

# **Inside the Palimpsest: A Study of Newsroom Information Gathering**

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## **Abstract**

The methodologies of systems design, rooted in engineering and in cognitivist conceptions of human action, have been stretched to the limit by the complexity of uses to which information and communication technologies are being turned. Within segments of the broader design community there has been a ‘turn to the social’ – a perception that there is a need now for richer stories about the everyday practices systems designers build tools to support. This thesis is presented as a contribution to the corpus of ‘richer stories’ about the what, how, why, when and where of information gathering.

The thesis presents findings from an ethnographic study of newsroom information gathering at a UK daily newspaper. Adopting an analytical perspective based upon cultural-historical activity theory (CHAT), it describes and analyses journalistic information gathering on two mutually constitutive levels; that of activity and that of artefact mediation. Its starting point is that neither information gathering, nor the artefacts of information gathering, can be understood without consideration of the social, cultural and historical contexts within which they are situated. Ethnographic data is drawn upon to argue that journalistic information gathering can only be understood within the particular context of the ‘story lifecycle’. Stories are the principal object of journalistic enterprise, and the thesis examines in detail how everyday working practices are oriented towards this lifecycle. Based on an analysis of the artefacts of newsroom information gathering, and of the discourses of information systems designers, it is also argued that the discourses of systems designers over-emphasise the importance of the category ‘information’. In particular it is argued that sources are how journalists orient themselves in the vast, heterogeneous information spaces they simultaneously inhabit and populate.

The background to these discussions is the often controversial relationship between ethnography, theory and systems design. This relationship is examined and it is argued that the CHAT perspective provides design ethnographers with an opportunity to move from ethnographic intuition to design insight. It is also argued that at a more pragmatic level, CHAT helps the fieldworker navigate the apparently never-ending mass of ‘potentially interesting material’ any field experience throws up.

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## **Dedication**

This thesis is humbly dedicated to the memory of

**Robert Campbell – Journalist**

without whose generous support gaining access to The Scotsman would have been so much more difficult, if achievable at all.

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## Prologue: 'The Story'

### 'Hold the Front Page!'<sup>1</sup>: The Journalist in Popular Culture

Stereotypical images of journalists abound in the media. Whether or not these images have a basis in any individual journalist's lived experience, they are how the profession is generally viewed and affect the way we all (as academics, as consumers, as members of the profession or as those who must deal with them) think about and interact with journalists and their products (McNair, 1998). Any contextualised account of work practice in the newspaper industry must address them – not least because such images affect journalistic work practice, journalists themselves being as prone to their influence as anyone else.

For many of us brought up in the West our idea of what a print (or broadcast) newsroom is like is probably composed of a variety of half-remembered images from films and television – somewhere between US TV's *Lou Grant* and UK TV's *Drop the Dead Donkey*, with a little from films like *Front Page* and *All The President's Men* thrown in for good measure. Men (and just occasionally women) in unlikely hats and unfashionable raincoats tramping the streets of a rainy metropolis in search of 'the big lead' that will secure them the coveted 'front page story'. Or that perennial favourite – the journalist as heartless beast door-stepping the grieving, the unfortunate or the bewildered in pursuit of comment they will completely rewrite to suit their own (inevitably nefarious) agenda. Just another denizen of *Private Eye's* 'Street of Shame'<sup>2</sup>. Whilst contemporary images of journalism tend to portray either a heartless hack or a champion of justice<sup>3</sup>, earlier images incorporated a little more variety. In his novel *Scoop*, Evelyn Waugh memorably presents us with the journalist as upper class bumbling idiot, and in numerous British films of the twenties and thirties we have the journalist as lower middle class tradesman.

However one thing most popular images of journalism agree upon is that the proprietors of newspapers are ruthless megalomaniacs – an image proprietors themselves have all too often done little to dispel. Whether it is the reclusive Rosebud-obsessed *Citizen Kane* (a character allegedly based on American newspaper magnate William Randolph Hearst), the often

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<sup>1</sup> As a matter of record, during the entire course of my fieldwork I never once heard anyone say 'hold the front page!'

<sup>2</sup> *Private Eye* is a satirical magazine published in the UK and the 'Street of Shame' is a reference to Fleet Street in London, formerly home to most of the UK's national newspapers

<sup>3</sup> For example the post-Nietzschean Superman is in his other life a journalist.

mentioned but rarely seen Sir Royston of the UK TV sitcom *Drop the Dead Donkey*, the power hungry media mogul of David Hare and Howard Brenton's stage play *Pravda* or the proud owner of an 'illustrious organ' – *Private Eye's* Lord Gnome, popular culture seems convinced of the potency of owning a newspaper.

Images such as these have a long history and reflect our complicated love-hate relationship with what another Macaulay first termed 'The Fourth Estate'<sup>4</sup>. But they do not, as we shall see, reflect accurately the day-to-day life of a Scotsman journalist. Neither are such images universal. For example, in the Soviet Union journalists had a rather different cultural mandate. For Lenin, a journalist's job was not to expose corruption and wrongdoing but to promote positive feelings in Soviet society by reporting on successes and not failures (Franklin, 1997).

## **The British Press: A Historical Perspective**

### **Stormy Beginnings**

The birth of the newspaper is often attributed to the Roman *Acta Diurna*; manuscripts recounting Roman events, which were controlled by the government and which were posted in public places on a regular basis (Franklin, 1997). In Britain, the first weekly newspapers appeared during the 1620's. The first printing press had been brought into the British Isles by William Claxton in 1471 (Collet, 1933) and the potential uses of such a technology were obvious to those in power from its very beginning. In many ways the history of the British press is the history of attempts to control it. Initially it was the Church, and not the State, which had the reins of control. In 1637 a decree of the Court of Star Chamber effectively handed licensing control over printing to the Archbishop of Canterbury and the Bishop of London (Collet, 1933). The Star Chamber's powers were not to be sniffed at. For example in 1637 Alexander Leighton and William Prynne were punished with mutilation for printing libel. However in 1641 the Star Chamber was abolished and control of the press was passed to the House of Commons. In 1643 an Order of Parliament set up a Committee of Examination with powers to search for 'scandalous pamphlets' and seize them, the presses they were printed on, and the printers themselves. An enraged John Milton addressed parliament with *An Appeal for the Liberty of Unlicensed Printing, the Areopagitica* (McNair, 1996). His appeal was unsuccessful and in 1662 further government attempts to control the press resulted in the Licensing Act being established. The State proved no less

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<sup>4</sup> The Whig politician Lord Macaulay dubbed the press the Fourth Estate in the belief that owning a newspaper was a public duty (Franklin, 1997).

rigorous in its dealings with the new printing industry than the Church. The notorious Sir Roger L'Estrange, who was appointed Surveyor of the Press, ordered an unfortunate printer by the name of John Twyn hung, drawn and quartered for publishing a Republican pamphlet without license (Harrison, 1974). But L'Estrange was later to be sent to the Tower of London and the Licensing Act fell in 1695.

The fall of the Licensing Act heralded the dawn of the first great flourish in the British newspaper industry. The first daily newspaper, the *Daily Courant* appeared in 1702. Franklin (1997) comments, it was hardly 'news' since most of the content was culled from continental newspapers, which were of course by then several days old. The use of other media as an information source is something of a theme in the following pages, and it is interesting to note that it has been a feature of the British press since its inception. The *Courant* advertised itself as providing only 'news', and not opinion. However within a few years it had been joined by a number of publications which were only too happy to fill the opinion gap (for example the *Spectator*, which was established in 1711.) Daniel Defoe, who founded a popular journal called the *Review* in 1704, is an important figure in journalistic history, since he established what was called 'a tradition of responsible popular reporting'. To this day, journalists are encouraged to maintain the twin tradition of being both accessible and responsible (Keeble, 1998).

During the second half of the 18<sup>th</sup> Century popular daily papers aimed at middle class readerships began to gain ground, and in 1788 *The Times* was established. 'The Thunderer', as it became known, was distinguished by its strong editorial opinions, and by its coverage of both nation-wide home news, and foreign news. The end of the 18<sup>th</sup> Century also saw the introduction of the first Sunday newspapers, for example the *Observer*, which was founded in 1791. It was also during this period that what are called the provincial press emerged, with 130 titles around the country recorded by 1760. Finally, the end of the century saw an outburst of enthusiasm for the radical press. Papers and pamphlets such as *Black Dwarf* and the *Poor Man's Guardian* became an important vehicle for the promotion of radical reform from the Jacobin period onwards (Burns, 1977). Although circulations were low they were widely read, often aloud to gatherings in coffee houses around the country (Harrison, 1974). However, overshadowing all of these developments were the debates about and campaigns against the 'taxes on knowledge'.

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## The Taxes on Knowledge

The fall of the Licensing Act in 1695 by no means marked the end of State attempts to control the press. The government simply changed tack and instead sought to control the press through taxation (Harrison, 1974). The main vehicles for this were three taxes, introduced in 1712, which together came to be known as the 'Taxes on Knowledge': advertising duty, newspaper stamp duty and paper duty. Newspaper stamp duty was a fixed duty on every copy of every newspaper sold. It was rigorously enforced; in London between 1830 and 1836 there were over 1000 prosecutions for the sale of unstamped papers (Curran, 1977). Many newspapers tailored their journalistic style to try and avoid the duties. For example since the essay format did not carry 'hard news' publications based on it, such as the *Spectator*, could avoid paying the stamp (Smith, 1977).

Government control, whether direct or indirect, helped shaped both the form and content of newspapers, and in turn affected how journalists went about their work. But it was not the only force at work. Even though taxes were constantly raised, for example the period between 1789 and 1815 saw a 266 per cent increase in stamp duty (Franklin, 1997), this attempt to control the influence of the press by increasing the cost of the papers themselves was frustrated by the rise of the middle classes and the related growth of the commercial press (Curran, 1977). Sales of newspapers grew from 14 million in 1780 to 85 million in 1851, advertising revenues were expanding, and the increased revenue brought about a growth in the number of full-time journalists the papers could employ (Curran, 1982). Greater numbers of full-time journalists changed news-gathering practices since they allowed the papers to reduce their reliance on 'official sources' of information. The founding of the Reuters news agency in 1851 had a similar liberating effect on the provincial newspapers, who could now rely less on the London papers for information (Franklin, 1997). Paul Julius Reuter had moved to London as soon as the first telegraph cable between mainland Europe and Britain was opened in 1851, prior to that Reuter's had to use carrier pigeons to get foreign news across the channel (Standage, 1999). But it took the agency some years to secure its position in British provincial journalism. Its first attempt to capture the market for wire news<sup>5</sup> in the provinces failed but the repeal of stamp duty and the growth of the industry that resulted helped change the company's fortunes (Read, 1999).

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<sup>5</sup> Wire services (such as Reuters, AP and PA) were originally provided via telegraph and now are provided online. They are a crucial source for UK journalists. They provide brief outlines of breaking news from all over the world and from many domains (business, foreign, etc). Wire service stories often get used as the basis of stories, to be worked on and developed, or used straight as space fillers.

Journalism had also been affected by the introduction of Fox's Libel Act of 1792, which weakened seditious libel law by making juries the judge of such cases, and by the introduction in Lord Campbell's Libel Act of 1843 of a defence against libel charges on the grounds of public interest (Curran, 1982). The campaign against the taxes on knowledge finally, it seemed, succeeded where Milton had failed and freed the press from government control. All three taxes were abolished during the period between 1853 and 1861 (Collet, 1933).

### **The Rise of The Mass Circulation Press**

The period immediately after the end of the taxes on knowledge is often characterised as the first great flourish of a mass British press. Franklin uses the *Daily Telegraph* as illustrative of this period of growth. It was established on the day newspaper stamp duty ended and was aimed at the lower middle class. The use of headlines, interviews and other techniques of the so-called 'new journalism' was imported from America, and the paper ran numerous campaigns, particularly targeting politicians. Within a few years its circulation outstripped *The Times*, and by 1880 it was selling a quarter of a million copies (Franklin, 1997). The end of the 19<sup>th</sup> Century was to see a number of 'new journalisms' develop around different newspapers (Smith, 1977), a phenomenon that continues to this day.

It was two brothers, Lords Northcliffe and Rothermere, who really instigated the birth of what is known as the *popular press*, the division between the quality and the popular press from then on marking the main lines of competition and journalistic style within the industry - nearly a century later the Audit Bureau of Circulation records of press circulation still reflect this division. After visiting America in 1900 Northcliffe, or Harmsworth as he was then, came back to Britain determined to import what he had seen there and in 1903 launched the *Daily Mirror* (Franklin, 1997). It was "*promoted as a 'paper for gentlewomen' (...)* the owner assured his readers that the *Daily Mirror* would be '*feminine but not effeminate*' " (Pilger, 1998) p.378.

However, whether the growth of the mass circulation press was also the growth of a free press is another matter. As many involved in the campaign against the taxes on knowledge had proposed, their abolition need not signal the end of control of the press. The campaigners, many of whom were from the newly powerful capitalist classes, believed that the free market would make just as effective a vehicle for the control of the press as the gallows (Harrison, 1974). Certainly the period after the abolition saw the almost complete disappearance of the radical press, although the reasons for that are not clear. The twin

forces of rapidly growing demand and new technology meant that anyone looking to publish a newspaper was faced with hefty start-up costs, for example it would be 1912 before those in the working-class movement could publish one (Curran, 1977). The effect was to concentrate ownership of the press in the hands of a few, in 1910 three people controlled 67 per cent of the national daily circulation (McNair, 1996).

Profits could be made, but the risks of owning a newspaper were also growing during this period. The 19<sup>th</sup> Century had seen a rise in the importance of the editor in the newspaper business, and market pressures often lead to tension between the editors and the owners of newspapers. The editor's role as ultimate authority was, and still is, supposed to be central to the freedom of the press, and the freedom of the press was supposed to be central to political democracy. Of course the history of the British press is replete with stories of interfering owners. Even the *Mirror*, with its Board of Directors instead of owner, was not exempt from charges of editorial interference. Instead of an owner the *Mirror* had an editorial director in the shape of Harry Guy Bartholomew, who “*drank a lot, was relentlessly foul mouthed and often hit his editor, Cecil Thomas, over the head with an eight-foot balsa-wood plank*” (Pilger, 1998) p.381. Nevertheless, the image of the unfettered journalist is a powerful one, understandably so since it was first drawn in the blood of the victims of the Star Chamber. And whether or not ‘the press’ as an institution can be comfortably characterised as a defender of the truth, individual journalists around the world still die every year trying to live up to that image.

### **The Modern Era**

The modern era in journalism has been characterised by increasing competition and a steady decline in sales, particularly in the tabloid sector where only the *Sun* has managed to buck the trend. Not that this has put off new entrants to the marketplace; since 1985 three major dailies have been launched, the *Daily Star*, the *Independent* and *Today* (although *Today* has since closed). One approach to the problem has been to increase the number of pages produced (Franklin, 1997), often in the format of supplements covering specialist areas such as ‘lifestyle’, money and travel issues. Another, more successful, attempt to improve individual papers’ readerships was started in 1993 by Rupert Murdoch – price cutting. Price cutting battles have been a feature of the British newspaper scene ever since, although their effects are complex they are said to have claimed at least one victim in the *Today* paper which was closed at the end of 1995 (Franklin, 1997).

Another feature of journalism in the modern era has been the decline in power of the unions. Here again Rupert Murdoch plays a central role. In January 1986 he switched production of two of his papers from Fleet Street to a new electronic, non-unionised printing facility in Wapping and effectively ended the power of the print unions (Franklin, 1997). The revolution in printing that Wapping signalled and the hoped for increase in the diversity of publications as a result of cheaper printing costs never materialised since the savings made were eaten up by the new supplements and increased marketing costs (McNair, 1998).

The print unions were not the only ones to lose their foothold in the newspaper industry, the National Union of Journalists also went into decline in the 1980's with the eroding of collective bargaining rights. This coincided with a period of rapid change in journalistic life. Between 1969 and 1994 the number of journalists freelancing increased from 10 per cent to around 30 per cent (Franklin, 1997). Freelances offer attractive savings to newspaper owners. They are only paid by the copy they produce and of course do not have any overheads such as a desk and a phone associated with them. Although freelance staff have access to fewer non-human information resources, since they work from home, as we shall see in later chapters, this is often in part compensated for by the staff who commission them. And of course information resources such as the Internet are eroding some of the exclusivity of the newspaper industry's access to information.

### **The Electronic Newspaper: Boldly Going or Boldly Gone?**

It perhaps seems strange to be talking about what many regard as the future of the newspaper in a section about the history of the British press. However, since it is often remarked that Internet years bear little relation to the conventional passage of time it seems like the best place to spend a moment or two discussing the electronic newspaper<sup>6</sup>.

Back in the heady days of 'new media' (or, in more traditional terms, a year or two ago) the imminent demise of the newspaper was a foregone conclusion. People, it was said, no longer wanted messy, bulky, *non-interactive* media like the newspaper. What we wanted, apparently, was to be our own editors<sup>7</sup>, and to *interact* with 'our' news. In fact, it was said,

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<sup>6</sup> To clarify, whereas in journalism electronic newspaper refers to a paper which is produced electronically, here it is used to refer to a paper which is delivered electronically.

<sup>7</sup> No-one it seemed considered that the old journalistic maxim, 'a journalist who edits their own copy has a fool for an editor' might also apply to the reader who edits their own paper.



we did not really want news anyway, we wanted information. As one of the journalists behind Switzerland's first online newspaper puts it:

*The journalist's role as an expert, as the one most entitled to formulate information is declining. One of the most remarkable aspects of the interactive digital environment is the progressive vanishing of the lines dividing the producer and the consumer of information. (...) facts and information can circulate without interference and without the journalist acting as a filter – based on his competence as well as on his position. The role of the journalist is changing into a more central figure, a mediator. He directs traffic, explores, becomes a facilitator of discussions.*

(Giussani, 1997)

But contrary to Giussani's belief this is not a new era. History has instead come full circle. We are back in the days of the *Daily Courant*, whose proud boast was that it provided information without comment – 'just the facts ma'am'! Whilst electronic newspapers have yet, if they ever will, to replace their printed cousins around the breakfast table, they have not been a complete failure. In the UK television text services such as *Teletext*, offering a diet of news bites, travel offers and competitions, have proved popular and long lasting. In addition, most UK national newspapers, The Scotsman being no exception, now have an electronic version of some kind available via the Internet. Many provide additional features that are only available from the Internet version, and increasingly interactive elements such as live video and competitions are being incorporated. As we shall see from this study, the consumers of these new electronic services are often other media themselves.

## Summary

So from its earliest days journalism has been a story of the adoption and exploitation of new information technologies. The printing press, the telegraph, the telephone, the computer and now the Internet have all been swiftly adopted by the newspaper industry. However the adoption of new technologies has usually brought with it clusters of new working practices in response to the related issues of control (Church then State) and economics (the Taxes on Knowledge, price wars, etc) that have inevitably arisen when new technologies have been introduced. Similarly, from its earliest days journalism has been the story of the 'palimpsest effect' – the sourcing of stories from other media is nothing new. But this thesis is not concerned with this historical view, but concentrates instead on a day in the life of a contemporary newspaper.

## **'The Story': A Day in the Life of the Newsroom**

It is 11 am in the features room of The Scotsman newspaper. A large, old fashioned office with lots of wood panelling, some ancient heating pipes weaving their way drunkenly across the ceiling, and an assortment of 'desks throughout the ages' squeezed into every available space. It has the studious air of a school staff common room in a pre-war British film. But unlike the gloomy and airless newsroom, just down the hall, there are several large windows, albeit overlooking one of Edinburgh's famous dark, medieval 'closes'. The view may not be much, but towards mid afternoon the sun slants off the stone of the building on the other side of the close, some five or six feet away, throwing the rough-hewn stone into a delicate relief pattern and bathing the room in a strange light.

Features is home to around 12 - 15 people at any one time, with numbers creeping up as the afternoon progresses, peaking in the early evening and dying off during the night until finally around midnight it falls quiet again. The features and arts editors who work in there have been on the phone or chatting to each other about possible stories for most of the morning although Mary, the features editor, has been out of the room for the last 20 minutes or so. James, a features writer, has been in for a couple of hours catching up on some filing, reading the paper, browsing a couple of his bookmarked entertainment news web sites and checking his email. James has worked at The Scotsman for nearly five years now, and has witnessed many changes. Originally a general features writer, he moved up to editor of The Scotsman's listings section (known as The Bulletin page.) Although the job carries the title editor, it's actually a rather unusual position, he thinks, because the post-holder acts as writer<sup>8</sup>, chief sub<sup>9</sup> and sub<sup>10</sup> all in one. In fact, there are several other people in different departments occupying such hybrid roles, each one sure that theirs is a unique position. The lines of demarcation are not so neatly drawn in the day-to-day of newspaper life as its participants might imagine.

James, like everyone else in the room, has spent the last few minutes wondering when Mary, the features editor, will get back from the first of the editorial conferences that day. Conference is regarded by many at The Scotsman as a quasi-mystical event. All the section

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<sup>8</sup> Informants used the term journalist to encompass both people working as writers and those working as sub-editors.

<sup>9</sup> Chief sub-editor: responsible for the design and lay-up of their particular section of the paper, as well as selecting stories. At The Scotsman the chief-sub in some departments will also be responsible for generating story ideas and commissioning writers.

<sup>10</sup> Sub-editor: status is equivalent to that of a reporter. Subs edit copy, checking it is grammatical, follows the in-house style and is the right length for the available space. They also sometimes write headlines.

editors, like Mary, attend. They present their story ideas to the editor, who decides which should be used and debates the approach, or 'slant' to be taken. Sometimes negotiations between two or more section editors will take place about who should cover a particular story. For the section editors' conference can be an anxious time since it is also when the editor tells them what he thought of their previous day's efforts. As one staff member remarked, "he's not slow in telling you he doesn't like something".

A brief pre-conference conference has already been held to make a rough division of the space available after the day's advertising space has been taken up between the various departments. As a result of the pre-conference conference a pagination plan has been circulated to section editors, which they use to start working out what they will put in their sections. Such shared documents, copies of which flow through the organisation all day like cats patrolling their territory, begin the process of co-ordinating the slowly developing shape of tomorrow's newspaper. Every now and again one of them will become the focus of intense negotiation as someone vies for more space for a good story, or tries to persuade another department that story x would be better in their section. The documents gather scribbled annotations until they are 'fixed' again in the next conference and pristine new versions produced to replace them and resume the patrol.

Now, in the first full conference of the day, Mary is presenting her plans for her allocated space. Until she comes back, most of the features team spend their time reading newspapers, making phone calls and finishing off any stories they were working on the day before. Unlike in the news department, features writers often have more than one day to research and write a story – when they must finish a story in one day they call it 'working live'. When she does come back, James wanders over to her side of the room to see if he has been assigned a story for today (there's no guarantee he will have been). Mary hands him a small clipping from another newspaper and tells him she wants a piece based on it. It is about women trainspotters. James goes back to his desk and reads the clipping. It is an anecdote, only about four sentences long, about an article which appeared in another publication, a railway enthusiasts magazine. When he finishes, he decides to sort out some concert review tickets he needs to get and spends the next hour making phone calls. Although he now only has a few hours until deadline he is in no great rush. The story has not exactly lit his journalistic fire!

Eventually James returns to the story. Opening a new file in his text editor, he notes a couple of key facts from the clipping and then stares across the room, hopefully. He has no idea how to start, so he shouts over to Mary asking her what the angle should be. She tells

him she was thinking downpage funny, just as he had expected. That helps, at least he has an idea how long he should be aiming for now. Downpage articles, as their name suggests, are those which appear towards the bottom of the page, as opposed to leader articles which appear at the top of a section. Downpage features stories are usually about half the size of leader and up-page stories, somewhere in the region of 900 words or less. He picks up the clipping again, opens up his web browser and goes to a web search engine site. He enters "Railway Enthusiast Monthly" and works down the top three of the matches returned, following the links to the sites and then back to the search engine page. None of them contains information on the magazine's address. "Hmm, don't seem to have a home page" he remarks, before returning to the text editor and the working notes he has listed there. He has to conduct a phone interview with a composer on behalf of Simon, who looks after the classical music pages. The composer had contacted the paper and suggested the interview, and James has the letter on his desk. He goes next door and chats with Simon about what he wants, then comes back, calls the composer and does the interview making no notes as he talks since he is taping it. His interview style is relaxed, he opens with a few pleasantries and quickly moves onto a list of detailed questions about the composer's life and work. Several times he paraphrases what the composer says and asks for confirmation of his interpretation. After some ten to fifteen minutes he starts to wind up, asking to check spellings and some details. When he puts the phone down he scribbles a couple of notes in the note pad on his desk.

After the interview and another round of phoning for review tickets, James returns to the trainspotting story. "Start at the beginning and ring trainspotting clubs I suppose." He grabs the phone book on his colleague's desk and starts looking up clubs. He shouts over to the chief sub, who works at a desk near the features editor, "Sam, do you want me to find trainspotters who feel hard done by or what?". Sam shouts back, "Yeah. Well, both." He dials one of the numbers in the phone book but gets no answer. So he tries another, but with the same result. He notes the club names and numbers in his text file and then calls directory enquiries for the number of a club in another area. Again getting no reply. Again noting as much in his file. He calls the transport department of a sister paper "Do you have a copy of this month's Railway Enthusiast Monthly? I'm trying to speak to women trainspotters, do you have any numbers?". He notes down a telephone number for the magazine and then gets directed to another reporter in the transport department. "Hi, I'm doing a piece on women trainspotters for tonight's Scotsman and I was wondering if you have any numbers for professional women trainspotters or any women highly placed in the field?". More numbers are noted in his file. He calls one, explains that he is writing a story about the way women trainspotters get treated in some clubs and asks for some contacts. He gets a few more and

again notes them in his file. He remarks that this is a hard story to write because he's "not really very sure what they want". It's causing him problems because it's a very short clipping and he's got to get 900 words out of it. He decides it's time for lunch.

After lunch James is still finding it hard to get going on the trainspotting story. It's after 2pm and he still hasn't got anything written. He looks down his list of contacts, picks one, sets up a microphone on his telephone earpiece and dials the number for Railway Enthusiast Monthly. He asks for the editor, and then requests that they fax through a copy of the original story referred to in the clipping. Then he starts to ask the editor some questions; "So do you think women trainspotters are hard done by?", "So what's your name? How do you spell that?". Although he is taping the conversation as before, this time he makes quite a few notes as he talks. Then he calls one of the professional woman trainspotters he has a number for, again outlining the story and the original clipping. He asks his interviewee about the image of young women trainspotters and about anti-woman practices in clubs. He tells her he is trying to gauge the strength of the opinion out there about the issue. He asks if she has ever experienced discrimination and when she says no, asks if she knows anyone who has. Next he calls another of the women on his list, this time recounting what the last interviewee had said regarding discrimination not being a huge problem and asks for some comment on that. When that call ends, he goes to see if the fax from the magazine has come in, it hasn't.

A few minutes later, he finally starts to write the story. It is now 2.30pm. He knocks out a couple of paragraphs quite quickly, outlining the main facts from the clipping. He puts on his headphones and listens to the taped interview with the professional woman trainspotter, making notes at the top of his file as he listens. Then, still listening to the tape, he adds a few sentences to the 'main text'. For the first time since he was assigned the story he looks relaxed and happy. After about 15 minutes of editing notes and text and listening to the tape, he stops and calls the library. "I'm looking for stuff on trainspotting, BRS<sup>11</sup> should suffice, about comments Joseph B. Quick made about women trainspotters. Is that Maxine? Hi." He puts the phone down, does a couple more minutes worth of writing and tape listening and then he is off to the library to see if they have found any articles for him. He comes back with two, sits down and starts to read through them quickly. He writes some more and then turns to his colleague and asks who Joseph B. Quick played in the long running soap opera

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<sup>11</sup> BRS is The Scotsman's own electronic text archive, which contains several years worth of all the articles printed in each of the main editions of each day's paper, as well as those of her two sister papers. Journalists can ask librarian's to conduct searches for them or can go through to the library and use the terminals available there to do the search themselves.

Fandango Drive. She tells him the name, he notes it down and then sighs, "Right, back to the library then." He grabs a pad and pen and goes to the library.

A few minutes later he comes back with some scribbled notes on his pad and a pile of computer print-outs. He has managed to track down the Joseph B. Quick quote he was looking for on the Profile database, which allows him to search online back copies of other national newspapers. By 3.30pm he has about 8 paragraphs written and is replaying the taped interviews. He continues listening, reading the cuttings and editing the text on screen for another three quarters of an hour or so. Then he stops, walks around the room and comes back to his desk. He begins to read the text on screen closely, pulling one of the print-outs from the library across the desk and propping it up between his monitor and keyboard. After about 15 minutes he starts to edit the text again, this time moving sentences and paragraphs around, changing a phrase here and there, correcting spelling mistakes.

The features room has got noisier and busier. All the subs are now in, working on the pages for tomorrow's paper. Other staff come in and out delivering copy and photographs to subs or the features editor. One of the production staff comes in to check with the subs that the production schedule is being met. The features and arts editors are hard at work chasing up stories and listening to writers (both those in the room and those phoning in) recount their stories. A lengthy conversation involving several people springs up around James as he works - a story picked up from another paper has turned out to be incorrect and the original feature planned around it looks in doubt. The deputy editor of the paper comes in for a wander, stopping at various desks to enquire "How's it going?". Mary shouts over to James, "James, how's your militant feminist trainspotter piece going? Do they say they hate it?". "Yeah, well they say it's a rotten state of affairs.", he shouts back, before returning to his editing.

By 4.30 p.m. James is beginning to glance anxiously at his watch at regular intervals. The first deadline of the night is around 6pm, but he's got to let Mary see the piece first in case she wants any changes made. He needs another 108 words. "I'll see if I can get another trainspotter", he says as he hooks up his telephone mic, looks up another of the numbers in his list and dials. No answer. Just one more quote would finish the piece, but as he remarks "The problem with writing a piece like this is, where do you find a woman trainspotter? It's like writing a piece on breathing, everybody does it?".

By 4.55pm he is hurriedly making some last changes, referring to one of the library cuttings. At 5pm exactly he checks the word count again, it is spot on. He prints out a copy, reads it, and starts making more alterations to the text. More paragraphs are moved and phrases reworded. A couple of minutes later, he seems satisfied. He prints it out and picks up a copy from the printer on the other side of the room. On the way back to his desk he stops to read the papers piled up on the reading desk by the main entrance to the room. Then he checks his email and responds to a couple of them. Finally, he copies the trainspotting story from his basket to the one for features, where Mary and the subs can pick it up. He's pretty convinced Mary will want him to change it. He's gone for a lot of puns he doesn't think she'll like. To kill time while waiting for her verdict he sorts through the towering pile of press releases he has stored on the shelf behind his desk. Mary comes over to chat to his colleague and then turns to James, "That trainspotting story was really good, I liked it". The next morning, people reading *The Scotsman* over their breakfast will chuckle at an amusing item in the features section all about women trainspotters. 'The Story' is complete.

# **1 Stories in Journalism and Design**



## 1.1 Introduction

This is a story about stories. It is about how journalists gather the information required to turn ‘information’ into ‘news’ – about the telling of stories to make stories. It is also about the stories information systems designers tell about people engaging with the information and technological artefacts<sup>12</sup> that comprise the ‘information spaces’ they inhabit, about the telling of stories to design new artefacts for information gathering. These stories are important. The stories journalists tell form a significant part of public life, and the stories designers tell become embodied in the artefacts of journalistic information gathering. But finally, this is also a story about the stories ethnographers tell, and the ways in which these stories might inform the design of future artefacts for information gathering, which in turn will alter the way journalists go about their story-telling, and hence the way we all come to ‘know’ about events in the public sphere.

Like all stories, this one had a beginning. It started with a simple question – what does ‘information gathering’ mean in a journalistic context? Implicit in this question is an assumption that information gathering means different things in different contexts. At this point, anyone familiar with the various literatures which concern themselves with what I have termed here ‘information gathering’ may wonder why I have used that phrase and not the more commonly seen ‘information seeking’, e.g. (Barry, 1997). Indeed in the early days of my research I too tended to speak of information seeking. The problem with the concept of information seeking is that it is too directed, too active. Information gathering is a more useful starting concept for this study in that it allows for situations where information is passively acquired, or where information is not the object<sup>13</sup> of the activity but merely a resource. Seeking implies a clear need, gathering allows for more confused, fuzzy motives. But this was just a working definition with which to begin the study. The real point of the study was to investigate this concept in the light of the research experience, to use the research experience as an opportunity to discursively reflect on the concept. Ultimately then, this is also a story about the application of the concept ‘information gathering’ in various contexts; ethnographic, philosophical, methodological, real-world (The Scotsman newspaper) and design. In that sense it is related to the work of Erving Goffman; “*Goffman’s overall goal was to transform ethnographies of places into ethnographies of concepts.*” (Manning, 199) p.154. Why do this? Well, principally to inform the design of

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<sup>12</sup> What is meant by the term artefacts will be a topic of much discussion further on in the thesis. For now though we will assume a traditional sense of the term is applied here – something crafted rather than naturally occurring.

<sup>13</sup> Object is here used in the sense of focus or goal.

future information gathering tools, which brings us to the subject of computers and journalism.

## 1.2 Computers and Journalism

### 1.2.1 Changing the Face of Journalism?

*Time, traditionally the journalist's nemesis, loses its authority on the Net. A constant deadline is no deadline at all. Since there is no intrinsic production cycle or appointment with viewers, journalists and other providers can take whatever time is necessary to establish their content before posting it. Unfortunately, the present culture of journalism on the Net fails to take advantage of this reality. Still caught up in the outmoded "scoop" culture of 100 years ago, when newspapers updated screaming headlines in order to compete with each other's street corner sales, Net journalists take even less time to check their stories than they did in the Old Media. But guess what? The audience doesn't notice who got the scoop first. It's only a journalism peer thing. Unless it's news that moves financial markets, or has some other unusual triggering quality built into its subject matter, the story's "first-ness" is of minimal market value in this new media landscape. Yet this rush to throw everything online, including stories that aren't ready for publication in the Old Media, is undermining the credibility of journalists everywhere*

(Hume, 1999)

If anything has marked the modern era in journalism, it is the arrival of the computer. No aspect of newspaper life has been left untouched. Whole professions have disappeared, job demarcation boundaries have been blurred, work processes fundamentally changed and the content and appearance of our paper's shaken up. In the UK the introduction of computerisation has been directly implicated in the break-up of the print union's power in the industry (Chippindale & Horrie, 1999). But it is only relatively recently that computers have begun to impact journalistic information gathering – even if for some, as the opening quote illustrates, the march of technological change is well underway. Even when computers were used for information gathering it was usually indirectly – such work being broadly the domain of the news librarians who acted on the journalists' behalf. Access to specialist online databases is usually charged for on a per-line basis, making inefficient searching a costly exercise, and so access to these systems was often restricted.

The computer's greatest impact initially was on newspaper production practices, not editorial practices. Even when computers did work their way on to individual journalists' desks it was as tools of writing and not information gathering or communication. At the start of this study few UK newspapers of any size offered all their journalists desktop Internet access (The Scotsman was something of a pioneer in this regard). There is a widely held

view amongst professional observers of journalism that new technology is challenging the profession of print journalism in many ways; increasing (online) competition, changes to working practice as a result of the computerisation of the production process and new online sources speeding up the 'news cycle' (Elliott, 1998). The print industry's role as 'provider of news' is coming under threat from the proliferation of widely (at least to those who can pay) available new electronic information sources (Rosen, 1996), and online newspapers have led to the creation of the new role of 'online journalist' (Singer, 1998).

### **1.2.2 Computer-Assisted Journalism (CAJ)**

Interest in the use of computers for journalistic information gathering in the United States of America (US) was of sufficient maturity in the 1980s to give birth to an acronym (CAJ – Computer Assisted Journalism). CAJ<sup>14</sup> refers to journalistic information gathering or story development/analysis that is supported by computers. Its proponents cite the use of databases, spreadsheets and online information services as the hallmark of CAJ work (LaFleur, 1999), although its first real flowering was in the US in the 1980s mainframe computers had been used by election reporters as far back as the 1950s. The growth of CAJ in the US is associated with what is sometimes known as 'Precision Journalism' (Meyer, 1991), the use of social science research methods in the newsroom, an example of yet another 'new journalism' fashion to sweep the industry<sup>15</sup>.

The term is still largely a US phenomenon – few journalists in the UK would claim to engage in CAJ/CAR/CAIR. There are several possible reasons for this. First, the range and quantity of government information available as public record (in electronic or other form) is far less than in the US where there are powerful constitutional rights ensuring access to government information (Miller, 1999). Second, computers have been a feature of newsroom life for significantly less time in the UK than the US, and journalism training courses have only recently begun to address their use in any way more significant than for word processing. Finally, there is the question of culture; journalists on this side of the

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<sup>14</sup> CAJ is also sometimes referred to as computer assisted reporting, CAR (Garrison, 1995), or computer assisted investigative reporting, CAIR (DeFleur, 1997). Although there has been some attempt to delineate these as distinct forms, to my mind it has been unsuccessful and certainly for the purposes of our discussion serves no useful function. Therefore I refer only to CAJ in the body of the thesis, although this should be taken as incorporating work that identifies itself with the various other titles.

<sup>15</sup> In the Prologue other examples of 'new journalism' from the industry's history were discussed.

Atlantic recognise the value of ‘number crunching’ for dredging up stories but view with amusement their US counterpart’s enthusiasm (Foley, 1996).

### 1.3 Aims of the Thesis

The aim of this thesis is to examine and describe the context of information gathering in one particular real-world setting: journalism. This is not a study of how computers are used to gather information (although this topic is of course addressed). Rather it is a study of the relationships between technology, information, work and news. The principle question it seeks to address is: how do journalists gather information?

Journalists have comparatively rarely been the subject of ethnographic inquiry. A flurry of organisational studies in the 1970’s, and more recently (Machin, 1994), (Durrenberger, 1989), and (Riede, 1999), are exceptions. Even within the branch of sociology which has most comprehensively addressed journalism and the media, media and cultural studies, research has often focussed on the outputs of journalistic practice rather than practice itself, for example (Riede, 1999) relies heavily on content analysis in his study of civic journalism in the United States of America. Perhaps the reluctance to engage with journalists is because they are so dominant a feature of the Western psyche that approaching such an endeavour requires a great deal of stereotype and myth un-picking. Perhaps it is because the relationship between journalist and ethnographer is a difficult one to navigate – after all much ethnographic method exists to promote a distinction in the reader’s mind between journalism and ethnography (Wolcott, 1995). And yet few groups can boast such a thorough-going, long-term and well-recorded body of ‘information gathering’ practice. Information gathering, it would seem, is at the heart of all journalism; it is what provides the journalist with a defence against charges of liable, bias or simple fabrication. Therefore for anyone interested in understanding information gathering journalism presents a powerful draw.

Furthermore, the newspaper industry has traditionally had very close ties with developments in information and communication technologies (ICTs). For example, the first public demonstration of Alexander Graham Bell’s ‘speaking telephone’ was on 25<sup>th</sup> June 1876, the first use of a telephone to report the news was on April 3<sup>rd</sup> 1877, by a reporter from the *Boston Globe* (Winston, 1998). Later technologies, such as television and the Internet, offered news organisations<sup>16</sup> not just a new information gathering mechanism, but a new

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<sup>16</sup> It might be useful at this point to draw a distinction between the attitudes of newspaper institutions and journalists. Whilst it is true to say that the institution of *The Scotsman* has traditionally been very enthusiastic

distribution channel. For example, discussions in the journalistic community about the impact of the Internet on the industry tend to focus on the Internet as a distribution channel rather than as an information source, e.g. (Fulton, 1993; Fulton, 1996).

In summary then, information gathering within the media is particularly interesting because the media are simultaneously consumers, producers and distributors of enormous amounts of information. Furthermore, they are historically closely linked with developments in information gathering practices and technologies which impact far beyond the limited domain of journalism.

#### **1.4 Genesis of the Thesis**

The idea of context is something of a theme in this chapter. First however, this work itself must be put into some kind of context. The project's genesis can be traced to two separate points: my experiences as a news analyst, and my MSc project work. Prior to returning to academic study, I had worked (amongst other places) in a company that monitored television and radio news broadcasts, 24 hours a day, seven days a week. We taped and transcribed (usually live) the contents of news broadcasts, analysed them and sold transcripts, summaries and tape copies to a variety of industry and government clients. That time gave me my first insight into what has been called the 'circular circulation of information' (Bourdieu, 1998) that, as we shall see in the coming pages, characterises the news media both in the modern era and historically. Some years later, I would return to academic study and an MSc dissertation on the use of sound in computing. I began my doctoral studies considering the ways in which sound might be used in the design of information seeking (sic) systems. However, one issue quickly overwhelmed these early aims: what does 'information seeking' mean?

#### **1.5 Scope of the thesis**

Before considering what was done, it is worth pausing to reflect on what was not. Although this thesis is intended as a contribution to the corpus of stories about the relationship between work and technology available as resources for design, it does not go so far as to explicitly engage with design issues. This was not an action research project; no tools were built and evaluated as a result of the study reported here. Instead this thesis offers an analysis of a workplace that might allow those interested in design to think about design

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about new technology (Morris, 1992), as we shall see in the coming pages journalists themselves are often rather more cautious.

issues and requirements (in the broadest sense). Such work is distinct from requirements gathering and from design, yet it contributes to design by providing another in the corpus of stories about the social worlds in which the products of design must ultimately be situated. This in itself is task enough, to move forward to design would require another thesis.

There is also the question ‘why *newsroom* information gathering?’ to address. There is no great mystery to this – it was simply a matter of access (of which more in Chapter 3). Securing access to the newsroom was hard enough, but securing access to journalists as they went ‘out and about’ proved all but impossible. Journalists were not keen to have someone hanging around when they were off interviewing sources or following up stories, and their editors were by and large even less keen. This was perhaps partly because the organisation had been going through a considerable amount of upheaval prior to and during my study. Staff turnover levels were high, and the journalists in particular were struggling to adjust to a new editor (in fact two by the end of the study). As it turned out this was a rather fortuitous early hiccup; it forced me to focus my attention on the wider newsroom team – subs, section editors, librarians and picture desk staff – and to consider the relationship between information needs and information sources.

## **1.6 Design in the Age of Information Sickness: The Context Problem**

This thesis is part of a wider movement within the Human-Computer Interaction (HCI) and systems design communities to leverage the findings of ethnographic work within design. It has been suggested that the central question for IT research should not be what kind of technology should we create, but rather what we want to do with it (Harper, 1998b). The implication behind these initiatives is that a lot of technology is built because it can be, without reference to the uses in which it might be put, or the contexts in which it might be used. Personal computers, for example, were created by technology-enthusiasts some time before anyone thought of a compelling use for them (the spreadsheet). Even then the compelling use was in itself to be developed by users as a tool for communication as well as number crunching, as (Nardi & Miller, 1990) illustrate. Such post-hoc rationalisation of technology investments such as the personal computer may have been acceptable when few claims were being made for them, and little money spent. But at the start of the 21<sup>st</sup> Century, when few businesses would consider operating without some computer technology, when even tiny voluntary organisations struggling to work in deprived communities feel obliged to spend considerable financial and time resources on computers (Macaulay & Smith, 1995), such post-hoc rationalisations are increasingly unacceptable. How then are we to rise to Harper’s challenge? Harper himself offers one possible solution: “*to find out what goes on*

*in work practices and to use that as a metric to determine what to devise technologically*". This thesis then is offered as a contribution to that process, as one possible metric for the design of future information gathering systems.

### **1.6.1 Addressing Context: Leaving the Lab**

However, widening the research focus from 'users' in labs to real-world practice brings us face-to-face with the unruly and apparently un-abstractable world of 'situated' human behaviour – the 'situation' being typically conceptualised as some context of future use. A growing literature is concerned with understanding 'context-of-use' as a way of informing the design of information systems (Anderson & Alty, 1995; Cockton, Clarke, & Gray, 1995; Wixon, Holtzblatt, & Knox, 1990). The phrase 'context of use' is generally used to refer to both the material and the ideal conditions of use; the many environmental, social, cultural, individual and historical factors which affect how people manage to do things such as information gathering. Driving this interest in gathering contextual information are two interrelated moves within the field of systems design. On the one hand, there is mounting unease with the dominance of cognitivism as a conceptual framework for both design theory and practice (for example (Carroll, 1997; Draper, 1996; Green, Davies, & Gilmore, 1996; Winograd & Flores, 1986) ) because of its focus on individual users engaged in discrete activities. On the other, the move towards user-centred approaches to design practice is beginning to extend the requirements gathering focus of design projects to 'social users' and not just 'individual users' (Berg, 1998). A number of design methods have arisen which explicitly engage with 'context of use'. The following section briefly overviews two such methods: Participatory/Cooperative Design and Contextual Design.

### **1.6.2 Design Methodologies and Context**

In recognising the need to move out of the lab the HCI design community also recognised the need to develop design methodologies which could incorporate the results of such a shift. Participatory design (PD) and its Scandinavian cousin co-operative design were developed to involve users more closely in systems design, and entail a shift in emphasis away from cognition/task-based approaches to design and towards understanding the behaviours of groups of users interacting in complex ways within organisational settings (Kyng, 1995). A number of techniques have been adopted and/or developed to facilitate the PD/co-operative approaches. For example scenarios of use are narratives describing what people do/might do in the future when engaged in particular activities (Carroll, 1995; Mack, 1995). Scenarios have been developed from in-depth ethnographic studies (Nardi, 1995) – capturing user's stories – or brainstormed by users and designers in design workshops or in

brief sessions with workplace managers (Muller & Carr, 1996). And rapid prototyping, using techniques such as storyboarding and paper mock-ups, has been used to assist users and designers in envisioning the future system during the PD process (Bødker & Gronbaek, 1991).

A closely related design method which attempts to engage with issues of context is Contextual Design. This uses workplace interviews (known as contextual inquiry) as the principal means for generating contextual information, which is then used as the basis for iterative prototyping (Wixon et al., 1990). Contextual design provides a clear framework for the design team, who iterate through a process of inquiry, modelling, design, prototyping and eventually implementation (Holzblatt & Beyer, 1996) and the philosophical basis is that only through interviewing users in situ can their 'true' needs be determined (Coble, Maffit, Orland, & Kahn, 1996).

But whilst these methods and techniques have much in common, not least in their reliance on stories as both resource for and means of communicating about the design process, there is little agreement (or even discussion) about what is meant by that much used phrase 'context of use'.

*One answer to the question – what is context – is both good news and bad. The good news is that context is hot. (...) The bad news is that the very question turns out to be almost embarrassing, and certainly a question leading to a quest that demands extraordinary tolerance of chaos. After an extended effort to review treatments of context the only possible conclusion is that there is no term more often used, less often defined, and when defined defined so variously as context.*

*(Dervin, 1997) p.13-14*

Opinion in much of the design literature seems to be divided as to where the primary challenge in dealing with context lies; is it at the level of developing an understanding of what context is (in either a specific or abstract sense), or is it simply in knowing what to do with such an understanding once it has been (relatively unproblematically) developed? For some the problems associated with integrating notions of context into systems design are primarily pragmatic: how should contextual material, which it is held can be easily gathered (Cockton, Clarke, Gray, & Johnson, 1996), be used? A typical response to this practical issue has been the development of tools to help incorporate contextual information into the design process, for example, the Literate Development Environment (Clarke, 1997), Rich Pictures (Monk & Howard, 1998) and the Exploratory Sequential Data Analysis technique (Lewis, Mateas, Palmiter, & Lynch, 1996). Cockton et al. are by no means unique in their assertion that contextual data is easily gathered. Discussing scenarios, (Nardi, 1995)



comments that many of the papers in this area often regard the gathering of 'baseline' data as unproblematic, and yet without grounding scenarios in appropriately detailed ethnographic descriptions they are unlikely to be of much use. For others, though, the 'how, what, why and when' of developing and incorporating understandings of context are far less easily resolved.

### **1.6.3 Ethnography: On Not Looking for the 'Continent of Meaning'**

Ethnography is one of the methods that HCI, Information Systems (IS) and particularly Computer-Supported Cooperative Work (CSCW) researchers have turned to for insight into context and situated practice (Brown & Duguid, 1994; Cooper, Hine, Rachel, & Woolgar, 1995; Rogers & Bellotti, 1997). Interest in the use of ethnographic techniques in IS research has often been attributed to the impact of Lucy Suchman's book *Plans and Situated Actions* (Button & Harper, 1996). Suchman proposed that since tools reify underlying models of the activity they are designed to support, developing an underlying conception is a crucial part of design (Suchman, 1987). The central theme in her work is that in order for designs to be 'realistic', designers must find ways of understanding work in practice (Suchman, 1995). Suchman's work draws on ethnomethodology, and as such emphasises attempting to understand human behaviour through observation, using techniques like conversation analysis, for which, of course, ethnography is a key empirical data gathering technique.

However, despite the large number of studies and design projects that claim to have involved an element of ethnography, there is no agreed single approach to its use in systems design and evaluation contexts, and consequently its application has been controversial (Harper, 1998b). This situation in many ways reflects a more widespread confusion about what ethnography is and to what ends it is or ought to be oriented. What is generally agreed is that ethnography is a set of methods, and not a theory (Hammersley & Atkinson, 1995). These methods may include, amongst other things: participant observation, interviews, materials gathering and desk research. Although not all methods require the ethnographer to leave their home-base, all ethnography requires some, usually extended, contact with a 'setting'. Since neither the methods nor a commitment to fieldwork are unique to ethnography, we are still left unclear about what makes an ethnography an ethnography. For some, distinguishing an ethnographic study from, for example, a qualitative study that uses participant observation, is so difficult that appeals to 'ethnography is an attitude' are required (Wolcott, 1995). For further illumination we can turn to any number of statements about ethnography from a range of professed ethnographers. For example:

- ethnography is a kind of ‘storytelling’ enterprise and ethnographers a kind of ‘supertourist’, the authority of whose holiday stories rests in their direct personal contact with the ‘others’ they visited (Van Maanen, 1995);
- ethnography is an attempt to understand the “character of the day-to-day life of the people in the study” (Lareau & Shultz, 1996);
- ethnography is the gathering and reporting of observations for the purposes of cultural analysis, which “is (or should be) guessing at meanings, assessing the guesses and drawing explanatory conclusions from the better guesses, not discovering the Continent of Meaning and mapping out its bodiless landscape” (Geertz, 1993).

Each of the above statements is embedded within a discourse about what does and does not fall under the aegis of ethnography. Often such discourses revolve around attempts to distinguish ethnography from other forms of reportage, particularly journalism. The key is usually said to be a commitment to notions of culture, and to interpretation. For example, Sanjek proposes that what sets an ethnographic account apart from a journalistic one is the appeal to theory (Sanjek, 1990) – that ethnographers do not simply ‘report’ what they see but interpret it as well<sup>17</sup>. Wolcott, discussing ethnographic writing conventions, notes that for an ethnography to be taken seriously it would probably need to be of monograph length Wolcott (1995) – clearly not a usual journalistic form.

As the use of ethnography in other domains (for example in medical anthropology, sociology and systems design) has grown, the answers to many of these questions have had to accommodate more than just the sometimes rather prosaic concerns of its parent field, anthropology.

#### **1.6.4 Theory – Ethnography – Design**

Since this ethnographic study has been conducted within an information technology design context, it is important to consider the relationship between ethnography and design. And since it makes a virtue of a specific theoretical framework it is also important to consider the relationships between theory and ethnography and design.

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<sup>17</sup> Of course many observers of journalism, myself included, would dispute this distinction, arguing that journalists do not simply ‘report’ news but ‘make’ it, for example (Hall, Chritcher, Jefferson, Clarke, & Roberts, 1982; Rock, 1982)

Undoubtedly, a tension arises between the traditional idea of the ethnographer as one whose object is to describe and interpret cultures with the minimum impact upon the cultures being studied, and the design ethnographer whose aim is to describe and interpret cultures for the purposes of designing a future tool which will change the culture studied (Mantovani, 1996). Design ethnographers have often been reluctant to comment on design issues, preferring instead to restrict their input to critiques of existing designs, which (Berg, 1998) suggests may be due to a tendency amongst design ethnographers to adopt one of two positions with regard to technology; technologies are bad because they are developed by those with power in society, or 'the only good technology is small technology'. For others the reluctance of design ethnographers to involve themselves more closely in design is a fittingly humble response to the complexities of the lived practices with which they engage. However these tensions are not unique to design ethnography. Within anthropology debates rage about the 'uses' of ethnography, about analytical frameworks and about the impact, intentional and unintentional, of ethnographers on the field, for example (Bruner, 1984; Marcus, 1986).

Just as ethnographers have expressed concerns about their involvement in design, designers and ethnographers themselves have expressed concerns about the 'benefits' of ethnography for design. There have been concerns that the products of ethnography might prove intractable in real-world design projects, an assertion supported by a review of work practice studies which found that few provided anything but the most high level design suggestions (Plowman, Rogers, & Ramage, 1995). Even when it is thought that ethnographies can offer useful insights for design, it is not held self-evident that anything can be done with them:

*Ethnographic evidence suggests the very conception of work held in companies will affect the design of technologies and the design of jobs. What is not clear is whether new business designs will in fact support the tacit, informal social systems that exist in workplaces, or whether these informal systems will devise ways to accomplish work despite the constraints of new design.*

*(Sachs, 1995) p.44*

Interest in ethnographic techniques in design can be traced to a growing concern about the gap between users and designers, and the perceived relationship between this gap and systems failures (Berg, 1998). However, for many, the introduction of social theory and its associated debates and disagreements serves only to undermine ethnographers' claims to help in closing this gap (Button & Dourish, 1996). Reasonably enough, systems designers are generally more interested in acquiring and using information about contextual issues than in the particular techniques being adopted or the complexities of theoretical debates use

of such techniques can engender in anthropological or sociological circles (cf. (Cockton et al., 1995).

The relationship between ethnography and design can be conceptualised as an ongoing dialogue about, amongst other things, three particular issues: attitude, validity and practicality. One of the first issues to be tackled when considering using ethnographic techniques in an IS context is the attitude of the computing profession to sociological methods. Qualitative methods are often considered 'soft' by those working in a design environment steeped in traditional scientific methods (Mantovani, 1996). But such questions are not exclusive to what has been called design ethnography. Anthropologists and sociologists have been dealing with them for years, as, of course, have human factors specialists. One way of addressing the attitude problem is to ensure that the work is undertaken in a rigorous manner, and that the fieldworker engages in a constant process of reflection about their activities, findings and biases (Wolcott, 1995). Furthermore, the adoption of rigour and reflection needs to be explicit in the reporting of the study (Harper, 1998b).

A second problem is that of validity. To a culture immersed in experimental protocols and statistical analysis, the 'subjective' techniques of ethnography seem suspect, and the language of ethnography alarmingly intimate. And of course the un-repeatability of the findings, a central theme in establishing the validity of experimental work, seems to render the whole enterprise thoroughly dubious to someone of a positivist frame of mind. A first response to this line of thought is that validity depends on the use of an appropriate method for a given situation (Silverman, 1993). If we accept that information gathering is a complex, socially, culturally and historically-embedded, knowledge rich behaviour, then clearly a cognitivist approach to studying it is not, by itself at any rate, the right method (Pickering & Chater, 1995). It has also been suggested that openness about the theoretical decisions made in the course of an ethnographic study – since ethnographers cannot observe everything implicit and explicit theories must be used to choose what is observed – is an additional means by which the validity of the work might be established (Whyte, 1993). In making explicit our theoretical frameworks and theorising, we are enabled to engage in *critical* reflexive research rather than simply reflexive research (Haraway, 1997).

The third problem we shall consider here is that of practicality - the 'you say potato dilemma'. Ethnographers tend to report their findings in monographs but designers like diagrams with as little text as possible. Ethnographers, although reluctant to say exactly how long one ought to spend in the field (Wolcott, 1995), like to spend considerable time there,

whereas designers generally want to (or have to, design being a pragmatic as well as a creative endeavour) get down to the nitty gritty of building things as soon as possible. Additionally ethnographies are almost always conducted in limited field settings from which it is difficult to warrant any generalisable conclusions. However, appealing to theory (Sanjek, 1990) and the anticipation of a larger corpus of studies upon which meta-analyses might be conducted in the search for more generalisable principles (Harvey & Mysers, 1995) have both been suggested as possible solutions to this dilemma.

A number of other possible solutions to these problems have been suggested from within the design community itself. Some have advocated a 'quick and dirty' approach to ethnography, wherein matters such as length of time in the field are glossed over (Blythin, Rouncefield, & Hughes, 1997; Hughes, King, Rodden, & Anderson, 1995). Others have suggested approaches to the analysis of ethnographic data which emphasise the importance of reducing wordy field reports to sets of statements which can be fed into the design process (Lewis et al., 1996). Nevertheless many of these issues are often ignored in the literature. Curiously, published accounts of ethnographic studies rarely discuss the theoretical underpinnings of the work or report the conduct of the study in any detail (Harper, 1998a), which as we saw above have been regarded as two key methods for establishing validity.

The difficulties are compounded by the range of ways in which ethnography might be used within a design context; from requirements gathering tied to a particular project to a kind of high-level, 'in-and-of-itself-interesting' approach. Clearly addressing these questions requires an ongoing dialogue between designers and ethnographers. As we have seen, many of these issues have been addressed within the terms of reference of ethnography and sociology, but addressing them within a design context may require radically different solutions. For examples of how to stimulate and maintain such a dialogue we can look to the experiences of institutions such as Lancaster University and Xerox, where ethnographers, sociologists and designers have been engaged in long term joint projects (cf. (Button & Harper, 1996; Dourish, Bellotti, Mackay, & Ma, 1993). Their experiences have led to a valuable body of work on both the practice and philosophy of incorporating ethnography (ethnomethodologically-informed ethnography in particular) into design.

### **1.6.5 Theory and Ethnography: Picking up Rocks**

Despite the saying, attributed by Michael Agar to William James, that "you can't pick up rocks in a field without a theory" (cited in (Wolcott, 1995), the relationship between theory and ethnography is as complex and occasionally heated as that between systems design and

theory. In an excellent presentation of the 'case for theory, with extreme caution', (Wolcott, 1995) suggests that while a theoretical orientation can mean many things, and is by no means necessary to the production of ethnography, it does have a number of advantages and that ultimately an atheoretical ethnography is simply not possible. He argues that theory can help 'anchor' the descriptive work of ethnography, which might otherwise prove endless. He suggests that theory can provide assistance in efforts to generalise by providing a way of linking one's research efforts with those of others. He also suggests that theory can provide a critical perspective by calling attention to problems previously identified as requiring further attention. Nevertheless, he cautions that theory can all too easily overwhelm fieldworkers, the lens of social theory becoming a blindfold. He also notes that the details of the *actual* role of theory in fieldwork are often obscured by the conventions of ethnographic writing. Explications of theoretical frameworks are typically presented in the opening parts of an account rather than in a manner which would reflect when they actually 'came into play'.

For others, theory plays a less problematic role in ethnography. Robert Layton proposes that since we will inevitably notice some things and not others, the Realist quest for complete description is "impossible without some theory to guide our choice of events to describe, and the style by which we represent those events" (Layton, 1997). Whether general or situated, ethnographers cannot avoid theorising about social life. Theory then is a tool, without which the ethnographic task would be impossible. Often discussions of theory in relation to ethnography go hand in hand with discussion about the relative merits of a systematic, theory-directed approach to fieldwork. The key is perceived as maintaining a balance between the freedom to intuit, which Wolcott holds so highly, and the need for 'theoretical scaffolding'.

### **1.6.6 The Case for Theoretical 'Scaffolding'<sup>18</sup>?**

A theoretical framework, however formal or informal, is by no means a pre-requisite for ethnographic study (Wolcott, 1995). But 'top-down' theoretical frameworks can play a role in ethnography, e.g. (Moore, 1996), just as ethnography has been pressed into the service of exploring theoretical frameworks, e.g. (Bourdieu, 1977). This particular study was conducted within a scaffold of theoretical concepts drawn from a range of sources: CHAT, reflexive sociology, and Goffman's social interaction studies. Since the study need not have

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<sup>18</sup> The scaffold metaphor has also been used in the field of child development in relation to 'joint involvement episodes' between adult and child (Schaffer, 1996).

been conducted within this, or any, framework we must ask ourselves the following questions; why any scaffolding and why this scaffolding?

To the first question there are two principle replies. First, this is an applied ethnographic study – it was conducted for reasons over and above simply understanding some culture. The study has a pragmatic context, a concern with the way information technology (IT) for gathering information might be designed in the future. However, that it is not to say that the study is some form of *requirements gathering* exercise; there was no particular system in mind.

The second reply is a far more personal one. As an individual I am drawn to theory; I find it a useful ‘tool for thinking’. Without some orienting concepts with which to start, and against which to pit my field experiences, I would have felt ‘lost’. Furthermore, the scaffolding was not just there to brace my ‘thinking’ in some internalised way, but my doing. Choices about where to look, what books and journals to review, who to talk to, when to visit, were all constrained to some extent by my scaffolding. And of course constraints are no bad thing when the newsroom is, almost, one’s oyster. Ultimately though, whether or not one chooses to use theoretical scaffolding in this way is also a matter of personal taste (Wolcott, 1995). To the second question, why this particular framework, we might remember that the ‘turn to the social’ that has been witnessed in computing has in part been a response to the weaknesses of mechanistic accounts of human behaviour as the basis for design. Frameworks like CHAT provide a way of theorising the field that allows for the creative involvement of individuals in constructing their lives.

Given all this, though, it should not be forgotten that “Scaffolds, after all, are to build things with and should be erected with an eye to taking them down.” (Goffman, 1990) p.246. The particular scaffolding I have chosen has opened up some areas and obscured others. As with all research, this thesis presents very much a ‘view from somewhere’ and as such is open to charges of bias in what is and is not presented. However, I have been careful to describe my somewhere. The scaffolding is obvious for all too see, and tear down should they so desire. And of course scaffolding is by no means a monolithic structure, it is by definition impermanent. Whilst CHAT played an important sense-making role in the study, it was by no means the only such resource I used. The concept of bricolage is useful here. Levi-Strauss introduced the term to refer to the way in which people make use of a range of the things at hand to achieve a particular end (Orr, 1996). My emphasis on the use of CHAT might have given the impression that this is an activity theoretical study. I would characterise it rather as an ‘CHAT-oriented ethnography’, in the manner of (Crabtree,

Nichols, O'Brien, Rouncefield, & Twidale, 1998). In addition, CHAT represents not so much a strong theoretical framework, as a collection of often still contested approaches to action, which share a common heritage (Axel, 1997). Consequently, in keeping with the spirit of bricolage, I have adopted a wide range of sense making tools in this study; from cultural psychology, from anthropology and from sociology. CHAT's role might best be characterised as the anchor around which this 'tinkering' could be tethered.

## **1.7 A Brief Introduction to CHAT**

This section presents a brief and by no means complete introduction to the history and key issues of CHAT, as they have informed this study<sup>19</sup>. Since my concern was specifically with information gathering and the design of future information gathering tools many key issues and debates have been glossed over or ignored completely. The references cited can fill in the gaps and missing pieces for the interested reader.

Cultural-historical activity theory is based primarily on the works of Vygotsky and Leontiev<sup>20</sup>, but has its roots in the philosophy of Kant and Hegel and the writing of Marx and Engels (Kuutti, 1996). The central thrust of CHAT is the study of human behaviour on both the individual and social levels (Nardi, 1996c), and its method is rooted in developmental as opposed to experimental psychology (Vygotsky, 1978), and in Marxist philosophy. This section begins with a discussion of the historical context and development of CHAT. The main principles of CHAT, at least in so far as are commonly accepted, are discussed through considering each of the term's constituent parts; Culture, History, Activity and Theory. Next, the uses of CHAT within systems design contexts is considered before ending with a discussion of some of the outstanding problems and limitations of CHAT.

### **1.7.1 Historical Development**

The label 'CHAT' is used throughout the thesis as a convenience only. As is often pointed out, there is no 'theory' as such, rather cultural historical activity theory is a collection of theoretical approaches to the study of the 'higher psychological functions' . Furthermore, it should be remarked that the use of the phrase CHAT in this thesis is an explicit choice. It is being used to refer to several schools of thought within various formal and informal research

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<sup>19</sup> Following Wolcott's advice, more detailed reflection on CHAT conceptual resources will be reserved for the appropriate point in the ethnographic narrative.

<sup>20</sup> Other spellings often seen in the literature include Leont'ev and Leontjev.



communities drawing inspiration from Vygotsky and Leontiev; activity theory, cultural psychology, the cultural-historical approach and the socio-cultural approach. Although there are subtle and not so subtle differences between these various schools of thought all share the same basic philosophical premise; that human consciousness is formed through social practice. The cultural-historical aspects of CHAT derive largely from Vygotsky's concern with tool use and development as a social and cultural-historical process. From Leontiev comes the activity theory part; the concept of activity as a hierarchical, collective process (Hedegaard, Chaiklin, & Jensen, 1999).

In its broadest sense, CHAT encompasses ideas from psychology, philosophy, sociology and anthropology, and from researchers from many parts of the world. In terms of social theory we might think of CHAT as occupying, in part at least, similar ground to Pragmatism, G. H. Mead, Goffman and the interactionists (Holzman, 1996). More recently the work of Bourdieu and Giddens resonates with that of the CHAT community (Cole, 1996). What unites these various schools of thought is a common desire to overcome the subject/object divide that is held to characterise the inheritors of Enlightenment thinking (May, 1996). As Cole has contended, the drive behind the Russian cultural-historical school of psychology, which he refers to as cultural psychology and from which CHAT grew, was to re-unite the study of mind and culture after the Enlightenment split. This split, he argues, led to the establishment of psychology as a discipline primarily concerned with the internal functioning of the mind and anthropology, history and sociology as the disciplines concerned with culture (Cole, 1996).

### **1.7.2 Background: Historical and Dialectical Materialism**

Historical and dialectical materialism forms the foundation of Soviet philosophy and has its roots in the work of Hegel and, later, Engels and Marx. In an attempt to develop on what he characterised as the mechanical form of materialism, in which explanations about the origins of the physical world were used to explain human, social life, Marx developed the concept of historical materialism. According to this view a proper theory of society needs to be based on an understanding of the historical development of human activity (Williams, 1983).

Dialectics in classical literature referred to approaches to and/or methods of thinking and arguing, later developed by Hegel into the notion that life is the result of the process of action, reaction and integration (Reber, 1995). It was Engels who introduced the concept to Marxist thinking (Williams, 1983), where it came to refer to the unification of opposites, as

is expressed in three dialectical principles (Bakhurst, 1991): the interconnectedness of things, the constancy of change and development, and development as the result of the resolution of contradictions inherent in all things. From these three principles, three dialectical laws were derived: The law of the transformation of quantity into quality, the law of the unity and struggle of opposites (the internal contradictions of all phenomena and processes, the struggle and resolution of which constitutes development), and the law of the negation of negation (development is the process of the negation of one stage by the next but dialectical negation means that part of the earlier stage, its progressive content, is preserved in later stages).

Inheritors of the Enlightenment project and Cartesian thinking, often disparagingly referred to as ‘positivists’, envisioned the nature of the world as the relation between logically independent selves and an external, material, world (Bakhurst, 1991). Objects of enquiry become split between phenomena of the world and phenomena of the mind. In this way psychology became divorced from the other sciences (Cole, 1996). Therefore ‘anthropocentric’ properties of things, such as values or aesthetic qualities, are of the mind and not of the world (Ilyenkov, 1977) according to the ‘positivist’ tradition. Vygotsky, Ilyenkov and others in the CHAT tradition sought to challenge the Enlightenment’s Cartesian view of this relationship<sup>21</sup>, and consequently also challenged the methodological foundations of empirical science. Dialectical materialism rests on the fundamental assumption that the material world exists prior to thought, thought cannot exist independently of matter<sup>22</sup>. In other words dialectical materialism does not allow for the ‘logical independence’ of the mind from the world. If we accept that all non-material properties result from the material world, it follows that consciousness is determined<sup>23</sup> by the material conditions of existence.

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<sup>21</sup> Whilst we are here referring to a particular, Soviet, tradition of anti-Enlightenment thinking it is interesting to note that similar moves have been inherited in the West, often inspired by Wittgenstein and in particular his *Philosophical Investigations* (May, 1996).

<sup>22</sup> Lenin defined matter as that which exists independent of thinking subjects and is available to them through the senses (Bakhurst, 1997).

<sup>23</sup> Murdock and Golding (discussing accusations that Marx was an economic determinist) assert that Marx’s use of the terms conditioning and determining has been oversimplified, and that an alternative reading of the terms would be more in the sense of ‘general limits’ and that “*within these limits he allowed a good deal of room for intellectual autonomy and innovation*”, (Murdock & Golding, 1977) p.16.

So, we can only understand the mind with reference to the interaction with the material world that produces the contents of the mind:

*The production of ideas, of conceptions, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life. (...) Life is not determined by consciousness, but consciousness by life.*

*(Marx & Engels, 1974) p.47*

On our ability to ‘know’ the world, Lenin proposed that whilst objective truth is possible in principle, since our knowledge of the world is an accurate reflection of it, in practice our knowledge of the world can only ever be partial (we cannot ‘know everything’) and our knowledge can only ever be relatively true (Bakhurst, 1991). In other words, we view the world from a particular social, cultural and historical position.

### 1.7.3 Interpreting CHAT

(Bakhurst, 1996), who has studied at length a number of Soviet philosophers and psychologists<sup>24</sup>, contends that whilst interpreting CHAT is a challenge for Westerners (largely because of the political context of the USSR) a number of basic points can be made relatively un-controversially. Vygotsky, who figured in the Soviet psychological scene for a mere ten years (1924-1934) before dying of tuberculosis, was concerned to establish a psychology that could adequately explain consciousness; something the various schools of his time had all failed to do. In particular Vygotsky worked against the prevailing ‘stimulus-response’ orthodoxy, proposing a distinction between lower and higher mental functions; the former being simply the result of the physical structure of an organism and its subsequent physical development, the latter being, as a system, human consciousness itself. Crudely put, children are born equipped only with lower mental functions, and it is only through engaging in external practices in the social world that the child acquires (internalises) the higher mental functions. In this way the social world can be said to embody human consciousness. Vygotsky then went on to expand on the role of signs and tools in mediating psychological activity, a move which allowed him to account for the bi-directional nature of human action; through the creation and use of tools we affect our environment as well as being affected by it. Vygotsky distinguished between two kinds of mediation; by psychological tools (signs and symbols, the most important being speech) and by technical tools (Minick, 1996). Psychological tools are oriented towards control of

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<sup>24</sup> And importantly, has done so in the original Russian – texts available in translation are limited in number and suffer all the usual translation problems.

oneself whereas technical tools are oriented towards control of the external world. However we must not fall into the trap of assuming that psychological tools are internal/cognitive and technical tools material. Vygotsky regarded all tools as having both material and ideal aspects (Cole, 1996). Hence an apparently material (or technical) tool like a handkerchief with a knot in it, to use one of Vygotsky's favourite examples, is in fact a psychological tool – it is oriented towards controlling our memory by reminding us of something.

#### 1.7.4 Analytical Resources in CHAT

##### **Culture**

The problems of finding a definition of context have already been discussed. Context is often closely allied to another notoriously slippery term; culture. Within the psychology, social theory and anthropology literatures definitions of culture (like context) fall into two broad camps; culture as system or culture as process. Views of culture as a system are prominent in anthropology, *“the dominant definitions in anthropology still seem to define culture as a Gestalt, as organic and unique, as a way of life”* (Moore, 1996) p.80. Geertz, for example, has defined culture as:

*An historically transmitted pattern of meaning embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate and develop their knowledge about and attitudes toward life.*

*(Geertz, 1993) p.89*

‘Culture as process’ views (amongst which can be counted CHAT), use a number of metaphors. One view highlights the developmental aspect of culture by using the metaphor of a garden:

*(...) the garden metaphor naturally links us to ecological thinking by reminding us that we must be concerned not only with the systems of interactions within in a particular setting, but also the way the internal system is related to the “next higher level of context.”*

*(Cole, 1996) p.143-144*

For others, the idea of culture as a kind of shared guidebook is appealing:

*Culture is not simply a cognitive map that people acquire, in whole or in part, more or less accurately, and then learn to read. People are not just map-readers; they are map-makers. People are cast out into the imperfectly charted, continually shifting seas of everyday life. Mapping them out is a constant process resulting not in an individual cognitive map, but in a whole chart case of rough, improvised, continually revised sketch maps. Culture does not provide a cognitive map, but rather a set of principles for*

*map-making and navigation. Different cultures are like different schools of navigation designed to cope with different terrain's and seas.*  
(Frake, 1997) p.44-45

But the view of culture as process is perhaps most clearly expressed by Edwin Hutchins, who is identified with the distributed cognition approach to psychology (an approach which bears many similarities to CHAT):

*Culture is a process, and the "things" that appear on list-like definitions of culture are residua of the process. Culture is an adaptive process that accumulates partial solutions to frequently encountered problems.*

(Hutchins, 1995) p.354

From this idea of 'culture as process' we can distil a number of the fundamental concepts found in CHAT; culture as a historical and developmental process, artefacts as the residua of culture, and hence artefacts as embodiments of practice.

## History

*To study something historically means to study it in the process of change; that is the dialectical method's basic demand. To encompass in research the process of a given thing's development in all its phases and changes – from birth to death – fundamentally means to discover its nature, its essence, for "it is only in movement that a body shows what it is".*

(Vygotsky, 1978) p.64-65

The importance of history in Vygotsky's work is evidenced by the name given the branch of psychology he founded – cultural historical psychology. The principle of historicity within CHAT dictates that analyses must include "*concrete historical analysis of the activities under investigation.*" (Engeström, 1999a) p.25. Historical analysis in CHAT is not a matter of dryly recounting 'historical facts' but of understanding historical development. However Vygotsky was less helpful when it came to guidance on just how we should do this (Holzman, 1996). One suggestion is that Vygotsky's use of history was insufficiently developed; for example he viewed historical development as a universal and so could not account for different rates of change in different societies (Scribner, 1985). In fact history is usually markedly absent from most CHAT analyses (Engeström, 1999a), a study of the development of writing and numerical concepts in Sumeria being a notable exception (Nicolopoulou, 1997). Nevertheless, the principle demands that we attempt extend context to include the past.

### Activity and Artefacts

CHAT as it is most often found in the HCI literature adopts *activity* as its primary *unit of analysis*<sup>25</sup>. Within Marxist thinking the concept of ‘practical, object-oriented, sensuous activity’ is a key philosophical resource. Marx and Engels criticised non-dialectical materialism for its failure to recognise that reality was not the product of contemplation but of human activity; “*Life is not determined by consciousness, but consciousness by life.*” (Marx & Engels, 1974) p.47. It follows from this that consciousness is in the first instance determined by the practical conditions into which humans are born, the context of our practical activity. However Marx and Engels were no crude determinists, they recognised that the forces of historical development both shaped and were shaped by the conditions of existence; “... *in it (history) at each stage there is found a material result: a sum of productive forces, an historically created relation of individuals to nature and to one another (...)* It shows that circumstances make men just as much as men make circumstances.” (*ibid.*) p.59.

Activity theorists, recognising the importance of human activity, took on the theoretical development of the notion. Leontiev in particular developed the notion of the activity hierarchy, whereby activities are composed of actions, which are in turn composed of operations (Engeström, 1999b). An activity<sup>26</sup> is usually undertaken by collaborating individuals, and is oriented towards some objectified motive. For example, a production team (the subjects) work together to create a film (the object) because they are being paid to do so (motive) leading to some outcome (for example an award, further work, etc). The relationship between subjects and objects is not a direct one, rather it is mediated by artefacts. In our cinematic example mediating artefacts might include cameras, lights, the rules of film grammar or the conventions of a particular genre, etc. As we can see in this example, artefacts within CHAT are not restricted to the physical domain – to what we might conventionally think of as ‘tools’. Anything that mediates an activity is an artefact. Actions are consciously carried out by individuals and have a goal. So for example the cameraperson will pan the camera slowly along a wall in order to film a scene in which the star runs alongside the wall. The goal might be to get the shot ‘in the can’, although as (Kaptelinin, 1996b) points out goals do not *explain* actions as they are often only explicitly attached to actions after the fact. Actions can also be polymotivated, that is that the same action can be undertaken within the context of more than one activity (Cole, 1996). In our

<sup>25</sup> The unit of analysis is a core Vygotskian concept; studying the unit of analysis of a particular theory was thought by Vygotsky to be an essential stage in understanding the theory itself (Zinchenko, 1985).

<sup>26</sup> An interesting account of the development of the concept ‘activity’ in Western philosophical and scientific thinking can be found in (Lektorsky, 1999).

example the cameraperson might also have a trainee working with them that is being introduced to panning. The action the cameraperson undertakes would therefore be motivated both by the need to make the film because they are being paid, and the need to teach the trainee.

Since CHAT takes activity, and not action, as the minimal unit of analysis, one must look beyond the acting individual to understand the acting individual. The cameraperson's actions cannot be understood without reference, for example, to the star's actions. We must also consider the history of the activity and not just isolated moments in its development. So for example the actions of the cameraperson and star are related to the previous actions of the director, who decided where the star should run and from where the cameraperson should film. Actions in turn consist of operations, which are unconscious and are oriented to the conditions in which they are undertaken. So an experienced cameraperson will not need to think consciously about using their arm to pull the camera around on its tripod, one of the operations required to perform a pan. However, if conditions change unexpectedly, for example because the star has missed a mark they should have hit, the operation will become a conscious action as the cameraperson attempts to compensate and keep the pan going. This example demonstrates why activity must be the smallest unit of analysis – without understanding the star's actions and operations the breakdown and repair of the pan by the cameraperson makes no sense.

CHAT is rooted in the idea that all activity is mediated by artefacts and that all artefacts have both material and conceptual aspects (Bakhurst, 1997). To illustrate, whilst in common-sense terms we might regard a pencil as a material tool, its material/physical aspects are not its entire nature. A lump of wood with some lead through the middle is only a pencil if certain ideal properties, or significance's (Wertsch, del Rio, & Alvarez, 1995) are attached to it. In other words we cannot understand how a pencil mediates the activity of writing through considering its material properties in isolation. Furthermore, "sociocultural context shapes the selection of cultural tools" (Wertsch et al., 1995) p.26. Therefore in order to understand *how* an artefact mediates *action* we must understand both its physical and its conceptual properties, which in turn reflect a certain historical development. And in order to understand *why* a particular artefact is used to mediate one action rather than another we have to represent the higher level activity context of the *activity* in question (the activity, in its turn, being the context of the actions in question). What is emphasised is that we cannot usefully separate out artefacts and practice. Various attempts have been made to develop the theory of artefacts. For example, (Engeström, 1999b) p.381-382 suggests four types of artefacts can be distinguished:

- *what* artefacts – allow us to create and describe objects
- *how* artefacts – are used to guide our progress towards objects
- *why* artefacts – help us understand objects
- *where to* artefacts – allow us to imagine possible futures for our objects

And (Wartofsky, 1979) has distinguished primary from secondary artefacts (primary artefacts are used in production and secondary artefacts are used to stabilise and transmit practice).

### Theory

*(...) the theoretical analysis of empirical facts always naturally coincides with critical analysis of concepts, with creative development of the available, historically established categories, and that novel theoretical conception of facts (a new system of categories) never emerges out of nowhere, never 'straight from the facts', as positivists and vulgar scientists would have us believe*

*(Ilyenkov, 1982) p.202*

It is perhaps a little ironic that the term theory finds its way into CHAT, since Vygotsky treated with the utmost suspicion any attempt at building 'grand' theoretical positions (Stetsenko, 1999). The use of the term theory is also problematic because of the huge amount of debate that still rages within the various CHAT schools of thought<sup>27</sup>. In part this is a problem of the interpretation of materials originally developed within the very particular context of Soviet Russia. In part this is a problem of the very success of CHAT pioneers like Vygotsky, Leontiev and Ilyenkov. Their works have influenced a great variety of researchers in many disciplines and countries, e.g. developmental psychologists (Alvarez & del Rio, 1999), social scientists (Turner, 1999), and anthropologists (Daniels, 1996), Although I have attempted to synthesise some of the broad features of CHAT, my interpretation is by no means definitive – it simply reflects my understanding of the most relevant issues and concerns for this study.

### 1.7.5 Limitations and Unresolved Problems of CHAT

Like all theoretical traditions, CHAT has its weaknesses and blindspots. Many of these can be traced to the twin problems of a) developing theory in Stalinist Russia and b) problems of

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<sup>27</sup> A useful overviews of these debates can be found in (Engeström, 1999a).



interpretation for Westerners unaware of the context of CHAT's development. Furthermore, CHAT is very much a living theoretical framework and controversy and debate still surrounds many core concepts. This section touches upon some of the limitations and unresolved problems of CHAT most relevant to the study.

Vygotsky died in the Soviet Union in 1934, and during the last years of his life had seen his work come under fire for its alleged anti-Marxist tendencies. These Stalin-inspired attacks had by then led some of his students and followers to move from Moscow to Kharkov. Amongst them was Alexei Leontiev, who was in time to become regarded as the main inheritor and interpreter of Vygotsky's work (Kozulin, 1996). Daniels (1996) notes that Kharkovian theoretical positions were far more in tune with the pragmatic character of the time. The suggestion that cognitive processes mirrored practical activity gave activity theorists a position from which they could offer the State a practical theoretical tool; if cognition mirrors activity then collective activity should give rise to collectivist consciousness. The next generation of revolutionaries could be secured through the encouragement of appropriate forms of activity. Consequently, the role of semiotic mediation in Vygotsky's work was to be sidelined in favour of activity until the change of political climate in the Soviet Union that began in the 1950s (Bakhurst, 1991). Since it is the Leontiev-inspired CHAT tradition of 'activity theory' which has in the main been adopted within design communities, communicative activity has tended to be subsumed under instrumental activity. For Leontiev communication was simply an aspect of coordinating instrumental activity, an issue that is particularly important in the context of the growing body of CSCW work which addresses the mediation of communication by computer, e.g. (Bannon & Bødker, 1997). One particular problem with the Kharkovian interpretation of Vygotsky's work is that it suffered from the failure to engage at either a theoretical or methodological level with the implications of the observer's role in defining activities in the first place:

*The unequivocal determination of individual motives is decisive in order to differentiate between an action and an activity and between activities, but it is not possible. Leont'ev's aim is to describe objective activity, but his conception of activity thus easily becomes subjective and relativistic: Activity is what the researcher perceives as motivated.*

(Axel, 1997) p.140

The failure to problematise the issue of how the observer *decides* what is an activity has been attributed to Kharkovian CHAT's practical orientation, which led to a tendency to interpret observations in formalist terms (Kaptelinin, 1996b). Although the problem has been recognised, I have been unable to find any work which has explicitly addressed the

methodological problem of identifying motives (and activities). However this is not a confession that all CHAT analyses are crudely relativistic. CHAT methodological practice lies between a free-for-all apportioning of motive on the part of the researcher and the impossible ‘un-equivocal determination’ Axel teases us with since “...*science and objective theory are as praxically grounded as are moral and political matters. It is not, therefore, for Marx, a question of applying true theory to the actual world; it is rather that whatever we construe as the objective order of nature is itself formed through the formative resources of praxical thinking.*” (Margolis, 1989) p.372. It could be argued that since CHAT recognises that objects are only constituted through activity, it would follow that the activity of research would contribute to the historical development of the object of the part of the research concerned with identifying activities (i.e. the motives of the Other). Since researchers, as the rest of humanity, can only come to know from a position of partiality there can be no ‘un-equivocal determination’.

Leontiev’s development of Vygotsky’s work, on the other hand, has been criticised for over-emphasis on individual rather than collective activity (Lektorsky, 1999), although collective activity is now the focus of much work in the information systems area, e.g. (Bardram, 1998) and recent attempts have been made to extend CHAT conceptualisations of collective activity. For example, the canonical activity model is a triangle (Figure 1.1):

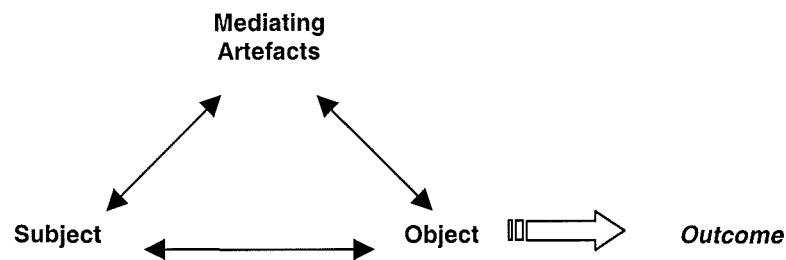


Figure 1.1: Vygotsky's Model of Action

But there is a problem with the adoption of the triangle. It was derived from Vygotsky's extension of the stimulus-response model to account for sign and tool mediation of *action* not *activity* and so really only refers to an individual subject, and of course activity is by definition a social phenomenon. In an attempt to overcome this Engeström, drawing on Leontiev's extension of Vygotsky work on action, extended the model (see Figure 1.2) to incorporate the notion of community of practice, 'rules' (practice) and the division of labour (Engeström, Brown, Christopher, & Gregory, 1997).

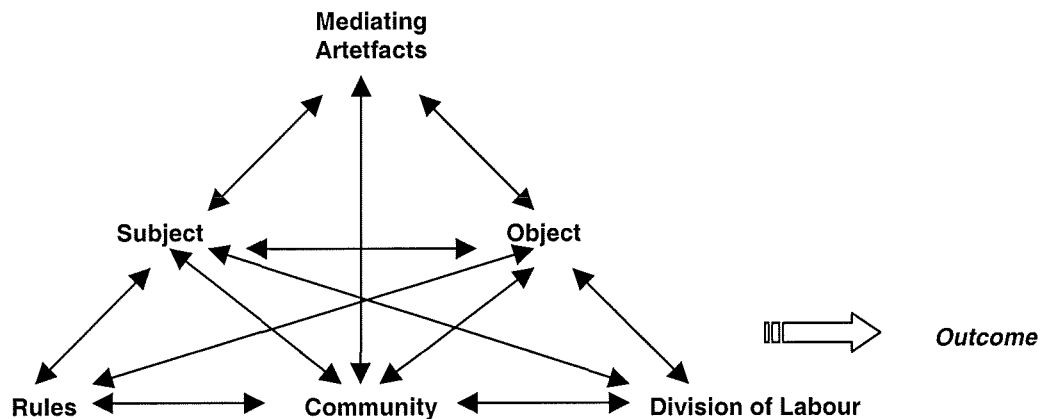


Figure 1.2: The Extended Activity Triangle

However the problem with the extended triangle is that the role of 'subject' is an uneasy one. Activities are (usually) the domain of multiple subjects, and of course where there are multiple subjects there are likely to be co-ordination, power and control issues which this model struggles to capture (let alone the network of relationships between multiple acting subjects and the other nodes of the model).

### 1.7.6 The Dangers of the Routine: What Does CHAT Buy You?

*It seems a general rule that what was once a daring intellectual adventure turns into the thoughtless repetitiveness of routine.*

*(Bauman, 1999) p.ix*

As we shall see later, the richness of CHAT is one of the barriers to its more widespread adoption by IS professionals and researchers. In the face of this, the temptation is to take existing conceptualisations of activity structure and apply them relatively unthinkingly to empirical data, (Engeström, 1999b). Indeed the use of tools intended to make CHAT more accessible, such as the Activity Checklist (see Chapter 3), could in fact facilitate just such a

situation, "... *the reduction of methodology to recipe method*" (Dervin, 1997) p.24. Armed with a neat set of questions the ethnographer, or analyst or designer, sets off looking for activities/actions/operations, which of course they will inevitably find since they themselves will (co-)constitute them through the act of naming them (Bourdieu, 1977).

In a review of a collection of papers demonstrating the value of various forms of social theory (CHAT amongst them) for work practice studies Rogers pointed out that it often seemed as if the ethnographic work simply existed to provide examples of this or that point from the theory (Rogers, 1997). This led her to wonder what, if anything, such work might add to the *development* of theory. I shall return to this question in the final chapter, but for now it should be pointed out that the spirit of the new still seems to infect CHAT influenced researchers. For example, Engeström's studies of organisations have significantly contributed to the development of the CHAT concept of activity through his extended version of the activity triangle model (Engeström & Escalante, 1996), and broadened out empirical and theoretical work on learning to include adults as well as children (Engeström, 1999b).

To summarise then, CHAT oriented analyses must take place on two levels: activity and mediational means (Tulviste, 1999). In the CHAT conceptualisation we do not engage in activities, but constitute and are constituted by them – activity is the fundamental unit of analysis of life processes (Fichtner, 1999). Where CHAT differs substantially from the other 'practice' or action oriented approaches is in the focus on change and development. Activity *is* change from a CHAT perspective (Tobach, 1999). As Button & Dourish (1996) commented with respect to ethnomethodology, there is a paradox in the incorporation of an approach so focussed on the details of *existing* social action, when the process of design itself changes those very details, through the introduction of new artefacts and practices. CHAT on the other hand grew out of a specific concern, originating in dialectical materialism, with processes of development and change in social life. The concern is not just with the details of work practices, but also with the details of the development of those practices (Nardi, 1996b). One of the potential benefits of CHAT is that it, partially at least, explicitly addresses the paradox that Button and Dourish presented us with.

## **1.8 Methods and Data**

### **1.8.1 Methods Used**

So having finally arrived at the methodological implications of the particular research approach adopted (ethnographic enquiry from a CHAT perspective), it is time now to

describe the practical details of following it. The principle body of data used in this study was gathered during fieldwork at The Scotsman newspaper which spanned just over one year (1997-99), and during which time in total some 47 days of participant observation was undertaken. Notes from observations were recorded in notebooks, usually at the time<sup>28</sup> of the observation. These notes were typed up and expanded at home, generally the same or the next day. These edited fieldnotes formed the heart of my data. I also kept a research diary, recording miscellaneous observations about, and reflections on, my experiences – although as time progressed distinctions between research diary and fieldnotes became blurred, the ostensive property of one often creeping into the other.

In addition to the numerous conversations I had during my participant observation visits I also conducted 42 mostly audio taped interviews with Scotsman staff. Interviews were in the main unstructured in a formal sense, although I typically would have a number of key questions I wanted to start with, or broad lines of enquiry I was interested in. They were usually around 35-45 minutes in duration, although some extended to well over an hour, and were typically conducted either at the informants' desks or in the workplace cafeteria, or one of the nearby cafes or pubs frequented by Scotsman staff. Interviewees were identified either through existing informants suggesting useful people to talk to, through personal contact built up during participant observations, and occasionally through reading the paper and identifying particular journalists. Taped interviews were transcribed using a simple notation (see Table 1.1) and the notes from unrecorded interviews typed up and edited in the same way as other fieldnotes. Supplementary information from informants was also gathered via email and telephone.

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<sup>28</sup> The journalistic environment made it relatively easy to take notes during observation visits (although the teasing that resulted from an early use of a clipboard quickly prompted a shift to the more familiar reporter's notebook). Nevertheless there were occasions when for reasons of discretion it was more appropriate to make notes as soon as possible after an event (nothing makes one feel quite so much like a 'real ethnographer' as sitting in a toilet hastily scribbling fieldnotes).

<i>Interview Notation</i>		<i>Fieldnote Notation</i>	
<i>?</i>	<i>Question asking intonation</i>	<i>(...)</i>	<i>Moved from one section of fieldnote to another</i>
<i>(xxx)</i>	<i>Transcriber's comment</i>	<i>'xxx'</i>	<i>Reported speech</i>
<i>(...)</i>	<i>Moved from one section of tape to another</i>		
<i>,</i>	<i>Short pause</i>		
<i>-</i>	<i>Long pause</i>		
<i>((xx))</i>	<i>Unclear section – any wording in brackets represents a guess at the word(s)</i>		

Table 1.1: Interview/Fieldnote Extracts Notation

Extensive desk research was carried out. The desk research was structured around three main sets of concerns:

1. What is the history of information gathering practice/mediational means in the United Kingdom newspaper industry?
2. What is the history of The Scotsman as an institution and also as a consumer of information technologies?
3. What is the cultural image of journalists – both in society at large and within the profession?

A key element of this desk research was surveying what journalists themselves have said about the various themes of the study in books (fictional and non-fictional), newspaper articles and TV programmes. I also gathered around 4500 library enquiry forms (filled in by librarians as they took enquiries from journalists) which were logged and analysed.

In addition to the main study I interviewed 2 ex-journalists who had become journalist educators. Prior to the main Scotsman study I conducted a short term (9 days and 8 interviews with members of staff) field study at a small health promotion project in Edinburgh, Get Healthy<sup>29</sup>, in order to acquire some basic fieldworking skills and to try and

<sup>29</sup> The name of the organisation has been changed by request.

flesh out my understanding of what information seeking (as I then thought of it) might mean in real-world contexts.

### **1.8.2 Presentation of Data and Confidentiality**

Where extracts from the data are presented in the body of the thesis, they are labelled either 'fieldnote' or 'interview'. Interview extracts are from audio-taped interviews and use the transcription notation detailed in Table 1.1 above. Fieldnote extracts occasionally contain reported speech, which is indicated with single quotes. Whilst I had to secure permission from individual journalists to observe them, the nature of an open plan office meant that not everyone within my field of vision was always aware of who I was and what I was doing there. Indeed as time progressed and I became a more familiar figure in an environment that was used to a high staff turnover it may have been that some people assumed I worked for The Scotsman. It is standard ethnographic practice to change the names of all individuals referenced, but I have also changed department, gender and story details for instances where I felt that those being observed would have been unaware of my intentions.

### **1.8.3 Key Questions**

Behind all work practice studies is a commitment to the notion that as ethnographers, designers, or information scientists, our discourses about certain phenomena may or may not coincide with those of other communities of practice. As I hope to show in this thesis, concepts like information gathering may mean hugely different things to different communities of practice. In order to design artefacts for information work it is important that designers understand the different discourses and the implications of these differences, which is why work practice studies have an important role to play. I therefore endeavoured to approach the field with an open mind about what information gathering might mean in the newsroom, and developed an initial set of concerns which I hoped would help me stay open-minded. These questions were oriented around the two levels of CHAT analysis; activity and artefact mediation:

1. Where in space/time is information gathered and why (what are the information needs)?
2. How does information gathering relate to the broader activities within The Scotsman?
3. Who does the gathering?
4. Where is information gathered from?
5. What are the artefacts of information gathering?
6. Do my conceptualisations of information, and information gathering, bear any resemblance to my informant's conceptualisations?

## 1.9 Organisation of the Thesis

Chapter 1 has set the scene for the story to come. The ways in which stories about journalism practice can contribute to the design of information gathering systems has been examined (although consideration of how generalisable such stories are is reserved for Chapter 7). The aims, scope, approach and methods used have been outlined and the key questions the thesis seeks to address identified.

Chapter Two starts the process of opening upon the artefact mediation level of the study by examining the stories designers and researchers tell about work and the relationship between these stories and the technological artefacts of information gathering now finding their way into newsrooms around the world. In particular attention is drawn to the strength of cognitivist (individuals engaged in cognitive 'tasks') and information-as-thing concepts in mainstream design research, and this study is located within the small but growing body of work which seeks to extend the focus of researchers and designers 'outside the lab'.

In Chapter 3 data from the desk and field work is drawn upon to introduce the field setting for the study – The Scotsman newspaper. It is noted that during the fieldwork period many changes were being wrought both within the newspaper, within journalism and within the 'information scene' as a whole.

Chapter 4 draws on the CHAT perspective to begin the process of locating information gathering work within the web of activities that constitutes the transforming of information into news. I identify the story lifecycle as central to this network of activities and the organisation of the work, and work spaces, of story lifecycling is described. From this I develop a taxonomy of newsroom information needs. The informant suggested metaphor of the palimpsest (a mediaeval manuscript which was reused such that old layers could often be seen through the new) is used to discuss the particularly complex relationship between journalists and information and news.

Chapter 5 examines the role of the newspaper's library. The chapter begins with a discussion about the history and future of news libraries. The organisation of the library is discussed and the relationship between journalists and librarians examined. The work of Erving Goffman on regions and regional behaviour is then drawn upon to suggest that the drive towards a virtual newspaper library, which has been underway at the paper for a couple of years, ignores the role of the physical library as a 'backstage region'. This



argument is placed within wider arguments about the future of media libraries in the face of the 'threat' of new technology.

Chapter 6 of the thesis introduces the story of the information source. The range of sources available in the newsroom is discussed and the ways in which journalists learn to handle these sources examined. We consider the ways in which new information gathering artefacts are impacting, and being impacted by, practice. The introduction of the Internet is shown to have had less effect on information gathering practices than the utopian promoters of new technology like to suggest primarily because it was conceptualised in source terms more than 'technology' terms by the journalists, and designers of Internet information gathering artefacts have yet to fully encompass notions of source.

The concluding chapter begins with a review of the 'story so far'. I consider the influence of the 'information retrieval' and 'information gathering' metaphors in design practice and suggest that such metaphors promote an objectivist attitude to the activity of finding and acquiring information which is not appropriate for this particular community of practice. It is argued that information sources cannot be understood in some simple, objective, sense. Rather information sources are constructed through the journalists' practice from the array of potential information sources available in their information environment. I also reflect on the use of the CHAT theoretical framework in the study. The chapter concludes with a section on future work, including some preliminary observations on how to move from these reflections to design (from ethnographic to design stories). Three key themes from the fieldwork are considered from a design perspective and the implications of the insights generated are explicated.

The thesis is framed by a prologue and an epilogue in the form of ethnographic vignettes – stories based on observations in the field which illustrate key themes from the study. In particular the use of these vignettes has been adopted to try and overcome a common problem with thesis presentations of ethnographic work – namely that the conventions of academic writing mean that the reader is often some considerable way into the work before first encountering 'the field'. Whilst the 'preamble' material is important since it constitutes the practical activity context (research) within which this work was conducted, I also believe in the importance of the descriptive duties of ethnographic writing. Ultimately, this work begins and ends at *The Scotsman*, and so does this thesis. Besides all the analytical reflection there is (in the language of CHAT) a sensuous world of human, practical, activity here. The prologue and epilogue have been included to draw the reader at least some way into that world. It is hoped that they will introduce a little of the character of life at *The*

Scotsman, and remind us that ultimately this thesis is a story about people and the ways in which (often despite the odds and always despite the deadline) they practically and socially manage to produce a newspaper, day after day.

## **2 Work and Technology**

## **2.1 Introduction**

The aim of this thesis is to contribute to the corpus of stories about how work is done (specifically, information gathering work). Researchers around the world have been slowly building this corpus of stories in the belief that it might help inform the design of technological artefacts in the same way that experimental psychologists have worked for years to build a corpus of laboratory stories for designers.

The chapter begins with a consideration of the kinds of stories information systems designers have told about information gathering. We see that these are very much task and information focussed stories, based in Cartesian ideas about the nature of information. The chapter then moves on to consider more recent work on 'information gathering in context' and relates this to the rise of work practice studies in design circles. Particular attention is paid to work practice studies that have adopted a CHAT perspective. The chapter ends by considering the importance of considering these various research and design traditions. From a CHAT perspective, the work reviewed in this chapter is a very real part of the historical development of the object of this study – newsroom information gathering.

## **2.2 Information Systems Design Research**

Since we are concerning ourselves with the design of future systems for information gathering in journalism, through studying information gathering practices as they currently exist, we must also consider the various research communities which have addressed information gathering and the design of information gathering artefacts. Research into aspects of information gathering can be found across many disciplines, and so widespread now is research into 'information behaviour' in its broadest sense that even delineating these disciplines is difficult. For the purposes of this thesis however I am interested in two broad categories of related work; that which considers information gathering from a theoretical standpoint and that which seeks to design systems for information gathering. As I will show, the former will give us some insight into at least part of the context of the latter.

Information systems design research is currently strongly motivated by the enormous expansion in the size and range of digital information resources and a changing 'user population' as access to these resources is increased. Whereas in a stable, homogeneous database finding relevant items to 'telecommunications' might involve the inputting of a query composed of just a few variations on the term, on the Web such a query is likely to bring back huge numbers of irrelevant items and miss important ones (Berghel, 1997).

Tackling the problems of finding information in these new kinds of information spaces is being undertaken from many angles, for example:

- calls for better standards to control dataset structures (Etzioni, 1996)
- restructuring the Internet (Floridi, 1995)
- building intelligent agents to reflect the variable needs of diverse user groups (Berghel, 1997; Laurel, Oren, & Don, 1990)
- supporting social interaction and collaboration in the information space (Crabtree, Twidale, O'Brien, & Nichols, 1997; Dieberger, 1997; Ehrlich & Cash, 1994; Twidale & Nichols, 1996; Twidale, Nichols, & Paice, 1996)
- supporting collaborative information filtering (Maltz & Ehrlich, 1995; Resnick, Iacovou, Suchak, Bergstrom, & Riedl, 1994; Shardanand & Maes, 1995)
- improving the design of the interface, e.g. through the use of metaphors such as a city (Dieberger, 1994) or a newspaper (Golovchinsky, 1997)
- presenting information in ways other than textual (Jacobs, 1992)

### 2.2.1 Browsing and Searching

Information gathering has often been divided into two categories; browsing and searching. Browsing is perhaps most clearly associated (to the majority of the computer users at any rate) with the Web. Browsing is traditionally defined as the process whereby people move about an information space at will by following links from one node to another (Kim & Hirtle, 1995). But others have viewed browsing as a wider process, distinguished by the fact that the user is moving about in the information space with an ill-defined goal (Marchionini, 1995). The strengths of browsing are said to revolve around the fact that it exploits the human ability to recognise something being sought better than say what it is (Hertzum & Frokjaer, 1996) - although of course it doesn't solve the problem if you don't know what it is you want in the first place. The most commented problem with browsing is, of course, the problem of getting disoriented when following large numbers of links (Kim & Hirtle, 1995).

However some researchers are less happy with an either/or browsing-searching dyad, preferring instead to view information gathering as a dynamic process (Koenemann, 1997) where users adopt a wide variety of strategies. A number of approaches to the idea of 'hybrid' information retrieval systems, which typically incorporate both browsing and querying paradigms (and frequently visualisation of one kind or another), have been proposed. This work is perhaps most visible on the Internet, where most public Internet search engines adopt a very basic version of this hybrid approach, allowing the user to

browse hits found via querying. One browsing paradigm which has generated a great deal of interest is the scatter/gather technique (Rao et al., 1995). Very large collections of text are clustered by the system and the user then gathers groups they are interested in for more information. It has been suggested that the Scatter/Gather technique enables users to develop a better conceptualisation of a text collection, which helps them generate better queries (Pirolli, Schank, Hearst, & Diehl, 1996).

### 2.2.2 Visualisation Techniques for Searching and Exploration

An alternative approach to navigating and searching in very large information spaces is to render the space itself graphically, visualising either the structure of the whole space being searched or a sub-set of it. Some of the main developments in this area have been:

- TileBars - visualises term distribution information in Boolean-type queries (Hearst, 1995).
- Butterfly - an 'organic user interface for searching citation links' which provides users with the ability to search, browse and access information held in multiple repositories from one interface (Mackinlay, Rao, & Card, 1995).
- The Xerox Information Visualisation project outputs; Cone Tree, Perspective Wall and Document or Table Lens (Rao et al., 1995) - systems which have all been categorised as examples of the 'focus+context' technique (Sawyer & Mariani, 1995) where the user is presented with at least two views of the data, one wide and one narrow focus using a variety of techniques.
- Envision - a free text searching and information visualising system which, it is claimed, offers a uniquely large number of document characteristics for visualisation (Nowell, France, & Hix, 1997).

Such guidelines as do exist for the design of IR systems are based on experiences largely drawn from experimental IR work on closed, stable databases (Willie, 1995). However, as has been pointed out information retrieval does not happen in a vacuum (Hearst, Kopec, & Brotsky, 1996).

Might a more qualitative approach to defining the design space and generating requirements and design specifications be one way of improving the chances of gaining the insights necessary for successful product development? In the next section we review some of the alternative approaches to information gathering systems, and find that particularly in the

area of socially-oriented systems (many of which are to be found in the CSCW literature) interest in qualitative methods is stronger.

### **2.2.3 Supporting the Social Aspects of Information Gathering**

A fairly obvious approach to dealing with the problem of searching large, dynamic, diverse information spaces is to make them smaller! Information filtering takes just such an approach. Although information filtering and information retrieval appear confusingly similar concepts from the literature, the key distinguishing characteristic seems to be that information filtering is concerned with the indexing and accessing of dynamic streams of information, rather than closed databases. Much of the recent focus in the information filtering literature revolves around two aspects - supporting filtering through collaboration and supporting filtering through adaptive and agent based systems.

Recognising that in the real world people often use each other to help them find information, a few researchers have started to look at ways of leveraging this very human approach to the information gathering problem. Juggler (Dieberger, 1997) supports the process of social navigation by automatically loading an URL into a web client when a participant in a virtual chat room (specifically a MOO) tells another about that page. InfoVine (Harvey, 1996) is intended to provide support for informal word-of-mouth strategies to information gathering. Recommender systems, which get groups of users to rate or recommend particular items of information, come in two forms; those which require fewer simpler tasks of the user and those which require more complicated user tasks (Hill & Terveen, 1996). For example, GroupLens allows Usenet articles to be collaboratively filtered by users by assigning ratings to them (Resnick et al., 1994). Some researchers, though, think that people will get tired of the effort required to vote, and instead propose recommendations based on frequency of mention (Hill & Terveen, 1996). A more sophisticated approach to the 'fewer/simpler tasks' model can be found in Ringo, a music recommendation system, which profiles users and matches their interests to make its recommendations (Shardanand & Maes, 1995). A twist on the more complicated end of things was taken by the developers of the 'pointer' idea, where users actively point their co-users to relevant information rather than just passively receiving recommendations (Maltz & Ehrlich, 1995).

One of the problems with information gathering in the 'information age' is the sheer volume of material that has to be sifted through before a set of potentially relevant items can be developed. Adapting an approach from biology, it has been suggested that information gathering is like foraging for food and that at some point there has to be a balance between

energy expended finding something and gain from it (Pirolli & Card, 1995). Intelligent agents and adaptive systems are offered as one way of cutting down the size of the 'area to be traversed', a natural extension of the information filtering concept. Some agents are tailored to the interests of individual users. Adaptive systems, such as POP, are characterised by their attempts to tailor themselves to the user at run-time (Höök, 1996).

The interest in virtual reality worlds and in particular the development of VRML for the Web is further evidence of a move away from solely textual modes of interaction/information gathering/knowledge generation and exchange. One system making use of 3D and VR is HyperSpace, which visualises a particular area of the Web. Pages are represented as spheres and if a page has a link to another a line is drawn between them (Twidale & Nichols, 1997). The Web Forager (Card, Robertson, & York, 1996) allows users to view selected pages from the Web in a 3D space which has three levels; a Focus Place where a page is at full size, an Immediate Memory space where pages in use but not the current focus of attention are store and a bookcase where many pages can be stored. The user can generate a smaller space to navigate, which is designed in such a way as to facilitate rapid access to all the items in it.

Some projects have attempted to combine aspects of these quite broad approaches to information gathering/retrieval. At Lancaster University the ARIADNE project attempted to combine collaborative filtering and visualisation to allow users to maintain an awareness of others as they search an information space rather than simply once they have found items of interest (Twidale & Nichols, 1997). A combination of ideas from the visualisation field, collaborative information retrieval and VR can be found in the work on *populated information terrains* at the University of Nottingham (Benford et al., 1995).

#### **2.2.4 Alternative Ways of Exploring Information Spaces**

Unsurprisingly, literate cultures are strongly visually oriented - we must, after all, be able to see the products of our literate society (Ferrington, 1995). The move from presenting the results of explorations in information space in text to presenting them visually/graphically is a far easier one for the interface designer (and user?) than from text to sound. However, it is hardly a radical suggestion. As far back as 1945 Vannevar Bush (Bush, 1996) was proposing an even more radical solution to the problem, wondering if we could not introduce information in the form of electrical currents directly into the human body. As yet though, the potential of using sound in computing has not been fully realised.



Non-speech sound has been used in human-computer interface design in two main ways. Auralisation is concerned with presentation of information in sound and has been used to facilitate monitoring of systems events and processes. Sonification has been used to provide the auditory equivalent of the visualisation of data set views, mapping numerically represented relationships through sound, usually abstract or musical tones (Kramer, 1994). Examples of auralisation systems include *ShareMon* (Cohen, 1994), a network activity monitoring system, and the *Audible Web* (Albers, 1996) which provided feedback and monitoring information for the *Mosaic* web browser. One system which seeks to integrate sounds into a soundscape is *loudSPIRE* (LoPresti & Harris, 1996), an auditory display developed to supplement a visualisation system for analysing information in large document-based databases. However, despite the widespread use of sound in computer games and entertainment applications, and even on the Internet, work applications are still largely silent. The reasons for this are diverse and include:

- the technology to deliver affordable desktop audio has until recently been unavailable
- organisational factors such as the popularity of open plan offices mean that current sound technology is perceived as intrusive
- the tendency for those auditory interfaces that do exist to exploit isolated and intermittent sounds, sounds which in everyday life tend to be warnings, and therefore by definition distracting
- the heavy emphasis on the graphical in user interfaces means very few interface designers have any experience of working with audio.

This failure for sound to become a common feature in systems design may be because of the visual bias of many cultures. The decline in the importance of the auditory in Western society has been attributed to the shift from oral to literate cultures (Ong, 1982). Furthermore, what is sometimes known as the ‘anthropology of the senses’ movement has provided numerous examples of cultures where vision is not so overwhelmingly the dominant sense, for example (Feld, 1990; Stoller, 1989). Nevertheless, for the foreseeable future it is likely that technologies to support information gathering will continue to ignore the potential of sound.

### 2.2.5 The Notion of the 'Information Society'

In 1948, in the tumultuous aftermath of World War II, two landmark publications marked the dawn of what for some was to become known as the Information Age or Society; Claude Shannon published *The Mathematical Theory of Communication* and Norbert Wiener published *Cybernetics, or Control and Communication in the Animal and Machine* (Mattelart & Mattelart, 1998). Wiener's book laid the groundwork for the development of the field of Artificial Intelligence, the pursuit of 'machines that think', and Shannon's book was to fundamentally change the way technologists and scientists thought about information, divorcing meaning from message (Roszak, 1994). Whilst Wiener was not unaware of the complicated issues involved in his vision of the Information Age, particularly as regards social control, the ideas of these two were to strike a chord (Edwards, 1996). Information, until then a difficult and elusive concept, had been tamed by technologies of control. And information and its associated technologies were in turn, it was enthusiastically proposed, to be used to tame the unruly beast of unpredictable societal change (entropy in Wiener's terms). The rhetoric of the Information Society now had its foundational terms; information, communication, technology (note that it was some time before the term user would be added to that list). Since those early days the clamour has grown to the extent that there is now talk of 'information economies' and the Information Revolution (Lyon, 1988). But for many critics of the Information Society notion, the problem is how we define information. The utopian version of the Information Society rests on the assumption that information is a quantifiable thing (*more, faster, bigger information now!*), but the possibility of wrenching apart of message and meaning has been challenged on many fronts<sup>30</sup>.

Later parts of this thesis will of course address what the concept of information means to journalists, but in this section I would like to consider how information has been conceptualised within the various research communities which have taken information and information use as their research object. Let me be clear, I do not hope to provide a definition of information, but simply to point out that information, for all its importance as a concept within *information* systems design, has proved elusive (Gougen, 1997) and many different uses of the word can be found scattered throughout the literature. In a useful attempt to synthesise various meanings of information, (Buckland, 1991) p.351 has identified three principle definitions:

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<sup>30</sup> A fuller discussion of this can be found in (Webster, 1995).

- *information-as-process*; the act of informing or being informed
- *information-as-knowledge*; that which one informs or is informed about
- *information-as-thing*<sup>31</sup>; things which are informative (e.g. documents).

He goes on to discuss the concept of information-as-thing, considering three types of information things: data, texts and documents and objects. Examining each in turn he concludes that anything could conceivably be information since the state of being thing-as-information is situated, and therefore it is reasonable to label any thing that might be assumed to be informative in the future as information (whether or not it has in some situation already fulfilled that function). This is of course echoes CHAT's emphasis on the situated nature of artefacts.

### 2.2.6 Information Retrieval

The term information retrieval (IR) was introduced in the early 1950s by Calvin Mooers and the very name IR itself is useful in helping us locate its central concerns – the person trying to retrieve some piece of information from some information storage system:

*Information retrieval is concerned with facilitating users' access to large amounts of (predominantly textual) information. Typically, IR systems address the technical issues of representing the documents that comprise its collection, of representing the user-initiated queries, and of performing the calculations required to retrieve the appropriate documents.*

(Golovchinsky, 1997) p.8

The IR model of information gathering is based on the notion that the user has an information need which can be expressed in a way the information system they are using will understand (Sutcliffe & Ennis, 1996). Many public Internet search engines, such as Alta Vista, make use of variations on traditional Boolean logic or natural query languages as the principle mechanism through which users express their information needs to systems. Many of them also attempt to disguise the fact that they use Boolean operators, even though this can lead to confusion among users (Mendelzon, Mihaila, & Milo, 1997). The efforts to mask the underlying Boolean logic are understandable, since a growing body of work has suggested that many people, particularly the kind of non-programmers/computer specialists who make up a significant part of the Web user population, find using even simple Boolean operators confusing (Greene, Devlin, Cannata, & M., 1990; Willie, 1995).

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<sup>31</sup> McReadie (1998) added a fourth definition to this list, information-as-data-in-the-environment, which in fact broadly equates to Buckland's information-as-thing.

The IR community has traditionally based itself on a cognitivist approach – seeking to find a cognitive model of the information retrieval process upon which the design of future systems could be based, although the recent history of the field has attempted to move beyond simple cognitive models to include issues like affect (Mizzaro, 1996) Golvchinsky's thesis, however, heralded a change in the IR community's conception of itself, as the research focus shifted from information *retrieval* to information *exploration*. The shift is presented as a shift in response to changes in user behaviour brought about by the advent of technologies like the Web. Nevertheless, the underlying model is still a cognitivist, individualistic, task-centred one.

The criteria of success within this conceptualisation of information gathering is usually referred to as 'relevance' – the degree of relevance of any 'matches' found during the system search to the user's expressed need (Mizzaro, 1996). The focus of IR in its early years was how to improve relevance (van Rijsbergen, 1975), for example by developing measures of 'informativeness' (Tague-Sutcliffe, 1992). Relevance was often further subdivided into *precision*, the number of relevant documents from the set of those returned, and *recall*, the number of relevant documents returned from the set of all those thought to be relevant in the information space searched (Koenemann & Belkin, 1996). The problem with this approach was the crisis point which was reached when the IR community recognised that its heavy reliance on relevance in evaluating IR systems was not keeping pace with the results of studies of relevance itself, which had begun to address broader criteria such as completeness, value and time (Saracevic, 1995). The problem was that relevance judgements were just that, judgements, and IR's commitment to scientific method was not advancing the field (Ellis, 1996). For some the research object shifted to understanding the contexts of information retrieval tasks, namely information seeking, needs and use (Wilson, 1997).

### 2.3 Studying Work Practice

Studies of information seeking, needs and use can be found in many domains (although the bi-annual Information Seeking in Context conference is a significant focal point). Such studies have abandoned the artefact focus of IR and concern themselves very much with context. Whilst there have been few direct CHAT influences within information theory research, the social constructionist (Tuominen & Savolainen, 1997) and discourse analytic (Talja, 1997) points of view have proved popular in information science circles in recent years. The discourse analytic point of view focuses on the construction of both information

and information needs through language (Vakkari, 1997). The social constructionist focus is both discursive and bodily interaction. Whilst there are differences between the positions and that of CHAT, they have a common root in the concern with social (inter)action.

The social constructionists do not seem to have gone so far as to question the construction of the *concept* of information. For this we can turn to Phil Agre, who has argued that one of the reasons information is such an elusive concept is that it is not a 'natural category' but a category arising out of the ideologies of various institutions, in particular librarianship and computing (Agre, 1995). He points out that not all library users necessarily use the category, citing the example of academics whose professional ideologies mean that they work with literatures rather than 'information'. Libraries are organised around the category of information, and so the librarian's role could be regarded as translating between categories. For example, most university libraries have subject (i.e. literatures) specialists who are charged with mapping the information in the library to the concept of 'the literature' predominant in a particular subject discipline in order to assist the information (literature) searcher.

The topic of subject searching has recently been picked up on within the information science community under the label Domain Analysis (Hjørland, 1998), and it is here for the first time that we can see the direct influence of CHAT. Domain analysis gives priority to the 'social user' and not the 'individual user', and it concerns itself with understanding the role of information and communication within different knowledge domains (Hjørland & Albrechtsen, 1995). Of course the drawback of such an approach in the context of journalism is; what is the domain of journalism? Very few journalists have anything other than a general domain ('business', 'news').

## **2.4 Breaking 'Through the Interface': CHAT and Systems Design**

In a review of various debates about information systems research three key recurring challenges in the literature were identified: how to understand individuals in action, how to cope with change and how to handle multi-disciplinarity (Kuutti, 1999). For Kuutti, CHAT seemed a particularly relevant theory when addressing these issues. It is a belief that has been shared by many others. In this section I shall review some key moments from the history of CHAT within systems design circles.

CHAT concepts and their possible application in systems design contexts were first made widely available to the HCI and CSCW communities in 1991 with the publication of

Susanne Bodker's book 'Through the Interface' (Bødker, 1991). In it she argued that the significance of computer tools was the ways in which people interacted *through* rather than *with* them. In other words, the whole basis of HCI is wrong – people do not interact with computers but rather use them to interact with the world (i.e. to mediate activity). Around this time several papers appeared which highlighted the potential of CHAT in contributing to the conceptual development of the systems design field, e.g. (Bannon & Bødker, 1991; Bødker & Gronbaek, 1991; Draper, 1992; Kuutti, 1992). The issues presented in these papers were taken up by an international community of researchers and applied to the problem of understanding how computers do, and might, mediate activity. This culminated in the publication of a collection of papers on CHAT and systems design (Nardi, 1996a).

CHAT has been applied to a wide variety of activity studies, everything from animism and religion (del Rio & Alvarez, 1995) to the sound of the violin (Boesch, 1997) to learning to networking in non-governmental organisations (Foote, 1999). Two broad kinds of CHAT oriented activity study dominate; those concerned with work (and in particular information systems of one kind or another) and those concerned with education. As we shall see later in the thesis, studies of child development are central to CHAT, arising as it did from developmental psychology in the first instance. For our purposes however, we shall concentrate here on studies concerned with work activity in general and information systems in particular<sup>32</sup>.

The concept of activity was drawn upon to develop potential directions for the design of a CSCW system for various healthcare and social services units in a Finnish authority (Bardram, 1997b). In particular the activity concept allowed the authors to question the utility of the 'shared material' metaphor in CSCW, proposing that the metaphor covered various phenomena that should by rights be treated individually. A study of differences between Danish hospitals which did and did not use a large scale hospital information system drew on CHAT distinctions between action and activity, and the concept of polymotivation<sup>33</sup> to conclude that future systems ought to design for such polymotivation (Bardram, 1997a). The same field study is also drawn upon to consider the role of plans in activity (Bardram, 1997b) and the nature of dynamic activity (Bardram, 1998).

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<sup>32</sup> Readers interested in studies of child development might find Wertsch & Tulviste (1996) a useful starting point. This paper places central Vygotskyian ideas on development within the context of contemporary concerns in education and developmental psychology.

<sup>33</sup> Polymotivation references the idea that actions can be motivated by more than one activity (Kaptelinin, 1996b).

Moving away from health, also still in the realm of European public services, (Christiansen, 1996) reports on an ethnography of investigation teams in the Danish National Police. Unusually, this paper details closely the ways in which CHAT informed the conduct as well as the outcomes of the study, an aspect often lacking from other papers (perhaps because the restrictive length of the typical paper mitigates against such detail). Christiansen's analyses helped her identify the factors which were important in determining whether an artefact would be successfully adopted.

In a study of how people customise their computer resources, based on informal interviews with experienced computer users, we have another example of the way in which CHAT was explicitly drawn upon to inform research (Kaptelinin, 1996a). The author provides an example of how he moved from the CHAT perspective to a checklist of concerns to take into the informal interviews. Another ethnographic study, this time of bug management in a software company, drew on recent developments within CHAT on different types of artefact to develop a taxonomy of bug management tools (Shukla, Nardi, & Redmiles, 1998). CHAT has also been used to examine the relationship between educational technology and change through the development of educational computer tools based on CHAT principles (Bellamy, 1996). A retrospective analysis of a failed software development project drew upon the activity hierarchy to overcome problems in understanding why users sometimes preferred generic and sometimes task specific software for slide-making (Nardi, 1996c) And CHAT ideas about contradictions and conflict were drawn upon to inform an ethnographic study of student programming teams (Holland & Reeves, 1996).

## **2.5 The Trouble with Design Implications**

As we have already seen, the 'turn to the social' within the design community has led to an interest in the use of qualitative research methods (including ethnography) within the design process. A number of studies have explicitly concerned themselves with gaining design insights for information gathering related systems development, particularly in the context of both traditional and digital libraries (Crabtree et al., 1997; Ehrlich & Cash, 1994; Procter et al., 1996; Schiff, Van House, & Butler, 1997). Such studies have been derived from a variety of theoretical perspectives and are usually based on some form of ethnographic/field study, although other methods used include telephone surveys (Baldwin & Rice, 1997), questionnaires diaries/logs (Kuhlthau, 1991), and content or discourse analysis of interactions between library users and librarians (Nordlie, 1996; Spink, Goodrum, & Robins, 1995).

It has already been remarked that design ethnographies and work practice studies have sometimes been criticised for their failure to address ‘implications for design’. However this is often with good cause, the problem is that implications for design are political. In a study undertaken to inform the design of digital libraries, (Schiff et al., 1997) developed a framework based on situated action and reflexive sociology to consider the ‘information environment’ of environmental planning. Using this framework they derived a number of insights indicating fruitful areas for the future design of a digital library for environmental planners. However, what their framework does not appear to have done is cause them to reflect explicitly on their own motivation<sup>34</sup>. For example, although they note that technology design is not apolitical, in commenting on the work that people in the various groups that comprise environmental planning (government agencies, landowners, environmental campaign groups etc) do with maps they remark that “*Much of the work that people do with maps can be done more easily and quickly with technology*” (ibid., p.166). Yet they had already observed, drawing on Bourdieu’s notion of cultural capital, that information is an important category of capital in the field of environmental planning and hence the object of much contest. If information in the form of maps is made faster and easier to work what impact will that have on information capital contests? Will the technology that raises a group’s capital really be available equally to all? The authors have not used their framework to question or investigate whether, or for whom, better and faster is ‘a good thing’. There is an implicit assumption in their work that as long as technological change is grounded in ‘user’s realities’ it will be a positive force in *all* those user’s lives – that somehow technology design can rise above the mundane world of human conflict. In this study I hope to strike a balance between technological utopianism that seeks only to get things done more easily and quickly’ at any cost and technological dystopianism which cannot or will not engage with the implications for design work practice studies inevitably throw up.

## 2.6 Conclusion: Why These Accounts Count

*A non-Cartesian stance would necessitate viewing these artifacts as meaningful only within a certain cultural-historical milieu: they are not separable from the environment in which they are produced, interpreted and used.*

(Spinuzzi, 1999) p.16

It might be tempting to regard the material presented in these early chapters as the ‘preamble’ to be skipped through quickly on the way to the body of the thesis. This would

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<sup>34</sup> In fairness it should be pointed out that the paper was an early report from the study, such issues may well



be a mistake. The work discussed here is as much a part of the context of newsroom information gathering as the newsroom itself, or the history of information gathering practice within journalism, or the range of electronic sources available to journalists. When we think about the artefacts of newsroom information gathering we must acknowledge that there are in fact multiple environments of production, interpretation and use. In this chapter we have focussed particularly on the environments of production. The work arising from these various research communities is particularly relevant to this study because it often sets the dominant discourses within the design community, and such discourses find their way into the everyday life of journalists when they become embedded in actual designs, and in design principles. For example, the discourses of information retrieval (individual users engaged in discrete information seeking tasks, Boolean logic as the basis for efficient computer searching, the concept of relevance, etc.) are embedded in the design of web and other search engines which still rely heavily on Boolean operators, relevancy ranking, etc. Journalists at The Scotsman use these search engines everyday, their information gathering discourses are affected by design discourses which can, in turn, often be traced to research discourses. The outputs of other research traditions have begun to challenge the philosophical and methodological foundations of the IR community. An awareness of work-practice studies has, for example, led to a growing interest in the collaborative aspects of information retrieval and the implications such a problem-focus might have for IR systems design (Karamaftuoglu, 1998), and also stimulated work which is based on a more informal conceptualisation of information seeking (Hendry & Harper, 1997).

This chapter has also raised a rather more thorny issue. Having questioned the research category 'information' we must now ask ourselves – is information a relevant research category (Buckland, 1991) within journalism, and if not what does that mean for our understanding of journalistic information gathering and the design of information gathering systems for them? These questions inform the presentation of the ethnographic study presented in the following chapters. As we shall see, journalists have been happily ignoring epistemological uncertainty regarding facts, data, knowledge etc. for many centuries:

Catriona: Do you think of non human sources as sources in the same way or are they something totally different?

Jamie: I tend to think there are humans behind them. Things like the Internet. I tend to take the Internet in the same way as I would the human source.

**(Interview 09/25)**

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have been raised in later work. However I have been unable to find any further reports.

Indeed as Roszak (1994) has pointed out, it is only really in computing that such notions have been treated so suspiciously. Having looked at the context of the production of computerised information gathering artefacts, the next chapter turns to one context of use of such artefacts – The Scotsman newsroom.

### **3 Inside The Scotsman**

### 3.1 Introduction

It is at this point that we move on to the empirical part of the study, my view of newsroom information gathering. Like any ethnography this is a particular view, and so before introducing the field I would like to discuss the development of the fieldwork and say a word or two about the production of this account. This is followed by an introduction to the field setting.

### 3.2 Fieldworking

#### 3.2.1 Getting 'In'

Securing access to the organisation took nearly three months from an initial approach to one of The Scotsman's 'old hands', recommended as a good guide to getting in by a former colleague of mine who worked at The Scotsman. Over the course of several meetings, phone calls and emails we debated how best to approach the organisation. The Scotsman had been going through a period of considerable upheaval (changes of ownership, senior management and editors), and my contact felt that it would be difficult to get permission to do the study. On his advice I decided to approach the office of the managing director and explained in a letter that I was interested in how journalists gathered information. Eventually a meeting was arranged and the barriers *appeared* to vanish.

The agreement was that I would be allowed to interview and observe those staff who wished to participate in my study, although securing their co-operation would be my responsibility. It was also agreed that copies of any publications<sup>35</sup> resulting from the study would be sent to the managing director and that although the company name could be used, the identities of all informants were to remain confidential. The managing director then put me in the hands of the production editor. He took me on a tour of the offices and introduced me to several staff he thought I would be interested in talking to, mainly section editors and staff he knew had a particular interest in the Internet.

This initially seemed to be a relatively unfettered access arrangement, but there were (inevitably) problems. It was apparent from my first visit that getting hold of staff was going

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<sup>35</sup> This agreement was altered after the first couple of academic publications proved 'indigestible' and it was agreed that I would produce an 'executive summary' of my findings for the managing director after I had written my thesis.

to be difficult; few journalists can say whether they will be free in ten minutes times let alone a couple of days. Without prior knowledge of the newsroom 'set-up' it was often hard to judge who should be approached, whose permission should be sought to approach so and so, etc. This was exacerbated by the loose management structure at the paper. Lines of power and authority are not obviously drawn. For example, some section editors were considerably more relaxed about my presence in their area than others. Furthermore the fieldwork coincided with a period of considerable staffing changes and informants and would-be informants had a tendency to disappear. In fact one early informant disappeared only to return just before the end of the fieldwork – a testament to the high job mobility of journalists.

Securing access became in many ways as difficult a task as the 'real' fieldwork. Until I had established myself with a few key informants, many hours were passed hanging around at the staff entrance to the building waiting for permission to go 'upstairs'. Whilst this at times felt like an extreme example of the ethnographer 'hanging around', it was by no means wasted time. The hallway contained one of the many illuminating staff noticeboards that were dotted around the building, this one was particularly useful since memos from management regarding staff movements were posted here. In an environment with as high a staff turnover as the newspaper industry this turned out to be an invaluable aid in informant tracking. The hallway was also on the route to the staff cafeteria and consequently was also a useful place for 'bumping into' people and recruiting them for the study.

Once actually in, most of my informants seemed remarkably open in their dealings with me, despite their hectic and unpredictable work schedules. Being journalists, they were usually curious about the study and I often felt as much interviewee as interviewer. At first I explained my study as an investigation into 'technology and journalism', and in particular the Web – a recent arrival in the newsroom. On hearing this many journalists would be only too happy to talk about their experiences with the Web, or ask questions about how to do this or that. My identity was established as somebody who was interested in the Internet and computers – so much so that a couple of journalists came up to me in the street to recount tales of their encounters with the Internet.

### **3.2.2 Securing the Theoretical Scaffolding: The 'Activity Checklist'**

During a pilot study at a small community organisation, Get Healthy, undertaken principally to acquire some basic fieldworking experience, I found that drawing on CHAT whilst actually conducting fieldwork is problematic. The broad scope of activity theoretical

concepts and their unfamiliarity meant it was difficult to orient either observations or analyses towards them easily, and attempting to do this occupied a great deal of time. And time is a precious commodity in the field – it disappears in a flurry of ‘what’s her name?’, ‘why is that there?’, and ‘where are the toilets again?’. Eventually, making best use of the field work opportunity had to take precedence and CHAT faded into the background of the pilot study.

Conveniently enough though, Victor Kaptelinin and Bonnie Nardi had recently developed a tool that was to prove useful in overcoming some of these difficulties during the main study – the Activity Checklist (see Appendix 1). The Checklist (Kaptelinin, Nardi, & Macaulay, 1999) is primarily intended for designers, as a way of helping them organise and use contextual information. Whilst the tool had not specifically been designed for use in long-term ethnographic work situations, its potential seemed obvious within a design ethnography. It allowed the fieldworker to maintain an awareness of CHAT concepts without overwhelming the initial, often confused and difficult, stages of the fieldwork.

The checklist comes in paper form and distils out the key elements of CHAT (at least those the authors thought useful for design) into a number of tables of key points and sample questions – some oriented towards a design context and some towards an evaluation context. The key issues are organised into four sections. The first, Means/ends, explains and stimulates thinking about Leontiev’s hierarchical structure of activity, although the emphasis is heavily biased towards the action and operation levels. The next section, Environment, addresses the object-oriented aspects of activity. The third section, Learning/cognition/articulation, brings centre stage the concepts of internalisation and externalisation – encouraging the Checklist user to investigate issues such as how collaborating groups come to know about each other’s actions, and how users are/can be helped to set and evaluate goals. The final section, Development, covers one of the potentially most useful aspects of CHAT for design contexts, the focus on activity transformations. So for example the Checklist encourages consideration, and preferably ongoing evaluation, of developments in activities resulting from the introduction of new artefacts. On the subject of artefact mediation, there is no separate section dealing with mediation since the concept is so fundamental it arises naturally within each section. The Checklist is accompanied by an introduction to CHAT and some guidance as to its use. Kaptelinin and Nardi suggest that the Checklist is best used as a drilling down tool; at first it can help in identifying aspects of the context (activity) in question, and later can aid deeper consideration of each. Whilst not particularly intended for use in long-term ethnographic studies such as this one, the Checklist was to prove a valuable tool.

Rather than using the Checklist in any formal or structured way, it became an aide memoir when reviewing field materials or preparing for sessions – a kind of ‘neophyte fieldworker’s CHAT cheat sheet’. Of course use of the Checklist varied dramatically as the study took its inevitable twists, turns, dead ends and side streets. In the early stages of the study it helped when preparing for interviews, suggesting avenues for questioning and providing some helpful stand-by questions for use in interviews that were not going too well. It also became a kind of ‘security blanket’ – I kept a copy of it in each fieldnote book and often used it to fill unfocussed hours in the field that were otherwise spent scribbling anxious notes about the ‘meaning of life’ or how uncomfortable it felt being there. Using it gave me some confidence that the work was addressing at least *some* relevant issues – a common area of anxiety for fieldworkers in the early stages of a study when it often does not seem clear that anything interesting will ever come of it<sup>36</sup>. During the final stages of the study the Checklist became more of an aide to questioning what CHAT was adding to the study, rather than a way of asking whether the study was ‘activity theoretical’ enough. During the first major attempt<sup>37</sup> at organising and analysing the field materials, towards the end of the study, the Checklist was abandoned completely in favour of a grounded approach to coding, only to resurface during the second cut as a way of thinking about a number of the themes which had been identified. For example in Chapter 6 the nature and role of sources is considered. This was a theme that arose out of the first major attempt at a software-based analysis of the fieldnotes (using the Ethnograph analysis application to attach codes to parts of interview and fieldnote text). The Checklist was then used to identify further categories for consideration in a second phase of analysis. But perhaps most importantly, the Checklist provided an opportunity to reflect on what was been done, why, and on how CHAT was informing the study.

### 3.2.3 CHAT in Use

Having discussed the practicalities of adopting a CHAT framework, it is useful to illustrate the use of CHAT with a pertinent example – the writing of a thesis. The first thing to be said about CHAT is that it encourages us to think of practice as networks of activities and not isolated activities. The next thing to be said is that CHAT recognises that all practice is fundamentally social and historical. And finally, CHAT encourages us to consider the co-constitutive relationship between activity and artefacts.

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<sup>36</sup> The second edition of Bateson’s famous account of his fieldwork contains a marvellous ‘warts and all’ account of fieldworker’s insecurities. (Bateson, 1958).

<sup>37</sup> Informal organising and analysis of course occurs all through the fieldwork stage of an ethnographic study.

Consider a research student undertaking a PhD, how are we to understand 'doing a PhD'? CHAT would first orient us towards a consideration of the motives and objects<sup>38</sup> of the student. A student's motives for doing a PhD might include pursuing a long standing interest, advancing their career plans, or calling themselves Doctor. But an understanding of motive does not in itself help us understand 'doing a PhD', we must also consider how that motive is directed (i.e. the object of the activity). Let us take 'calling oneself Doctor' as our student's principle motive. At this point our understanding of the student's motive would suggest that we redefine the object of our study as 'getting a PhD', since one can 'do a PhD' without 'getting a PhD'. Now we can see that the student's principle object must be a thesis – without a thesis the student cannot be examined and without an exam the student cannot gain the qualification that bestows the title of Doctor. However we could only have arrived at this point by considering the wider community within which the student is located (i.e. the academic community in general as well as the specific academic domain the student is located in) and the rules about getting a PhD that operate within that community. That community also defines rules about what does and does not qualify as a thesis, e.g. legitimate topics for study, standards for conducting research and requirements for its reporting. These rules therefore are artefacts of 'getting a PhD'. These rules also give us clues as to the main 'parts' of the activity 'getting a PhD, such as identifying a topic, developing a research programme, doing the research, analysing the results of the research and reporting on all these stages and the conclusions arrived at as a result.

This allows us to develop an outline of the network of activities that comprises 'getting a PhD'. This in turn also allows us to consider the range of actions and operations the student must engage in to get a PhD. For example, part of 'identifying a topic' is 'conducting a literature review', which in turn requires a number of actions/operations (the distinguishing feature between an action and an operation is that an operation is achieved unconsciously) such as searching databases, making notes, creating references lists, and writing reports. So far we have only considered one subject in the activity 'getting a PhD' but of course there are others. The student's academic supervisors are likely to share the same objectified motive, the thesis, although their motives will be different (which can of course be a cause of conflict or co-ordination difficulties within the activity network.). Thinking about one of the activities in getting a PhD, writing a literature review, we find that the academic supervisors will play a role in searching databases by suggesting references, or in writing reports by providing feedback and comment on them, etc. We also begin to see that the activity 'getting a PhD' requires that multiple subjects collaborate to move in and out of a

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<sup>38</sup> People, of course, usually have multiple motives and objects.



range of related activities, actions and operations in pursuit of the objectified motive ‘the thesis’. Some of these activities, actions and operations may clearly be hierarchically/temporally related – a topic must be selected before a literature review can be conducted, although there is nothing to say that one of the outcomes of the literature review might not be a revisiting of the topic selecting activity. In developing our understanding of the activity ‘getting a PhD’ we can now begin to move through the various levels of activities, actions and operations. From this basic understanding, the CHAT framework affords us the opportunity to pursue a variety of interests. For example if we are interested in artefacts then our focus might be on the development and use of artefacts in each, and if we are interested in interaction our focus might be on the communicative aspects of the activities.

Of course considering the activity ‘getting a PhD’ through the explicit foregrounding of the theoretical framework risks obscuring much of the detail of the activity, and can become unwieldy when considering highly complex and collective activities such as ‘getting a PhD’ or ‘newsroom information gathering’. The problem with theory in ethnography has always been one of use: is the theory a tool to get at the data or the data a tool to get at the theory? What interests me is not CHAT as theory but CHAT as tool. In this thesis CHAT is very much a tool to get at the data. As was discussed in the previous section, it helped orient me in the field and helped structure the analysis, and it provided a broad outline for the thesis (from delineating the key activities of newsroom life to considering the key artefacts of newsroom information gathering). For those with a particular interest in CHAT this may be frustrating, they might wish for more by way of discussion of the application of key CHAT concepts. However ultimately this thesis aims to provide an ethnography of newsroom information gathering, a narrative that describes and considers the concept of information gathering within the context of one particular year at one particular institution. Foregrounding CHAT would obscure much of the detail of everyday newsroom information gathering life, and whilst it might be interesting for the theoretically inclined it would do little for the designer seeking to understand more about the everyday working contexts they seek to design tools for. Consequently, CHAT’s presence in the rest of the thesis is light, although as I will discuss in the final chapter the work presented here throws up interesting issues for CHAT (just as it does for design).

### 3.2.4 A Note on ‘Writing Culture’

*‘The workings of a great newspaper,’ said Lord Copper, feeling at last thoroughly Rotarian, ‘are of a complexity which the public seldom*

*appreciates. The citizen little realizes the vast machinery put into motion for him in exchange for his morning penny.' ('O God', said Lady Metroland, faintly but audibly.)*

*(Waugh, 1943)*

One of the aims of this thesis is to reveal a little of the 'vast machinery' of everyday information gathering practice at a daily newspaper (although hopefully in a manner Lady Metroland would have found somewhat more appealing). Whilst for those working on a daily newspaper the invisibility of their machinery is a mark of their success, for those of us engaged in academic research there is a requirement for a more visible approach. In revealing a little of this machinery I must inevitably also reveal a little of the machinery that produced the account, if the story is to be complete. This is a story about my research activity, it is not a story about the 'facts of information gathering at The Scotsman'. The use of theoretical frameworks and the role of CHAT has already been discussed, a second part of the machinery of writing this thesis is the use of various writing styles, the bringing out in the telling of the story the *"always partial, always finite, always fraught play of foreground and background, text and context, that constitutes critical inquiry."* (Haraway, 1997) p.37.

Ethnography is at heart still the practice of 'writing culture'. But in recent years the process by which such accounts are written has itself become the object of ethnographic enquiry. One of the first issues ethnographers face when approaching writing is how to describe the field. Whether or not it is an ethnographers duty, or even right, to try and communicate a sense of what it is like to be 'the Other' is a matter of debate<sup>39</sup>. I have decided that it is relevant to this account in this context. This is an 'applied' ethnography in that it is, in the last instance at least, oriented towards a systems design audience rather than a general audience or anthropological audience.

My concern is twofold: to bring a CHAT perspective to the study of the contexts of information gathering and to bring a sense of the lived detail of information gathering work from a human and not machine or information point of view. In order to achieve this a number of descriptive and analytical techniques (voices) have been used. There is the disembodied voice of ethnographic authority in the body of the account, in which I attempt to organise and comment upon those aspects of my experience in the field I find most relevant to my concerns. Then there are the vignettes (tales from the field) in the prologue and epilogue in which I attempt to follow in the tradition of the Chicago School<sup>40</sup> by trying

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<sup>39</sup> See (Clifford & Marcus, 1986) for an excellent overview of the arguments.

<sup>40</sup> The Chicago School impacted both ethnographic method (it pioneered the use of participant-observation and highly detailed descriptive accounts of field settings (Marcus & Fischer, 1986) ) and social theory (it was one of the key centres in the development of the symbolic interactionism with which Goffman is often associated). A

to bring a flavour of everyday life in the field to the account. There is also the voice of the fieldworker in the form of fieldnote extracts, and the reported voices of informants embedded in those fieldnotes. Informants voices are also heard in interview transcript extracts. I have chosen to restrict the use of the 'ethnographic present tense' to the fieldnote extracts only. Whilst the use of the present tense in ethnographic narratives has been persuasively argued for (Hastrup, 1995), from a CHAT point of view we cannot forget the processes of change. The field which gave rise to this representation has already changed, and will continue changing. I use the past tense as a reminder that this representation has its roots in a context that has already changed, and will continue to change.

### **3.3 Introducing The Scotsman**

#### **3.3.1 Organisational view<sup>41</sup>**

The Scotsman was founded in 1817, originally a weekly journal it became a daily paper in 1855 after the abolition of stamp duty. The Scotsman Publications Ltd, which since 1917 has been based in an imposing building in Central Edinburgh, comprises The Scotsman, the Edinburgh Evening News, Scotland on Sunday and a number of local papers, as well as the full colour printing press at Newhaven in Edinburgh. The parent company, Scotsman Publications, was sold to European Press Holdings in 1995. With the change in ownership came a new managing director and a new editor-in chief.

The paper was structured around departments, and although journalists and sub-editors did move departments they were generally attached to one editorial department at a time. Editorial departments broadly reflected the structure of the paper itself: news, foreign news, political news, sports, features, diary, comment, TV and radio, business and specialist writers (for example agriculture, investigative and transport). There was also a weekend magazine-style supplement. Other departments include pictures, the production desk, graphics, the Library, IT and management. The paper, like most UK broadsheets, was printed in sections, the main one covering news, features and comment, the other covering business and sports.

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fascinating insight into the convoluted interweaving histories of Marxism, pragmatism and symbolic interactionism can be found in (May, 1996) and a discussion of the links between symbolic interactionism and CHAT can be found in (Star, 1998).

<sup>41</sup> Most of the historical data in this section comes from (Morris, 1992).

Like all British newspapers The Scotsman operated in an intensely competitive market place. However it did have a somewhat unique position in that it had always been regarded as more of a national paper than a Scottish regional paper. Reflecting this, journalists at The Scotsman had always paid union dues on the basis of being at a national rather than provincial paper. This status was recognised in 1998 when the UK Audit Bureau of Circulation (ABC), which provides the industry recognised figures for print publication sales, started to record The Scotsman under UK national papers instead of UK regional papers (where it had until then been placed). During 1998 the paper sold around 80,000 copies per day according to ABC figures (see Appendix 3), by early 2000 this figure had fallen to around 75000, part of a general decline in sales in the industry – of the 13 papers in the ABC tabloid, mid-market and quality press listings 9 including The Scotsman had seen sales drop during the period.

The paper always prided itself on staying abreast of new technology in the newspaper industry. For example, one of its employees invented a technique which allowed stop press to be inserted into hot metal printing presses even after the presses had started running. Computers entered the newsroom in 1987 with the ending of hot metal printing. The Scotsman scored another first in 1962, when it launched Britain's first separate Saturday magazine supplement. In 1994 the page planning system was fully computerised, and in 1997 the paper became the first in the UK to provide all editorial staff with their own desktop access to the Internet. Change in technology systems during the course of my fieldwork was also at a constant rate. The Internet had just been introduced, and this was followed by fax scanners and networking of the company's own electronic text archive. Upgrading of systems available in the regional offices in Glasgow and London was also undertaken and future plans were underway to introduce a new desktop editorial system and a new email system. All within the space of just over one year. A great deal of this drive to invest in new technology was both recent and top down. The then managing director had a background in IT and maintained a keen interest in new technology, attending conferences and exhibitions and instigating many new systems projects himself. The growth in the use of new technology led to the creation of a support unit in the IT department, although the production editors at The Scotsman were still typically the front line in dealing with systems problems.

### 3.3.2 Inside the Newsroom

*The editorial floor was a single, hideously distended office. You were aware of vistas and horizons. The desks were arranged in clusters across a dingily*

*carpeted space full of swarming, gesticulating, jabbering journalists. There were dark, tunnel-like alcoves off the main floor into which men in suits would swoop, and from blabbering, shrugging teams of executive – awesome meeting on the move – raucously emerged. You didn't want to go too near them unless you were asked to do something or got swirled into the argument.*

*(Martin, 1998), p.8-9*

All three main papers in The Scotsman Group had offices in a large, old building in central Edinburgh. There were some one hundred Scotsman editorial staff (that is, production and writing staff). Most of them were based in Edinburgh, with around 8 to 10 at the Glasgow office and a similar number in each of the two London offices. The Edinburgh offices of The Scotsman were split over a number of rooms on one floor of the building (the other papers in the group were on different floors), the main ones being the newsroom and the features room.

The newsroom was large, with workstations for around fifty people. A small room, home of one of the two deputy editors, and a number of alcoves housing specialist writers or large photocopy machines, opened off the main area, which was organised into a number of departmental sections. At the centre of the newsroom was the 'control' area (referred to by some informants as 'The Bridge') where the editor, news editor, night editor<sup>42</sup>, and chief sub-editors, sat and directed their teams, monitored the paper's daily progress and discussed developing stories. Around them were news, business, foreign and picture desk sections each having a mini-bridge with a section editor, usually a chief sub-editor, subs and writers. People were jammed tightly together and there were piles of books, paper and newspapers littering every available surface and corner. Shelves overflowed onto the floor in front of them.

One of the first things I noticed was that despite the large number of people, phones, TV's and keyboards, the noise level (variable as it was) was not unbearable. People held conversations across the room on a regular basis but this did not seem to be overly intrusive. The next thing I noticed is that the newsroom was never still, people were constantly moving around. As the evening wore on the activity and tension levels would rise. Indeed the 'hothouse' atmosphere in the newsroom was something that many informants were keen to 'explain' to me:

Simon mentions to me that I should have been in the other night 'it was mental in here' and Pete and the new guy join in, chatting about how

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<sup>42</sup> The night editor ran the newsroom when the editor left and up to the final edition.

busy it was and how heated it got. Pete and Simon both mention several times how 'wrecked' they were the next morning.

**(Fieldnote 01/26)**

Participation in 'mental nights' was a very important part of newsroom culture – it gave the participant 'war stories' and as an ethnographer was part of the slow process of gaining a tentative identity in the newsroom. Doing the time (being there for long stretches, during particularly stressful evenings, and being there until 'the bitter end') was important, even if at the time itself that was not always apparent.

Outside in the hall were rooms housing specialist and political writers, the weekend magazine format supplement team, graphics people and (the largest of these rooms) the features department. The features room was fairly large and held around twenty five desks, about half of which were occupied at any one time. This room was broadly similar to the newsroom in initial appearance, busy and full of information materials. However the atmosphere was a notch or two slower than in the newsroom, at least until deadlines approached. Again, though, the room was never still.

**3.3.3 Not Holding the Front Page: Producing a Newspaper**

Creating a newspaper is an intensely social activity. Throughout the day different constellations of staff would suddenly come together, clustered around screens discussing layouts, or pictures, or wire stories. Just as suddenly, they would vanish – lengthy debates were a rare sight. Piles of print-outs, layout samples, photographs and documents were carried around the newsroom in a constant stream. Well trodden paths from area to area were smoothly traversed by staff seemingly well used to the minefield of cables, papers, books, chairs and sharp edges. Impromptu conversations occasioned by a meeting on one of these paths turned into heated debates as people sitting nearby joined in. Questions, thoughts, jokes and asides flew about – sometimes directed at one person, sometimes at whoever was within earshot, sometimes at no one in particular at all. And all the while the editor loomed – pacing around the newsroom, pausing behind reporters or sub-editors to assess their work or ask them for the page/story/picture he was waiting for. There were two editors of the paper during the course of my fieldwork. Each had a distinctive editorial style and newsroom presence. What was common however was that each could regularly be seen approaching writers or section editors and asking to be 'talked through' some story or developing situation. As the deadline approached, the noise and movement levels would increase. Then, suddenly, there would be a lull. The first edition had left the building.

Swift visits to the cafeteria and the pub would be arranged and suddenly the newsroom would be empty. From a flurry of talking, moving around, searching for pictures, formal and informal meetings, visits to the library, shouting, phoning people, typing furiously, painstaking editing of photographs, and playing with layouts, a newspaper was born six nights out of every seven. Until the very last minute, everything was up for grabs. During the course of an average night there would be around five editions of the paper. On one occasion I left the building at nearly 11pm thinking the front page looked one way, only to wake up the next morning to discover it had completely changed – not one thing about the front page was the same. There is no firm ground in the creation of a news story, or a newspaper. The faint hearted or the precious would not last long in the heat of The Scotsman newsroom.

### **3.4 Conclusion: Into the Field**

Having considered in Chapter 2 the stories that inform the birth and initial development of many ‘information gathering artefacts’, this chapter describes in some detail the particular setting with which this study is concerned, the Scotsman. This was prefaced with some comments regarding the practical aspects of carrying out the fieldwork, and in particular the techniques used to ‘scaffold’ the use of a CHAT perspective.

As I think back to my days in the field I am reminded of a performance by the Culberg Ballet (a Swedish modern dance company) – tightly choreographed so as to appear entirely spontaneous, by turns gentle and frantic, intricately woven through time and space, but anchored all the while around some focal point (in CHAT terms, some object). For The Scotsman journalists that object was by and large a story. What we have not yet considered though is how information gathering practices and artefacts clustered around such stories. That is the topic of the next chapter.

# **4 Inside the Palimpsest: Newsroom Lifecycles**



## 4.1 Introduction

Looking at The Scotsman (or any major daily newspaper) we can see it is comprised of collections of stories organised into sections and supplemented by advertisements. This distinction between stories, advertising, sections and newspapers was manifested in both the spatial and temporal organisation of The Scotsman's routine activities. In this chapter we shall consider the aspect which dominates that spatial and temporal organisation of activity at The Scotsman - the story.

In the prologue we traced the biography of the production of one story. The use of the 'biography' (Kopytoff, 1986) or 'career' (Harper, 1998b) of the phenomena of interest is common in ethnographic studies. It allows us an insight into the culturally constructed aspects of the phenomenon, although of course we "*bring to every biography some prior conception of what is to be its focus.*" (Kopytoff, 1986) p.67-68). A story could have many biographies. An economic one would consider the costs involved in producing it and the economic value realised in that production. A content biography would consider the negotiation and development of meaning during the creation of it. And a consumption biography would consider the ways in which the story was read and used. But the biography I shall focus on in the first part of this chapter is the biography of the production of stories – the story lifecycle. All newspaper stories have a lifecycle, and a number of 'stages' in the story lifecycle can be identified. These admittedly crudely drawn stages comprise the birth, writing, editing, lay-up, distribution and archiving of a story. Whilst the majority of these stages take place within The Scotsman's offices, the birth of all stories and the afterlife of those that make it into the paper will take place largely outside.

A common criticism of traditional information retrieval approaches to information gathering is that the issue of how 'information needs' arise is rarely addressed. In cognitivist models an information need is something which arises as a result of events outwith the head, and therefore outwith the scope of investigation. But as we shall see, there is a complex relationship between how an information need arises and information gathering and its contexts. This chapter describes the context of information needs in the newsroom; the story lifecycle. On this basis a taxonomy of newsroom information needs is generated.

## 4.2 The Story Lifecycle

The use of the term lifecycle is not meant to imply that the stages of the lifecycle necessarily proceed in strict linear fashion according to some pre-ordained order. Rather, like a human lifecycle, the stages are loosely tied to certain times of day or milestones, but there is a great deal of room for manoeuvre, within and between individual lifecycle, and stages often overlapped each other. The representation of the lifecycle presented in Figure 4.1 below is not intended as a formalism. The work I observed was highly complex, dynamic and collaborative and certainly nothing that would lend itself easily to a formal account. The lifecycle is simply a useful way of organising an account of the central activity of journalistic life; the transforming of information into news.

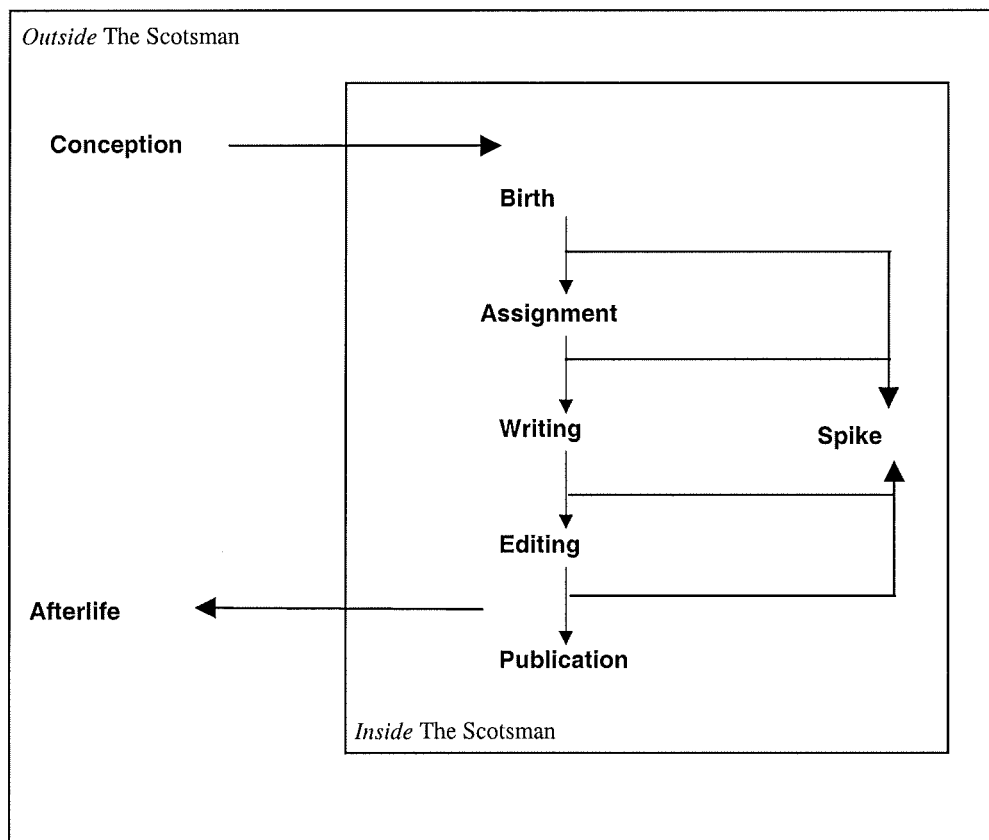


Figure 4.1: The Story Lifecycle

### 4.2.1 Birth of a Story

Contrary to the public image, most journalists at *The Scotsman* did not always, or even often, source ideas for the stories they wrote. This was in part a matter of organisational culture, in part a practical response to the problem of constantly monitoring the ever expanding range of available information sources. The editor who was in post during the main part of my fieldwork was generally regarded as very 'hands-on' and liked to set the agenda for the various sections himself, often suggesting stories to section editors. Some section editors were more pro-active in this regard than others. For example one department had a section editor who almost always sourced story ideas themselves. Some journalists in that department resented this, missing the opportunity to generate their own story ideas. They thought that stories which came from the 'people on the ground' were more likely to be interesting and up-to-date than those generated by their head, who must inevitably rely heavily on other media since their jobs do not afford them many opportunities to go out and about. When the new editor arrived gradual change was introduced and journalists who were interested in generating story ideas found a more receptive audience for them. In the particular department in question, the section editor left shortly after the original editor, and the new section editor was far more receptive to journalists' story ideas. Nevertheless, the primary responsibility for ensuring that there were enough story ideas circulating each day to fill each section lay with the section editors – it was their problem if at the end of the day there was insufficient material to fill their section of the paper.

The media using other media as sources of news is a much commented upon phenomenon; sociologists usually rate it highly interesting (Bourdieu, 1998) and journalists get irritated by the sociologists interest in it (Randall, 1996), whilst sounding a practical note of caution about the dangers of doing it (Hamill, 1998). The British newspaper industry is highly competitive and this exerts a pressure on newspapers to monitor each other. Whilst the majority of discussions about what goes into the paper I witnessed were largely about matters internal to the story (is it interesting, is there anything new, can we say that, will readers care?), there is a constant concern with not missing stories that rival papers have picked up.

As David, a senior member of the editorial staff, put it:

David: News editors are very nervous, essentially all the senior editors always need to be reassured that other people are thinking not the same way as they are, but that we are not missing mainstream things. The BBC for example is now putting up a live wire (David indicates to his screen, which is showing the BBC's web site, complete with a section derived from the wire services). That is published at 12:31 which means it has been updated less than ten minutes ago, and I find it very helpful that I am actually sitting with what the BBC's main news editor is doing for business, and I know that I will have that story in tomorrow, and I will have that one but it will be a slightly different approach.

Catriona: It reassures you?

David: It reassures me if they haven't found anything that I haven't got. My old editor used to say, what I want in a newspaper is everything everybody else has got, lots of things that nobody else has got, and something (unclear).

### **(Interview 12/03)**

Editors then must tread a delicate balance between covering the same stories as everyone else without appearing to be the same, and getting the stories that others have missed. The palimpsest is not a matter of laziness but of insecurity. Having access to what the competition do is an important way of being reassured about the progress of the section. Alternatively, having access to information sources which it is known the competition uses is also a good bet for overcoming anxiety. There are a number of information sources which most newspapers in the UK rely upon, in particular wire services. Monitoring the wires is a crucial part of the effort to ensure that the paper is covering the same stories as its rivals. Section editors in those departments which were particularly likely to see relevant material appear on the wires, (e.g. news, business and sports) spent a great deal of their day checking them. The use of 'reliable' sources like the wires and the diary of advance notice events means that newspapers can tackle one of the great paradoxes of the industry – although news 'events' are by their nature unpredictable, newspapers must report a relatively fixed number of events every day.

The amount of space in the paper for news is, by and large, not determined by news but by advertising. The first thing that happened each morning was that all the advertising secured was assigned space in the pages of the paper. This was often dictated by the kind of advert. For example an expensive advert would be placed in important pages (such as the front page) whereas classified advertisements are grouped together at the back of the second section. After this, at morning editors' conference, the various departments negotiated for the space left according to the story ideas they have generated - although there would be ongoing renegotiations about these early decisions throughout the course of the day. The

section editors would have spent the night before and the early morning producing a list of story ideas. They would present these at conference and the editor would decide which to give the go ahead to. Unfortunately I was unable to secure permission to attend conference – a testimony to how important the event was felt to be by senior editorial staff. On one occasion I actually made it to the room conference was about to be held in, at the invitation of a senior staff member, only to be told (as I fully expected) that a stranger at the meeting would be too disruptive to an event that was fundamental in the success of the paper, it was just too sensitive<sup>43</sup>. Nevertheless I did manage to observe numerous ‘conference aftermaths’, when section editors would return and inform their teams of the outcome. And being around the newsroom or features room when senior staff were away did have its advantages – informants often being rather more willing to spend time talking than when their boss was around!

When they came back from conference section editors would assign stories and a paper copy of the story list, indicating what was to be written for which page and by whom, would be distributed to the subs and the section editor (Figure 4.2). This meant that, for example, on some days the pages roughly assigned as news pages would have more advertising than others and so the news editor would need to negotiate with the editor for extra space if they had a lot of good stories. On the other hand they could find themselves struggling to find additional material to fill space they had been assigned on days when there were fewer stories around.

Story lists (see Figure 4.2) are an example of the many kinds of paper document that circulated the newsroom, constantly being annotated and amended and eventually re-formalised at another conference before once again beginning their rounds of the newsroom.

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<sup>43</sup> However others have been more successful in gaining access to an editors’ conference, e.g. (Clayman & Reisner, 1998).

ONE:

Elec firms to defy ban on selling gas until their own markets are open...600...Stokes  
 Menzies confirms to sell High Street stores, demerge ELC.....550.....Flanagan  
 Scottish Widows slams ISAS/Govt denies £50,000 ceiling to be lifted.....500.....Newton  
 Gramplan to sell golf, knitwear and sportswear businesses.....400.....Nevill  
 Souter says rolling stock deals are safe.....300.....Stokes  
 Indonesia currency succumbs and drag rest of asia with it.....450.....McSherry

TWO:

Oil prices dive under \$15 as glut causes OPEC row.....450.....Frazer  
 BA/AA offer to delay alliance to get EU approval.....staff  
 B Mid complains to EU about BA commlssions.....wires  
 Airbus orders.....wires  
 Midshires Mike Jackson tipped for great things at Royal Bank of Scotland.....Newton  
 Spending slowdown predicted by small firms.....wires  
 Extra administrators appointed in Maxwell case.....staff

Round-up:

FTSE/Sterling.....City  
 EU widens accountants merger probe.....wires  
 Clan Homes results.....Nevill  
 Trader wins libel case v Times.....250.....wires

THREE:

Views:  
 Menzies.....Flanagan  
 Gas.....Stokes

Lourho profits fall to £101m as talks continue to sell and buy.....staff  
 First Leisure may sell Bingo business.....staff  
 Oasis has poor winter sales.....staff  
 BAF insurance new business figures.....staff  
 D Mail subsid buys US computer firm.....wires  
 \*Atlantic Telecom Q4.....Nevill

FOUR:

Profile of new Menzies chief David Mackay.....Flanagan

FIVE:

Media:  
 Is Birt blocking BBC Scotland move from QMD?.....Cullier  
 ...or why we only get TV rather than modern literature.....Gibb  
 Do foreign corrps make good presenters.....Kinnes  
 Scots TV firm sells Vietnam war history to US.....Kemp  
 Mirror Group changes - latest.....

Figure 4.2: A Story List (as at c. 1230)

The constant need for story ideas also meant that a great deal of effort went into developing regular story sources. For example, on the business desk a record was kept of when different company annual reports were due. Similarly, in the features room a record was kept of when new cultural events were due to occur so that they could be reviewed. All the departments I observed had a physical diary of some kind in which such regular or pre-scheduled events were recorded. These diaries were available for all the staff to consult, and for many journalists checking what the future possibly held was a regular routine. Towards the end of my fieldwork, one of the section editors approached the IT department requesting that a computerised diary system be set up so that any of the staff in that department could access the diary from the desktops.

Often diary items were culled from the huge quantities of press releases, faxes and phone calls which arrived every day and which were scanned for potential stories. It was advantageous to have such information pushed to them because it gave section editors

advance warning of a possibly interesting story – allowing them to schedule page space, reporters and photographers well in advance. Whilst the journalists were wary of press relations people, they were also aware that they were necessary to the newspaper. Without them, the task of finding enough stories to fill the paper would have been extremely difficult indeed. It goes without saying that a good press relations person must understand the nature of news reporting and provide newspapers with information in a timely and appropriate manner<sup>44</sup>. New technology has of course been exploited in an effort to get press releases to the newspaper as quickly as possible. In the newsroom, faxes were regularly received (so much so that fax scanners were introduced to the newsroom in an effort to reduce the amount of re-keying of information that had to be done). However the system did have its drawbacks. On one occasion a section editor was driven into a fury by the arrival of a fax from a PR company with news ‘for immediate release’. Unfortunately the fax had arrived way too late for use in the next day’s paper. Despite the fact that he was preparing to leave for a social function the section editor spent some minutes trying to track the person responsible down and left several messages making his displeasure clear. The use of new technology for issuing press releases had, however, yet to take off. One specialist reporter was particularly frustrated by the failure of some of his major sources to email press releases, but he fully expected that in time, and with pressure from journalists like himself, they would.

#### **4.2.2 Generating Enough Stories: ‘Putting a Kilt On It’**

The problem of variable amounts of news events explains why in the UK the month of August is traditionally referred to as the ‘silly season’<sup>45</sup>. Many of the institutions which throughout the rest of the year generate enough regular events to provide plenty of raw material for journalists slow down during this period, and so the struggle to find enough events increases. Newspapers and other news media must either cast a wider net or cover stories which in the normal run of things would be unlikely to get picked up. It is interesting to speculate whether the increased availability of news from overseas as a result of, for example, the Internet and satellite broadcasting will mean that rather than the summer months seeing more ‘silly’ stories in the press, it will come to mean more foreign news.

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<sup>44</sup> This perhaps explains the phenomenon of journalists becoming press relations people, commonly referred to as ‘poacher turned gamekeeper’ – something I myself witnessed when one particularly long standing specialist reporter left to take up a press relations post with a major company in his field.

<sup>45</sup> At the time of writing UK journalists had the enormous good luck to have a total eclipse of the sun over parts of England occur in August – the enormous amount of press coverage the event received said less about media perceptions of public interest in the eclipse than it did about the fact it was the silly season.

For papers like *The Scotsman*, competition was compounded by the difficulties of presenting as both a Scottish and a United Kingdom national paper. Although *The Scotsman* did not at that point in time have a great deal of market penetration outside Scotland, since its take-over by the European Press Holdings there had been an effort to build a strategic readership in London and the south-east of England. In 1998 *The Scotsman* was for the first time listed under the Audit Bureau of Circulation's newspaper circulation lists as a UK national daily not a 'regional' daily (Brown, 1998b). One of the ways this difficult balancing act was achieved was by covering national stories, but giving them a Scottish flavour – or as they said at *The Scotsman*, 'putting a kilt on it':

Mark (journalist): In most cases they (the wire services) do a really good job, they get it, they're really quick, they're on the spot. I sometimes sit here enviously. But when it comes in it's often very basic, it's just quick. You don't look for fine writing in anything, apart from some of the freelances work that comes in. So it needs, usually, an awful lot more, more phone calls and often, from a Scotsman point of view what we call putting a kilt on a story and try and get a Scottish angle on it, somehow or another, or find Scottish examples of the thing they're talking about.

**(Interview 10/22)**

Previously it was remarked that section editors liked to know that they were covering stories that their competition were covering. As we can see here, *The Scotsman* had the advantage of being able to take a story that all the other national dailies are covering and easily differentiate it.

### **4.2.3 Assignment and Writing: From Information to Story**

Once their section's initial story list had been agreed at morning conference, section editors had to decide who to assign to each story. Depending on which department they worked in, journalists could find themselves working on anything from one to four stories in a typical day. For example, features stories are typically quite lengthy (from a few hundred words for a 'downpage' piece, so called because it appears at the bottom of the page, to a thousand plus for leader) so they usually had no more than two stories on the go at one time. News reporters, on the other hand, would often have two or three stories assigned to them in the course of a day, although some of these may have required little more than reworking a piece that had been picked up off the wires. Feature writers were also more likely to find themselves working on stories which were not intended for the next day's paper, news reporters almost always had same day deadlines for all their stories.



Although the popular image of the journalist tends to portray them as working very much alone, depending on how complex or important the story was journalists in any department could well be assigned to work as part of a team of writers on a story. In the following extract Rosie, a section head, is setting up a team to work on a story (incidentally, this particular story was a perfect example of ‘putting a kilt on it’ – the story had appeared in another UK publication the day before and was now being revitalised with the application of the kilt):

Liz comes over to Susan: ‘What we want you to do is phone as many Scottish business people as possible and ask them if they'd take a pay cut. There's a lot of phoning so get Juliette involved’. They chat about who to call. Liz ‘All the usual suspects’ Susan ‘So it has to be top of the range?’ Liz ‘Yeah yeah ((unclear)) but Scottish firms’ Susan ‘Right, okay’ Liz ‘We need to get a good mixture of people in there. Because they might say it wouldn't happen with our company because we're doing well.’ (Juliette is looking over at Susan and Liz) Susan ‘Yeah, we don't want people giving us the state of their company, the latest annual report (unclear)’ Liz ‘The business desk will know who to call. Liz ‘Juliette, I need you to help Susan with a job today, will you come over?’ (Juliette gets up and goes over) Liz ‘We're doing a number on Scotland, on would you take a pay cut to save the company’. They all sit and discuss the story some more, brainstorming companies to call.

**(Fieldnote F0416)**

Liz and Susan very quickly set about clarifying what kind of sources were required – the story itself received very little attention. As Liz pointed out, getting people to comment (at least in the way hoped) was going to be challenging and so several heads had to be brought to bear on the task. Liz was also quick to think about other people at The Scotsman who could help. This kind of cross-department working was very common.

Phone polls or phone around stories like these required a lot of careful co-ordination. Throughout the course of that day, the journalists working on the phone around story mentioned above frequently got together to compare progress on getting comment, and to review their initial contacts list. As the day progressed and few of those contacted got back to them (inevitably, most of the people they tried to phone were not available and they had to leave messages) they pulled in their colleagues to try and think up more people to contact. Whilst the journalists I observed rarely asked for help with *writing* a story, they frequently asked for help *finding sources* for the story.

Once assigned, a journalist would usually be given some kind of briefing by the section editor. This might have been as simple as a quick run down of what was known about the

story so far and an instruction to see what could be made of it, or it may have involved a lengthy chat and the provision of already gathered background materials such as clippings from newspapers, database print-outs, etc. It is at this point that the journalist would first begin to get a sense of what information they would need to gather to add to any they had been given:

Dave (journalist) says that although the 1030 editors' conference sets what stories are going to be worked on, decisions about size aren't taken till much later, so sometimes he is working on a story and doesn't know if it'll be a lead story (c. 1500 words) or a downstream story (c 900 words). He comments that sometimes it's difficult if you don't know how big the story should be, although quite often you can make a good guess about what's going to happen. He also mentions that unlike in the past you can now get handed a story much later than before. Sometimes you have to try and write quite a lot of words in only 3 or 4 hours. However, generally if you don't get given a story when Jane comes back from the 1030 conference then you won't get one at all.

**(Fieldnote 12/01)**

What Dave highlighted here was the importance of the ability to make an educated guess about the likely length, reception and fate of the stories. As we shall see later in the chapter, educated guessing in turn depended upon the ability to monitor what was going on around one.

Although practice varied a great deal between departments and amongst individual journalists, the start of the writing stage was usually marked by a period of concentrated information gathering. It is important to note that journalists rarely engaged in one 'task' (for example, searching a database, writing part of the story, phoning around looking for comment from eye witnesses, etc) for any length of time. It was far more common to see journalists and section editors constantly moving between different tasks (for example flicking in and out of the wire services window whilst writing at their computer) or multi-tasking (editing one story on screen whilst talking on the phone to someone about another story).

A number of factors affected what kind of early information gathering journalists engaged in when assigned a story. An important one was how close to deadline it was when the assignment was given. Deadlines at The Scotsman had been something of a shifting target in the period just prior to and after fieldwork started, although typically the first deadline of the day would be around 1700 or 1800. As the first deadline of the day approached the newsroom became louder and more frenetic. Journalists, picture and library staff came under increasing pressure to find last minute bits of information. But the deadline loomed

even from early in the day and affected decisions about the information gathering strategies pursued:

She (librarian) tells me that deadlines are a big factor for journalists and library staff. Sometimes if you know that the search is not going well it can be important to admit defeat quickly so that you can get back to the writer and give them (the journalists) a chance to rethink. She thinks that with the amount of information available growing so fast, and with the pressure of deadlines, they really aim to do a 'good enough' search rather than a completely comprehensive one. They have to know when to stop, and make decisions about the likelihood of success as quickly as possible.

**(Fieldnote 12/16)**

Here the librarian was making the point that the ultimate arbiter of all information gathering was the deadline. As we shall see in Chapter 6, sources often fail to provide information in the time-scale required, and so knowing which sources are likely to prove successful, or which alternative sources for the same piece of information exist, is important. Although most journalists would be assigned something when their section editor came back from morning conference and the initial story list has been established, many would also be given new assignments throughout the course of the day. In addition, some shifts started at around 2pm and those journalists had very little time before the first deadline.

Another important factor in developing an initial information gathering strategy was the kind of story that has been assigned, something most obviously influenced by the department the journalist worked in. News reporters often worked on short news items which may not have required a great deal of background information gathering but could require plenty of comment, which usually signalled a frustrating period trying to get hold of people on the phone. As the deadline approached the amount of information gathering work undertaken typically died off whereas the amount of writing increased. Nevertheless, information gathering could still be a major source of concern for the journalist, even as they were trying to finish writing. Getting that last comment or response from the person they had been trying to reach all day could sometimes be the difference between a story appearing in the paper or ending up spiked.

As we have seen, the writing stage of the story lifecycle is actually comprised of three elements: negotiating/talking through the story with colleagues and editors, information gathering and the writing itself. Information gathering is a particularly social part of this process. One aspect of the negotiating and talking through stage was checking. Whilst

journalists were writing, section editors were monitoring the progress of the stories they were working on, and the progress of other stories in their department, other departments and 'out there'. In particular the information gathering that went on in relation to other stories could have as significant an impact on a particular story as the information gathering done for it. Journalists would check with the person who briefed them as they wrote the story to make sure they were on the right track. The person who assigned the story would also periodically ask for an update and this information became part of the overall pool of information that circulated throughout the offices of *The Scotsman* all day, every day. Although the section editor would request the information, anyone within earshot would have that information available to them (the monitoring issue mentioned above). For section editors, editors' conference is a major chance to gather such 'secondary' information on the progress of stories in other departments. For journalists and less senior section editors (*The Scotsman* has a number of 'sub sections', the heads of which are represented at conference by the head of their parent section) vigilance is required.

He (journalist) said that because he didn't get to go to conference, although he did mention that he usually had a private chat with the editor about once a day, he had to have 'lots of antennae out there because you need to pick up what's going on'. He needed to try and keep aware of what was going on around him to help him decide what to do. RB acted as the major point of contact with the editors' conference, but there were all sorts of others things he tried to 'listen out' for.

(Fieldnote 04/08)

#### 4.2.4 The Fate of Stories: A Tale of Murder and Kidnapping

One of the outcomes of this kind of ongoing awareness maintenance is the 'love tug story'. At any stage in the story lifecycle, story ideas were vulnerable to 'kidnapping'.

The news editor has wandered over and is standing behind Sam looking at his screen. He turns to James and asks if he's got that X story? Mark says yes and mentions that he's heard X are going to 'defy the ban'. The news editor comes round to James's desk saying, 'That's a good story, we'll take that, that's 550 at least' (...). When he (James) comes off the phone he says 'That's another problem, sometimes if a story is too good the front end (news department) want it, we get hijacked - we try to bullshit them but if it's a good story, they get it.'

(Fieldnote 01/22)

Here, the news editor immediately sensed an opportunity to use the story and could even predict how big a piece it would produce. As is obvious from this fieldnote extract, such custody battles over good stories could be fraught affairs. At such times the department

hierarchies became more obvious. News and its associated departments (such as politics) frequently won these tussles since they formed the 'front end' of the paper. This section editor was clearly ambivalent about losing this particular story, even though it could be argued that a good story would benefit the paper more if placed up front. (In the event, the losing section did carry a version of the story so the battle was not entirely lost.)

Such situations are by no means dependent on casual monitoring of newsroom events, as in the above extract where the news editor wandered over to find out what was happening on the business desk. Editors' conference was a formal system for encouraging such situations – it was at conference that section editors get to hear what is going on in other departments. Even the paper's information systems supported facilitating love tugs. The wire service application included a feature which marked with an asterix any story that was already being used by another department, allowing section editors to decide whether or not this was a story they needed to fight for. Love tug stories were an everyday feature of newsroom life.

Of course not all stories that were born, or even written, would make it to the final stages of the story lifecycle. Some would fail to attract the editor's attention at conference. Others would be strangled at birth, overtaken by events in the newsroom or elsewhere:

He (journalist) tells me that he's been put on another story because the one he was working on this morning fell through - he'd been sent out to doorstep<sup>46</sup> someone and it turned out that they were away.

**(Fieldnote 12/16)**

Sometimes a story would be left part way through the writing stage. The more fast-moving a department the more likely it was that journalists would be assigned stories which they would later be told to leave for another. For example, it was quite routine for a journalist on the news desk to be pulled off one story and told to cover some breaking news, whereas a features writer was far less likely to encounter such a situation. And in a dynamic environment like the newspaper business, an important part of each section editor's job was to ensure that enough material had been commissioned to allow for stories becoming redundant as a result of events overtaking them. Some departments also gathered a number of story ideas that they kept on their story list but only assigned if necessary.

I go back round to James's area, where he is very slowly reading through the city editor's text he had referred to before. When he finishes checking it he saves it into another basket<sup>47</sup> and then goes back to Text Manager.

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<sup>46</sup> Doorstep – literally hang around on someone's doorstep in the hope of getting some comment from them.

<sup>47</sup> Basket was the term used to refer to directories on the computer network.

As he is scrolling very quickly through the list of texts he says 'There are several stories in here I do not need so they're going to get dumped.'. Then he says that earlier in the day they like to collect more stories than they need in case there are any problems with any of them, but as the day progresses they can start dumping some.

**(Fieldnote 01/22)**

Many things could happen between the morning commissioning of a story and the last deadline of the night. The story might simply peter out during the course of the day, or turn out to have been incorrectly reported in the first place, or simply not as interesting as first thought. In the parlance of The Scotsman newsroom, stories sometimes simply failed to *stand up*. Since space allotted had be filled, the section editor needed to know that if a story failed to stand up, there was something else to take its place on the page. Some journalists told me they had developed the ability to *sense* the likely fate of stories they were working on. By monitoring events as they developed around them, particularly by listening in to the numerous public conversations that would take place within their ear shot, and using their knowledge of both their own section editor and the editor, they learnt to anticipate whether or not a particular story would stand up. Material which was rejected was referred to as spike, a term which has its roots in the early days of the newspaper industry when all copy was hard. In the pre-computerisation era rejected material would be placed on a metal spike rather than in a bin because it could be retrieved from the spike and resuscitated if events dictated it ought to be. In the digital newsroom of The Scotsman, all departments had an area on the network labelled spike which served exactly the same purpose<sup>48</sup>. Juggling the percentage of material which did and did not get spiked was a difficult problem, not least because spike was a cost with no obvious return.

Although the decisions about what did and did not get spiked were usually made by section editors or the editor, journalists could during the course of writing a story come to the conclusion that it would not stand up. To the originator of a story idea, especially someone less well established in their role, the question of whether or not a story stands up could be a fraught one. Once any advertising that had been secured had been assigned to the page plan during morning conference, section editors had to fight for a share of what was left. The more good story ideas they had to present, the better the chances of securing enough page space for their section. Clearly however, there was a danger of being drawn into pitching stories more vigorously than they perhaps deserved:

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<sup>48</sup> The link with past working practices was also reflected in other aspects of The Scotsman's editorial software system (Hyphen). For example folders and directories were called baskets and files, and a journalist's main working basket was known as the In-Tray.

He is on the phone again asking for an update on a story he had assigned to a freelance journalist. He has just been back over here telling me that this is quite a nervous time for him because he might find he has oversold a story in conference and if it doesn't turn out to be strong the editor will get irritated. (He's very agitated as he tells me this).

(Fieldnote 01/22)

#### 4.2.5 The Problem with Palimpsests

Another reason for stories failing to reach the next day's paper was that the source of the story may not have been accurate. This was a particular problem of the 'palimpsest effect'. Journalists at The Scotsman often worked on stories which had originated in other newspapers, or in other media. As one very experienced journalist put it:

He (a senior editor) explains that people have to really try to get the facts straight first time because 'Newspapers are like palimpsests'<sup>49</sup> - one paper is written on top of another'. He points out that if a mistake is made it goes into the archives and cuttings files and online databases of other papers and is reused - so the mistake gets perpetuated and is really hard to eradicate.

(Fieldnote 01/21)

This highlights an important problem for the newsroom staff, how to catch the factual errors that inevitably creep into the process. One key way in which the UK newspaper industry generally, and The Scotsman was no exception, dealt with the problem of spotting factual errors in stories was by organising the production of a story in such a way as to ensure that several people will have reviewed and discussed it before it reaches print.

The routine use of multiple perspectives on a story permeated the entire lifecycle, particularly, as we shall see shortly, the editing process. Even in the writing stage of the story lifecycle (usually associated in the public mind at any rate with individual journalists) the development of the story was an intensely social activity. Many people would have contact with a story during its writing stage: colleagues offering ideas or listening to the writer recount progress so far, librarians clarifying issues so they could mediate a search,

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<sup>49</sup> A palimpsest originally referred to a medieval manuscript which was re-used, so that the previous layers could be partly seen through the top. Later it also came to be applied to paintings which had been created in a similar fashion. An excellent example of the problem with the palimpsest effect is given in a Scotsman story about searching a press database for the source of a quote; *"There were 15 entries. Read in sequence, they made up a fascinating chart of the way a quotation floats through a culture, being twisted, warped, paraphrased and misattributed at every turn, and how even as the writers are abusing it the scholars are just behind them, panting to keep up, trying to stop them mangling it beyond recognition"* (Meek, 1998) p.14.

section editors wanting updates, picture desk people looking for background to help them with finding appropriate images, the list goes on. In the United States this process of informal fact-checking has been formalised and specialist fact-checkers are used on larger features and in the magazine sector of the industry. However this formal version of the process is not fool-proof. In the US a scandal erupted in the media around the failure of fact checkers to spot a string of falsified stories written by a journalist for *The New Republic*, an American political weekly magazine who had also written completely invented articles for the magazine *George* and Microsoft's online magazine *Slate* (Kinnes, 1998).

#### **4.2.6 Talking Up a Story**

Talk was a crucial part of work at *The Scotsman*, whether in a formal setting such as a conference, or an informal setting such as a passing remark in the library. For example, editorial meetings were referred to as conferences and not meetings – journalists do not meet, they confer. The editor and section editors could often be heard asking to be 'talked through' a story. Section editors constantly asked their journalists for updates on story progress, and the hallways and pathways of the building were frequently occupied by groups of journalists discussing stories. Over the course of a day in the newsroom there was a distinctive pattern to these discussions.

In the morning people frequently discussed stories they had seen in other media – most people would have a newspaper open in front of them and would be reading as they chatted with colleagues, made phone calls or had coffee. As the day progressed the 'talkscape' of the newsroom tended to feature journalists on the phone to sources or chatting with each other about ideas for possible sources. In the meantime the section editors and editor would still be discussing breaking stories. As the afternoon progressed, section editors spent more and more time asking journalists for updates and discussing these with their chief subs, other heads and the editor. The next big phase of talking revolved around discussing how particular stories were standing up and what should go where on the pages. As the night progressed talk revolved around page design, deadlines and new developments or stories that were breaking during the night. Journalists could often be seen 'rehearsing' these conversations with each other, or on occasion with 'non-involved' parties such as library staff, even me. They would run through the story, looking for reaction and comment. This often happened in the Library when they bumped into colleagues from other departments or other papers, but we shall return to this point in Chapter 5.



### 4.2.7 Editing: From Story to News

So far we have concentrated on the journalists' and the section editors' involvement in the story lifecycle, we can now turn our attention to the other group heavily involved in the process, the sub-editors and page planners. For the journalist or journalists assigned to writing a story, submitting final copy (a text) was the last stage of their involvement with what would eventually become an article in the paper, news. It was also often an anxious moment. When they finished an article they would move it from their basket (directory) to the departmental basket, from where the sub-editors and section editors could access it. Most stories would then pass through a four stage editing process (see Figure 4.3) during which the raw text would be turned into the final story.

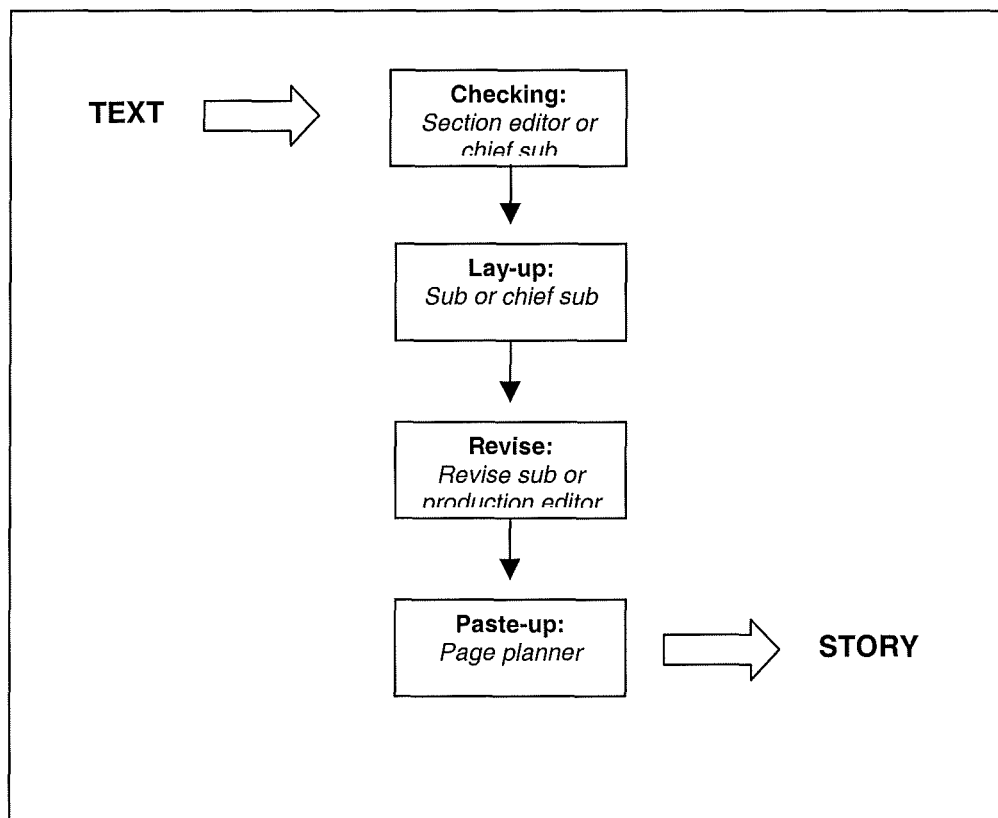


Figure 4.3: The Editing Process

The Scotsman had an electronic page production system, Hyphen. Copy was passed through various directories, which were accessible to different groups of users. Details of each edit were recorded so that it was possible to see who else had edited the piece and when. Copy was usually first checked by the section editor, or a senior sub. At this point checking was

largely concerned with fairly 'high-level' matters affecting whether or not the story was after all suitable for publication. The story would be checked for general content and writing style and how it shaped up against the other stories that were also being submitted. Although a lot of material that was to be spiked would already have been identified as such by the time the section editor was editing, it was not uncommon for stories to make it as far as this stage only to be spiked. In an ideal situation a section editor would have a little more material than could be fitted into the available space. A few 'possibly spike' stories at this point gave section editors confidence that if the worst came to the worst they had some stories in backup to ensure that their space would be filled. At this stage a section editor might also decide that they still wanted the story but that more work was required on it, and it would be passed back to the journalist concerned. Clearly a lot rode on this decision; a journalist could not leave for the day until they knew that there are no revisions required. Also, since many of the journalists I talked to cited simply seeing their work in print as a major source of job satisfaction getting spiked, like not getting a by-line<sup>50</sup>, was a disheartening experience.

If the story passed this test it would be sent to a sub-editor to be 'laid up'<sup>51</sup> on the page. Sub-editors checked the story for spelling and grammar mistakes and ensured that the various house style-rules had been adhered to. House style rules were recorded in The Scotsman's house style guide, which was maintained and updated by the production editor. Traditionally, most UK newspapers maintain such a style guide. It covers matters as diverse as the correct way to refer to different dignitaries, which slang terms to avoid, how to phrase certain things, etc. During the course of my fieldwork, The Scotsman's style guide was for the first time converted into HTML and posted on the paper's Intranet, a development welcomed by many of the journalists I spoke to. The subs also wrote the headline that would accompany the article, and on occasion might have to substantially rewrite the article to fit the tone of the section more closely. At this point the story would be released to the revise subs.

Each department had its own team of subs and page planners, however one edit was conducted 'outside' the department – the revise edit. Revise subbing was done by the production department, who checked all the stories in the business and news sections of the paper (sports and features handled this themselves). As with the subs, the focus was on spelling, style and grammar. The production editors were also responsible for monitoring

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<sup>50</sup> By-line – the journalists name appears with the article. Withholding by-lines can be used to censure journalists (Smith, 1977).

<sup>51</sup> Another reference to the industry's past, when texts were physically laid on a table top to arrange the pages.

the progress of the entire newspaper through the day, making sure that backlogs of work are not building up. The revise subs were theoretically the final editors of a story, however in practice the page planners (who put the last version of the pages together on the electronic page lay-up system) often caught last minute problems.

This extensive editing process, which took place over several hours (usually between around 1800 and 2300) meant that copy submitted by a journalist could be almost unrecognisable by the time it got to print. During the process the various editors and subs would often want to check particular details. If the journalist was still around they could check with them, frequently though these subs (most of whom are clustered in or close by 'the Bridge') would check with each other or consult one of the reference books that were dotted around, or phone the library or sometimes use the Web. Since the system allowed material that had been edited out to be visible on screen but not included in the version sent to page lay up, checking what had been removed would also sometimes clarify any queries that arose at this stage.

Whilst for the journalist(s) writing the story, decisions about it would largely be made with reference to the information gathered about the story itself, for the section and sub editors such decisions would also be influenced by information gathered about events elsewhere in their department, or in other departments, or outside. A section editor could spend a great deal of the day discussing individual stories and their relationship to the rest of the emerging paper, especially with their subs.

RB comes back and starts chatting with Sam. They are both looking at the front page lay-up on Sam's screen and RB says 'It needs to be moved forward to power meltdown or something like that'. Then Sam says, 'It needs reaction' Then they start to discuss the picture that is going with the story.

**(Fieldnote 01/22)**

Here, a section editor and a sub were negotiating both the physical appearance on the page and content of a story. During this process, they identified another information need - 'reaction'. Sudden last-minute information needs at the behest of section editors or the editor were not uncommon. A related story may have appeared in another section, so the story might be slightly reworked to fit with the other story better. Similarly, the sub may have received some late breaking news which required that their story be altered. Once any alterations had been made the page planners (or sometimes the subs) used a PC-based electronic page lay-up application called Frames to create the electronic version of the

paper. The paper-based pagination plan was drawn up after morning conference and which would get updated throughout the day, would be used as the guide for this stage of the story lifecycle. Each page would be represented on screen and once any advertising that had been secured was allowed for, the section editor and subs could see how much space they had left for the various stories, pictures and graphics assigned to it. The story could now be slotted into place and any fine adjustments made. Although a decision would usually have been made earlier in the day by the section editor and/or their chief sub (and very occasionally by the journalist involved) about whether a story should have any pictures or graphics with it, the sourcing and selection of pictures did not usually take place until well into the afternoon. The final content and angle of a story was a major factor when selecting pictures so it generally was left as late as possible unless there was a very obvious picture candidate already available.

#### **4.2.8 The Picture Desk**

Pictures were the province of The Scotsman picture desk, headed up by the picture editor. Pictures could be sourced from a number of places. They could be commissioned from staff or freelance photographers, assuming both the need and the opportunity were known in advance. They could be found from The Scotsman's own archive of previously published pictures – The Scotsman had both an electronic archive and a physical print archive. They could be taken as 'grabs', still images which were copied from video tape recordings of television programmes. Or they could be bought from agencies who provided either archives of photographs or photographs taken that day and posted on a real time picture agency service which operated in much the same way as the wires. The Scotsman's electronic picture archive, Phrasea, comprised all the pictures that had appeared in the paper since the system was introduced in 1996, some of those which were bought but never used, and a number of pictures from the physical print archive which was slowly being transferred to electronic form. Around 1200 pictures a day were archived in this image database, organised by category and searchable by keywords which were assigned by the library staff at the time of archiving. The move to electronic storage of images marked an important point in a general turn towards the provision of digital library services, but I shall leave further discussion of that until Chapter 5.

The use of increasingly large numbers of pictures in The Scotsman is something that came about with the change in ownership and editor. For a long time the UK daily broadsheets<sup>52</sup>

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<sup>52</sup> UK daily and Sunday newspaper are divided into two categories; broadsheets (a.k.a 'quality' papers) and tabloids.

could be distinguished from their tabloid counterparts by (amongst other things) their bias towards large amounts of text rather than photographs. During the 1980s and 1990s such distinctions began to break down, a phenomenon sometimes referred to as the tabloidisation of the press (Franklin, 1997). The increased use of pictures at *The Scotsman* became particularly noticeable during the reign of an editor whose background was in the tabloid press. Both library and picture desk staff felt the impact of the increasing emphasis on pictures. An interesting phenomenon one of the staff on the picture desk commented on was the inverse relationship between how much 'news' was about and the amount of work they had to do.

Sammy chats a bit about the kind of day he's had. He says it's been pretty bad, lots of changes kept making more work for them. He says that actually big news days tend to be easier because everyone pretty much knows what they are going to be working on, and there's not so much to think about for the pictures. But quieter days get difficult because people keep changing their mind, or wanting lots of alterations. And then it starts to back up.

**(Fieldnote 10/09)**

Picture desk staff learnt of the need for a picture either through conversation (face-to-face or by phone) with the person requiring the picture (usually a section editor) or through a picture order slip which contained very brief details of what was needed. At this point unless it was a very simple requirement, the picture desk staff usually did not have enough information to select from whatever pictures they found that matched this broad brief. They would need to check with the person who ordered the picture to see which one they wanted, or by asking for more information. If someone from the picture desk was going to check with the person who ordered the picture they would usually print out copies of those under consideration and use them to orient further discussions. The picture desk person would often have some preferences, based on subjective matters of taste or on more practical matters such as whether the picture could be easily cropped to fit the available space. But as with textual information gathering, the ever looming deadline also affected picture gathering.

James from business comes over and chats with Simon. There is to be a 1630 press conference in London about the Digital take-over and he really wants a picture. Simon explains that it will probably be at least an hour after that before anything on it comes through from AP (Associated Press, who supply agency photos digitally to *The Scotsman*) on the wire. James says he'll come back in an hour and see if "anything's come in". Later, James comes over to Simon again chasing the Compaq/Digital shot. Simon says nothing has come in yet, it's too early. James: 'If you phone them will they at least tell you if you're going to be getting

anything, because if they're not we can do something else.' They have a chat about how long they could wait for a photo, and then James goes and Simon phones someone and asks if they've got anyone at the Digital press conference.

**(Fieldnote 01/26)**

Here, the section editor heard in advance about an event and was trying to get a picture. But it was running close to deadline time, and as he points out he cannot afford to wait until the very last moment without having a back up plan in case a picture does not materialise. The section editor guides the picture desk staff member in their search, suggesting some keywords to use. Picture desk staff were in some ways a cross between journalists and librarians. They were basically intermediaries in someone else's search for a picture. But because they were also responsible for the creative process of editing photographs they often got involved in discussions about which picture to use, in a way which librarians would generally not, regarding the information they source. And unlike the librarians, the picture desk was situated within the newsroom (although as I shall discuss in Chapter 5, developments in the provision of media library services in *The Scotsman* are in many ways pushing the positioning of librarians in the organisational structure closer to that of the picture desk staff).

Another important factor at this point was cost. Pictures taken from the paper's own archives were often (although not always) free to use, whereas commissioning a photographer or buying a photograph from an agency could be expensive. All departments ran on a budget which got eaten up every time they hired a freelance writer or used a photograph that required payment. Towards the end of my fieldwork, a librarian mentioned that they had noticed an increased use of pictures from *The Scotsman*'s own library, and that this had been attributed to a move to reduce the large bills that had been run up through use of agency pictures. Clearly then, there was a tension between the perception at editorial level that good pictures were important from a competitiveness point of view, and a managerial level concern with running costs.

#### **4.2.9 The Palimpsest: From News to Information Again**

Once the text had been edited, the photographs and graphics produced and the final decisions about page positions made, all the material was passed to a page planner to be put together and released ready for the printers. The first edition was usually completed (i.e. the electronic version of the paper was ready to be transmitted to the printing press, some miles

away) around 1000 or 1030 at night. The subs and page planners could now head off to the pub, but not for long since the whole process had to start again for the second edition<sup>53</sup>.

Of course throughout the whole process one figure was looming behind the scenes – the editor. At any stage the editor could intervene and alter decisions made by section editors, journalists, picture desk and graphics staff. Several journalists talked about newspapers being like football teams – strongly hierarchical with an absolute ruler at the head, the editor. As the then deputy editor put it, the editor’s word is final because the editor bears ultimate responsibility. Both editors in post during my time at *The Scotsman* spent a great deal of the day in the newsroom constantly checking what was going on. Stories were presented to them, pictures and page layouts debated. They would rarely be seen alone, someone was always asking them for their opinion on something. No matter where the editor was they were always sent a copy of the first edition as soon as it was ready (a taxi would deliver it if they are away from the office) and they would provide comment on what to include, exclude, alter, etc, for the next edition.

So far the story lifecycle has been presented as a process of transformation; an account of how information becomes news. But there was one last stage in the process, a kind of ‘the afterlife’. In this final transformation, news once again became information. The popular image of the journalist rushing into the newsroom shouting “hold the front page!” with some nugget of information they have just beat the competition to is a compelling one. But the majority of stories which appeared in *The Scotsman* had their origins in a rather less romantic image, that of a journalist or section editor doggedly monitoring a (usually large) number of information sources, particularly other media. Aside from all their other duties, section editors spent much of their day phoning around regular contacts to see if anything new was happening, or sitting constantly checking the wires, looking at the news diary or listening to the latest television news broadcast playing in the background from one of the many TVs dotted around the office.

For example, an important ideas source for the features department was the news (general, political, business, sports, etc.) section of *The Scotsman* itself. A great advantage of this from *The Scotsman*’s point of view was that the original journalist could act as a source for the next one. One example of this was a story which had originally appeared in another newspaper, had been picked up by *The Scotsman*’s news section the day before and had been spotted by the features editor, who had assigned a journalist to produce a follow-up piece. During the course of the day, as the journalist tried to gather more detailed

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<sup>53</sup> Editions were tied to geographical areas, with the last editions reserved for the Edinburgh area.

information than had appeared in either of the two previous stories (the one in *The Scotsman* and the one in the other paper), it transpired that the original story was not as accurate as had at first been thought. The features journalist now researching the story had concluded that the original had been based on a misreading of the source material, an academic paper. There was in fact no story. Establishing this, however, required as thorough research as if the story had been written. As the journalist in question commented to a colleague, it was important to be sure it was incorrect before telling the section editor. Checking that the facts really were wrong was as important as checking they were right.

This example illustrates two particular aspects of what could be thought of as the ‘palimpsest effect’. Firstly (and no surprises here), information inscribed on the news palimpsest is not always appropriately interpreted. Secondly, unless spotted, mistakes are likely to be propagated throughout future layers, as happened here. Once an article has been published it will not only be distributed in the pages of the paper which published it – copies of the paper will also be bought and stored by media libraries around the world. Many papers sell all or some of their copy to online newspaper archiving services and that copy therefore become accessible to other journalists who have access to that service. And of course all of the articles in *The Scotsman* were stored in *The Scotsman*’s own electronic archive, which was freely available to all staff via the Intranet. Some electronic databases, e.g. the online UK newspaper archive FT Profile, have a facility for annotating items which have subsequently been found to be incorrect. But that presupposes that the error has been spotted, something one of my informants felt was unlikely to occur in many cases<sup>54</sup>. Problems with the accuracy of information sourced from the palimpsest were simply an inevitable part of everyday life for *Scotsman* journalists.

### 4.3 A Taxonomy of Information Needs

Findlay: I might pick up stories when I see something going on in the street or notice something talking to a cab driver, or even meet people in the supermarket who are complaining about the price of, you know, fish or something.

(Interview 04/17)

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<sup>54</sup> Although she did go on to comment that crime stories were one area where mistakes were regularly spotted since lawyers had a vested interest in monitoring them and vigorously ensuring that errors were corrected.



Having identified the activity system within which most journalistic information gathering at *The Scotsman* took place – the story lifecycle – we can now begin to identify the kinds of information need which arose during the lifecycle. Background information needs were generally suggested by the briefing given and any associated briefing materials. Whoever assigned a story to a particular journalist would usually try and provide some initial background. This might have included general historical data, selections of articles on the subject published in the press previously and discussion with colleagues who had covered the same or similar stories. The dictates of time meant that paradoxically, further background information gathering was often delayed until comment information had been sourced, or at least until the necessary phone calls had been placed. As many journalists remarked during my time in the field, the advent of the telephone was possibly of more significance for information gathering practice in the newspaper industry than the computer and its associated technologies. The telephone meant that primary sources<sup>55</sup> could be accessed from the office, and indeed the most obvious feature of life in the newsroom was not people pounding away at keyboards but people talking away on the telephone.

The ‘meat’, the substantive facts of the story, was usually gleaned from primary sources or from an already existing story. Certain kinds of stories also required a ‘peg’. This was information which provided an interesting way to open a story for discussion, to ‘hook’ the reader’s attention. A story about unemployment figures might be pegged by an account of what life was like for a family enduring long term unemployment. The peg gives the reader a focus, a ‘way in’ to the story. It is particularly useful in ‘general’ stories with a broad focus – the peg could humanise an otherwise quite dry account. In order to keep a story interesting or to get the length required ‘filler’, information which was not vital to the story or did not add anything substantive or new, was also sometimes required. Some of *The Scotsman* journalists found the Internet to be a particularly good source of filler. Finally, almost all stories needed some kind of comment, preferably from someone intimately involved in the story (a primary source). Getting comment, and its partner ‘reaction’, is one of the ways in which the profession creates a distance between the institutions of journalism and its products (the things that they say).

Much research has been done into important tenets of professional journalistic practice such as balance and objectivity. It has been suggested that such practices can be regarded as

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<sup>55</sup> Within the journalism profession there is a clear distinction made between primary and secondary information sources (Keeble, 1998). Primary sources are those closest to an event, its instigators or eye-witnesses. Secondary sources are people or organisations thought to be in a position to offer informed comment even though they have not personally been involved in the particular event in question.

'strategic organisational rituals' which exist to reinforce the image of the press as a neutral force in society, simply reporting events as they happen (Tuchman, 1972). Comment and reaction (getting a second source to comment on the original comment) contribute to the achieving of 'balance' in reports, the newspaper is seen to be presenting 'both sides' of the story. In The Scotsman newsroom, comment and reaction was also a useful way of extracting information from recalcitrant human sources. One journalist I observed had been struggling to get an important primary source to talk to him about a breaking story. On the advice of his section editor he phoned someone else and asked for comment on the story, then phoned the first source back, told them what had just been said and got the comment (now couched in 'reaction') he had been trying so hard to secure.

Once a story had been generated and written, those involved in editing it sometimes required additional information in order to verify the accuracy of the facts, or to aid them in rewriting certain parts of the story. If the journalist who produced the original was still available they would simply be asked to check or expand the information they had used. But if, as was more often the case, the journalist had left for the day (editing typically took place much later in the evening after the main story deadline) the sub editor would have to try and find this for themselves. Finding additional information to check or expand a story could often be complicated by the fact that a number of people (section editors, chief subs, even the editor) may have seen and altered the story after its initial submission. The editorial workflow system did have a facility that tracked who had edited the piece and when, which was sometimes useful in tracking down the right person to discuss the issue with.

Category	Principle Gatherer
Background	Journalist
Briefing	Editor Section editors
Comment/Reaction	Journalist
Fact Check	Sub-editor Section editors
Facts	Journalist
Filler	Journalist
Graphics	Section editors Graphics staff
Ideas	Editor Section editors
Meat	Journalist
Peg	Journalist Section editors
Pictures	Section editors Picture desk staff

Table 4.1: Taxonomy of Information Needs

One last information need in the newsroom ought to be mentioned. Information was often required to give a story, or even a section, the appropriate 'angle'. This is not included in the taxonomy since strictly speaking it is not so much an information need as a quality of an information need itself. Whilst journalists would in part judge what angle a story should have using their knowledge of the paper's history, house style, and so on, the angle was also usually heavily reliant upon what the editor or the section editor wanted. Staying alert to what the editor was doing and thinking was another one of the monitoring skills journalists needed.

#### **4.4 Understanding Co-ordination and Control in the Newsroom**

So far I have adopted a rather restrictive view of the kinds of information we are concerned with, namely I have only been concerned with what we might think of as directly story-related information. I have already argued that stories are a key object for understanding journalism. The metaphor of the story lifecycle has given us some purchase on this. But this does not mean we can ignore the most obvious object of journalism – the newspaper itself. Whilst journalists at *The Scotsman* were strongly story-oriented, subs and in particular editors also had to be newspaper-oriented (or at least section-oriented, since only the most senior editorial staff were concerned with the paper as a whole). Newsroom collaboration therefore took place on a number of activity levels which could be distinguished according to their collaborative object.

First there was story lifecycling, then section lifecycling, then paper lifecycling. Journalists, subs, librarians, and editors worked collectively to create stories. Subs, picture and graphics people and editors worked collectively to create sections. Subs, editors, production staff, advertising and marketing people and printers worked collectively to create newspapers. It is tempting to see these activity levels as a hierarchy (sections are more important than stories, etc), or as temporally located (first the story is produced, then the section), but this would be simplistic. Whilst the paper level did require that some work had been conducted at the story level, as should be clear by now there was a great deal of interplay between levels. Events at section level may have caused events at story level to change dramatically. For example, stories would routinely get spiked to make room in the paper for other stories. What is important to note here is that the temporal boundaries between story, section and newspaper lifecycling were fluid. Just as different activities were a social production, so to were the relationships between them.

But the strongly time-oriented nature of this work meant that much of this social production was related to issues of control. For example, section editors needed to be up to date on the current status of the various stories in their section in order to be able to report to the editor, spot potential bottlenecks or make decisions about the distribution of workloads. Some of this was formalised in the work process systems present in the newsroom. Hyphen, the electronic editorial system, controlled the editing process by passing texts through a series of stages. In order to move from subbing to revise subbing a text had to be flagged as ready. Editorial conferences controlled the development of page plans and story lists by providing points in time at which these documents have to be updated and authorised by the editor. And as has been shown, there are great many informal systems at work in *The Scotsman* as well (for example 'chance' hallway meetings which become briefings).

#### **4.4.1 Making Sense of Collective Work**

As discussed in Chapter 2, the canonical activity triangle even in its extended version, quickly becomes unworkable when considering highly complex, collective activity systems such as story, section and newspaper lifecycling. A more promising approach to thinking about highly collective activity systems is to distinguish between different kinds of collective activity. In an examination of the relationship between the instrumental (subject-object) and communicative (subject-subject) aspects of collective work, (Engeström et al., 1997) distinguish three levels; coordination, cooperation and communication. In coordination situations the subjects are working towards their own objects within the overall activity system – if each succeeds and follows the 'rules' of their role<sup>56</sup> (performs appropriately) the overall activity should develop without any problems. In cooperation the subjects share a common object. Communication refers to occasions when subjects interact to reflect on their coordination and cooperation. The authors propose that the nature of the collaborative or coordinative activity is mediated by a script – which may be more or less formal. In communicative activity the script itself, along with the object, may be reconceptualised. Within an activity system subjects, objects and artefacts may move between some or all of these levels. It is then proposed that transitions between these levels are the result of disturbances, ruptures or expansions (i.e. moving from one level to another, e.g. from cooperation to communication) of the activity. We can apply this model to the activity of 'manufacturing the news'.

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<sup>56</sup> Talk of roles in CHAT resonates with sociologist Erving Goffman's work, not the only such point of similarity as we shall see in Chapter 5.

The argument so far is that the ‘manufacturing of news’ at The Scotsman can be represented as comprising three different high level activities; story lifecycling, section lifecycling and newspaper lifecycling – each distinguishable by their object (see Figure 4.4).

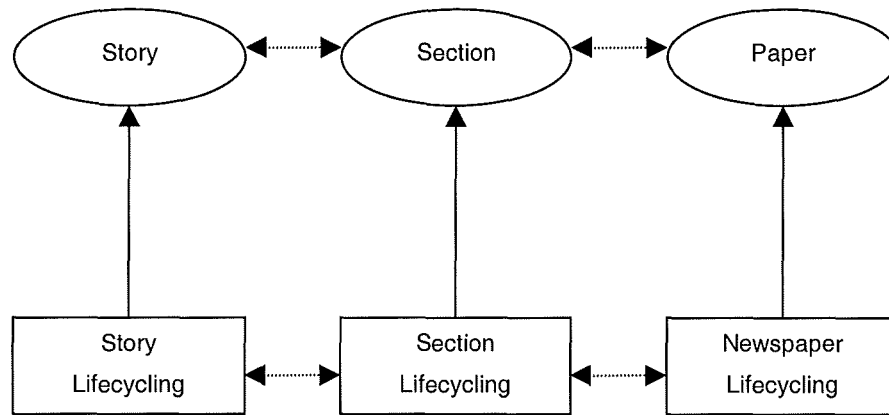


Figure 4.4: The Activity System Manufacturing the News

Objects are transformed during each activity (that being the definition of activity; the transformation of objects). But there is another kind of transformation in the transition from one activity to another as each object in turn becomes a mediating artefact (see Figure 4.5) in the ‘next along’ activity level. The object of story lifecycling is a story, but that object becomes a mediating artefact for section lifecycling, the object of which activity is the section. The section in turn becomes a mediating artefact for newspaper lifecycling. And thinking back to the palimpsest metaphor, the object of newspaper lifecycling (the newspaper itself) may be transformed into a mediating artefact for some future story lifecycling (within or outside The Scotsman).

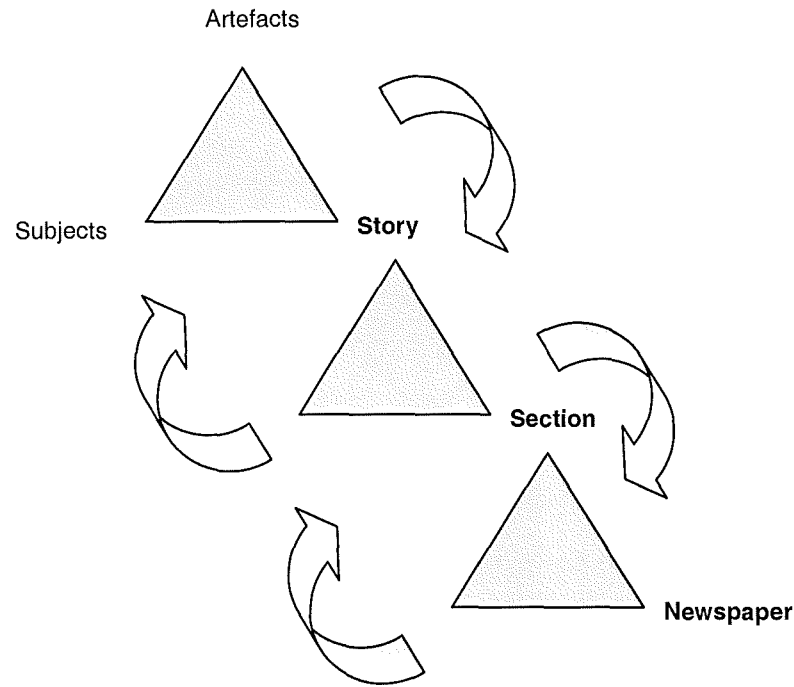


Figure 4.5: Activity Transitions in Manufacturing the News

Again, it is important not to think of this as some temporally ordered sequence of activities, with stories becoming part of sections which in turn become part of newspapers. For example, both a developing section and a developing paper were mediating artefacts in story lifecycling. Physical and mental representations of each were used to inform and influence the development of the story. Section editors used current representations of their section to make decisions about whether a story was ‘standing up’. The editor used representations of the paper to decide whether a section was shaping up, etc. And of course subjects moved between activities all the time - sections heads would almost simultaneously be *directly* contributing to the production of a story and a section and a newspaper (of course everyone who works at The Scotsman is *indirectly* contributing to all three levels).

Within each activity all three inter-subjective kinds of sub-activities can be found. A team of writers working on a single story is an example of cooperative activity. Different kinds of ‘talking through’ sessions are communicative activities. For example, the writer and the section editor or editor reflect on the object (the story) and plan further actions. Examples of coordination would include a picture desk person finding a photograph while the writer finishes a text. But transitions between the three high level activities are always examples of coordination. Interestingly, they are examples of coordination between activities in which the same individual subject might well be part of both activities. A case in point is the use of

'outlouds' to mediate the transition between story and section lifecycling. It also illustrates the issue of power in coordination interactions.

#### 4.4.2 Work Talk and 'Outlouds'

A particular kind of work talk, 'outlouds' has been described in the context of City of London dealing (Heath, Jirotko, Luff, & Hindmarsh, 1993), and in the context of air traffic control rooms (Luff, Heath, & Greatbatch, 1992). Essentially, an 'outloud' happens when someone shouts a piece of information which is connected with work being done in a given work-place. Outlouds are a way of economically giving information to a large group of people and a way people maintain a peripheral awareness of goings on (Heath et al., 1993). Outlouds, as defined above, are a common feature of life in The Scotsman newsroom:

Sarah had been asked to hurry with the Stonewall story by a voice from the central area. Sarah is shouting out whilst typing 'what's the send command for the news desk?', someone shouts F9, then she shouts 'Stonewall'. The first voice asks for the name again, and she shouts Stonewall.

##### (Fieldnote 09/10)

In the first example we can see two uses of the outloud. First is 'broadcasting a request for information' - in this case a request for help with an computer application command. Next is 'alerting a colleague to an action that is relevant to them' - in this case the completion and 'sending' of a story that has been previously chased up.

The editor sits in the Bridge (central area of the newsroom occupied by subs, section editors and the editor himself) and asks 'So what's the story on X' (he's not looking at the person who answers). He listens to the response and then says 'So the line is' and starts discussing whether that is the best line to take. Two other people in 'the Bridge' join in and they take about five minutes to agree. Editor: 'Right then, so we'll just (give it the line).'

##### (Fieldnote 01/26)

In this second example we can see how outlouds are also useful as peripheral monitoring devices for others who may have a collaborative interest in an activity. The editor did not know who was responsible for the story so he simply announced his request to the people in the immediate vicinity. The response could be overheard by others, two of whom used this 'peripheral information' to join in the conversation. Such scenes were often observable in the newsroom, and as each day progressed *seemingly* impromptu 'outloud-initiated' conversations would arise with ever greater frequency. We can now turn our attention to a

consideration of the ways in which outlouds can be used to support the vesting of control over the co-ordinating of activities within the higher level activity of section lifecycling (or 'pulling it all together', as one section editor described it).

#### **4.4.3 Section Lifecycling: 'Pulling it all Together'**

In many ways the business section of *The Scotsman* was a microcosm of the paper as a whole. Within the business department there were news and features sections, specialist sections and even 'sports' (if one chooses, as many do, to think of the stock market in sporting terms). The business section was located in the main newsroom, close to the foreign desk and the 'Bridge'. The business editor, James, described his job as "pulling it all together", getting a balance of Scottish, UK and foreign business stories. James told me that because lots of the business reporters were actually at the paper's London and Glasgow offices, a lot of his job was about "keeping on top of them". He would start his day by reading all the papers (which were scattered on desks, shelves and the floor all around the business section) and checking 'Reuters' and 'the wires'. He would have Reuters running on a PC on the left side of his desk, and the wire on the PC on the right of the desk. He would also use that PC to pick up and review stories from Scotsman staffers and freelancers that would come in across the network throughout the day.

Once he had checked a story that had come in from either the in-house or the Glasgow/London staff, James would release the copy to his chief sub Magnus to be finished and laid-up. But perhaps most importantly it was James who responded when, as they inevitably did, 'plans' went awry. A story failed to stand up, or the front end claimed it, or a new story meant something had to be dropped. In all these cases changes to story lists, assignments and pagination plans would be called for. It was James who acted as the key co-ordinator at such times, ensuring that all the relevant actions were taken and that all the relevant people and documentation are updated. As such, he rarely got an uninterrupted period of time to focus on one task. On top of this, he had to deal with the unrelenting pressure of deadlines.

One of the ways in which James coped with the conflicts between the need to attend to so many important activities at once, the need to get everything in on time and the interruptions he inevitably endured was through the exercise of control, wherever possible, over how he spent his time. The exercising of this control was supported through the spatial layout of his immediate environment and in the everyday activities of the business section. James' desk was at the hub of the business section - between the writers and the sub-editors areas.



Information flows within the section (phone calls, mail and press releases, conversations, newspapers, the wires and Reuters online information service) all revolved around him and he was ideally positioned to hear everything his colleagues said.

Life in the newsroom was punctuated by regular and frequent deliveries of information (mail, press releases, memos, etc.) which, whilst gravitating towards James, were not under his exclusive control. New mail was brought to his desk and placed on the top deck of his filing tray stack. This top deck has been turned away from James, facing out into the room, a symbolic invitation to others to read what was in there. A similar pattern could be seen in the arrangement of the large number of newspapers delivered to the section each day. Whilst they were generally stored on or behind James' desk, other staff did read them (although they were always returned to the same place). Likewise, although James had the only PC in the section capable of accessing Reuters, others could and did use it.

I am not trying to suggest here that there was some simple, and/or explicit, determining of human behaviour through the spatial organisation of the business desk space or through any formalising of the section's quotidian activities. People could, and did, break with these practices. For example, co-present colleagues could sometimes be seen issuing an outloud as they walked past James rather than from their desk. In this way they were more noticeable and James sometimes got drawn into a conversation at that point. Rather it suggests that considering the 'produced' spatial organisation (Moore, 1996) and lived practice of the business section reveals much about the co-ordination, and control, of co-operation.

#### **4.4.4 Outlouds and Control**

On The Scotsman business desk, writers or sub-editors who wanted to discuss something with James, generally went over to his desk. When people did come to James he did not always immediately respond to their presence. He might wait until he had finished whatever he was doing. From his perspective outlouds offered James a great deal of unproblematic control:

One of the reporters behind James shouts without turning round 'Right you've got Widows' and James, without looking up/round, shouts 'OK' .

**(Fieldnote 01/22)**

Using outlouds to inform James of the availability of a story was highly efficient for both James and the sender. Outlouds (when they worked) facilitated a smooth transition between

story and section lifecycling activities for James, since the newly arrived story became an artefact in section lifecycling. Neither the issuer nor the recipient of the outloud had to interrupt their current activity in order to achieve it. James could choose, as in this case, to offer some kind of verbal response. But since both sender and receiver would be co-present this was not always necessary. The sender was aware of the intended recipient's presence and activities, and could therefore legitimately assume that no further action was necessary. In addition to choosing whether or not to respond with confirmation that he had received the message, James could choose whether or not to act. In this case he did not, he simply acknowledged the outloud and continued with what he had been doing. The outloud was functioning as both an efficient way to communicate information (without interrupting either the sender's or the receiver's current activity) and a mediational means for achieving control over the activity space. But what happened when the person who had a story ready for James was not co-present?

#### 4.4.5 The Virtual Outloud

The one aspect of James' daily life that he could not control so easily was the telephone. The telephone, unlike some of his colleagues, was always responded to immediately. James *could* multi-task whilst responding to a telephone call, but nevertheless telephone calls represented a significant challenge to his ability to control his activities. Staff in the other offices could be regarded as in some ways trying to *emulate an outloud* when they would phone James to tell him a story was ready – as they usually did since if they just sent the story it might be some time before James noticed it had arrived. However, in this situation the definition of an outloud is not met since the communication required that James stop what he was doing and attend solely, or almost solely, to it. This was particularly problematic for James since, as we saw above, he coped with the many conflicts inherent in his job by exercising a great deal of control over the activity space of the business section. This control was denied him by the 'telephone emulated-outloud'.

Indeed, a telephone call to tell him a story has been made available often led to a request for immediate feedback on the story. As has already been discussed, journalists were often anxious about the reception of their work for a number of reasons. The submission of a story, even close to deadline time, may not have been the end of the matter for a journalist. Their section editor could have decided that changes were necessary and sent it back to them, so until such time as they had received feedback they had to remain 'on call'. Furthermore, the danger of being spiked loomed.

Dave finishes the piece he's been working on. He phones Jenny, the section editor, and asks her if she got it (he moved it from his basket into another one which I presume she has access to). Then he asks whether it's long enough, then he says great and hangs up.

**(Fieldnote 12/01)**

Whilst everyday practice at the Edinburgh office discouraged journalists from asking for such feedback at inappropriate times, as the extract above shows telephone conversations opened up greater opportunities to elicit feedback. In the business section, James rarely interrupted his current activity immediately upon notification via co-present outloud. Indeed it could be some considerable time before he got around to checking a story, an important control issue since he had to co-ordinate checking and chasing of a large number of stories with his numerous other duties. In the case of 'telephone emulated-outlouds' he was forced to attend more *directly* to the communication, and was vulnerable to being induced into dealing with the story at a time that may not have been of his choosing. This situation echoes that found in City of London dealing rooms, where (Heath et al., 1993) comment on the importance of the outloud not overtly demanding the initiating of collective activity.

#### **4.5 Conclusion: Cycling is a Social Thing**

This chapter attempted to locate newsroom information gathering within a system of lifecycling activities distinguished by their respective objects: story, section and newspaper. The locus of most information gathering seemed to be the story lifecycle. The arrangement of work space and time was oriented around stories. Labour divisions were oriented around stories (you were distinguished by what you did to stories – edited them, wrote them, gathered them – laid them up, etc.). I began my discussion of the story lifecycle with a simple, work-process oriented abstraction (Figure 4.1, above). In descriptively fleshing out this abstraction its flaws are all too obvious; there is no sense in this representation of the active, creative involvement of people in this work process, no sense of the moment by moment adaptation to circumstances that must occur within the story lifecycle, no sense of the discontinuities and conflicts that arise within a given lifecycle. Using the CHAT perspective we can begin to model the activity in less deterministic terms.

The activity 'story lifecycling' had as its object a story, as its collective subjects the editor, section editors, journalists, and production staff, and a huge range of mediating artefacts, from sources and computerised editorial workflow systems to page plans and interview notes. The instrumental aspects of the activity encompassed a diverse range of actions; identifying sources, querying sources, writing draft copy, etc. The communicative aspects

were equally diverse; negotiating with the editor, briefing journalists, talking the story through, asking for source ideas, interviewing sources, etc. The motivation of subjects was shared in so far as all wanted to see stories in the paper, since without stories there would have been no paper and the paper was everyone's *raison d'être* (or at least *raison d'emploi*). But that it is not to say there was never any conflict within a particular story lifecycle. In constructing the object (the story) there was no guarantee that all the collaborating subjects shared the same 'perspective' (Holland & Reeves, 1996) on it. Section editors and journalists of course occupied different structural positions within the institution, each had different powers and responsibilities. The section editor was likely to be concerned that only good stories get printed, whereas individual writers may simply have wished to see their story in print regardless of how it 'stood up' in relation to other stories. Conversely, a section editor may have wished to see the story printed regardless of its merit because it was a quiet day and there was insufficient material to fill the page. The journalist may have felt embarrassed having their name attached to a printed story that was not of their usual quality. Power lay with the section editor in the first instance, although they in turn had to negotiate with the editor, and the editor in turn would have additional pressures (economic, the desires of the owners, etc.).

We can see now why the activity must be labelled the story lifecycle and not 'the creation of a story', or the 'social construction of stories'. Stories are indeed socially constructed at *The Scotsman*, but that occurs within the context of a larger activity (story lifecycling). In the context of the higher level activity 'newspaper lifecycling', many stories will never make it all the way through the lifecycle. Of those that do, some will go on to have an afterlife in other stories. Even some of those that don't end up printed in the next day's paper may live to see another day – resuscitated when the story environment changes or more information becomes available. The outcome of engaging in the activity 'the story lifecycle' is not a printed story, it is simply working towards a story and in so doing contributing to the higher activity system of newspaper lifecycling (which does have an unequivocal outcome - newspaper sales and income generation). The story lifecycle is as much about contributing to the conditions which allow the paper to be constructed as it is about contributing concrete 'parts' of that construction (i.e. stories). Process models with their linear structure fail to capture the cyclic nature of activities and activity systems. The object in both the process model and the activity model is a story, but the outcome in the process model is binary (story or not story), the outcome in the activity model is develops as the activity does.

Having considered in detail the way subjects co-operated in story lifecycling the chapter then moved on to consider CHAT's focus on the social nature of activity. CHAT allowed us

to understand the failure of the telephone to adequately mediate the emulated outloud in the context of the activity section lifecycling. The emulated (or virtual) outloud was problematic from the section lifecycling perspective because it opened up the potential for a disturbance of the co-ordination activity which transforms stories as object of story lifecycling to stories as artefacts in section lifecycling. The problem with using the telephone to mediate outlouding within the activity 'pulling it all together' is that it opened up an opportunity for a disturbance to the coordination aspects of pulling it all together – the journalist (sender) could deviate from the 'script' and disrupt the normal flow of the business editor's activities. Telling James that a story was ready marked a major point of transition for stories. From being the object of the activity 'story lifecycling' they are transformed into mediating artefacts within section lifecycling. But at this point of transition there was a conflict between the principle subject of the story lifecycling activity (the journalist) and the principle subject of the section lifecycling activity (the section editor). Whilst in order to ascertain whether or not the desired outcome of story lifecycling is likely (i.e. that the story gets printed in the next day's paper) the journalist needed feedback from the section editor, the section editor needed to maintain control over the co-ordination aspects of the section lifecycling activity by choosing when to give such feedback.

Of course what this highlights is the issue of perspective. If we take section lifecycling as our activity focus then the use of the telephone to mediate virtual outlouds does lead to a coordination disturbance. However, if we were to consider the activity story lifecycling then the use of the telephone by a remote journalist provides an opportunity to move from the 'waiting for feedback' to 'acting on feedback' aspects of the activity. But from the section lifecycling perspective it is by no means clear which activity should take precedence. Whilst James needed a high level of personal control of the flow of actions in order to pull the business section together, it may have been that early feedback to the journalist was vital in case additional work was required, since as the working day progressed the opportunity to access relevant human sources for any re-writing decreases (at least on stories with a UK focus – after 5pm it would get much harder to track down human sources).

## **5 The Scotsman Library: From 'Morgue' to 'Cyberspace'**

## 5.1 Introduction

Until quite recently, newspaper libraries in the United States of America were known as ‘morgues’ (Semonche, 1993) – places where dead news is stored until such time as it needs to be resurrected. The role of the library, and status of the librarian is low in most media institutions – librarians offer support services to those on the frontlines (the journalists). New technologies are thought to be radically changing both journalism and news libraries (Keeble, 1998). For some their introduction heralds the death knell of the news library, although recent research suggests that the obituary notice may have been premature (Nichols & Williams, 1997). The Scotsman library had, just prior to my arrival, found itself at the centre of such debates. A management driven initiative was underway to develop a virtual library service, enabling journalists to access sources that were once only available within the physical library from their own newsroom desktops. With it, this initiative had brought about debate about the proper role of the library staff both within the library and within the newsroom. The move towards the virtual library embodied the sense, strongly held at management level in *The Scotsman*, that journalists ought to have been doing more of their routine information gathering themselves and that librarians ought to have been a specialist, research service. There was even some discussion about whether or not specialist librarians should have been based in the newsroom rather than in the physically self-contained library. In the US this process has led to the suggestion of a new job specialism, the information editor (Orr, 1996). Such a move at *The Scotsman* would have put the library very much on a par with the picture desk, which was headed by a picture editor (the ‘editor’ title being a crucial status signifier). However in the wider UK newspaper industry economic pressures and the weakening of the Unions had led towards the collapsing of job specialisms (Smith, 1977) and not the creation of ever greater numbers of them – as was the case in the past (Semonche, 1993). In this chapter I shall consider the role of the library in information gathering activities at *The Scotsman* and the relationship between journalists and librarians (collective subjects in story lifecycling).

## 5.2 Inside the Library: Where ‘Books are Always Available’.

There were 8 permanent staff and a variable number of temporary staff employed in the library. These librarians fulfilled a number of functions; they maintained the digital and analogue sources available, assisted in the identification and development of new sources and facilities, indexed and electronically archived the paper every day, digitised the paper’s huge photographic print collection, undertook information searches on behalf of journalists, assisted journalists (in person and on the phone) with searches, trained journalists in using the various available sources and publicised new sources.

The Scotsman library was staffed from 0730 till 2300 weekdays, from 0730 till 1900 on Saturdays, and from 1300 till 2200 on Sundays. During these periods, any Scotsman journalist could wander in and search through over two million photographic prints, check the names of a Company's Directors or access a full-text version of an article from yesterday's New York Times. If they could not be bothered strolling down to the library, or if they were busy with something else, they could simply call and ask for a search to be done and the results either sent to them or left in the Library for later pick-up.

The library occupied a small room on a corridor some distance from the main newsroom (although close to the features room). The first thing one saw upon entering the library was a large cabinet with an array of trays on top labelled Scotsman, Evening News etc. The trays contained articles and photographs retrieved by the librarians and waiting to be picked up. Just behind the cabinet was a bank of computer terminals. Some were for library staff use, and some for journalists visiting the library. On the left as you entered were two rows of bookshelves. Books were classified using a sub-set of the Universal Decimal Classification system (the sub-set is listed in full in Appendix 4) which reflected the information priorities, from the librarian's point of view, of the organisation, namely: people, places, events. This version had been constantly adapted over the years, and so reflected not just current but past interpretations of what Scotsman journalists would want to know about. The head librarian was responsible for adding to the collection and she did this on the basis of a number of issues:

- An emphasis on Scottish material
- Keeping 'year books' up to date
- 'Short history' style books on relevant topics
- Material that was not easily available elsewhere
- Books that had illustrations – which were handy as a supplement to The Scotsman's own picture archive

Behind the bookshelves were banks of movable bays which were used to store the remnants of the cuttings library (which had been greatly scaled down since the introduction of electronic archiving) and some books. The cuttings classification system was again mainly organised around the primary concerns of the paper: people, places and events (see Table 5.1).



<b>LEFT SIDE BAYS</b>		<b>RIGHT SIDE BAYS</b>	
<b>Bay No.</b>	<b>Label</b>	<b>Bay No.</b>	<b>Label</b>
1	Biographies A-L	1	-----
2	Subject Shops to Sport	2	Subject Aviation to Companies
3	Subject Politics to Shops	3	Subject Companies to Countries
4	Subjects – Places	4	Subject Countries to Crime
5	Subjects – Places	5	Subject Crime to Festivals
6	Back Copies of Papers	6	Subject Festivals to Medicine
7	Back Copies of Papers	7	Subject Medicine to Places
9	Biographies S-Z & Royals & Foreign Royals	8	----
10	Biographies Mc- ST	9	----
11	Biographies M-Mc	10	Evening News Centre Spreads
		11	Government Publications & Reports
		12	Government Publications, Statistics etc
		13	Books Edinburgh
		14	Books Scotland

**Table 5.1: Cuttings Archive Classification System**

At the far side of these bays were a row of terminals used by library staff when preparing the electronic archive of articles from the Group's various papers. To the right was a large cabinet, extending several feet into the room, which housed bound copies of current newspapers. Behind this were more movable bays, this time housing the photographic prints collection. An enormous card index machine against the back wall recorded the contents of this archive. This side of the room also housed the terminals used by library staff when archiving electronic pictures. The librarians were responsible for archiving digital materials produced by The Scotsman Group's papers. They maintained both the text archive (usually referred to as 'BRS', but sometimes 'TSPL') and the picture archive (referred to either as the 'EPA' or as 'Phrasea'). Since BRS relied on a conventional free-text search engine the librarians did not have to classify the contents of each day's papers when they prepared them for transfer to the BRS database.

However, electronic picture classification had proved to be something of a challenge. All pictures were stored with a number of keywords which were added by library staff as the picture was prepared for archiving. The list of keywords was in the thousands and rising – librarians could, and did, suggest new keywords for the list, which was periodically updated. Librarians had a guidebook which detailed how keywording was to be approached. As with cuttings, the main distinction was between people and subjects. Subjects were arranged by keyword groups. Some of these groups had special guide notes for keywording, for example under the subject group Politics it was noted that the year should follow where appropriate. There were also a number of *general tags* which were to be added at the end of keywords, e.g. Interiors, Exteriors, Performances, Fifties, etc.

### 5.2.1 Measuring What a Library Does

After my first few visits to the Library I offered to help with the logging of enquiry data. The librarians used enquiry forms (see Figure 5.2) to record details of enquiries that they have been asked to answer by journalists from the Group's papers (The Scotsman, Evening News, Scotland on Sunday and a number of small local papers<sup>57</sup>). They would record the enquirer's details, what was wanted and then indicate which sources they had used in answering the enquiry (a typical form would show 1-2 sources used). Getting involved with this was a good way to get a sense of the range of enquiries that librarian's handled. Although full details of exactly what was wanted and done were not recorded on the forms many of them reveal enough to get a sense of the complexity of the enquiry. It also seemed like a good way to legitimate my regular presence in the Library, which I had by then identified as a potentially key site for my research since it was a chance to observe journalists interacting in a less public setting (of which more later in the chapter) and also provided a less hectic environment in which journalists were more open to 'having a chat'.

Enquiry Form			
Date			
Staff			
Name & Paper			
Contact number			
Public & Name			
Pix Print		Pix EPA	
Request			
BRS	Profile	Lexis/Nexis	Reuters
Internet		Cuts	M/film
Books			
Public Lib			
Comments & status			

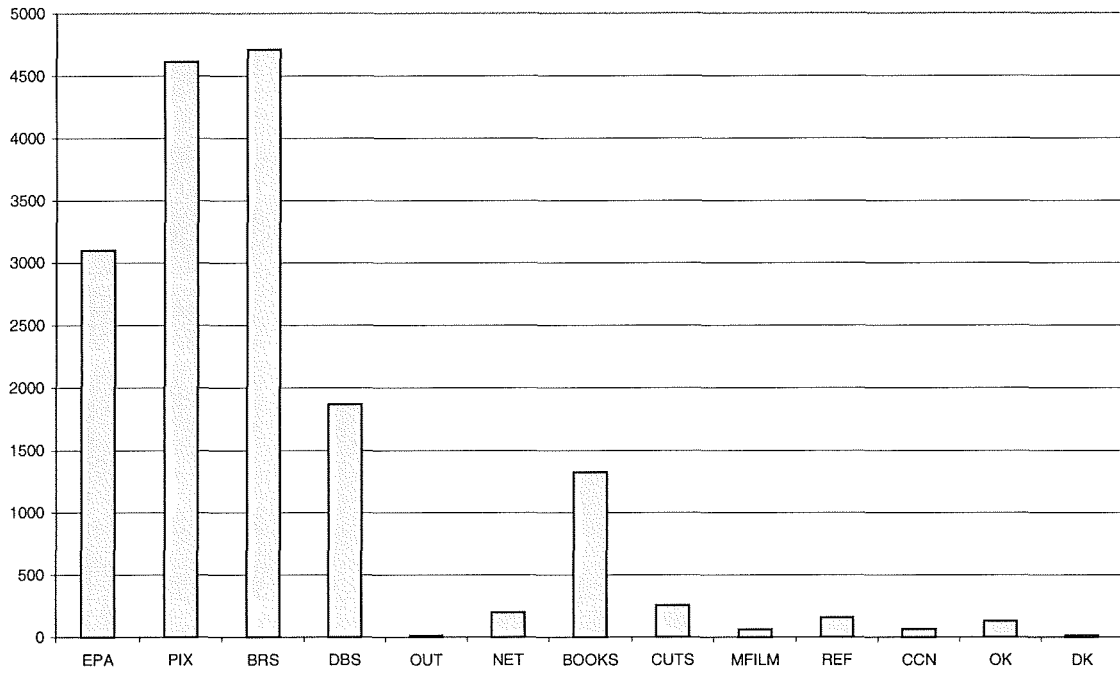
Figure 5.1: Library Enquiry Form

<sup>57</sup> A typical breakdown of enquiries would be c. 40% from Scotsman staff, c. 40% from Evening News staff and c. 15% from Scotland on Sunday staff. Evening News enquiries usually accounted for more of the picture (electronic and hard copy) requests, Scotsman enquiries for more of the text source enquiries.

Before we consider the results of this survey of 6 month's worth of these forms (the first half of 1998) in more detail we must address the issue of their warrantability; what are the conditions under which we must interpret this data? Firstly, these figures by no means objectively represent the volume of work undertaken by library staff. For example, at busy times, library staff frequently answered very quick queries (such as those that they could answer from their own knowledge or whilst the journalist was still on the phone) without completing a form. Furthermore, monitoring of the volume of calls into the office from elsewhere in the building did not seem to tally with the enquiry log figures. The Scotsman's call logging system recorded typically 1000+ calls per week as against c. 350 forms – even allowing for some non-enquiry calls it seems likely that some 50% or more of the enquiries per week were not being recorded. And of course the forms do not record anything of the many other activities librarians engage in. Secondly, defining an enquiry has been an ongoing challenge for the library staff. At busy times it was often not possible to get around to filling in the forms.

Taking on the logging of the enquiry forms provided me with an opportunity to discuss how an enquiry was being defined by the librarians. At the point I began the logging, a couple of months into the fieldwork programme, an enquiry was defined by the two most senior librarians, who co-ordinated the logging effort, as a search for one piece of information from one source. So searching for the name of a businessman using both The Scotsman's own archive and another database would be regarded as two enquiries and searching for the names of two businessmen using one source would also be regarded as two enquiries. This definition in some way addresses what a simple count of the number of forms cannot capture, the difficulty of answering an 'enquiry job'. Some jobs could take several members of staff a considerable amount of time to answer. But generally these kinds of jobs required the use of several sources of information and so were recorded as several 'enquiries'.

The full results of the survey, broken down by week and by source type, are available in Appendix 5. Here I shall discuss some of the key findings. During the period I was recording the data 16512 source enquiries were recorded by the librarians; an average of 2752 per month. Of these 79% used what we might call 'Scotsman's own' sources: their electronic and hard copy archives of texts and photographs created for The Scotsman Group's papers, and the librarian's own knowledge (i.e. where no source had been consulted by the librarian).

**KEY:**

- EPA = Phrasea, the electronic picture archive
- PIX = Pictures from Library collection
- BRS = Scotsman Group's own database
- DBS = other databases (e.g. Profile etc)
- OUT = outside source
- NET = net (principally WWW)
- BOOK = books
- CUTS = articles from Scotsman Group's own collection of newspaper article cuttings
- MFILM = microfilm, Scotsman Group's collection of microfilmed newspapers
- REF = referred on (principally used when queries are from members of the public)
- CCN = an online company and electoral roll information service
- OK = own knowledge (librarian's rarely bothered to record queries they had answered in this way)
- DK = don't know

**Figure 5.2: Total Library Enquiries (6 Months), by Source**

As can be seen from Figure 5.3, use of the Internet was still very limited compared to other, longer serving, sources – only 199 enquiries in total (although there was a slight upward trend over the period). However whilst use of the cuttings library was limited, use of the hard copy print archive was still considerable (in fact there was a slight upward trend during the period, possibly as a result of the general increase in the number of picture's being used in The Scotsman in particular). It is interesting to compare the figures for use of books (1327 enquiries) with those for the Internet. Despite the heavy investment in new technology books still played an important role in the library.

## 5.2.2 Journalist-Librarian Relationships: 'I'm Not Stupid Really'

Lorna (a librarian): Some of them are happy to do it (information gathering), and some of them recognise that sometimes its better to do it themselves given the nature of some of their enquiries. A hell of a lot of them don't. I mean, you know, if you get something like a really really general request like Jane had in the other week, the history of sea faring (laughs). I mean, oh god, and that was basically what the girl had been told to write.

Catriona: Yeah?

Lorna: It was you know, a potted history of sea faring - Scotland or the UK, I don't know. But Jane did you know a big Profile search, and she virtually, you know, going through on something so general and picking out what you think is important.

Catriona: Yeah

Lorna: I mean some journalists would recognise that they should do that search themselves if they are going to write the article, because they, they're browsing and picking out.

Catriona: Mmm.

Lorna: Some of them trust you to do it and know that you'll do, you'll get what they want, and some of them don't really care what you give them because they are going to write the article from that anyway, it doesn't really matter what it is, they've got to write article and they need something.

Catriona: Something, yeah.

Lorna: Just give it to me now.

### (Interview 08/25)

What this librarian had recognised here was that the finding and selecting of information was a fundamental part of being a journalist – a story could be written until some information had been gathered. As we saw in the previous chapter, journalistic information gathering is strongly oriented to the deadline. At some point, a story just has to be written and that means at some point, some information just has to be found. With some stories there will be limited amounts of information available and the principle challenge will be in finding it. With other kinds of stories, as in the sea-faring example given above, there will be no shortage of information and the challenge will be in selecting it.

For the Head Librarian, Sally, this pressure meant that the focus was on fitting in with deadlines rather than the completeness of a search:

Sally said deadlines are a big factor for journalists and library staff. Sometimes if you know that the search is not going well it can be important to admit defeat quickly so that you can get back to the writer and give them a chance to rethink. She thinks that with the amount of information available growing so fast, and with the pressure of deadlines, they really aim to do a 'good enough' search rather than a completely comprehensive one. They have to know when to stop, and make decisions about the likelihood of success as quickly as possible.

**(Fieldnote 12/16)**

What Sally had also recognised was the extent to which personal relationships between journalists and librarians affected the way journalists made use of the librarians' expertise. The physical 'apartness' of the library, and its very different atmosphere, contributed to a somewhat mixed relationship between journalists and librarians. Whereas both the newsroom and the main subsidiary editorial room (features) exuded an air of tension at all times, particularly as the day progressed, the library generally had a calm atmosphere, despite the constantly ringing phones bringing yet more enquiry requests from the newsroom. Library staff were all female until the very end of my fieldwork, when one male was employed on a temporary basis. This was in stark contrast to the newsroom where the majority of staff were male – of the main editorial departments only features had a roughly 50-50 male-female staffing ratio.

Unlike in a public or general library, staff at The Scotsman library put considerable effort into getting to know their patrons, many of whom they would see two or three times a day, several days a week:

The library staff seem to have good relationships with a lot of people who come in. I overheard one guy remark that he was surprised that they knew his name and the librarian replied that after finding millions of photos for him she's bound to know his name.

**(Fieldnote 12/16)**

But like many UK newspapers at the time, The Scotsman had a relatively high journalistic staff turn-over and at any one time there would be several new, temporary and/or work-experience journalists working there. How journalists got introduced to the Library could be a hit and miss affair. Some would have had a brief induction session with the Head Librarian, although this was dependent on the Library being notified of their existence,

which was certainly not always the case. For most, their introduction to the library would, if they were lucky, come when a colleague showed them round the building. One fairly new, and young, journalist commented to me that he thought the library staff were un-welcoming and that since he had never formally been introduced to any of them or been shown around he felt a bit uncomfortable going in there. He recalled that it was quite some time after he had started working at The Scotsman that he was shown into the Library by a colleague. Although he had passed the Library everyday on his way to and from work, he had not felt comfortable about going in alone. Increasing staff turnover had not gone unnoticed in the Library, and along with the reduction in the number of occasions on which journalists visited the library (as a result of the transfer of one of the main electronic sources to the newsroom network), this led some librarians to worry about their ability to maintain good contacts with journalists.

Although the librarians could be seen as functionaries who existed to serve those on the frontlines, the librarians themselves were actively trying to move away from this role:

Meg and Lorna start chatting about Meg's shift last night. She mentions that it was very busy and she kept trying to persuade people to do their own searches. Then she takes a call about pictures of the Xmas Market in Princes St Gardens last year. She asks out loud if anyone has seen anything like that, which they haven't. She calls the person back and says she can't see anything in prints. When she comes off the phone she says that he (one of the people she was trying to persuade last night) eventually said, well I can look in Phrasea. Lorna remarks 'Ah, the penny drops'. They carry on talking about how some people are for ever asking for loads of stuff they could easily find themselves. Meg says 'It's easier if they do it' and comments that then they don't have to go into all sorts of explanations about what they want which can be confusing - she uses the example of being asked for a photo of someone 'looking left' when they don't clarify what they mean. She says that 'they know what they want the minute they see it, we don't.

**(Fieldnote 02/13)**

Meg clearly wanted to encourage more self-reliance in her patrons, since certain kinds of enquiries were more easily pursued by the journalist or picture person in question.

### 5.3 Social Functions of the Library

#### 5.3.1 Learning in the Library

As far as the Head Librarian was concerned their informal educational role was a crucial part of their work, although formal training sessions for journalists were not regarded as a viable option. The nature of working life on a newspaper, such as deadlines and the unpredictability of workloads, meant that arranging and keeping training sessions was challenging. On one occasion the Head Librarian tried to go round everyone in the newsroom to show them how to operate the new networked version of BRS. She found that she had to approach people by asking for five minutes of their time only. If she asked for more she would be told it was impossible, although when she asked for five she usually got more (a trick I myself had learned some months earlier when approaching people for interviews!). She used the opportunity to try and get some feedback from the journalists about how they were taking to the new technologies in the newsroom.

In the Library, help notes for the various electronic systems were situated to the side of the relevant terminals and library staff were always on hand to assist any journalists with queries – either by doing the search themselves or by advising the journalist on tactics, commands, etc. Library staff also regularly circled around the journalists' terminals and would ask anyone they thought was struggling if they needed help. In particular they were watching for people who had been getting large numbers of 'hits' returned for a search, or who had been in for some time:

Meg has been watching the woman who has been in searching since before I arrived, pausing behind her every few minutes. Now she has gone and stood behind her and starts to ask her what she is looking for. She suggests that if she puts in less specific words she might have more luck, and then asks if she has checked Profile as well. The woman asks what Profile will get her and Meg explains that Profile contains national newspapers other than The Scotsman.

**(Fieldnote 12/22)**

The important point to note here is that Meg did not just stop to help the woman with the query she was trying to run, but also used the opportunity to check to see whether or not it was really the query she ought to be running (in this case by checking whether or not she was using the right source). In so doing she discovered that the woman was unaware of the existence of Profile and so now had an opportunity to provide some basic training, by explaining Profile.



However not all journalists would work away doggedly at an intransigent search, as the woman in the previous extract did. Others would approach library staff themselves seeking assistance:

A woman (W) who has been sitting at a workstation for about 10/15 minutes has got up and come over to Lorna (L): W: 'Excuse me, what would be the best way to do a search to do with the States to do with tobacco sponsorship?' L: 'Tobacco sponsors? I don't think you'll get that in a book. The best way is probably FT Profile.' W: 'FT Profile?' L: 'That's the national papers'. Lorna takes her over to a terminal. Both sit down, L in front of screen and they both look at screen L: 'What are they wanting to know, tobacco sponsors?' W: 'No, they're wanting to know how much money is spent (unclear)' L: 'That's going to be hard' Lorna types in something, I move round and see a list of headlines come up on screen L: 'Have a look in there'. Lorna scrolls down the screen as the W looks on but doesn't say anything.) L: 'It's money they give to sport then?' W: 'Not even just sport, everything.' L: 'Oh right'. Lorna types in something else, I can't see what it is. L: (Looks at W) 'It's just the same as our system really, only different commands. I'm just asking it here to look for tobacco industry and sport, to get going, and then asking it to look for sponsors' W: 'Right - yeah - that's good.' L types as W watches and then L looks at her. W: 'That'll be fine' After another couple of minutes when they are both looking at the screen, something starts to print out and the W gets up and fetches some texts from the printer and leaves

**(Fieldnote 02/13)**

This kind of informal, on-the-job, training echoes the situation Julian Orr found in his study of photocopier field service technicians (Orr, 1996). Particularly striking is the similarity between the way the technicians socialise their clients into using the 'right language' when describing their problems, and the way librarians get journalists to think about the 'right issues', for example 'how far back', 'which source' etc . Orr gives the example of a technician who had been called out to repair a machine which the client had reported was jamming. The technician asks to see the person who had actually noticed the problem (it turns out there were two people) and then discusses with them the problem while standing at the machine in question. Orr notes the ways in which the technician persuades the users to use technician's language, for example by correcting the user when they say 'double-sided' instead of 'two-sided'. This kind of socialising is important because it helps the technician diagnose the problem when it is not immediately recognisable to either the technician or the customer. Being "*socialized in the ways of the machine*" (Orr, 1996) p.117 helps the user create representations of the situation, which in turn can be interpreted by the technician and, along with various other bits of information from other sources (such as observing the machine) will contribute to the diagnosis of the problem. Similarly, the 'training' function

of librarians existed not simply to train better information gatherers themselves, but better library users:

Harry calls the library and asks them to check BRS for a recent Scotsman 'piece on Calton Fitness Club and personal trainers, if you put Calton and personal trainer in you should get it. I'll come and pick it up later.'

**(Fieldnote 01/21)**

Here an experienced journalist, who had been at The Scotsman for some years and had a friendly relationship with the librarians, demonstrated his understanding of what makes a 'good' library user. He had identified appropriate search terms, communicated the context of the story and told them roughly when and where they would find it. He even told them that he would pick up the results himself later. The call was short and to the point.

### **5.3.2 Mediation**

In much IR and IS/library science literature librarian's are regarded primarily as mediators, people whose job is to act as go-between between the 'fuzzy' needs of the user and the precise needs of most information systems. Although many of the journalists who used the Library conducted their own searches, others would ask for or be offered assistance:

She talks about how writers use the service - specialist writers often take care of themselves because they have a good grasp of their field but generalist writers can often get asked to write pieces on things they admit they know nothing about. They come in saying things like, I'm doing a piece on the history of the class structure in Scotland - what have you got.

**(Fieldnote 12/16)**

This comment from a librarian reflects a common difficulty faced by journalists, lack of what (Hjørland, 1998) calls subject knowledge. Whether or not they knew how to access the various sources available to them, many had a rather more serious problem to deal with – they were searching for information about things they knew little, or nothing, about. Although there were a number of specialist writers at The Scotsman, the majority of Scotsman journalists were not specialists (except in the broadest sense, for example 'business' or 'sport'). Added to this, journalists had a huge range of sources available to them, and as we shall see in the next chapter, had to develop strategies for coping with this diversity within the overriding newsroom constraint of the deadline.

Mediators were valuable allies and a typical visit to The Scotsman library would provide no end of examples of just such a mediating role:

Sally is helping a guy who came in, sat at a terminal, hit a few keys, looked confused and then quickly grabbed Sally for some help. She starts asking him a lot of questions and using his keyboard. She asks a number of questions: are you in the right database, how far back do you want to go, do you want to see the headlines for that, is it a particular story you want, what is it you are looking for? He starts to tell her more about what he is looking for. She explains why it is important to refine his search and suggests that he try for variations on the spelling of one of the words he is looking for. He's getting frustrated so she tells him 'If you can drive a car you can use this system' They are having problems printing so they move to another workstation. Man says 'the old system with the envelopes was much easier, Sally asks if he'd rather leave it with her. He goes off.

**(Fieldnote 12/16)**

There are two particular points to be made about this extract. Firstly, the questions Sally asked were fairly standard and would often be heard when a librarian was helping a journalist. The question about how far back the search ought to go was usually one of the first to be asked, along with how to spell any unfamiliar terms. But asking these questions was not just a way of eliciting the information required to construct a query, it was also a way of eliciting more general information about what the journalist was looking for; a way of getting them to think through their information needs.

On one occasion a systems developer sent to see the Librarians was discussing whether or not some kind of email request system might be useful for the librarians. The developer thought that such a system might make it easier for the journalists and the librarians by cutting down on lengthy telephone calls, and by encouraging the journalists to provide appropriate information for the librarians. The developer repeated the suggestion several times, unable to understand why the librarian's did not agree that it would be a useful system. From a highly task-oriented point of view, an email form that forced journalists to include information such as date range required does seem highly practical. It would reduce the amount of time librarians had to spend asking for this information. What the developer could not see however was that the personal contact of the mediation situation did not occur simply to elicit this rather basic information. The personal contact of the mediation situation afforded librarians an opportunity to prompt journalists into deeper reflection on their needs. Given the complex and/or obscure nature of many of the requests librarians receive, this opportunity paid many dividends that an email request system would not. Secondly, this

previous extract is another example of librarian's using the assisted search as an opportunity to 'train' journalists. Sally did not just tell journalists what they ought to do, she also explained why they ought to do it.

### 5.3.3 Physical Documents: 'The Weight of Things'

Some of the journalists had been at The Scotsman long enough to remember the pre-BRS days when journalists left the library not clutching a stack of print-outs but an envelope. In the previous extract the journalist refers to 'envelopes'; selections of cuttings that the librarians created and maintained under various subjects. When a journalist was looking for old stories about for example, famous murder cases, they would be given the appropriate envelope of cuttings to take away. This system had a number of advantages. For one, the librarians had already done the search for you; deciding what should and should not go in the various envelopes. Then there was the fact that journalists did not have to use a complicated piece of technology to access a selection of relevant information, they just asked a librarian for it. Finally, as the informant below points out, there were certain physical properties of information presented in this way that added to the information gathering experience:

He talks about the library changing from cuttings saying that before you'd call the library with a query and get sent a pile of cuttings - 'some of us preferred it in the old days, you could feel the weight of things but now when you use Profile for cuttings you just get a print out'.

**(Fieldnote 01/21)**

This point was echoed by another informant, who added that the envelopes communicated a lot about their contents. Envelopes which were extremely old or battered looking gave you an indication of how frequently the information in them had been referred to. This was of interest to him. He liked the security of knowing that a piece of information has been used before.

Before the arrival of Phrasia, picture envelopes functioned in much the same way as cuttings envelopes. Library staff would collect pictures under relevant headings; for example 'Princes Street, day'. New pictures would either be assigned to existing envelopes or new envelopes created especially for them. Because many of the pictures could only be used if a fee was paid, it was important to record their use to enable payments to be calculated. Consequently the envelopes would be annotated to show that the picture had been used. This information also helped staff decide whether or not a picture had been used too frequently. This annotation feature was carried on to the new digital system, which had

fields to record picture use histories. However, no such annotation system existed for either the analogue or digital versions of the text archive (other than that relating to recording mistakes in published stories, of which more later). But story cuttings themselves did afford extra information not so immediately available from the electronic versions. For example, the size of the story and its position on the page indicated something about the importance with which it was regarded at the time of publication. Such information was useful because of course in years to come there may be no other way of assessing how important a story had been perceived to be if no-one from that period remained.

#### 5.4 'Fixing' the Palimpsest

*This paper, and the hundreds of thousands of words it contains, has been produced in about 15 hours by a group of fallible human beings, working out of cramped offices while trying to find out about what happened in the world from people who are sometimes reluctant to tell us and, at others, positively obstructive.*

*(Randall, 1996) p.5*

Like all UK papers, mistakes crept in to The Scotsman. Many of them were inconsequential and went unnoticed, either by The Scotsman's staff or its readers. But some were noticed, and when they were it is usually up to the library to deal with their correction – to 'fix' the palimpsest. As we discovered in the previous chapter, the heavy re-use of information from media sources means that correcting mistakes is both difficult and extremely important. If the mistaken information is not to be repeated in later layers of the palimpsest it must be quickly dealt with:

Lorna: But it's quite frightening how quickly it, I had one not long ago, something about a (unclear) in the Evening News and within a month three stories had been written with the wrong information copied over. And the person who it was about had discovered, you know, seen two of them but had missed out, missed another one. And I found it when I was getting the information to change it. I found – oh there's another one here, you know. And that was just, you know, from May to July.

**(Interview 08/25)**

Minor mistakes, such as spelling mistakes, were often caught between editions of the paper by subs or production editors who would review each edition. The first edition, which usually left the newsroom around 2200 to 2230 to be sent electronically to the paper's printers, arrived back in the office in printed form around an hour later and copies were quickly grabbed and read by most of the night shift. Any mistakes spotted at this point

could be easily corrected for subsequent editions. Minor mistakes that made it through this first round of corrections were sometimes caught by the library staff who must edit texts slightly before they went into the text archive and so had the opportunity to 'invisibly' repaired the palimpsest.

However, big mistakes (such as errors of fact) could not be invisibly corrected since the text archive also acted as a record of the paper; the printed and archived versions had to be identical in all major respects. Factual mistakes had to be handled in such a way as to make it obvious what was in the original printed version, without perpetuating the mistake. Factual mistakes were usually spotted by readers, often those involved in some way in the story. When the library was notified they annotated the story on the database by adding a correction between the headline and the body of the story – where it would be most visible to anyone accessing it in the future. Other electronic cuttings services, like FT Profile, had similar features<sup>58</sup>. The existence of these corrections attests to the reliability of the source; it increased rather than diminished confidence amongst journalists and librarians alike. Whilst transparent fixing of mistakes tackled the problem of source reliability in what was acknowledged to be a fallible environment, tackling the loss of information held in the heads of experienced journalists was less easily solved. Experienced journalists were of course good sources in their own right:

Lorna: And I feel, I feel it's ((mistakes)) happening more and more but it's hard to be, hard to say. I just get the impression.

Catriona: Do you have any thoughts about what's behind it?

Lorna: Ach, I think, I mean, it's easy enough to say that journalists aren't as thorough as they used to be, but I think it's a fair comment to some extent. Changes to staff as well, like staff who used to know, I dunno, Edinburgh Council inside out.

Catriona: Yeah.

Lorna: And they've all gone, so you've got new people doing the stories who, you know, perhaps don't know the people to ask as much or just don't have the background knowledge on it. So I think that's definitely a factor.

**(Interview 08/25)**

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<sup>58</sup> However, as one informant commented, the number of mistakes actually noticed is likely to be far outweighed by those that slip through.

## 5.5 The Virtual Library Project

A male reporter (MR) comes in looking for Sally to do a Profile search for him. She's not here and he says he'll wait for her and goes and picks up a paper, sits down and starts reading. When Sally comes in he tells her what he needs and she does the search for him, his query is very specific and she doesn't need to ask him any further questions to get some hits he thinks will do. They both sit looking at the screen as the matches come up: MR 'Well done! Who says we don't need the library! (laughs), what we need is one of you sitting with us'. Sally mentions that it is something that might come one of these days and then they both look at the screen again. After a moment Sally says 'Well, what do you want then?' The reporter points at the screen and says 'I'll have those two'. He gets up and paces around behind Sally as she prints them out.

### (Fieldnote 05/27)

The comment by this journalist about needing the library reflected a debate that was being held during the fieldwork period about the future of the library, a debate largely discussed in terms of what was known as the 'virtual library project'. One of the first interviews I conducted at The Scotsman was with the Managing Director, and one of the first things he told me about was his plan to build what he called a 'virtual library', part of his vision of a 'paper-less' (not 'paperless') office. Prior to joining Scotsman Publications, during the changes which followed in the wake of the company's change of ownership in 1995, the Managing Director had been an IT director. He saw information and communication technologies as central to the continued success of any newspaper publishing business. Not only was this reflected in his enthusiasm for the virtual library, but his adoption of other technologies, such as paper scanners to reduce re-keying, and a computerised system for recording the 'source' of news stories. Interestingly the concept of source was also important from a management point of view, although in their case 'source' was used to distinguish stories generated from wire service pieces from stories generated by other means. The system allowed management to monitor the percentage of wire stories appearing in the paper.

The drive towards a 'virtual' or 'digital' library was not unique to The Scotsman, or to the newspaper industry. Libraries of all kinds have been perceived of as 'under threat' from the advance of new technologies. A study of information-seeking amongst theoretical physicists, (Barry, 1997), found that the academics hardly used their library since most of the relevant material published in their field (at least fairly recent material) was accessible electronically. It was only when the academics needed older material, such as when they were researching an unfamiliar area, that they would actually visit the library. Barry

suggests that because of this the information environment of the academics might be becoming impoverished; opportunities for serendipity being much reduced in electronic information resources. But there was more at risk with The Scotsman's virtual library project than serendipity. The Scotsman library fulfilled a range of functions over and above those *directly* related to information gathering.

### 5.5.1 Goffman and the Dramaturgical Motif

The observation that librarians fulfil an important social role in information gathering, or that information gathering is a collaborative activity has been made before, e.g. (Crabtree et al., 1997). But I would like to extend this line of thinking still further. I would like to propose that the social function of The Scotsman's library supports more than just direct information gathering; it supports the whole story/section/paper lifecycling network. I would like to propose that the library is an example of what sociologist Erving Goffman deemed a 'backstage region'. Goffman regarded his major contribution to sociology as the establishment of the value of the study of social interaction, what he called the 'face-to-face domain' (Goffman, 1983). Throughout his long career Goffman concerned himself with the study of people's behaviour when in the presence of one or more others. In 'The Presentation of Self in Everyday Life' Goffman considers social interaction through analogy with theatrical performance; dramaturgy. The dramaturgical metaphor as a tool for understanding human action has a long history (Fox, 1998), and has had some influence in systems design thinking, for example (Laurel, 1993). Goffman was in particular interested in examining the strategies people use when presenting themselves in front of one or more 'others' – particularly in discrete arenas such as an office, hospital or factory.

Central to the dramaturgical motif is the idea of 'regions', and 'region behaviour'. By region Goffman was not referring solely to some physical 'space' where interaction takes place, but rather to "*any place that is bounded to some degree by barriers to perception*" (Goffman, 1990) p.109. Thus regions might be bounded visually by walls, or partitions such as are common in offices. They might be bounded aurally, for example soundproofing glass is used in recording studios. They might also be bounded by time. What by day is an office as I write this thesis, by night becomes a kitchen. Regions may be more or less highly bounded. Whereas the differences between factory floor and managing directors office will be relatively stable over time and obviously physically marked, the differences between my 'kitchen' and 'office' are less obviously marked. Some token tidying of scattered papers and books and the switching off of the computer are the only visible signs. The marking of region boundaries can become blurred around transition time. During the day if my partner



came into the room for some kitchen-related purpose she would tend to make such visits fleeting and would rarely interrupt me. If I was still working after about six o'clock however, she would be much more likely to behave as if the room was once again a kitchen region, feeling freer to make noise, interrupt me, etc. In Goffman's terms, her behaviour changes according to whether the room is a kitchen region or an office region. Decorum dictates that she ought not to interrupt or distract me when the room is an office, but if I am still using the room as an office outside the (un-stated) time boundary she has more leeway to interrupt<sup>59</sup>.

Goffman goes on to suggest that we might think of regions as being divided into two main types: front regions and back regions. Front regions are where our performances are accountable, visible. Therefore any aspects of our performances which would run counter to the impression we wish to create must be hidden. An accountable performance as a juggler would require that we do not drop the burning clubs flying around us. If we do drop a club we must be adept at quickly covering up the error if the impression is not to be shattered. But juggling burning clubs is not something we are born with an ability to do. Learning to perform like a juggler requires training and rehearsal. Acquiring the props and skills necessary to give an accountable performance, Goffman suggests, requires another region where we are not so accountable, where we can relax, practice, make mistakes. This he calls the back region or backstage.

Backstages are places for rehearsing roles, learning from colleagues, picking up hints and ideas, relaxing, and generally 'letting the mask slip'. Backstages are also psychological places "*where one can plan, brood and complain about frontstage social relationships of past and present, as well as act spontaneously without concern for the proper impression one is making.*" (Collins, 1988) p.46. We might then think that there is some easy relationship between region and function; back regions are where we 'are ourselves' and front regions are where 'we act'. But commenting on the structure of social space in tourist settings, (MacCannell, 1979) notes that we would be incorrect to assume that back and front somehow correspond to real and less real action settings. In tourist settings there are levels of progression from front to back; indeed part of the tourists agenda is to try and get a 'peek' at the back stage in the search for 'authentic experience'.

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<sup>59</sup> The tensions that can arise at such times are a good example of the difficulties that can arise when 'vocational territories' are 'decentralized' in cultures where social activities have a strongly territorial component (Durrenberger, 1989).

*The Presentation of Self in Everyday Life* has come under fire for alleged cynicism in its portrayal of people as constantly trying to manage the 'putting on of a show' (Giddens, 1988). It has been suggested that this criticism is based on Goffman's early work, and that in both the second edition of *Presentation of Self in Everyday Life* and his later works Goffman tempered his position on the role of self-interest in the interaction order (Manning, 199). This is part of a more general critique of Goffman's work; that his work was grounded more in theoretical concepts than empirical observation (Fine & Martin, 1995). Goffman's style, in particular, was thought to lend credence to such charges; he used data from diverse and unorthodox sources (May, 1996), wrote with more concern for evoking the field than systematically describing it (Fine & Martin, 1995), and was often vague about methodological issues (Williams, 1988). Nevertheless his dramaturgical approach remains persuasive. Particularly now that the first blush of enthusiasm for virtual spaces has been tempered by a degree of caution about what is lost with the destruction of physical places for interaction (Brown, 1998a), issues of regional behaviour and embodied action are attracting attention within the HCI and CSCW communities, for example (Robertson, 1997). It seems appropriate then to consider the role of the library, which as we have seen is very much at the crux of the debate about the relationship between work and real/virtual spaces, from the dramaturgical perspective.

### **5.5.2 The Scotsman Library as Backstage Region**

In what ways then does the library meet Goffman's criteria for a backstage? One of the aspects of backstages that Goffman emphasises is that of 'practice' area – a place where people can learn the skills necessary for their frontstage performances (Goffman, 1990). We have already seen that librarians perform a socialising function with regard to the training of library users in the information gathering skills necessary to help librarians function as good mediators. The skills necessary to make a good library patron are of course transferable to situations where the journalist is conducting their own searches. To some extent such skills are required for frontstage performances. If your section editor suggests that you find such-and-such a source for your assignment, finding the sources becomes an accountable part of your performance. In helping journalists acquire information gathering skills librarians and others in the library help them prepare for frontstage information gathering performances.

The library is also a 'training ground' for a far more central frontstage skill – story telling. As was discussed in Chapter 5, an important part of a journalist's role is to talk about their work to various parties. Finding an opportunity to practice these discussions is important. A commonplace sight in the library would be two journalists bumping into each other:

Mike leaves and Sam goes to but stops to chat with the woman about some wedding she went to. He asks her what she's working on, and she does 'the spiel' (it's kind of like the newsroom one only less intense). After she stops talking he suggests an article in Spectrum that might be useful, he can only remember roughly when but she says she'll find it okay. Then she asks him what he is doing and he tells her. She says it sounds more fun than hers and then asks him if he knows how to print out. He says no. Jane has overheard and comes over to show her, meanwhile Sam leaves.

( Fieldnote 08/27)

Here we see many aspects of the library as backstage. First the woman journalist presented 'the spiel'. As is clear from the extract, whilst the library performance is similar to those given in the newsroom, it is a more relaxed. This was not an accountable performance, nothing depended on it, it was a rehearsal. But it was not *just* a rehearsal. It also provided her with an opportunity to elicit some help with the story – in this case she got a suggestion for a potential source. This kind of scene was very common. Often listeners would add a comment or two, suggesting a useful article to read or giving the name of a contact. Sometimes the speaker would express worries about their story, or the likely reaction of their editor. Whilst such conversations were by no means unique to the library, they had a rather more relaxed air than those held in the editorial rooms. Often the listener's response in the editorial rooms would be more vigorous. Giving a colleague assistance was also an accountable performance in the newsroom. The fieldnote extract ends with an illustration of the use of the library as training ground, although in this case it was the librarian who ultimately provided the assistance.

Another of Goffman's suggested backstage criteria in *Presentation of Self in Everyday Life* is as a place for gossip. In the library journalists often bumped into colleagues from other departments or from the other newspapers in the Group. During one particularly intense period of staff change I realised that the Library was by far the best place to try and stay on top of who was leaving and who was joining. Soon the library became a place I too could bump into people I had not seen for a while, catch up and sometimes arrange further meetings.

Goffman also suggested that backstages are places to escape the prying eyes and ears of the bosses. The library was a place where, by and large, journalists could escape the attention of their principle frontstage audience; the senior editorial staff:

Harry: I don't know a senior editor in *The Scotsman* who does go to the library. We haven't got time, we send the reporters. I have got the Reuters main database on here so I have actually got a dial up database that I can use which is the main library database, but the web is handy for all sorts of things.

**(Interview 12/03)**

The embryonic virtual library, then, helped senior editorial staff avoid the need to go the library. The physical arrangement of the room also helped it fulfil the requirements for what (Collins, 1988) referred to as a place for brooding and complaining. There were few places in the library an unwanted pair of ears could lurk unseen, and even if somebody could the librarians acted as an extra set of eyes:

A guy I don't know has come in and is chatting with Tracy about a party. Then he asks how things are going, at first she says okay but then she starts to complain about not getting out much. She seems to have some problems with Douglas and is annoyed that someone who isn't very good is getting to do stuff she thinks she ought to. The guy starts giving her advice on handling her relationship with her editor and commiserates. I keep thinking they ought to be more discrete with me here but it doesn't seem to bother them. Is that me (they're used to me now) or something about the library being 'safe'?

**(Fieldnote 08/17)**

On this occasion the apparent indifference to my overhearing such 'brooding' may well have been because, to Tracy at least, I was a known face. Also, my presence in the library was in many ways legitimated by being positioned at a librarians desk, rather than 'hanging around' as I so often was in the editorial rooms. Nevertheless, the conversation was remarkably 'frank'. Again, it must be emphasised that the library was by no means the only place in *The Scotsman* that journalists could gossip and exchange 'frank views'. Halls, locals pubs and cafes and the cafeteria all served as 'backstages'. Even in the editorial rooms, within hearing distance of their editors, such conversations could be observed. What distinguished the library as a particularly useful backstage was that being there was legitimate, it did not mark one out as being 'backstage' in any way. Whilst (MacCannell, 1979) observed tourists trying to pry into obviously backstage areas in tourist settings, the audience for journalists' performances (senior editorial staff) had little or no interest in the library.

## 5.6 Conclusion: Peeking Backstage

This chapter has pulled aside the stage flats to reveal something of life backstage at The Scotsman. The librarians perform two key roles in newsroom information gathering; they mediate huge numbers of enquiries and they are in great part responsible for the development of the space of (non-human) sources within the organisation. But upon closer inspection we have seen that their contribution does not end there. The librarians also provide an environment in which journalists can rehearse their newsroom roles; can learn to be information gatherers and source handlers, can acquire the story performing skills so crucial in the story lifecycle, can relax and gossip and generally release some of the tension that builds up every day, without fail, in the newsroom as the deadline looms. The librarians themselves facilitate much of this, but it is also a place where journalists can support each other. Old hands pass on their wisdom and experience, and colleagues patiently listen to developing 'story spiels' that later will have to be accountably performed on the newsroom stage.

News libraries have been riding a wave of technological change for some time now, although like most technology waves, the changes it has brought have been slower to materialise than the wave's proponents would care to admit. News libraries have proved stubbornly persistent. In this respect they are a bit like paper. The Scotsman's managing director had conceded that the aim now was for a *paper-less* office rather than a *paperless* office, perhaps in time the vision will be for an *virtually augmented library* rather than a *virtual library*. In the meantime, librarians and journalists will continue to adapt and adjust to new roles and new contexts. Taking an activity rather than task perspective on information gathering in the library once again demonstrates that trying to understand information gathering without consideration of its broader activity contexts results in a dangerously limited story, whether our focus is the newsroom or the library. We shall discuss in Chapter 7 the implications of the story presented here for the ongoing 'virtual library project'.

## **6 Information Sources: 'The Heart of Journalism'**

## 6.1 Introduction

*At the heart of journalism lies the source. Becoming a journalist to a great extent means developing sources.*

*(Keeble, 1998) p.42*

Throughout this thesis the word 'source' has appeared again and again, with little or no elaboration as to what is meant by it. In this chapter I want to explicitly address the concept of source and its particular relevance to newsroom information gathering.

Studies of technology use in the real-world have a tendency to focus on the details of the technology rather than the details of its use (Brown, 1998a). Although Brown was looking at studies of Lotus Notes, the point holds for studies of technological artefacts in journalism. For example, an annual postal survey called "*The Media in Cyberspace*" is carried out in the US by (Ross & Middleberg, no date given). The study attempts to quantify the way journalists in both the newspaper and magazine sectors use the new technologies available to them. The surveys are posted, in the case of newspapers, to either the 'managing editor' or the 'business editor' (the authors noted no significant difference in rates of response from the two classes of editor). The response rate for the most recent survey (newspapers and magazines) was 17%, and for newspapers only it was 16%. The methodology rests on a central assumption: that information sources are 'objective things'. If they were, then the results of the survey would be of great interest. But as I hope to show, information sources are not objective things. They have a physical aspect in the storage, delivery and retrieval mechanisms for the information they possess. But from a CHAT perspective sources, like all artefacts, exist only *in practice, in use*. Asking the managing editor of a newspaper questions like 'If you use the Internet, what do you use it for? (tick all that apply)' is meaningless. Individual staff in the newsroom who do use the Internet will do so for any number of reasons. But the Internet is not the source, it is the means by which the source is accessed, it is the information channel. What *is* of interest is the way in which sources available via the Internet are conceptualised and used by individuals and groups within the newsroom, and the differences between these conceptions, and the relationship between the source and the means by which it is accessed.

It has already been remarked that information gathering at The Scotsman always took place within the constraints of each working day's various deadlines. Issues such as information overload were less of a problem than might have been thought because of these deadlines. As one of the librarians put it, the deadline means that gathering information is more of a

matter of 'the good enough search' than it is of 'the perfect search'. The Scotsman staff could only do as much as the particular deadline they were working towards allowed. And of course life in the newsroom did not stand still, technological change in the industry meant that everyone in the newspaper industry (whether traditional print or web-based formats) must deal with ever shorter lifecycles: "*The news cycle is becoming instant, for better or for worse. That's a big challenge for all of us who have to make decisions on the run.*" Merrill Brown, Editor-in-chief of MSNBC, quoted in (Elliott, 1998).

In the newsroom, the world of information from which journalists derive the 'raw', if not new, material for the story lifecycle, the information space (Benyon & Höök, 1997), is organised around the concept of the information source. Rather than a space of places, or a space of things, journalists navigate a space of sources. Discussing the organisation of physical space amongst the Marakwet of Kenya, Moore observes that "*The organization of space is the product of enacted practices and, given the nature of resources and power relations in Marakwet life, its meanings are always open to negotiation and renegotiation.*" (Moore, 1996) p.x. Space amongst the Marakwet is a social construction, not a (somehow) pre-ordained and fixed arrangement. Similarly, the organisation of information space in The Scotsman is a product of enacted practice and therefore negotiable, not wholly fixed. The meanings attached to different sources vary from time to time, place to place, journalist to journalist. Asking one person what the Internet means for all the journalists at their newspaper would be like asking a person who had never seen snow what it means and expecting their answer to describe what it means for everyone else in the world. By the same token, any study that sets out to investigate what information sources mean for journalists and their practice must take account of the negotiability of their meanings. This chapter attempts to trace the transformative process from potential source to source, from thing in the world to artefact.

## 6.2 Sources in Sociological Studies of Journalism

Journalism and its products have often been the subject of sociological inquiry, although rarely from an ethnographic perspective. Of course the products of journalism and the institutions in which it is practised have long been held to play an important role in the structures of society. Sociological studies of journalism have principally taken one of four approaches: the political-economic, ethnomethodological, organisational or culturalist. In order to illuminate the study, I shall now consider four papers which pay particular attention to the role of information sources in journalism from different perspectives. Clearly this cannot hope to reflect the diversity of views within each approach; culturalists for example



range from those with a pluralist perspective (Tunstall, 1996) to those with a Marxist perspective (Hall, 1977) and the political-economic approach encompasses both the gatekeeper (journalists and editors as primary filterers of news) and the propaganda (institutions of power as the primary filterers) models of news flow. However, it will elucidate some of the main issues relevant to an investigation of the role of the information source in information gathering practice.

### 6.2.1 Political-Economic

Political-economic approaches to the media emphasise structural constraints on journalism. Marx himself had been a journalist, although as (Franklin, 1997) points out he remained ever hostile to journalism, labelling it one of the 'ideological professions' whose sole purpose was to disseminate the ideas of the ruling class. Political-economic accounts therefore focus on questions of ownership of the media and the illusory nature of notions such as objectivity and impartiality. In a paper examining the economic base of media behaviour, Murdock and Golding propose that:

*It is only by situating cultural products within the nexus of material interests which circumscribe their creation and distribution that their range and content can be fully explained.*

*(Murdock & Golding, 1977) p.36.*

They examine two shifts in the economic control of the media; that towards increasing concentration of ownership and that towards diversification of media interests, which of course serves to further the concentration effect. Changes in market condition affect work practice since they affect the resources available for work. Information gathering practices changed in the 19<sup>th</sup> Century when the abolition of stamp duty lead to increasing revenues which allowed more full-time journalists to be taken on, and hence reduced newspapers reliance on 'official' sources of information. More recently, new investment money made available by The Scotsman's new owners in 1995 allowed the introduction of the Internet into the newsroom.

(Murdock & Golding, 1977) argue that the economic processes underlying cultural production have had two main effects: a concentration of the range of *voices*<sup>60</sup> available from the media, and that the voices lost in this process are those from outside the economic elite. Whilst allowing that some voices may creep in at the margins, they state that:

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<sup>60</sup> Voices here referring to both the sources used by the media, and the practices of journalistic enculturation which ensure that stories are published with an appropriate slant/tone.

*Given the insistent pressure to maximise audiences and revenues, there is not surprisingly a consistent tendency for the commercial media to avoid the unpopular and tendentious and to draw instead on the values and assumptions which are most familiar and most widely legitimated, which almost inevitably means those which flow authoritatively downwards through the social structure.*

*ibid. p.37-38.*

The information flow, then, is hierarchical and downwards. The primary aim for media institutions is audience maximisation in order to counter the effects of rising costs. This pressure, they propose, has led to the tendency for news and entertainment to merge, a process which if anything has intensified since this paper was written in 1977 with the drive towards news which is 'intentionally undisturbing' (Franklin, 1997).

However, the political-economic approach typified by Murdock and Golding was criticised on the grounds that it could not account for the dissenting voices which were heard in the media (McNair, 1998). Addressing this criticism, the culturalists (see below) set about developing an account which was less materialist, although always 'in the last instance' recognising the role of the market in determining media production (Hall, Chritchler, Jefferson, Clarke, & Roberts, 1982).

### **6.2.2 Ethnomethodological**

In a paper which draws upon ethnomethodological concepts, (Molotoch & Lester, 1982) propose that occurrences in the world become 'public events' (news) through the work of three agencies: news promoters (i.e. sources), news assemblers and news consumers. Each agency constructs an event account according to its 'purposes at hand', and as the occurrence passes through each agency grouping the number of possible accounts is closed off. Of course different agencies may have different purposes at hand, and differing accounts of the occurrence will arise. To use an example current at the time of writing, companies involved in a genetic food crop test will have a rather different account of this occurrence than an environmental campaign group. Having identified a particular occurrence as useful, promoters construct an event and attempt to promote it (for example by issuing a press release). News assemblers are of course a major object for the activities of promoter agencies.

But news assemblers are not, the authors contend, sitting passively waiting for events to be promoted to them for assembly. News organisations have event needs, which may not

coincide with promoters needs. But promoters who routinely meet some of these event needs may find they gain better access to the news assemblers than other promoters. And of course extremely powerful promoters, such as governments, may be able to change event needs to suit their own purposes better. Finally, consumers also engage in event(news)-making work, although clearly the array of occurrences they have available to do this have been much diminished by the work of the promoters and the assemblers.

So, human sources (news promoters) in this account are a constraint on the production of news to the extent that they provide the first reduction of the 'pot' of events that can become news, and thence public events. If no one promotes a story to the media it does not get picked up, and does not become news, and does not become a public event (although of course it is a local event to those who were in a position to directly observe it). Furthermore, the ways in which news organisations organise their information gathering in part determines which sources/promoters typically have access to the assemblers. For example, news organisations will treat the accounts of events differently according to organisational practices around which sources are regarded as trustworthy. News organisations also engage in the practice of routine checking with certain sources (and not others) for news events.

There are two particular problems with this account of the construction of 'public events'. Firstly, the account fails to address news assemblers need for more than one event account. As others have pointed out (Franklin, 1997), one of the ways in which journalists create an appearance of objectivity is through routinely presenting 'both sides of the case'. Competing accounts are actively sought in order to protect journalists and newspaper organisations from accusations of bias. The second problem with Molotoch and Lester's paper is that whilst the authors recognise that sometimes promoters can be assemblers, this is only in the sense of journalists who go out and 'dig up' stories. In their own words:

*This controversy is, in our terms, a conflict over whether or not media personnel can legitimately engage in transparent news promotion, or whether they must continue to appear to be passively reporting that which objectively happens.*

*(Molotoch & Lester, 1982) p.129*

What they have ignored is what is referred to in this thesis as 'the palimpsest effect', the use of information sourced from other media by the media. In other words, the line between promoter and assembler is a blurred one, and as we saw in the Prologue, has been ever since the days of the first British daily newspaper. Whilst the authors acknowledge that newspapers must sometimes cover what is widely 'directly observable' by the 'public' in order to avoid being accused of bias or stage-management of the news, they fail to

acknowledge that sometimes what is directly observable by the public is itself the product of the work of other news assemblers. Newspapers must also be seen to cover what other media are covering, something the assemblers themselves perceive as resulting from the economic imperative of reader expectations. Whether reader expectations are indeed at the root of the palimpsest effect is an interesting question, and on the evidence of this thesis the palimpsest effect is likely to be as much about peer expectations than reader expectations – journalists being more aware than any typical reader of the contents of rival newspapers. Nevertheless, the paper does effectively draw our attention to the intricate social relationships which affect the entire ‘news making process’, from ‘event’ to ‘public knowledge’.

### 6.2.3 Organisational

Organisational considerations of sources in the production of the news emphasise the relationship between source use and the ‘routine organisational practices’ (Sigelman, 1979) of the newsroom. Rock (1982) focuses on issues of time and space in his account of newsmaking.

*The world reported as news is ambiguous and elusive. Unless it can be translated into a succession of coherent events, the entire reporting exercise would fail. The process of translation must, moreover, be mechanical enough to ensure that a constant volume of news is produced at regular and frequent intervals. The organisation of newspaper work cannot rely on a random search for news. It cannot permit lengthy explorations which might be fruitless. Certainty must be built into reporting processes.*

*(Rock, 1982) p.66*

He points out that although there is some room for manoeuvre as regards space allocations in newspapers, broadly speaking space is fixed. The various sections of the paper will need to source a certain number of events each day to fill this space. Furthermore, he points out, these events will have to coincide with the timing requirements of the paper. For example, extremely slow moving stories are less suitable for a daily newspaper but may get picked up by a weekly journal. As a result, newspapers tend to favour sources where there is a good chance that events which suit the timing requirements of the paper will be generated on a regular, reliable basis.

Rock points out that one consequence of this “*search for an objectified and sure world of news*” (Rock, 1982) p.68, is that journalists rely on each other for news (the palimpsest effect). And as a result of this, the news appears to have a consistency that lends an air of

authority and objectivity to what is being reported – a case of ‘if everyone is reporting it, it must be true’. Organisational accounts like this provide the kind of detailed consideration of the day-to-day operating constraints on journalists which often seem lacking from political-economic accounts, and fill in the economic and historical detail often missing from ethnomethodological accounts. However, Rock’s account leaves little sense of journalists bringing their belief systems, creativity or personalities to bear on the process (McNair, 1998). Just as with crudely Marxist-determinist accounts of the production of news, in Rock’s account the journalist is little more than a pawn in game whose rules they did not write and cannot change. As Murdock & Golding (1977) point out, viewing journalists in this way smacks of a certain arrogance, particularly when the damning indictment is on the basis of a textual analysis of the output of journalistic endeavours and not on an empirical study of journalists themselves. Whether it is economic or organisational determinism at work, such analyses ignore the complex interplay between competing interests, individual and collective creativity and, to use Marx’s terminology, the conditioning<sup>61</sup> forces of the economic base.

It is interesting that whilst Rock places great emphasis on the role of routine organisational practices in shaping the production of news, little detailed attention is paid to the role of the artefacts used to meet these organisational imperatives (although this criticism is perhaps a little unfair since his method of investigation was textual analysis and therefore this would have been difficult to achieve). For example, he discusses the importance of news events fitting the time schedule of newspaper production, and the relationship between this need and the requirement to fill a certain amount of space every day. What he does not consider is the changes to such timing requirements wrought by advances in information and communications technologies. The telephone and the wire services opened up new sources of information in different parts of the world (and consequently different time zones) to those news organisations which could afford them, which also meant that what the agencies picked up was affected by who was buying their output (Boyd-Barrett, 1977). A similar process may be taking place with the Internet. Thinking about the palimpsest effect, journalists can now not only use the UK media to source information, but via web sites can see what newspapers around the world are covering on the *day* they are published. What is available will in some part determine what is news, but what is available is also in some part determined by the willingness of media institutions to pay for it.

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<sup>61</sup> Murdock and Golding assert that Marx’s use of the terms conditioning and determining has been misread to imply that he was an economic determinist, and that an alternative reading of the terms would be more in the sense of ‘general limits’ and that “*within these limits he allowed a good deal of room for intellectual autonomy and innovation*” , ((Murdock & Golding, 1977) p.16).

His lack of familiarity with daily working practices in the newsroom may also account for the assertion that newspapers cannot afford 'lengthy explorations which might be fruitless'. As we have seen story redundancy is very much a part of newsroom life – the certainty problem is coped with through over-commissioning of material, through the routine use of the spike.

#### 6.2.4 Culturalist

This brief survey of information sources considered from a number of different sociological perspectives ends with a culturalist account. The culturalist approach attempts to bring together both the political-economic and the organisational approaches by focusing on the ways in which certain sources are allowed greater opportunity to define the news, and the interpretative frameworks through which journalists take on these primary accounts (McNair, 1998). As one such paper puts it:

*The media do not simply and transparently report events which are 'naturally' newsworthy in themselves. 'News' is the end product of a complex process which begins with a systematic sorting and selecting of events and topics according to a socially constructed set of categories.*

*(Hall et al., 1982) p.335*

The paper, written from a Marxist perspective, attempts to account for the apparent fit between the ideas of the dominant structures in society and the practices of the media. The authors challenge the political-economic view, which states that since the media are owned by capitalists they will of course support capitalist interests. To do this they develop the concepts of primary and secondary definers of events. Taking on board the organisational perspective, they note the media's need for regular and reliable sources of news, and the organisational rituals around objectivity within which news from 'out there' is transformed into news from 'in here'. It is these structures, they suggest, which create a tendency to over-rely on accounts of events from those in power because such sources are regarded as having greater access to information. This, they propose, means that those in power become the primary definers of events.

Whilst they acknowledge that primary definers do not have exclusive access to the media, that other voices might be heard, they propose that the primary definers are the ones who set up the interpretative frameworks around stories. They use the examples of stories about immigration in Britain in the 1980s. The primary definers view is that there was a problem with the number of non-whites in the country. This view was then used to frame the story,

so that alternative views were only heard as in opposition to this view<sup>62</sup>. Hall et al then go on to discuss the ways in which such primary definitions are integrated during the production process. The paper considers the way different organisational attitudes towards news-value, which give different papers their 'voice' or 'tone', contribute to the process of selecting which primary definitions to develop. Journalists then are not simply taking whatever primary definitions they are given and faithfully reproducing them. They select from them according to the organisational practices in operation, and then the ritual of objectivity requires that competing accounts are sought to maintain 'balance' (albeit accounts selected to fit into the primary definitional framework). In this view, journalists do not make the news, they are the secondary definers of the news. The importance of this process, contend Hall et al, is that through this primary definitional access, the institutions of power in society influence public opinion. They are clear to state that they do not see this influence as in some way generating ideological closure around an event, but that this influence, and the structures that support it, leads to a *tendency towards* ideological closure. The meaning of events cannot be defined through the media by the powerful, but the framework for interpreting the meanings of events is. The tendency towards ideological closure has been used to explain why variations in the use of non-prominent sources at five 'civic journalism' oriented award winning newspapers did not result in substantial variations in content (Riede, 1999).

The culturalist approach has come under particular fire from the US, where far greater emphasis has been placed on the role of the owners of media institutions in the production of the news. What is questioned is precisely the degree of ideological closure in the media. In what has been called the propaganda model (McNair, 1998), a variation on the political-economic approach, the degree of ideological closure is thought to be much greater. Five filters are identified as acting to exclude dissenting voices from media coverage: concentration of ownership of the media; reliance on advertising; reliance on official and semi-official sources of news; 'flak', the use of legal and financial threats against the media; and anti-communism (Franklin, 1997).

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<sup>62</sup> An excellent example of this from the United Kingdom at the time of writing revolved around the campaign to change the age of consent for homosexual sex to the same as that for heterosexual sex, which ran into problems when legislation was passed in the (elected) House of Commons and rejected by the (un-elected) House of Lords. Media coverage of the story almost universally framed it as a story about the 'lowering' of the age of consent, what could be regarded as the primary definers account, rather than the 'equalising' of the age of consent. The 'story', therefore, was not about equal rights under the law, it was about whether or not gay men should be allowed to have sex at a *younger* age than was the law at the time.

Clearly these approaches have much in common, in particular they share an emphasis on the importance of the journalist in the production of news, although the degree of autonomy of journalists is disputed. All however share a concern with understanding the context of journalism.

An alternative approach is to focus, as is the case in this thesis, on the activity of journalism as context. The increasing reliance on non-human sources for access to both story ideas (or 'events' to use Molotch and Lestor's terminology) and story information characterises journalism in the late 20<sup>th</sup> Century. The range of sources available to the journalist is expanding. Within just over a year journalists at The Scotsman acquired access to both the Internet and The Scotsman's own electronic archive from their own desktops. As has been seen above, whilst the relationship between the production of news and human sources has been much investigated, that with non-human sources (and the artefacts by which both human and non-human sources are accessed) has received far less attention. One of the central questions of this thesis is therefore; what role do information sources play in mediating information gathering at The Scotsman – in what way are sources artefacts?

### **6.3 Inside the Palimpsest: You Heard It Here First?**

My first day in The Scotsman was a dizzying round of introductions and furtive-feeling glimpses into strange spaces full of people shouting and rushing about. It left me exhausted and concerned. What *was* I doing here? I was interested in information gathering, and the possibilities of (re)designing information technology systems that would support this activity. My first (and in the event only) step, I had thought, was to try and find out what 'information gathering' meant in the context of The Scotsman. But where was information gathering in amongst all this shouting and rushing about?

A typical response to a stressful experience is to cling to the known, to the familiar. My eyes, and thoughts, were drawn to what *I* thought were the physical artefacts of information gathering – computers, databases, filing cabinets, faxes, bookshelves, etc. I wanted to know how journalists used these tools, what they thought of them, when they worked and when they did not. But as the months progressed, I became increasingly aware of a gap between my understanding of what I was observing to be information gathering, and that of the journalists engaged in it. Most of the journalists I talked to were not particularly interested in these physical artefacts of information gathering. Although there were a few who were particularly interested in the Internet, for example, they were not generally interested in the computer systems they used to access it.



Indeed, had I been aware of it the clues were all around me. Journalists did not often *celebrate* their computers in the way that is, for example, seen in university research labs. They were tools of necessity, not choice, and this was reflected in the way they were treated. They were dirty, shoved into corners, obscured by books and paper trays, used as ad-hoc shelving or as notice boards with notes scribbled on to monitor casings (not as one might expect on bits of paper, but *directly* on to the case). Although the journalists used a variety of computer applications designed to aid information gathering everyday, they rarely seemed interested in exploring the wider potential of the applications they used. For example few of the journalists I talked to knew whether or not the text editor they used for writing their stories had a spell checking facility. But for all that they were rarely forthcoming about the tools they used, the journalists would quite happily talk at great length, and with enthusiasm, about the *sources* they used when information gathering.

The contrast between interest in the *tools* of information gathering and the *sources* of information was particularly noticeable around the Web. Whereas the ins and outs of the browser (Netscape) used were often a mystery – for example many journalists had yet to master cutting and pasting or file saving – the Internet as a source was a widely discussed topic. Web page addresses (URLs) were often exchanged in the newsroom, although usually by speech (face-to-face or phone) rather than email - which occasionally led to frustrating mistakes.

Mark talks about how he spent ages this morning searching the net for shots of this cruise ship because a reporter had told him they were on the Net but hadn't got the URL right.

**(Fieldnote 10/09)**

What they found interesting about the Internet was not *how* information was accessed but what information *could be* accessed. Which of course is eminently reasonable when one considers that a journalist's job is to gather information and turn it into new information, which in turn may be gathered elsewhere, and so on.

The importance of information sources cannot be underestimated. According to one view, "*The newspaper is not a mirror of reality but the realization of the potential of its sources (...) its chief characteristic lies in the selection, arrangement and reformulation of information passing to it through regular sources.*" (Keeble, 1998) p.182. However, there was no obvious definition of 'information source' in The Scotsman newsroom. For example, it was not at all clear whether journalists regarded individual web sites as sources and the Internet as the access means, or whether the Internet was another 'meta-source' in the same

way as The Scotsman library was. However, there was agreement that ‘people’ were information sources, as were ‘other media’, articles in other papers, reference books and web sites. Sometimes The Scotsman library would be referred to as a source, as would ‘databases’ in a generic sense. What is of interest here is that sources were not ‘abstract things’, sources were defined in an ad-hoc way through use, and such debates about abstract definitions of ‘sources’ were of little interest to the journalists. Whenever I tried to get journalists to discuss the relative merits of different means of accessing information the conversation would inevitably turn towards discussing the relative merits of different sources in different circumstances.

### 6.3.1 The Main Sources: People and Other Media

The Activity Checklist has an interesting sample question under the column relating to the environment. It asks, “Are concepts and vocabulary of the system consistent with the concepts and vocabulary of the domain?”. Information gathering systems at The Scotsman heavily emphasised the physical aspects of information gathering, in particular the technical means of access. What was not supported by these systems was the conceptual aspects of information gathering, and in particular the idea of the information source. This had not escaped the notice of those working there. Several journalists echoed the call of the managing director of the paper when he told me that what they really wanted was for the technicalities to be transparent and the sources to be to the fore in their systems.

#### People – ‘I’m Sorry, I’ve Called you Before!’.

It is a convention within journalism to label sources, particularly people, as either *primary* or *secondary*. Sometimes the distinction is made on the basis of ‘closeness’ to the events being reported (Keeble, 1998). An eye witness to a mugging would be a primary source, as would a police spokesperson commenting on the case. However a psychiatrist commenting on the likely psychological impact of the mugging would be a secondary source. Within the sociology of journalism a great deal of attention has been paid to the issue of sources and the primary/secondary division. Organisational theorists like Tuchman have commented on the hierarchies of authority that such distinctions implicitly create (Tuchman, 1972).

For Scotsman journalists however, one of the biggest daily challenges was simply getting hold of people in the first place. Although as many informants commented, the telephone revolutionised journalism because it meant you could get hold of someone without leaving the office, that is not to say it was without its own problems. Journalists spent a great deal of their day talking to assistants whose job is to keep the press away from their bosses, or talking to answering machines, or wading through interminable voice mail systems. The

value of a 'direct line' to a contact was enormous. Some journalists organised their information gathering around these frustrating periods, using the time spent waiting for someone to call back or a reasonable interval to elapse before trying again to use other sources. And of course being constantly on the phone could lead to confusions when sources try and call back. One journalist I watched spent hours trying to get hold of an important contact during a phone round only to miss their return call – made worse when they were told that the contact had tried several times already and was now leaving their office.

### **Other Media – ‘And This Just In...’**

Section editors at *The Scotsman* were concerned to ensure that they covered the stories the opposition did. It was held that failure to do this would be harmful to the paper's image and sales. But this was not simply a matter of 'keeping up with the Joneses'. There were economic pressures at work here too. Sourcing larger numbers of stories from other media meant fewer journalists were required to go out and about 'digging the dirt'. But whilst a reliance on other media for both 'news' and 'information' is one way of controlling costs, it does challenge some of the journalists' conceptions of their professional identity.

He said that another problem now was that a lot of journalists didn't 'get out there enough' (...) 'some of them seem frightened of going out the office' and that he couldn't understand that. He thought that to be a journalist you ought to 'love getting out there and finding out about how things really are'. He thought a journalist ought to know their country, geography, readership etc. and ought to be out there. I asked if he thought electronic sources had anything to do with increasing amount of office-based work and he said he was sure that was part of it, that people weren't going out making contacts and looking for the dirt enough and that the big challenge for journalism in the next few years was to get back to 'digging the dirt' style reporting.

### **(Fieldnote 04/08)**

Digging the dirt, in this journalist's eyes, was not something one did from the office. The reliance on non-human sources for both ideas and information was not, in his opinion, conducive to the dirt-digging style. Although economic pressures were a very real part of newsroom life at *The Scotsman* – for example much work was going on into financial reporting systems that allowed section editors access to information about their section's running costs – that is not to say that they determined the behaviour of individual journalists and editors. Even very senior editorial staff, who were presumably more aware than most of the economic constraints the paper operated within, were not prepared to completely give up on the idea of the dogged journalist pounding the streets. Nevertheless, other media were perhaps the most obviously accessible sources in *The Scotsman* newsroom. For example the

main newsroom had several television sets dotted around the room, hanging from the ceiling. Staff would sometimes sit and watch these programmes, at other times they would only look up during certain items, or when the one phrase guaranteed to cause a sudden silence in the newsroom was uttered – ‘and this just in’. Sometimes a journalist would go and stand near the a set with notebook in hand scribbling away. Other print media were also very much physically in evidence – any floor space or spare desk space around a section would usually be littered with a variety of newspapers and magazines – and most journalists would start their day by reading at least one or two.

### 6.3.2 Library Sources

The librarians to a great extent determined the information environment of the paper – the ‘system of sources’ as (Hjørland, 1998) puts it. Although section editors could order certain newspapers, journals or books for their own areas, the majority of information materials available within The Scotsman offices were acquired and/or developed and/or maintained by the librarians. The librarians were largely responsible for deciding what (non-human) information sources were made available both within the physical library space itself, and increasingly within the editorial rooms as well. Consequently I was interested to see what the librarians thought a source was:

Catriona: Do you have an idea in your head of what an information source is?

Lorna (librarian): Em, a very very broad one. I mean virtually everything I would say.

Catriona: Anything?

Lorna: Yeah. From a person telling you something to a database, Internet, pictures. It's very wide.

Catriona: And when you get a query, em, are you thinking about, how do you think about sources at that point, em, are you generally quite clear I'll go to there, or there?

Lorna: Yeah, I would say probably 80% of the time you know immediately where you are going to go, but sometimes they are very simple things. Sometimes you start on a round, roundabout route and you end up, at something really off, you know, the scene. I'm trying to think of an example. You might get an enquiry asking you about, I don't know, oh I dunno, a name of a company or something, and you could end up going around the houses and then finding out its on BRS cos it's Scottish, or you know, you could end up going through a big business directory and the Internet, or a site, or something and then discover it was actually in the Evening news, on BRS.

#### (Interview 08/25)

Like the journalists then, for Lorna a source could be almost anything, it was knowing which sources were the best bet in a given situation that was part of the skill of being a

librarian. As Lorna spent the greater part of her day gathering information, and as one of those charged with creating the information environment of the library, she had a well developed sense of the 'space of sources'. But familiarity with available sources was not always sufficient when it came to securing success. Librarians recognised, like journalists, that the central 'information gathering problem' is often identifying the right source to use. Having a rich understanding of what information was being sought greatly aided this identification process. As Lorna pointed out, a request to find information about a company can be problematic without also knowing that the company was Scottish. The company's Scottish-ness would be a pointer to appropriate sources, reducing the likelihood of 'going all round the houses'.

The librarians were also responsible for organising access to information sources – for example it was primarily the librarians who dealt with the developers of the revised electronic text archive system that was made available on newsroom networks during the course of my fieldwork. Although the principle 'end-users' of this system would be journalists, the designers consulted the librarians to derive requirements. In addition, when new sources were suggested it was often the librarians who would examine them and decide whether they ought to be made available. Senior library staff also regularly reviewed new services from existing source suppliers – such as web-based interfaces to online databases. During my fieldwork period, a new source was adopted by the library allowing access to the UK Voter's Roll. An introductory sheet was made up outlining the key features of the service and the Sally, the Head Librarian personally went round the newsrooms handing these out and encouraging people to try the service. When she arrived in the features room one of the journalists was immediately interested:

Sally comes in and goes round handing out information sheets telling people about the new database for searching the electoral roll. Joe immediately says, 'So could you get famous people's addresses?' Sally say yes. Joe: 'But not their phone numbers?' Sally: 'No, just addresses'. Then she adds 'There'll have had to have been there long enough to get on the electoral roll though'.

**(Fieldnote 10/27)**

Joe was quick to spot the potential of the new source in helping him track down famous people, although clearly the lack of phone numbers was something of a drawback. He confirmed this potential with Sally, but Sally spotted a drawback and prepared him for possible disappointment by explaining that the person being sought would need to have been in residence for a period of time long enough to qualify for the electoral roll. This kind of publicity/training function could be crucial. Journalists did not always recognise the

potential of new sources. Drawing the new source so forcefully to Joe's attention gave him an opportunity to assess its potential, and did indeed stimulate his interest. Learning to judge sources was also a matter of learning about sources in the first place. New sources which arrived on one's desktop, like the Web, became part of daily life in the newsroom, one could not help but notice them. New sources in the library were more easily overlooked.

A wide range of information sources, digital and analogue, were available in the library (see Table 6.1), although until the end period of my fieldwork the most commonly used by journalists was the electronic full text database of articles from *The Scotsman*, *Scotland on Sunday* and *Evening News* (the system was usually referred to as BRS). Some of the electronic sources were free at time of use (e.g. BRS), and some carried what could be a hefty usage fee (e.g. FT Profile). Most journalists I spoke to were conscious of this and said they would make an effort to get what they were looking for from other sources before using them. However one of the librarians I spoke to was not so sure that cost played a significant role in journalists' information gathering behaviour:

Catriona: And are you worrying about costs at all, costs on Profile (FT Profile)?

Lorna: Em, I would say I do yes, yes. But I wouldn't say I'm worried about it, but it's part of the process. If you think you can get it from a book for free I would do that first.

Catriona: So your, part of source decision is about cost?

Lorna: Yeah, Yeah. I would say that, every enquiry you think about that. I'd think about that at some point. But it is a fairly straight forward thing, that they cost and they don't.

CN: So it's not a hard decision?

Lorna: And at the end of the day it doesn't matter anyway, you just use it. But it is there, it's certainly a factor, for us. I don't think journalists see that, but then they're not looking at it from our point of view at all. And that's fair enough.

Catriona: They don't see the cost?

Lorna: No, I don't think they realise what costs and what doesn't. But it's not necessarily their, their worry.

**(Interview 11/25)**

Lorna was not unduly worried about how big a factor cost was for the journalists since she recognised that journalists had overriding concerns. This was perhaps also because at the time the sources for which there was a usage fee were only available in the library. Consequently searches using them were carried out by librarians on behalf of journalists, or by journalists under the watchful eye of the library staff. However there had been talk of making sources such as FT Profile available on the network. The prospect of this happening was of concern to the library staff, who foresaw spiralling fees as a result of journalists' relative inefficiency in using these services – particularly since they all operated using

slightly different interfaces and so skills learnt on BRS (which was free to use) were not directly transferable to costly systems like FT Profile. And as the librarians themselves recognised, using these systems was only a small part of most journalists' lives, whereas the librarians spent a great deal of time using them, and even had 30 minutes a week scheduled for training on them (something not available to journalists).

<b>Resource Name</b>	<b>Description</b>	<b>Usage Charge</b>
<b>BRS</b>	Electronic full text database of The Scotsman (1991 onwards), Scotland on Sunday (1992 onwards), and the Edinburgh Evening News (1992 onwards). Originally available via terminals in Library on a command-line system. Mid-way through field study system was moved to a Web-style interface and made available on the newsroom network.	<i>No</i>
<b>Picture Library</b>	Over 2 million photographic prints, stored in movable bays in the Library. A card index system was used to access the prints, which were stored in two main sections; People and Subjects.	*
<b>Phrasea</b>	Electronic picture archive, went into operation in September 1996. Pictures printed in the Group's papers were archived on this system and keywords were added by Library staff to facilitate retrieval. Archiving of material from before 1996 was also being undertaken and it was hoped at some point that the picture library would become redundant. At December 1998 there were nearly 2000 keywords, and the number grew constantly as new ones were suggested by staff and authorised or rejected by the library management. Phrasea was available in the newsroom from the picture desk, whose staff were its principal users. At busy times picture desk staff would ask Library staff to find some shots for them.	*
<b>FT Profile</b>	Online electronic full-text archive of UK newspapers and journals.	<i>Yes</i>
<b>Lexis-Nexis</b>	Online electronic full-text archive of international (mostly US) newspapers and journals.	<i>Yes</i>
<b>Reuters Business Briefing</b>	International and UK business news from a range of sources (news organisations, industry publications, etc.).	<i>Yes</i>
<b>CNN</b>	UK Voter's Roll information. Consumer information – checks on individual's credit history (bankruptcies, court judgement's etc.).  UK company information – company directors, company credit ratings, registration details, etc.	<i>Yes</i>
<b>Cuttings / Bound Files</b>	Cuttings: Formerly a central part of the library collection, the physical cuttings service began to wind down at the start of the 1990's with the advent of BRS and the introduction of services such as FT Profile. Cuttings files on special topics (such as people or companies) had been maintained and were available on special request – although they were stored in another room.	<i>No</i>

	Bound Files: Copies of the last daily edition of each title were kept in bound files, again in another room. Journalists were discouraged from using them as they were delicate and directed instead to the microfilm versions of same. Current bound files were kept for one year in the library itself.	
<b>Microfilm</b>	The final edition of each title was available on microfilm from the first day of publication of each paper (in The Scotsman's case this meant as far back to the early 1800's). A microfilm reader was available in the library.	<i>No</i>
<b>Books</b>	The Library stored a wide ranging collection of books – mostly of the reference, 'guide to' or 'history of' variety. Most could be signed out of the library for borrowing.	<i>No</i>
<b>CD-ROMs</b>	The Library CD-ROM collection, which could be used on a CD-equipped terminal in the newsroom, included a number of reference titles.	<i>No</i>
<b>Web</b>	Access to the Internet was available from the library as well as from journalists' desktops.	<i>No</i>
<b>Other Information Artefacts</b>	A collection of Ordinance Survey and city maps and telephone directories was maintained in the Library. The walls of the Library were also dotted with numerous other kinds of artefacts, such as election results tables, posters for events such as the World Cup, interesting graphics on various topics culled from The Scotsman and from other publications.	<i>No</i>

Table 6.1: Information Sources in the Library

### 6.3.3 Sources in Use

One of the problems when trying to understand the way sources were used at The Scotsman was that it varied hugely between sections and (to a lesser extent) between journalists. Furthermore, source use varied according to what type of information was being sought. For example, in features other media were a major source of story ideas but in the business department they did not rate a mention:

I ask the section editor what sources they principally use (for generating story ideas). He says 'City news is quite cyclical - there's a results reporting season'. He says the main sources are the wires, results and the news diary. Then you go down a level to the people sourced stories.

#### (Fieldnote 01/21)

For this section editor then there was a clear hierarchy of sources for story ideas. As we have already seen, the initial development of an information need as manifested within the story lifecycle was the shared imperative to find story ideas. Sourcing story ideas was intimately bound up with a constant process of discussing events in the world. The initial



briefing for most assignments usually took place publicly and it was not uncommon for colleagues sitting nearby to offer up ideas about, and contacts for, potential sources.

Mike has been called over to Rosie and told he is being taken off the fashion story and should do a piece re. a story about predicting spending habits from nose size. Rosie gives him a newspaper clipping and talks him through what she knows of the story. A young guy is with Rosie and he's to do the fashion piece so Rosie is outlining it and Mike chips in with a couple of points. Mike comes back to her desk with a piece of paper with a telephone number on it.

**(Fieldnote 02/09)**

Here a features journalist has been taken off a story he was already working on and talked through a new story idea. The section editor had picked up a story from the news section of the previous day's Scotsman and was keen to do a follow-up, quite a common occurrence in the features department. The journalist was given one contact number to get her started. The section editor also briefed the journalist who was picking up the other story, and as she did the first reporter gave the second some advice. This cooperative process of source identification could often be seen continuing throughout the writing stage. Colleagues would offer thoughts as they overheard comments on, or asked about, the writers progress. Section editors and the editor would routinely check on the progress of stories.

A news reporter is talking to the news editor on the pathway in front of Harry's desk. The reporter had been out on a story and the editor had asked her about how it went. She says she had trouble getting what she wanted and the editor suggests 'see if you can get some counter reaction on this and then maybe we can go in and see what she says to that'. The news editor leaves the newsroom (as he had been heading when he bumped into the rep).

**(Fieldnote 01/21)**

As can be seen from this quote, the check serves many functions. It helped the section editor maintain awareness of the likely outcomes of the various stories scheduled for the next day's section. But importantly, it also opened up an opportunity to review source issues. The writer was having problems pinning down a source and so used this as an opportunity to clarify what the section editor wanted. This led both to consider where to go next and the section editor offered some advice on a round about way to get what was needed.

## 6.4 The Art and Craft of Juggling Sources

Gathering information in as time-sensitive an environment as The Scotsman newsroom required that journalists became expert at judging which sources to use, as well as when and how to get the information required from them. Although by no means all of The Scotsman staff had gone through any formal training in journalism, those that had would have found their training heavily biased towards the handling of human sources. This is in part because interview techniques, particularly as regards the handling of quotes, are held to be a crucial part of any journalist's skillset. In one major journalism textbook an entire chapter is devoted to the subject of interviewing human sources, as compared to just one chapter on all the other sources combined (Keeble, 1998). In the UK journalistic tradition, getting a good quote is as much part of being a good journalist as writing.

### 6.4.1 Handling Human Sources

Aileen is on the phone and is talking through a story with someone, she says that JW has pulled together a few contacts and that if they want to do the story she'll send this stuff through. Then she outlines how she'd like the piece to be - what sort of things it should have in it. Then she says 'Okay, I'll send them over.'

**(Fieldnote 02/09)**

The importance of the human source was also reflected in the symbolism attached to the contacts book. All journalists maintain a book of contacts. It is as important to a journalist as a passport to an international traveller. You cannot go very far in journalism without one, and a good one will smooth your journey considerably. Sharing contacts within The Scotsman was an everyday occurrence. Contacts books at The Scotsman took a variety of forms. Some were small and tidy and rather plain looking. Some were ostentatiously stuffed with scraps of paper and scribbles on the cover. Others were elaborate, with eye-catching covers and index tabs. Although most of the journalists I observed had a paper contacts book of some kind, the use of personal digital assistants (PDAs) like the Psion™ was creeping into the newsroom. Of course the uniform external appearance of PDAs did not offer the journalist an opportunity to express something about their personality through their contacts book style. For all that professionalism and craft skills such as the ability to extract good quotes or produce copy on time were held to be important, many of the journalists I met were keen to remind me (explicitly and implicitly) that they were at heart creative individuals, so whether or not such mundane-looking devices will ever entirely replace their paper cousins is debatable.

### 6.4.2 Judging Sources

Although a great deal of Scotsman journalists' attention was paid to the handling of human sources, that is not to say that they were inexpert at handling other kinds of non-human sources. On the contrary, they often developed an intimate understanding of the sources they used, and (to a lesser extent) the means by which they accessed them. Although within the sociology of the media a great deal of attention has been paid to the effects on output of *which* sources are used, less attention has been paid to how journalists judge which sources to use on an everyday, routine, basis. Rather than focussing on the structural constraints on source use, as culturalist accounts tend to, I am concerned with the day-to-day *practice* of using sources. Part of this day-to-day practice was the judging of sources. Journalists at The Scotsman made these judgements according to a number of information source *qualities*, and these judgements varied from situation to situation and from department to department:

Jamie: Let's go back to the basics. When you are a 20 year old journalist knocking on the doors of mothers whose sons have been splattered all over the motorway in a car accident 24 hours ago, one of the things you are very much aware of is that part of, totally unconsciously without any cynicism whatsoever, that part of their spin is going to be that this was a wonderful lad, washed the dishes for his mother at home, caring, looked after animals, all the rest of it. It may very well be that the bloke was a violent alcoholic, went out every Saturday night and vandalised the town but to a certain extent you play the game. You accept that to a large extent most people haven't got, in those circumstances, haven't got the cynicism within them to do other than play that particular game but nevertheless it is a game. You are being spun even in those sort of circumstances.

Catriona: So that's the work of art that is journalism, learning how to play that sort of game?

Jamie: You play that spinning game, you have to decide when you want to allow yourself to be spun and when you don't, when you have got to stand up and head off in your own determinedly independent direction - which can be quite tough because sometimes you do find yourself as the only one marching in step, particularly as journalists are no more work-alcoholic than anybody else. I mean if there is a decent spin coming from somewhere 90% of the professionals will go with it.

#### (Interview 09/25)

Judgements about a source were highly variable and related to numerous factors, nevertheless a number came up regularly in discussion with the journalists; relevance, veracity, portability, timeliness, cost and accessibility. Each of these is addressed in turn below.

### Relevance

The reliance of the newspaper industry on regular sources of information has already been discussed above. This requirement means that journalists are particularly interested in sources to which they can go back again and again. Specialist journalists, for example, build up long lists of such sources, human and non-human. As has already been demonstrated, relevance is a widespread concept in information retrieval studies. However when we come to consider the practice of journalism, the conceptualisation of just what is being judged relevant differs radically.

Harper's study of information work at the International Monetary Fund highlighted the importance of the ability to understand the relevance of available information over the quantity of information available (Harper, 1998b). In order to use information, desk officers at the IMF first had to be able to place it in a 'field of relevance'. Similarly (Dourish et al., 1993) found that in two versions of an event management/calendar system in a research laboratory, the relevance of information was important both to those who contributed information and those who retrieved it. What I hope to show here is that there is a subtle, but important difference between the ways source is thought of in the Harper and Dourish studies and the way journalists at *The Scotsman* thought of source. In the Harper and in the Dourish et al studies, source was conceived of as a property of information. In *The Scotsman* it was the reverse; information was a property of sources. Relevance within the newsroom context was related principally to the source of information and not the information itself. Whilst journalists were of course concerned that the information they used was accurate, truthful, not likely to land them in libel court, etc., the way they went about establishing this was primarily through the source, not the information itself. The point I want to make here is that inside the newsroom, work-practices already existed to cope with ascertaining the qualities of individual 'units of information', for example the extensive editing process, the seemingly endless rounds of talking-through stories, or the principle of multi-sourcing. What was more important in such a time-sensitive environment was the handling of sources, the ability to make judgements about the qualities of the source rather than the information gathered from the source. Let me be clear, I am not saying that journalists never worried about the relevance, veracity, etc., of units of information. But by dealing with these issues first at the source level they could avoid a great deal of work that they did not have the time to engage in. Unlike a thesis writer, *Scotsman* journalists simply did not have the time to sit worrying about units of information; they just needed it. By making judgements at the source level the information gathering process could be greatly speeded up. But what was judged relevant about sources and how did individual journalists learn to make these judgements?

The first point that should be made is that relevance as a source quality is highly department-dependent. Different departments regard different sources as more or less relevant to their needs. For example, the wires were regarded as highly relevant in departments which covered fast moving stories (news, business, sports) and less so in departments which covered more slowly developing stories (features, some specialist writers). Of course as with all the qualities addressed here, relevance was not just a matter of institutional or even departmental preference. Individual judgements came into the picture as well. At the start of my fieldwork it was noticeable that, contrary to my expectations, older journalists seemed to be more interested in the Internet than their younger colleagues. This observation was also found in a study by the British Library into Internet use by journalists (Nichols & Williams, 1997). The authors of that study put the phenomenon down to the greater security of position of older journalists – they could afford to experiment. One of my informants thought that it might be because older journalists were more aware of the inevitability of change in the newsroom and were more likely to adopt new technologies quickly (they had seen it all before).

### **Veracity**

Veracity refers to the perceived truthfulness of a source. However this is not to say that journalists would not consult a source that they perceived as having low veracity, but rather that they were more likely to question and check the information gathered from a low veracity source. Low veracity sources may also have been of interest because they often provided interesting story ideas or leads. And of course since information is routinely multi-sourced (if something is reported by two sources it can be assumed to be ‘fit to print’) low veracity sources are not necessarily problematic. Furthermore some sources were treated as though they have high veracity even though journalists’ recognised that this may not be the case:

He (specialist journalist) is conscious though of the need to be aware that there is a lot of crap out there and that it's important to bear that in mind if quoting from a site. Then he mentioned a site that is all airline rumours and how interesting that is to check in too but he wouldn't ever use a quote from it.

### **(Fieldnote 10/10)**

So whilst this site was thought to have low veracity and therefore would not have been useful for comment needs, it was thought useful for story ideas. Some journalists used economic considerations when establishing veracity. For example since the wire services

were bought, at considerable cost, it was thought that the information on there would almost certainly be reliable. Human sources' veracity could in part be ascertained by questioning colleagues who may have had prior experience with the individual or organisation in question. Similarly, questioning or regular observation of colleagues provided not just pointers to other kinds of sources, but an indication as to the veracity of those sources. Nevertheless, although sharing of information about sources was widespread at The Scotsman, individual journalists still prided themselves on their ability to 'make their own judgements', at least insofar as the source permitted. A particular problem with web sites as sources was that the *affordances*<sup>63</sup> of web sites could be misleading.

Dave: It's the equivalent of me producing a fanzine and The Scotsman producing a newspaper and them both being sold on the news-stand with nothing to differentiate, you know, nothing to say this is done with this bloke who's an amateur and this is an official news organisation, you know. You wouldn't get that, but you do on the Internet cos it's all just higgeldy-piggeldy in there (...) One of the ways you can tell is how well designed, how glitzy, the site is. But then one of the trouble's with particularly glitzy sites is they take so long to, to come up. You just get bored and you think – and also it sticks a lot, it just stops and freezes. That happens a lot actually, you'll get half way through and it'll freeze (...) What I want probably is out there but it just takes ages, you know, I'd be better off going to the library and looking it up.

**(Interview 10/22)**

Dave, a specialist writer, had been working at The Scotsman for approximately five years and had spent some time getting to know about the Internet. Like all journalists at The Scotsman the arrival of Internet access on his desktop had not been accompanied by any formal training but by a very brief introduction. Most of Dave's knowledge about the Internet came from exploring it himself and from sharing ideas with a number of his colleagues. He had been an early adopter of the Internet, perceiving that it would be a useful source for a writer with his specialism. The roll out of the Internet into the newsroom had been done in a somewhat ad hoc manner over a period of several weeks, although an attempt had been made to give access first to those the production editor thought would benefit most. When Dave had heard about a colleague getting the Internet, he had gone to the production editor and asked to be given it – a common pattern with early adopters in The Scotsman. Indeed the same pattern of actively seeking out access to new technologies by some journalists could be found with regards to the introduction of voice mail in the newsroom. However such early adopters were not simply, as might be thought, 'gadget freaks'. For example Dave knew that voice mail was available but had not gone to ask for it

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<sup>63</sup> The concept of affordance was introduced to HCI and design audiences in (Norman, 1988) as the possibilities designed into an artefact – if an artefact is to be successful its affordances must be apparent to the user.

because he had decided that the benefits were not clear cut enough to him. This was in part a result of having observed colleagues who did have voice mail.

In the extract Dave talks about the difficulty of judging the veracity of a web site source on the basis that there are no reliable 'veracity' or authority cues built into it. (Brown & Duguid, 1994) have pointed out a number of such cues. Some are subtle: the colour or quality of paper used, the style of font, etc. Some are less subtle: the cost of the product or the number of expensive components such as photographs. As Dave pointed out, in the printed world the physical outputs of different kinds of information producers gave off cues as to the veracity of the information. Although Dave recognised that there was not necessarily a correspondence between the appearance of a site and the veracity of the information available from it, he did later 'carry over' some real world expectations to the Internet when he talked about the glitziness of sites. For Dave, if a site really was from a 'quality' information provider then it ought to look the part – although as has been remarked elsewhere, journalists rarely question whether or not the person they are speaking to on the phone is really who they say they are (Caruso, 1998).

Catriona: Do you think that the general culture is why you don't really get taught things like the Internet? It arrives and people are just left to their own devices? Is it really that

Jamie (interrupting): The Internet, the problem with that from a journalistic point of view at the moment, is it is sufficiently new that really it is far too soon for anybody having come through systems, having been taught. In fact I think that it's probably too new for many if any of the training schools to actually cottoned on to its importance and the different ways of using it.

**(Interview 09/25)**

It is tempting to see Dave's complaint in the earlier interview extract that web sites did not carry the right cues for him to make judgements about their source qualities as an a simple affordances issue. Designers just need to provide better affordances and that will solve the problem. But from a CHAT perspective affordances are not simply 'designed into' an artefact – they are part of the activity system (artefact – subject – activity) and as such are interpreted and historically developed. As Jamie points, the Internet is just too new for journalists and those who train them to have cottoned on to it. However affordances are not objective qualities of artefacts – built in by designers for ever more. The affordances of web sites within the activity system of newsroom information gathering are not pre-existing objective bits of an artefact. Over time the confluence of journalists engaged in object-oriented information gathering activity using web sources will result in the development of the affordances of web sites. In this sense affordances are most closer in spirit to concept

presented in (Gibson, 1986); not simply designed possibilities emanating *from* an artefact but interpretative possibilities historically embedded *in* an artefact through its use.

### **Accessibility**

Deadlines, as we have seen, are a major constraint on journalistic work practice. This is why other media, which operate to similar regularity requirements if not to similar actual deadlines, are such a useful source. The ability to get the necessary information from a source quickly was generally a major consideration in The Scotsman newsroom. Journalists' perceptions of the Internet, for example, had been greatly influenced by its failure on two accessibility counts: speed of search and speed of information return. In the previous extract Dave noted that although he could sometimes use the appearance of a site to make veracity judgements, but that there was an accessibility cost associated with this. The more glitzy a site was, the longer it took to download. And because the newsroom network was somewhat over-stretched, such sites were prone to causing his browser to crash – losing him even more time.

At this point it is useful to distinguish between what in computing terminology are called 'push' and 'pull' sources. Sources such as online databases and reference books are pull sources in the sense that journalists have to 'go to them' and acquire information actively – pull the information from them. Sources such as the wires and television are push in the sense that a regular stream of information is presented and journalists need do nothing more than choose to attend to that stream. Push sources can be useful since they provide a regular opportunity to acquire new information of which there is no prior knowledge. However this has to be balanced against the possibility that not all, or even any, of the information pushed in one period will be useful. Human sources, of course, can be either push or pull. Specialist correspondents in particular spend a great deal of time developing a network of contacts who will bring story ideas and information to them (i.e. push sources).

It is important to note that accessibility is not just judged by the speed of the access/retrieval means but also by the speed with which searches can be conducted, in the case of pull sources, or on the likelihood of useful information coming up, in the case of push sources. A number of interrelated factors determine this speed; the access means, journalists' familiarity with the source being searched, the amount of information held by the source and the way in which that information is organised and presented are the main ones.

Catriona: Do you use the wire service a lot?

Dominic: Oh yeah, all the time, all the time. About three or four a minute come in. It's a very good system. (He starts up the wire service application, Agenzie. Talks about what services are on (PA, Reuters,



etc), shows me a search. He can include or exclude different services and also different categories of information like business, news, sports, etc. There is also a search facility using keywords. The screen refreshes each time a news story appears. If he wants he can freeze the screen so that he is not disturbed while searching or reading) In most cases they do a really good job, they get it, they're really quick, they're on the spot. I sometimes sit here enviously.

**(Interview 10/22)**

Although a lot of information came in over the wires to The Scotsman newsroom, much of it could be filtered out, or the new material could be stopped until such time as Dominic was ready to look at it again. It was something he used frequently and so was very familiar with the technical means by which the wires were accessed (the Agenzie software application) and the information was relevant since for Dominic, who was a news reporter, very up-to-date information was important.

Searching The Scotsman's electronic archive of its own stories (BRS) was something journalists did frequently, and were familiar with. The archive was fairly small, when compared to a commercial online database, and was accessed via The Scotsman's own network. The information held was clearly organised to suit a journalist since it had been produced by them, and the organisation of the search and presentation facilities was custom designed for The Scotsman staff. By comparison, the FT Profile system was less frequently used by journalists, was much larger and was accessed via modem in the library, and used a different query system. Perhaps as a result of this, journalists would often ask librarians to do FT Profile searches, even though they were quite happy to go to the library and use BRS themselves.

Push sources were particularly important when it came to gathering ideas for stories and tracking developments in existing stories, a task which was largely undertaken by section editors:

Harry (journalist) said his section editor really had to make sure that there were enough news stories coming through, and that she had to keep an eye on things. He talked about how important it is for his section editor to keep an eye on the information coming up on one wire service in particular and said that she was really good at spotting things on there.

**(Fieldnote 04/08)**

As a result section editors were often the most likely to have a well developed interest in recently arrived sources, such as the Internet. New access means also made existing sources

more accessible. Changes as a result of the introduction of the telephone have already been discussed. The introduction of email similarly widened the range of human sources which could be contacted quickly. This was particularly useful for journalists who needed to contact people in different time zones. Rather than leaving messages on an answering machines, or trying to remember to call people at particular times, they could simply email them.

**Timeliness: 'There is no stop press'**

As sociologists studying journalists have often noted (McNair, 1998), the rhythms of newspaper lifecycling impose certain constraints on the kinds of stories that can be covered, and hence the kinds of sources that will be used for 'story ideas' information. A daily newspaper will naturally be drawn to 'breaking' news stories, since these fit the 24 hour rhythm of the paper (Galtung & Ruge, 1982). Additionally, competition from television news has meant that newspapers will watch for and cover stories which break far later in the day than was previously the case. The use of multiple editions of a paper (The Scotsman typically had five in one day) also allows the newspaper industry to cover very fast moving stories. If a story has not fully developed by edition one, it might well have by edition five and can therefore be 'tracked' through the night. Rapidly updated (i.e. timely) sources like the wire are particularly useful for faster moving departments such as news.

Regarding which human sources are used by newspapers, Marxist studies tend to emphasise the role of ideological structures of power, and organisational accounts tend to emphasise the need for achieving balance as a key determining factor in who is and is not approached. Clearly both of these accounts have their merits. However there was another much more mundane factor operating in The Scotsman newsroom, and that was simply who was available (a factor which comes into play for all sources). Some contacts were known for their willingness to talk even after 'working hours', a 'good bet' when a story had been assigned late in the day or other contacts had failed to provide useful information:

Lou has come over and asked the freelance Sammy to do a little piece on working parents. She wants her to get comment. James says that Mary Baxter might be good for a quote 'in the context of the story' and says that she is very helpful and is usually in about now (c. 5.15pm) and talks about Mary's domestic arrangements. James gets out his contacts book.

**(Fieldnote 12/01)**

Timeliness also covers issues of how up-to-date a source is known to be. This was a particular concern with web sites, where much of the information was old:

He (journalist) shows me a site with a stop press page that has a notice saying '6th August no stop press'. He comments 'in some ways that sums up the net for me, I could spend ages finding that just to find that there's no stop press'.

**(Fieldnote 10/22)**

Journalists, other than those in features, often talked to me about getting frustrated with the amount of old information carried on the Internet, since this was rarely of any use to them. One specialist writer found it particularly frustrating when corporate web sites were used to carry press releases, but these were not up-to-date:

He has noticed that some organisations in his field have started doing net press releases, although a lot of them are not up to date enough. Some have up to yesterday's available - and he finds that infuriating - 'if they can do yesterday's why can't they do today's?' (...) 'Yesterday is no good for him, it's today he is really interested in'. One organisation does do this, and they send a mail to alert him, which he finds very useful. The advantage for him is that these are often very big reports that would be hard to fax or handle as paper.

**(Fieldnote 10/10)**

On the other hand, the web has improved the timeliness of some 'other media' sources. In the past, foreign newspapers could not be accessed until the next day, when they finally arrived in the UK, if indeed they ever did. With the growth in the number of newspapers with Internet versions of their papers, this problem can be overcome. A new access means, the Internet, has improved the timeliness, as well as the accessibility and cost, of some existing sources:

He says that the most useful time they had with the net was in the summer when they used it to try and stay on top of the football player transfers that were going on. Lots of foreign players were being talked about so they used the net to access foreign players, and luckily they had got a new reporter who spoke Italian so one day he spotted a story on an Italian paper's web site that gave them a scoop on a transfer story that no-one else could get till the paper came out the next day.

**(Fieldnote 10/16)**

But as previous extract highlights, in order for journalists to exploit new sources or new features of existing sources a number of other factors, such as the availability of an Italian speaking colleague, can come into play. Of course journalists in the past did find problem of getting material from overseas newspapers, however this process was rather more laborious and unreliable than using the Internet.

“(So) rather than phoning them up and getting another reporter who's equally hassled to cut something out photocopy it, stick it on fax and get it to you, which they always say they'll do but they never do, if it's on the Net it's good for that.”

(N971022)

Timeliness could also affect what category of information (idea, background, meat, filler, etc.) a source was thought to be useful for.

Then he mentioned that sometimes wire stories are used straight as the main part of a piece and sometimes just as a source of information. But in almost all cases when he is using the net he is using it for background, apart from where press releases are available, but he thinks more organisations will rumble to the potential and start using the web, so he'll use it more for current information.

(T971010)

In this case the journalist primarily used the Internet for sourcing one information need (background), whereas the wires were used for two (meat and ideas). However, the journalist anticipated the Internet would become more useful. Indeed many of the journalists I spoke to had a 'sense' that the Internet ought to have been useful, but had been rather disappointed.

### **Financial Cost**

The financial costs associated with using particular sources affected staff at all levels in The Scotsman. Variable costs were associated with the use of wire services for text and pictures, and picture agencies. In addition many of the pictures in The Scotsman's own picture library were copyright and a cost was associated with using them, although not searching the library for them. Fixed costs were associated with the use of specialist databases. Library staff had a particular, although not overriding (as we saw in Section 6.3.2), interest in ensuring that costly sources were only used by journalists when it was appropriate.

**Portability**

The final source judging dimension we shall consider regards how 'portable' information from non-human sources was. For example, information appearing on the wire services could easily be imported into the text editor used to write stories by 'cutting and pasting'. News reporters in particular frequently work from wire stories, a practice common throughout the industry (Mayes, 1999). Of growing importance during my time at The Scotsman was the availability of digital information sources. Information from such sources could easily be imported into the now entirely digital production process.

**6.5 Sources: Learning When Not To Bother**

So far we have talked about source juggling in straightforward terms, as though journalists had a stable set of qualities against which judgements about any and all sources could be made in any and all situations. But deciding which sources to use when information gathering was a complex activity, something of a black art. A journalist's creativity was required for more than just writing. It was vital for juggling sources. For example, I asked one reporter when he typically consulted the Internet.

Dominic: Well the way it usually happens is you're thinking how am I going to get this and then, usually, I never think of the Internet right away, and then put in a few calls and then time's getting on a wee bit and check the library archive and you think yeah Internet, there might be something on the Internet you know.

**(Interview 10/22)**

For news reporters the phone and the wires were usually the first stop when assigned a story, but as this reporter had earlier pointed out to me, he often had to leave messages for people the first time he tried to contact them. Going to other sources like a web site or a trip to the library was a good way of filling in some time when waiting for people to phone back..

Dave: I think you also cultivate an awareness of what is going to be on there and what isn't going to be on there. I mean, for instance, if I was doing something for Brian, maybe doing something about film, yes it'll be very useful cos you know that what you want is probably going to be out there. You know if you want the full script of *On The Waterfront* someone, somewhere has probably put it out there. You can search from that point of view. Similarly with music, I mean I use it quite often for things like, it's very good for discography's. When you want, you know, what was the first Pogues album, when was it, what label was it on? That's going to be there because one thing all bands have is they always have a discography and someone has always put on their discography. So you get to know, you get to be familiar with which things are going to

be found on there. Quite often you need to know what label they're on and that's quite often the starting point. You think right we'll need to try and get into x, what label are they on first of all? So we can put the label, try the Internet. Try the Internet or we can go to Flop(local record shop) and actually physically check and stuff like that. So yeah, you know what things you are going to find (...) I think I know when not to bother.

**(Interview 10/22)**

This journalist had been building up a familiarity with the sources of information available via the Internet, and the alternative sources for certain kinds of information need. For the same reporter the wire services were far less relevant:

Dominic: I mean, they're very newsy, there's not really much of a features component to the wires. I mean the ones I do use, going back to the Internet, are the ones I've bookmarked, which is the Yahoo news service, which is a showbizzy one. Basically it's all taken from Variety and Reuters, so that's posted every day. It's very American but you'll get some good stuff there."

**(Interview 10/22)**

Interestingly, he notes that although he doesn't find the wires relevant enough for his particular field, he does indirectly access them via the Internet versions of the Reuters service. The advantage here is that the information available has been filtered to showbusiness interests. We are reminded once again that the media is an enormous palimpsest – layer glimpsed through layer glimpsed through layer.

Very few journalists at The Scotsman had any formal training in information gathering and source handling. If they were about on the right day, they might have been able to attend a brief Internet training session. Similarly when the BRS system (The Scotsman's own electronic cuttings archive) was introduced to the newsroom, those who were about at the right time got a ten minute hands-on introduction. However the principal means by which journalists learnt 'when to bother' were exploration and shared learning. Newcomers relied heavily on being shown the ropes by their colleagues. Many of the journalists I spoke to were of the opinion that this was probably the only way it could be done, and there is much to suggest that they are right. After all, source judging varies enormously from department to department so there would be little point expending a great deal of time and energy learning about source x when your department never uses it. And the nature of working life and economic constraints in the newspaper industry makes it unlikely that journalists could be freed from their duties long enough for attendance at regular training courses.

Some journalists thought that more familiarity with sources might be useful to the new journalist:

Catriona: Do you think that on the whole, I mean it seems like you have got a lot more electronic sources available to you, do you think how you use this thing should be formally taught or is it something that people just pick up?

Jamie: As with all of these things I think there are two sides to it and I think that in terms of setting out, training has changed since my day. But the biggest single weakness of my training was that you never got taught about evaluating sources, that was something you had to make up as you went along. Some people I don't think ever really got on to it and I think under that heading, electronic sources, it has become a major part of it. People tend to assume that because it has been on television it must be true which is rubbish. Because it has been on television it must be important, Reporting Scotland or the Nine o'clock news or the Ten o'clock News or whatever, it must be important and they don't really realise that Reporting Scotland over a story that is actually far more important because that's the one they have got pictures to go with and all television news is picture led, camera led.

(Interview 09/25)

## 6.6 More Human Sources

### 6.6.1 Librarians: Providing 'Definitive Answers'

Fixing the palimpsest was like putting a sticking plaster on a wound that really needs stitches, it was better than nothing but unlikely to have much effect on the problem. Far more important, from the point of view of controlling the palimpsest effect, was preventing such mistakes in the first place. One of the ways in which this was achieved was through the routine double checking of information, or multi-sourcing, which as we saw in the previous chapter had a significant effect on the way journalists gather information. The Scotsman librarians too had adopted this journalistic ritual:

Catriona: Say you'd found something in, perhaps the, you know, Mail

Lorna: Yeah

Catriona: And you felt a bit funny about it and you found something else, in the Mail, would that be all right?

Lorna: Mmm, I'd try and use another one, try and check it from a different paper.

Catriona: Right, yeah.

Lorna: But I do try and verify facts like that definitely. Not just once, it's a couple of times, till you're fairly sure that you've got the right thing.

Catriona: Yeah.

Lorna: Which we should, everyone should do that in the Library because we try to give them a definitive answer, and then ((unclear)) you get

caught out, because obviously especially with Profile (FT Profile) mistakes just get perpetuated.

**(Interview 08/25)**

Lorna's last statement is particularly interesting – librarians try to give a definitive answer to journalists' enquiries. So far we have been considering librarians from a traditional LIS perspective; as mediators. However we might also think of the librarians themselves as a kind of source.

The conventions of journalistic writing style are such that it is not usually necessary to cite the sources of all information in a printed story<sup>64</sup>, except human sources. Consequently journalists did not always need analogue or digital representations of a piece of information. For example one day a rather senior journalist brought the library to a halt with a particularly unusual enquiry: how many regulation footballs does it take to fill the mouth of a regulation goal? After a lengthy search involving several sources and much scratching of heads as volumes were calculated an answer was reached. The journalist in question did not need to see the various bits of information that were used in arriving at an answer. They were simply told the answer. It is for this reason that there existed an 'Own Knowledge' category on the enquiry logging forms – enquiries were often answered straight away out of the librarian's own knowledge.

### **6.6.2 Journalists as Mediators, Librarians as Sources**

Librarians did clearly fulfil a mediating function in the Library, as we saw in Chapter 5. However librarians were not the only mediators in The Scotsman library. Other journalists often fulfilled this function, for each other and also on occasion for the librarians:

Then Meg (librarian) sits at another terminal and tells me she'd better try that search she was doing before again. Just as she starts a male journalist (MJ) comes in - they say hi to each other and then she asks him: Meg: 'Do you know Philip Treacy?' (looking at him). MJ: 'Oh yes, it's Treacy - like Tree-Cee - well, I could be lying' looking at his screen). Meg: 'Well, I've tried everything else, so I'll give it a go.' (looking at screen). MJ: 'He does hats doesn't he?' (looking at screen). Meg: 'Yes'(looking at screen). MJ: 'Yes, he did someone recently, he was in the news recently, who was it?' (looking at screen). Silence for a couple of minutes as they both run searches - then Meg turns to MJ and says she's found something. Meg: 'What a pretentious name!' (gets up and

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<sup>64</sup> The practice of citing sources is more common in the USA, and a move towards doing so, particularly in longer analytical pieces, can be seen in some UK broadsheets.



walks to main enquiry desk and makes a phone call). Meg: (on phone)  
 'Right, finally tracked him down. It's Philip with one L and then Treacy,  
 T, R, E, A, C, Y. Bye.'

**(Fieldnote 12/22)**

Here the journalist became mediator for the librarian. Journalists would also act as mediator for newer and/or younger journalists, who would often ask another journalist using the library for help before asking a librarian. New staff were rarely formally introduced to the librarians and as one told me, the library could seem quite mysterious and forbidding. For more experienced journalists, especially those who had built up good relationships with the library staff, individual librarians become less like mediators and more like sources:

Rosie is chatting to Simon still, 'Well I'd get the library to do it. If you get the right person to do it in the library, like Lorna's very good.'

**(Fieldnote 04/16)**

Rosie was advising a junior member of staff on how to approach researching a story he had just been assigned. Rosie's relationship with Lorna was such that she trusted her to carry out searches on her behalf, searches that she might otherwise have been reluctant to leave entirely up to someone else. This is very similar to Orr's observation of photocopy technicians. A technician with a good memory was a valuable resource and likely to be much in demand when particularly difficult problems arise (Orr, 1996). Similarly, a librarian with good relationships with the journalists was likely to be much in demand.

## **6.7 A Taxonomy of Scotsman Information Sources**

As we have seen, the means by which sources are accessed affects many source use judgements. In developing a taxonomy of The Scotsman information sources (see Table 6.2) it is useful to consider both type of source and means of access. A distinction between direct and indirect access means has already been made. This is intended to allow for two particular situations that could arise when accessing sources. Firstly, some information in some sources could be accessed either by direct browsing/querying of the source itself or through indirect browsing/querying of a third-party's knowledge or re-presentation of the source. For example, consulting a copy of the Daily Telegraph in the newsroom or the library is directly browsing the paper (source). On the other hand searching an online database such as FT Profile for articles about a topic which returns an article from the Telegraph is an indirect query of the paper (source).

When juggling sources, journalists and librarians had not only to consider the qualities of the sources in question but also the direct and indirect access routes to the sources. In some circumstances it made sense to go via the indirect access route. The direct route to the wires, using the software in the newsroom, was of course not available to a journalist who was away from the office. However many web sites carry edited versions of the wires, albeit not as up-to-date as the direct service. And as we have seen direct access to a wire service might have been an overload of information for journalists in a particular department whereas indirect access to the wire service via a web page might have offered a usefully filtered supplementary source. Secondly, the biggest indirect access means used at The Scotsman was in fact another source, people. Information gathering activities at The Scotsman were almost always social affairs – journalists relied heavily on each other for background information, contacts for human sources and pointers to other sources.

A political reporter comes over and starts asking one of the business reporters for some information on Scottish Equitable. Two of the business reporters give him some information, which he notes in his pad, and then he starts to tell them what the story he is working on is. Then Tracy turns round and says that she is due to interview Harry Smith and had noticed when looking in BRS that he had interviewed him several times and could she have a chat with him sometime for advice on how to handle it. He says sure.

**(Fieldnote 01/22)**

In this case the political reporter had guessed that some of his colleagues on the business desk may have been able to help with some background information for his story. But he in turn becomes the subject for a request for help. Discovering who has written a story on a similar topic and then tracking them down if they were still at The Scotsman was a fast way of getting a head start on a story.

Source	Direct Access	Indirect Access
People (as individuals or as representatives of organisations)	<ul style="list-style-type: none"> <li>• Phone</li> <li>• Face-to-face</li> </ul>	<ul style="list-style-type: none"> <li>• Notice Board</li> <li>• web site</li> <li>• tv and radio</li> <li>• other print media</li> </ul>
Print media	<ul style="list-style-type: none"> <li>• Library and Newsroom Newspaper Collections</li> <li>• Newspaper Web Sites</li> </ul>	<ul style="list-style-type: none"> <li>• People<sup>65</sup></li> <li>• Library Electronic Text Archive (BRS)</li> <li>• Library Electronic Picture Archive (Phrasea)</li> <li>• Library Online Newspaper Clipping Services (FT Profile, Reuters)</li> <li>• Library Clippings</li> </ul>
Wires	<ul style="list-style-type: none"> <li>• Desktop Wire Service (Agenzie)</li> <li>• Specialist desktop Real Time News Services (Reuters Markets)</li> <li>• Online Desktop Picture Agency Services</li> </ul>	<ul style="list-style-type: none"> <li>• People</li> <li>• Web Sites</li> </ul>
Reference Collections	<ul style="list-style-type: none"> <li>• Library Books</li> <li>• Library CD-ROM</li> <li>• Library Specialist Databases (Hyperion, CCN)</li> <li>• Desktop Databases</li> <li>• web sites</li> </ul>	<ul style="list-style-type: none"> <li>• People</li> </ul>
Broadcast media	<ul style="list-style-type: none"> <li>• TV</li> <li>• Radio</li> </ul>	<ul style="list-style-type: none"> <li>• People</li> </ul>
Press Offices	<ul style="list-style-type: none"> <li>• Press releases (post, email, fax)</li> </ul>	<ul style="list-style-type: none"> <li>• People</li> <li>• web sites</li> <li>• Notice Board</li> </ul>
Diary	<ul style="list-style-type: none"> <li>• Desk Diary</li> <li>• Filing Cabinet</li> </ul>	<ul style="list-style-type: none"> <li>• People</li> </ul>
Web	<ul style="list-style-type: none"> <li>• Browser</li> </ul>	<ul style="list-style-type: none"> <li>• Other people</li> </ul>

Table 6.2: Taxonomy of Scotsman Information Sources

<sup>65</sup> As an indirect access means, people are of course accessed either by phone, email, face-to-face, by notice board or web site.

## 6.8 Conclusion: The Source Hunters

*There ought to be a collective noun for a group of journalists gathered together, for they so often hunt in packs.*

*(Cockerell, Hennessy, & Walker, 1984) p.13*

This chapter began with a consideration of the artefacts of information gathering, and highlighted the importance of the source. A distinction was drawn between the technological means of access to information sources and the sources themselves. The concept of the information source was discussed in activity theoretical terms, as both a conceptual and material artefact. The focus then shifted to the ways in which information sources are used, and in particular to the ways in which they are judged. A number of source qualities were identified, although it was noted that these qualities are highly dynamic. A taxonomy of Scotsman information sources was then presented. From this emerges a picture of the journalist as a kind of source hunter; constantly on the look out for information sources which might make useful sources for an existing or future assignment. They are an example of what (Erdelez, 1997) has called *super-information encounterers*. Through their source cultivation practice the journalists created the conditions for 'deliberately accidental information discovery'. They did this because the information environment they inhabited was so enormous, and the domains so numerous, that non-accidental information discovery was really very difficult, and it would have been no matter how good the technology they used had been. They just did not have the time. Let me be clear, I am not saying that journalists never worried about the relevance, veracity, etc., of units of information. But by dealing with these issues first at the source level they could avoid a great deal of work that they did not have the time to engage in.

The chapter considered other studies which have commented on the importance of the qualities of information itself for information work. However the focus here in these studies is not on the information itself but the information source. It is interesting to note that Dourish et al, in concluding their remarks on the importance of contextualising information according to a number components (which are in part similar to the source qualities discussed in this study). However their focus on information use leads them to conclude that "*Information retrieval, in its purest sense, is simply part of the challenge – once the information has been retrieved it must be suitably contextualised in order to be used*" (Dourish et al., 1993) p.50. In the case of The Scotsman it is clear that this contextualising process needs to begin before the information is retrieved, that it is the contextualising of the sources themselves that it likely to be of benefit. Finally, this chapter considered the status

of sources as 'artefacts' and illustrated the ways in which sources are constructed in everyday newsroom life, and their role as warrants for the accountability of everyday journalistic story lifecycling.

Thinking of sources in material terms makes it difficult to understand the way journalists and librarians at The Scotsman so happily refer to as sources all sorts of things an information scientist would prefer to label 'meta-sources', or a technologist would prefer to label 'information access means'. For example, (Hjørland, 1998) notes that librarians often provide fact retrieval (as opposed to document retrieval) services when responding to telephone enquiries and that this may be a dying phenomenon since fact retrieval hides the source of the information in a way that document retrieval does not – and knowing the source is increasingly important. But the author is using source in an objectivist sense – as though all information has some unequivocal source. For journalists at The Scotsman the librarians were a source in the same way as any of their other human sources were.

But if, as both journalists and librarians told me, almost anything could be a source what we ought to be asking ourselves is why and how 'anything' becomes a source. As we have seen in this chapter, 'anything' became a source by promoting themselves as such and/or being constructed as such by journalists. What is of interest then is why and how 'anything' becomes a source. In Chapter 7 the thesis concludes with further, exploratory, reflection on the nature of sources.

# **7 Outside the Palimpsest: Discussion and Future Work**

## 7.1 Progress and Outstanding Issues

In Chapter 1, I outlined the key questions that motivated this study. I shall now return to these, summarise progress towards answering them and discuss issues that remain outstanding. The rest of this chapter will then pick up and discuss the notion of ‘information source’, reflect on the adoption of a CHAT perspective and conclude with some remarks on moving towards design.

First, I started by asking a number of questions (in fact highly typical questions of an ethnography; the who, what, when, why and where of the setting):

1. Where in space/time is information gathered and why (what are the information needs)?
2. How does information gathering relate to the broader activities within The Scotsman?
3. Who does the gathering?
4. Where is information gathered from?
5. What are the artefacts of information gathering?
6. Do my conceptualisations of information, and information gathering, bear any resemblance my informant’s conceptualisations?

The answer to the first two questions lies principally in Chapters 3 and 4 – the organisation of the space/time of newsroom information gathering and the way in which information gathering relates to the other activity systems in the newsroom is revealed through the story lifecycle. In moving from a simple process model of the lifecycle to an activity system model we could see the importance of the lifecycle concept. Stories are the object of story lifecycling, but the outcome of the story lifecycle is not a binary opposition (a story or not a story). Instead the outcome of the story lifecycle is related to the development of two other lifecycles; those of sections and the paper itself. At the point of transition from story to section lifecycle, or from section to paper lifecycle, the object of the first activity becomes a mediating artefact in the second. A story (or a not story for that matter) mediates the section lifecycling process – it becomes a tool for developing the section. The CHAT perspective on artefacts allows us to see not-stories as artefacts in exactly the same way as we can see stories. They are largely conceptual artefacts (although of course they have a material aspect, for example on the spike) which allow section editors to make decisions about space and other stories.

The relationship between story and section lifecycling was then discussed in terms of the coordination and control of collective work. Chapter 4 opens up the communicative aspects of situated newsroom information gathering and highlights the existence of ‘the workplace soundscape’, something which has rarely received attention within work practice or design circles. This is an example of the workplace analysis as source of pointers for design which designers (include myself) could follow up.

The story lifecycle perspective also gives us some purchase on the third question: who does the gathering? In Chapter 4 we begin to see journalists (writers, subs, pictures people and editors) as cooperative information gatherers, although it is noted that separating out information gathering from story and section lifecycling in general is all but impossible and less than useful). In Chapter 5 I add to this list the librarians and in Chapter 6 I discuss how all these subjects are in fact principally source and not information gatherers. The broader activity context of journalism means that trying to gather information in the sense that it is presented in much information systems design and theory research is simply impossible. The information space is too large and the time available too short for this. Instead journalists have developed a special information gathering artefact: the source. It is to the source that newsroom information gathering is oriented.

Chapters 6 and 7 take up this point and consider source practices and the nature of sources in more detail. In so doing they round out my story by answering questions 4 and 5; information is gathered from sources and sources are the principle mediating artefact of newsroom information gathering.

## **7.2 Future Work 1: Outstanding Issues**

Of course many questions about sources remain – as we shall see later in this chapter. A key outstanding question is: how do we conceptualise the relationship between human and non-human sources? They are phenomena of the same order as far as journalists are concerned, but from a CHAT perspective artefacts and humans are absolutely not to be treated as equal. Is CHAT’s insistence on the fundamental difference between an artefact and a human justifiable? Can a human never be a mediating artefact, or are a non-human sources really not artefacts?



Chapter 5 also provides us with one of the most obvious ideas for future work. Now that the organisation has moved to its new offices, how has information gathering practice developed and has the library as backstage survived? This thesis (and *The Scotsman's* fortuitous move) provides a rare opportunity to consider the effects of physical environment on the social organisation of work. Access problems also precluded me from investigating the paper lifecycle in any great detail since I could not gain access to editors' conference. Whilst, as was mentioned, the role of editors in newspaper production has been addressed in the literature, it would be interesting to revisit this from the perspective of the network of lifecycles. Similarly, interesting comparative studies might be done between different papers, or different media (e.g. television news is a far faster moving environment, and Sunday newspapers far slower).

A common feature of all these attempted answers is the work presented in the overview of the history of journalism presented in the Prologue. Considering the historical relationship between journalism and new information technologies as well as the economic and control issues that have arisen as a result of this relationship has informed our understanding of the story lifecycle, of the broad environment of newsroom information gathering and of the practices that gather around sources. However, the development of the historical aspects of this study has been on the whole unsatisfactory; there is a somewhat perfunctory feel to it. This is perhaps inevitable in a study with as general a scope as this one. My intention was to open up for discussion and further investigation newsroom information gathering in a way that paid attention to the details of information gathering but in a broad-brush way. Previous studies of information gathering have tended to focus at a highly constrained atomistic level, and I wanted to contribute to the small but growing corpus of studies that aimed at a more holistic approach. CHAT itself gives us few clues about how to integrate different timescales into developmental analyses. For example, it would be interesting to consider the story lifecycle at different points in the historical development of journalism, but how would one approach doing and presenting such a study?

The other major outstanding issue is gender. Early in the study I made a decision not to address questions of gendered practice, I felt that to do the topic justice would have been an entire study in itself. But of course the issue raised its head. For example, one of the journalists (Dave) made a clear distinction in his team between those who used the Internet and those who did not. He was convinced that there was a "gender split" in operation since as far as he was concerned the women in his team did not use the Internet.

Dave: There's a real gender split there as well, women just will not use it.  
(...) No-one's encouraged to use it. I think what happens is, I think when

it came on stream the boys, if you like, encouraged each other to use it. You know, wow, this amazing, you know, you got, you em, hold on, you got Rachel from Friends site. (...) We kind of work off each other"

**(Interview 10/22)**

Interestingly, this was not actually the case. At that time some of his female colleagues did use the Internet, they just did not talk about using it, partly because they tended to use email (for keeping in touch with human sources) more than the web and therefore had no reason to share information about new sites or search engines. Clearly there is work to be done on the relationship between gender and source practices. These issues notwithstanding, I would now like to turn to a more exploratory consideration of one of the main findings of this study the relative importance of sources as compared to information in newsroom information gathering. In so doing I address the final question in that original list; do my conceptualisations of information, and information gathering, bear any resemblance my informant's conceptualisations?

### **7.3 Opening up the Source Problem**

Whilst it had seemed obvious that 'information' would be an important issue in a study of information gathering amongst journalists, by the end period of my fieldwork I was beginning to seriously question its usefulness as a concept. Information gathering seemed a much more immediate, almost unconsidered activity. Information was needed, the journalist got it. End of story. Puzzled by this, I posed one reporter a question: suppose she had decided she needed a quote about something and she had asked one of her sources who had given her a prior quote, how would she decide whether or not to use it? She was puzzled by my question, and eventually answered that she could not see what I was getting at. After all, if she had not wanted to use the quote why would she have asked the source. So the relevancy judgement was not made about the information itself, about the quote – it was made about the source (and before that, the need). She did not need to think about the information once she had got it because the thinking was done in the course of deciding which source to use. I had gone looking for information and the technologies associated with it, and I had found 'sources'. Having established in Chapter 6 that sources are a vital part of the story of newsroom information gathering I would like to now to (cautiously, for we are treading in murky epistemological waters here) open up the concept of source further.

It is fascinating to reflect on the silence that surrounds the concept of source in much of the literature. In a recent survey of information theories, (Webster, 1995) source does not rate a mention. One of the few places it is mentioned is in communication theory which, because of its attempt to divorce message from meaning, uses source in an extremely simple sense – e.g. the voice is the source of a spoken message (Mattelart & Mattelart, 1998). Interestingly the communication theory notion of entropy<sup>66</sup> does resonate with the picture of source handling presented here – source handling is a way of aborting information before it overwhelms the journalists in a context where the amount of available information and the amount of available time preclude information handling in any detail. By shifting relevancy concerns away from information and on to sources journalists can practically manage their information gathering activities. Whilst for Shannon and Weaver, Wiener and the other cyberneticists entropy was a threat to free society, journalists long ago learnt that entropy was an inevitable by-product of navigating large information spaces (a lesson today's web surfers are learning).

### 7.3.1 Sources in an Ilyenkovian Sense

Definitions of artefact usually rest on a distinction between (crafted) artefacts and (naturally occurring) things in the world. But from this point of view it is hard to conceptualise information sources as artefacts, at least entirely. Journalists at The Scotsman talked about a large number of things as sources, but pre-eminent amongst them were people (colleagues, librarians, people who contact you, people you contact). This consideration of human sources makes apparent an important issue: how sources come to be sources. Some people might *choose* to present themselves to the media as sources, and then will engage in some form of discourse by which they hope to persuade the media that they are sources. The ways in which some people come to be regarded as sources and others are ignored is a major concern of sociologists of journalism interested in the relationships between power and access to the media (McNair, 1998). However whilst some choose the status of source, others have it thrust upon them. After all, the distressed relative 'door-stepped' by a pack of heartless journalists desperate for a few words on the tragedy/scandal that has befallen their parent/partner/sibling/child is a common enough stereotype. So are human sources 'made'? Well it would seem to a certain extent they are, even if the making is sometimes at least in part a self-making.

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<sup>66</sup> Entropy was a notion introduced into communication theory by Norbert Wiener to reference obstacles to the free circulation of information (Mattelart & Mattelart, 1998).

But journalists also regard all sorts of non-human things as sources. These kinds of sources seem more clearly to be artefacts in the common sense of the word; something akin to (if not indistinguishable from) tools. So how do these kinds of sources relate to human sources? Are they really phenomena of the same order? Again we can turn to the dictionary for a starting point. Again traditional definitions of the term source focus on concepts like authority and original cause. Sources as original cause might do for primary human sources, in the sense that by reporting what they had witnessed they are the cause of information about it making its way out into the world. But what about secondary sources? A charitable interpretation might allow that secondary sources are the original cause of the information that they themselves provide, since if they were not there would be no information coming from them that would validate their identification as a source, and it is unlikely that anyone else would provide *exactly* the same information (which might have led us to question which source was the original cause). But the same cannot be held for non-human sources. It is quite conceivable that two non-human sources might hold exactly the same piece of information. For example, much of the information that appears on wire services is copied directly by web sites. Unfortunately, trying to bring things down to a more mundane, physical level, provides little help to those interested in coming up with some sort of clear definition of the information source. What we can say about sources is that they have to be able to hold information, accept requests for information, and return any matching information (in so far as 'it' can ascertain what that might be). So one way of approaching sources is to try and think about them in terms of:

- the information they hold
- the ways they store information
- the means by which that information can be accessed

But this is a less useful approach than at first might be thought. Regarding the kinds of information they hold, as I have already shown matters are complicated by the fact that the same information can be found from many sources. Information about the results of an election can be found by listening to the tv or radio, consulting a newspaper, consulting the wires or phoning a human source. So to conceive of them as holders is not a particularly useful way of classifying sources.

There is a similar problem when thinking about the ways sources 'store' information – one source can store information in multiple formats. A human source can store information in a letter, in their heads, in a database, etc. So does the means by which the information can be accessed give us a means for differentiating sources? Unfortunately not. Again, the same

source can be accessed by multiple means. A newspaper can be accessed via a traditional print copy, an electronic cuttings service, its web site, and so on. Neither can we distinguish sources on the grounds of whether they allow for synchronous or asynchronous access. A human source can be phoned up and asked something (synchronous access), but more often they will not be in so a message will be left (asynchronous). Other ways we might try to distinguish between sources is by the type of information need they meet. Journalists' information needs, as we saw in Chapter 4, include: comment, background, filler, meat, peg. But again, the same source can meet more than one information need type – although in practice some sources come to be regarded as being particularly 'good' for certain types of information need.

My attempts to pin down 'the information source' have so far left a somewhat confusing picture, and I have not yet begun to address the more 'qualitative aspects' of sources. For example, one way we might think of sources is as a characteristic of information, since they in part determine what happens to information. We have already seen that the relevance of a piece of information is in large part related to its source. The source also affects 'what happens next'. For example, in one department there was a 'rule' that said that if a piece of information turned up on wire service A, it could be acted on immediately, but if it appeared on B nothing should happen until it had also appeared on A. So regardless of what the information was, unless it could be validated by the traditional use of multiple sourcing it would not be acted upon. A recent example of this is that whilst Newsweek magazine in the United States of America knew about the Monica Lewinsky allegations long before they were made public, they did not use the information because the source was not regarded as reliable and they had been unable to source the same allegations elsewhere. In the end it was left to The Daily Drudge, an Internet gossip service, to 'go public' with the allegations (McNair, 1998).

Evald Ilyenkov worked as a philosopher in Soviet Russia until his death in 1978. Ilyenkov argued that naturally occurring phenomena, such as the night sky, became an object of human attention only when transformed into something other than their material nature through incorporation into human practice,

*Even the starry heavens, in which human labour still could not really alter anything, became the object of man's attention and contemplation when they were transformed by society into a means of orientation in time and space, into a 'tool' of the life activity of the organism of social man, into an 'organ' of his body, into his natural clock, compass and calendar.*

*(Ilyenkov, 1977) p.256*

In effect, through incorporation in human practice (i.e. navigation and time keeping, and presumably myth-making and ritual prior to that) ‘something’ is added to the stars which makes them accessible to the human mind. In the same way, sources become an object of journalistic attention when transformed into a means of orienting the journalists to information needs and spaces. Sources cannot be ‘made’ except through their incorporation into the journalists’ practice. Potential sources are things existing in the world that contain information available for retrieval. Potential sources are easily available to the observer. But neither the potential sources themselves, nor the information they contain, are useful enough to information gathering within newsroom constraints. Journalists, through their information gathering practice, create a new artefact – the source<sup>67</sup>. Sources are how journalists orient themselves in information space. Of course following Ilyenkov’s line of thinking one might argue that the concept of a mediating artefact is meaningless since apparently anything can be a mediating artefact<sup>68</sup>. Which is of course the case. What is of interest is not whether or not something has the potential to be a mediating artefact, since everything, even the heavens, does. What is of interest is the means by which something becomes a mediating artefact (i.e. the thing’s incorporation into human activity).

We can now understand the difference between the perspectives of information technology designers and journalists (the last of the original questions from Chapter 1). Consider a database. To the infocentric world of information systems design a database is an information system, but to a journalist a database is a source. Clearly a database happily co-exists as both an information system and a source. It is our activity context that dictates which perspective we choose. But as CHAT teaches us, for designers it is important that we learn to reflect on user’s perspectives as well as our own. To design a database requires at some point that we consider it an information system, but to design a useful database requires that we also consider how the database is or might be perceived in the activity context for which it is intended.

### 7.3.2 Journalistic ‘Fields of Relevance’

I do not propose that the observation ‘sources are important in information gathering’ is novel. Clearly within the Digital Libraries and Information Seeking in Context research traditions there is an evolving body of work which seeks to move beyond simplistic notions

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<sup>67</sup> Potential sources that do not become sources at The Scotsman may become sources in another setting – a case of one person’s thing in the world being another person’s mediating artefact.

<sup>68</sup> The problem I had categorising sources is relevant here – although journalists talked about sources, it seemed that *anything* could be a source

of information retrieval and recognises that sources are an important issue (Dourish et al., 1993; Ehrlich & Cash, 1994; Twidale & Nichols, 1996). What is novel however is the observation that one can trace the transformative process from potential source to source; we no longer simply accept that there are such things as sources but seek to understand how sources come to be in the first place. The role of the sources of information has often been taken to be largely a matter of *information* provenance. Harper's study of the IMF has already been mentioned. At one point he discusses the ways in which desk officers assign information to a 'field of relevance' on the basis of their knowledge of where it came from. He concludes that "*The medium of its delivery will make no difference to their effective use of that information.*" (Harper, 1998b) p.88. In contrast, this analysis of journalists at The Scotsman suggests that in their case the medium of delivery associated with a source can make a great difference. The journalistic field of relevance is situated within a highly time-dependent activity system and journalists often have a range of potential sources from which it might be possible to acquire the same information. The delivery medium is one factor in assessing 'source juggling' strategies. In other words, whereas at the IMF the focus is on assigning information to a field of relevance, at The Scotsman the focus is on assigning information resources to a field of relevance. Through their assignation to a field of relevant sources, things in the world become sources.

In developing the concept of information seeking as 'communicative action' (Benoit, 1998) proposes that amongst other things his model accounts for the notion that sources too might have goals and that this is ignored in much of the literature on information seeking. This study provides not just a real-world example of just such a phenomenon, but an illustration of explicit, historically developed practices designed to deal with the goals of sources. Journalists, unlike computer scientists, designers and some theorists, have always recognised that behind all 'information', 'data', 'facts', 'knowledge', etc lies a human being. The original cause of all information in the world of communicative events is always a human being and accounting for the possible goals of sources (whether categorised as primary or secondary, human or technological) in the communicative exchange is a necessary part of journalism.

*No student, researcher, or user can learn all potentially relevant sources.  
The ultimate criterion to judge the relevance of reference sources is their  
relevance from a subject point of view.*

(Hjørland & Albrechtsen, 1995) p.420

Whilst I am making a case for the importance of sources in newsroom information gathering practice, this is not to say that sources were the be all and end all of the matter. The problem facing Scotsman journalists was that, unlike say for a thesis writer, they had no particular

domain (except in the case of a few specialist writers) which allowed them to judge subject relevance – hence the reliance on human sources, discussions with colleagues during the working up of a story, etc. Information gathered was of course judged from a story relevance point of view, but in a necessarily limited way since much of the work of relevance judging had already been undertaken at source level. And placing information in a field of relevance took place with a network of relevancy fields. The relevance of the story was also judged according to the ‘information gathered’. The relevance of the information need was judged and developed according to source and story relevance judgements and developments. Newsroom information gathering can be characterised then as taking place within a network of interrelated, dynamic, fields of relevance (see Figure 7.1).

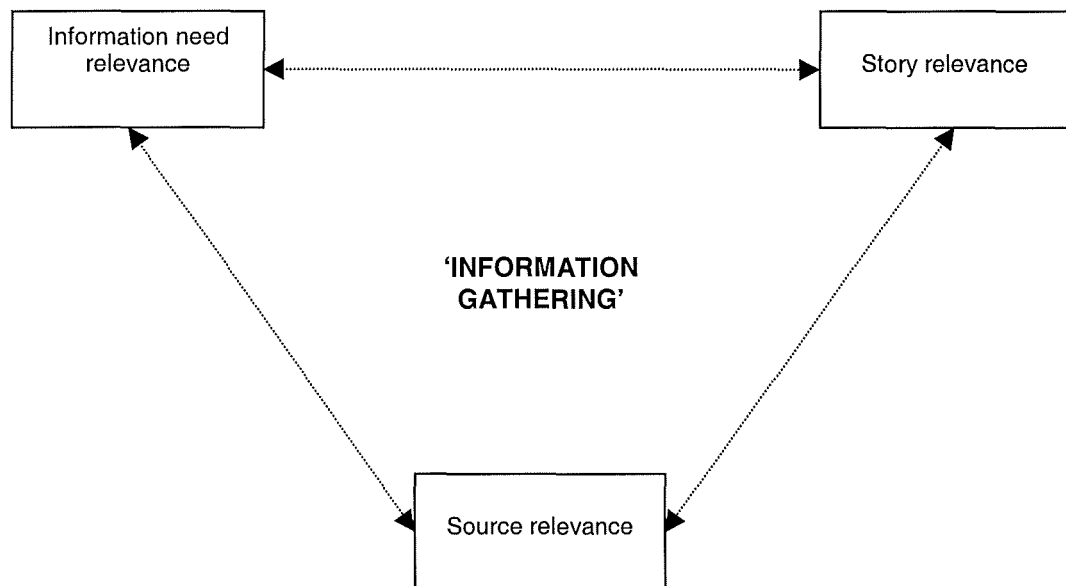


Figure 7.1: Newsroom Information Gathering 'Fields of Relevance'

The problem with digital potential sources is that they are often hard to place in a field of relevance, let alone in a network of fields of relevance. In the digital world information is the dominant category, not source.

### 7.3.3 Sources and Information: Chasing Briet's Antelope

Having reflected upon the implications of the representation in this thesis of the use of sources in newsroom information gathering, we are left with some interesting epistemological questions about the meaning of ‘information source’. I do little more than paddle at the edge of what are very murky epistemological waters here, presenting this section in terms of opening up interesting avenues for future work.



The distinction between source and information echoes that made between documents and information. In his review of the history of the word document (Buckland, 1991) examines the French librarian and documentalist Suzanne Briet's works. For Briet anything, even an antelope, had the potential to be a document. What made it a document though was that it was treated as one in some human activity. Hence an antelope in the wild was not a document but an antelope in the zoo was. Buckland derives four characteristics of a document from her work (Buckland, 1997) p.806:

1. It has a material aspect
2. It is intended to be treated as 'evidence' – for example an antelope in the zoo is intended as (amongst other things) evidence of the concept of the species antelope
3. It has to be made into a document – the antelope has to be placed in the zoo
4. It is perceived to be a document – we look at animals in zoos to find out about (amongst other things) examples of the species

All of this resonates very much with Ilyenkov's insight into artefacts. Documents (in both a conceptual and physical sense) are artefacts which mediate information work. From the CHAT perspective Briet's characteristics are exactly those of artefacts; they have a material aspect (even apparently 'cognitive artefacts'), they are made (through incorporation in human practice), they are intended to be treated as artefacts (practice articulates this) and they are perceived as such (if an artefact is not perceived as such it ceases to be used and therefore ceases to meet the criteria for artefact-ness). Sources, then, might be considered a kind of document. They have a material aspect, otherwise they could not be used. They are also intended as evidence; if the story is questioned it is the source which is wheeled out as evidence that the story was correct. They have to be made and they have to be perceived as sources. In short, yes – sources are a kind of document using this framework.

Yet the analogy does not seem very satisfactory. Our everyday understanding of the term source does not fit with this particular understanding of the term document. Having caught Briet's antelope, what do we gain? We should recall that for Briet the terms evidence and document were almost synonymous, a point also made by (Brown & Duguid, 2000) when they note that "*Documents not only serve to make information but also to warrant it*" p.187. This is important for our understanding of sources. Sources are part of the 'moral language' of journalism (Editorial, 2000), they mediate the activities of story, section and newspaper lifecycling by (in social constructionist terms) providing warrants of accountability.

Accountability is the idea that within every community of practice there is a moral order that sets the parameters for action (Tuominen & Savolainen, 1997). We are held to account for our actions within the terms of this moral order. Warrants, rhetorical devices through which we justify our discursive actions (Shotter, 1993), are the mechanisms by which we make our accounts. Warranting a journalist's actions on the basis of information itself would be problematic since there is too much information in the world for journalists to reasonably be expected to be accountable for it. Information as evidence is not appropriate within the practical, everyday context of newspaper journalism (Buckland, 1991). But journalists can be held accountable for their story sources. Mistakes because of incorrect information are a problem for the industry, but one which it is generally not overly worried about unless it is likely to land the editor in court. For example, the Guardian is rare amongst UK newspapers in having a column devoted to both printing corrections and discussing them. As long as you can prove you got the information from an appropriate source then the mistake is just part of the daily reality of journalism. On the other hand, source errors such as incorrect attribution, fabrication of sources or failure to multi-source, are a far more serious issue. In The Scotsman newsroom the discursive elements of story lifecycling were heavily biased towards finding 'good sources', practice was heavily oriented towards source handling (interview skills, departmental variations in multi-sourcing practices, contact books, the cultural capital of source knowledge, protection of sources, etc.). In the final analysis, information itself was not the evidence that supported a story, sources were.

Another important point here is that journalistic source handling practices do not just act as warrants of accountability within the profession of journalism, they are also how journalists warrant their practices on the wider social scene. Individual journalists establish their credibility and build cultural capital through their source finding and handling abilities. The industry itself uses these practices to establish its authority in society. However, as the number of media outlets explodes (largely as a result of new media outlets such as digital television and the Internet), source handling practice is changing. The pressure of tighter and tighter deadlines reduces the time available to multi-source material. The huge number of layers in the palimpsest makes it harder and harder to track where a story first appeared, much to the occasional displeasure of journalists themselves:

*Newspapers and broadcasters often borrow stories from their competitors. It is part of the process whereby issues are thoroughly examined and so makes a contribution to the democratic process. Among responsible journalists there are a few rules which govern the process. First among them is that one does not pass off as one's own a revelation made by another.*

*(Editorial, 2000)*

This Scotsman editorial referred to a story that had appeared in the paper some months earlier and which had resurfaced on a national broadcaster's output the day before, with no reference to The Scotsman. The story had been an exclusive, but had not been picked up on by other media at the time. The editorial reveals a great deal about how the writer sees the industry. The palimpsest effect is part of "the democratic process". Breaching the 'source attribution' rule is something only the irresponsible would do.

#### 7.4 The CHAT Perspective: On Reflection

In a review of a collection of papers on the use of different social theories to frame work practice studies (Rogers, 1997), three questions were raised:

- how and in what way is an account 'better' because of the social theory used
- how can the theoretical frameworks be used to practically inform design, and not just the ethnography
- how can such studies inform theory development?

In Chapter 1 we considered some of the doubts expressed about the role of theory in design ethnography, doubts arising from both pragmatic (theory getting in the way of the user-designer relationship) and philosophical grounds (ethnomethodological objections to all theory). To the pragmatists I would suggest that, perhaps paradoxically, theoretical frameworks can improve user-designer relationships by encouraging a strongly reflexive approach. Where CHAT moves beyond the concerns of some ethnographers to clearly differentiating *emic* and *etic* perspectives<sup>69</sup> is in the recognition that there are no purely emic or etic accounts. Rather both the ethnographer and the Other construct the object of study, the activity, through their collective activity – research. For inexperienced fieldworkers in particular, of whom there are surely many more now as variations on ethnographic techniques have become more widely adopted in both industrial and academic design communities, this is an important point. Without CHAT there is a danger that in seeking to more fairly represent the user in the design process we unquestioningly replace one dubious 'authority speaking for the user' (e.g. the systems analyst, or the manager) with another (the ethnographer as proxy user). As illustrated in Section 3.2.4, the use of

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<sup>69</sup> The concepts of emic and etic description were introduced to try and distinguish between descriptions from the perspective of the analyst (etic) and of the people being studied (emic). Modern ethnography has concerned itself with the traditional privileging of etic accounts (Silverman, 1993), and with questioning the distinction itself from a Postmodernist position which does not allow for objective knowledge of another's perspective (Layton, 1997)

theoretical frameworks such as CHAT provides scaffolding for the ethnographer entering the field, alleviating some of the concerns about ethnography being a black art with little place in the hard-headed world of design. It gives the ethnographer a point-of-view on the data gathered, the volume and detail of which might otherwise prove overwhelming. Finally, the use of CHAT concepts allows comparisons to be drawn between different studies, thereby providing an opportunity for a corpus of studies to be developed and meta-analyses of particular issues to be conducted.

Although cautious notes have been sounded in the ethnographic literature about the use of formal conceptual frameworks in ethnography, my experience would indicate that the power of the fieldwork experience acts as a significant counterbalance to the danger of being overwhelmed by theory. When conflict arose it was inevitably to the swirls and eddies of the field that I was pulled. As to the philosophical objection of the ethnomethodologists, that formal theory should play no role at all, this is beyond the scope of this thesis. I can only echo (Wolcott, 1995) in suggesting that an atheoretical ethnography is an impossibility. By engaging reflexively with CHAT my inevitable theorising of the field was made explicit and available as yet another resource for both my own sense-making activity, and that of the reader. Whilst a good ethnographer's intuitive sense of what is interesting may guide them in the field, even the inevitably overwhelmed novice ethnographer can gain from the opportunity to acquire insight through the application of CHAT concepts, if for no other reason than that in so doing the ethnographer is forced to actively reflect on their role in constituting the object of study. It is the reflection that makes the insight possible. Whether the insight is picked up by designers depends on their willingness to take part in the dialogue such reflection affords. At a CHAT international congress in 1998, Bonnie Nardi posed a question at a session on CHAT and design. She asked if it would be better to just train people to be ethnographers rather than burden them with CHAT. My answer is no. Whilst CHAT is by no means an easy set of (continually developing) concepts to come to terms with, the benefits of so doing outweigh the effort involved. And as more tools such as the Activity Checklist appear, the effort required may begin to decrease. However it would be foolish to pretend that there are no dangers in such an approach. As was pointed out in Chapter 2, part of the power of CHAT is the very unfamiliarity of the concepts which forces the analyst to extend their thinking beyond the routine.

Information systems designers are, of course, concerned with information and information 'work'. It is not surprising therefore that the discourses of the design community of practice revolve around these categories. But there is a danger in resting here. As this study has shown, it is difficult to warrant a perspective in which 'information gathering' or 'seeking',

or any other kind of ‘information work’ can be clearly distinguished from the broader activity systems in which such activities are embedded. In the context of the sensuous world of human practice, designers need to look beyond the ‘information’. They need stories about the how, why, when and where of information gathering. The contribution of this thesis is that it offers both such a story, and an account of the production of such a story. In making both the methods and the scaffolding so visible the reader is well placed to make their own interpretations of the ideas presented.

But this is not to say that adopting the CHAT framework has been unproblematic. As I noted in Chapter 1, there are a number of limitations to CHAT and none of these has been advanced by this study. In fact the study has thrown up a new issue: that of the prospect of ‘human as artefact’. It is axiomatic of CHAT that it does not treat humans and artefacts as equal in the way that, for example, those with a background in information processing theory might. And yet throughout this thesis I have discussed sources as being both human and non-human. Clearly work remains to be done to resolve the question: are human and non-human sources equivalent artefacts?

## **7.5 Future Work 2: Towards Design**

This thesis has presented a richly detailed account of the way information gathering work is woven into the daily lives of journalists at one UK daily newspaper. In so doing it has opened up questions about the categories that designers, technologists and theorists use when thinking about information gathering work. This work is presented as a resource for designers, including myself, who seek to develop a richer understanding of the contexts for which they design. But whilst the thesis does not explicitly seek to address design issues, pointers for design have of course arisen and I would like to finish by briefly considering some of these (others will no doubt find many more).

### **7.5.1 The Virtual Library: Solving the Right Problem?**

As we saw in Chapter 6, the physical location of The Scotsman’s library, on a hallway where it had to be passed to get to the editorial rooms, was thought by some librarians to contribute to their success in building relationships with staff. The existence of the library was drawn to their attention and it was not too much hassle for a new journalist to be shown in by a colleague. At the very least they all knew where it was, even if they were never formally taken there. However when The Scotsman Group’s new headquarters building was being planned it was decided to make the library even more ‘apart’ than in the old – on the floor above the newsroom to be precise. Unless journalists are formally shown around the

library in the new building, there is a good chance that they may be at the paper for some time before ever going near the place. Likewise, as more and more of the services currently only available from the physical library room are made available digitally on the newsroom networks reasons to visit the library will diminish. Diminishing the importance of the physical library room is of course a central aim of the virtual library project. New technologies are making it possible to conceive of journalists working with a vast array of electronic sources literally at their fingertips. The seemingly inefficient trek to the library is set to become a thing of the past.

Clearly with the virtual library project technology is being used to solve the problem of journalists having to leave the newsroom and go to the library in order to access a broad enough range of information sources for their requirements. This is not just a problem from a management perspective. Journalists too agreed that having to go to the library could at times be a nuisance. For example journalists are very telephone-oriented. Going to the library means you might miss an important phone call. Even if you have voice mail (as some do) or a colleague takes a message, timing can be important. On one occasion I watched a journalist return to her desk from a trip to the library only to discover that she had missed a returned call from an important source she had been trying to reach all day. She returned his call immediately, but he had now left his office and was unavailable until the next day – too late for the story. But there is already a solution to this problem: one can simply phone the library and ask them to do a search on your behalf, obviating the need to leave one's desk. The fact that journalists continue to leave their desks and go to the library would tend to support my proposal that the library is a backstage. We need backstages if we are to give a good frontstage performance. Many of the journalists I spoke to commented that they enjoyed visiting the library, that it was a break from the pressures of the newsroom.

The virtual library project is developing technology to solve a real problem, albeit one with existing solutions. If we consider information gathering from an atomistic point of view, the trek to the library does appear inefficient. But in solving one problem, the library as backstage is being destroyed. No doubt when that happens, journalists will find other backstages. Indeed the library is by no means the only backstage currently: the cafeteria, hallways and local pub all serve as backstages in some respect. However, none of these fulfils as varied a number of backstage functions as the library. There is little opportunity for training in the more practical aspects of information gathering in the hallways, and practising story-telling in the pub or the cafeteria can be problematic because there is a greater chance of seeing one's boss in those spaces. Backstages are under attack, ironically

at a time when they are probably most needed, since staff turnover is such that there are many more newcomers and inexperienced journalists around – exactly the kind of people who most need the kind of rehearsal opportunities that such areas afford. Of course there is a danger here in sounding crudely anti-technology. That is not my intention. Rather I hope to illustrate that as designers we must be prepared to hear cautionary tales; to accept that new technologies are not always necessary and should be introduced with due respect to the richness of the social worlds of work.

### 7.5.2 Designing for Sources

The term source is discussed in many of the literatures, but in a way more allied with the notion of resource introduced above and not in the much more concrete sense of potential source discussed in the empirical chapters. For example, the design issues around searching multiple information sources are discussed in (Lagoze, 1997; Rao et al., 1995). And within the sociology of journalism human sources are discussed at great length, for example (McNair, 1998) devotes a whole chapter to the topic. But again the term is being used to index a much simpler set of concepts than has been discussed here. In both cases sources are treated as ‘things’ and therefore the role of practice in the development of potential sources gets overlooked. Of course now it has been *discovered* and discussed, the concept of the source may appear obvious. But like most ethnographic *discoveries*, what is being offered is not some new fact, ‘the source’, but a new consideration of the significance of the source:

*The history of attempts to deal with this ready availability of understandings and interpretations of the events and nature of the social world is the history of sociology itself. But whatever proposals have been offered, they all necessarily share a common strategy, which is to disclose a regularity or an organization of some kind, present but un-announced within this realm of already known objects. Sociological discoveries are not then about the anticipated or unanticipated discovery of previously unknown facts; they are much more about the attribution of different significances to what is already known.*

(Williams, 1988) p.73

In a broader context we all know that we trust certain friends to recommend films to see or books to read. We select certain newspapers or television programmes because we think we will get better information from these sources. These are all aspects of the ‘social navigation’ of information space (Benyon & Höök, 1997). However, most search engines still calculate relevance based on the content of articles (i.e. information) and not on sources (Mizzaro, 1997). This had not escaped the notice of those working at The Scotsman. Several journalists echoed the call of the managing director of the paper when he told me that what

they really wanted was for the technicalities to be transparent and the 'sources' to be to the fore in their systems. Whilst the issue of 'resource discovery' has been taken on board by the digital libraries community in particular (Lagoze, 1997), resources in this case are still regarded in objectivist terms.

Not all 'potential sources' become 'sources'. Supporting the sharing of source practice and the social navigation of the space of potential sources is an overlooked issue. Journalists use each other constantly for pointers to potential sources, and learn from each other the subtle variations in source handling between departments and between papers. For example, journalists will often try and find the author of a story they have found when searching the text archive, but the system they use offers no help in this. If a system could let the searcher know whether the author was in the office, or offer some information such as extension number or email address, they might be more easily tracked down.

Chapter 4 illustrated how the same information need often resurfaces as a result of the large number of people who handle stories during their lifecycle. The spelling of a name was checked by the writer, by a sub and by the revise sub who undertakes the last check of a story before printing. The electronic publishing system used in the newsroom recorded the history of the writing of a story, deleted sections being kept in viewable but not printable form so that they could be revisited at various stages in the editing process. However information about the information gathering process was not held in this way. It was not obvious from the text on screen whether a piece of information of information had been checked or not. An audit trail for all sources would reduce some of the duplication of effort that goes on when information gathering is socially distributed in this way. Of course this would only work for non-human sources, UK journalists still stand-by the principle of the confidentiality of human sources (despite occasional attempts by the legal system to force them to name sources) and would be unwilling to have their human sources so publicly traceable.

The pointers for design are that systems which aid journalists in placing information in a field of relevance need to be supplemented by systems which support them in placing potential sources in a field of relevance; in other words, systems which make the transformative process more available. This is particularly relevant in the modern journalistic era, which in the UK at any rate faces many challenging problems as a result of changes in staffing practices. The UK has one of the world's most competitive newspaper industries and this, together with the eroding of the power of the Unions, has meant that many more young, unqualified staff are being brought in and increasingly large numbers of



journalists are working freelance – from 10% in 1969 to between 25 and 33% in 1994 (Franklin, 1997). As long as source handling skills remain largely invisible within day-to-day working life the chances of new or occasional staff being able to pick up such skills quickly and easily are greatly diminished.

Now that these pointers for design have been revealed, there are two questions to ask; how generalisable are these findings and what are their implications? In Chapter 1, I pointed out that journalists are an attractive research object for those of us interested in information gathering. Journalists have inhabited and survived in vast, diverse information spaces for far longer than most of us. But in the era of the Web, we are all beginning to learn that we have much to learn about inhabiting such spaces. The focus on the ‘unit of information’ gets harder and harder to maintain as the size of the information spaces we must navigate increases. As we have seen in this thesis, journalists’ strategy for surviving has been the source. Consider the way web browser’s work. We save favourite ‘sites’ (i.e. sources) not pages or units of information. We are not surprised when we return to a favourite/bookmark and find that the information that was there has gone or changed. We have become source gatherers on the web. And yet the resources available to us for searching the web still by and large assume that we are seeking units of information and not sources.

The second question is what would the implications of doing such design be? As we have seen, the historical development of newspaper technology has often been rooted in the intention (not always successful) on the part of newspaper proprietors to cut costs, particularly labour costs. Supporting new, young and freelance staff to access the valuable body of praxical knowledge about sources I found in *The Scotsman* may be of some short term benefit to individual journalists, but what would the broader implications be? If such praxical knowledge became externalised in new kinds of information(source) systems would management find the temptation to make redundant experienced (i.e. expensive) journalists too great to resist? Source knowledge is not static, it develops. Source handling systems would need to keep up with changes in the dynamic world of potential sources. Without the experienced journalists driving developments in praxical source knowledge the system would soon become hopelessly outdated. And since source knowledge is praxical it can by definition only be developed by those engaging in journalistic practice – so an ‘expert’ (human or machine) dedicated solely to updating source knowledge would be of limited (if any) use. Still, the temptation for management is obvious.

## **Epilogue**

### **Background: To the Glasshouse**

Casting a shadow over my time at The Scotsman was the prospect of the company moving to a brand new, custom built, headquarters. The old building was squeezed a little too snugly for comfort into the overcrowded Medieval streets of Edinburgh's 'Old Town'. It was located just beneath the heart of the Church of Scotland (a building called the Assembly) and the headquarters of the Bank of Scotland – nestling between God and Mammon. It seemed a perfect example of the eponymous Edinburgh Lady; 'all fur coat and nae knickers'. The visible bits, the front and the top floors, were calm and well appointed. The back and lower floors, where the paper was produced, were chaotic. Dark and grimy rooms, well hidden from public view, stuck haphazardly to halls that spoke more of a 19<sup>th</sup> century asylum than a (very) late 20<sup>th</sup> century media institution. As I conducted my fieldwork, preparations were well underway to radically change the working environment of the paper and its staff for the first, and last, time in the 20th century.

The new building is comfortably accommodated in a large area of ground in the new heart of Scottish political life – Edinburgh's Holyrood, the site of the new Scottish parliament building (assuming the current wrangling over costs is ever resolved). Its walls of glass seem to proclaim a public, visible press for the 21<sup>st</sup> century. Journalists occupy an open editorial floor, shared for the first time by all three main papers in the Group. The editor (the third to hold the post since I first visited the newsroom) can now survey all the staff at once. The library is still there, but symbolically isolated from the journalists on a separate floor, its contents and access tools heavily biased towards digital information. In the parlance of New Labour, it is a very 'on message' building. And yet both the Parliament and the new Scotsman headquarters have been tucked away from the heart of the city, in an area off the main tourist and commercial routes, even off the main transport routes. The new building may be at the heart of the State but the old was at the heart of the polis; a daily visible reminder for all that passed by of the institutions behind the news.

### **Another Story**

It is 11 am in the editorial floor of Barclay House, new home of Scotsman Publications Ltd. Harold, like everyone else in the Scotsman part of the huge glass walled space, has spent the last few minutes wondering when Dominic, the features editor, will get back from the first of the editorial conferences that day. When Dominic finally does come back, Harold wanders over to his desk to see if he has been assigned a story for today (there's no

guarantee he will have been). On the way he glances up at the glass box on the floor above that houses the Library. He keeps meaning to take the new listings editor up there to meet the librarians, but there never seems to be the time, and anyway he hardly ever goes up there now. In the library Sally is staring through the glass walls at the management offices. She feels uncomfortable being 'on display' and although she can see how somebody *might* like the new building she longs for nooks and crannies of the old one (not too mention the ready proximity of shops, pubs and cafes – the area around the new building is supposed to be 'up and coming' but there has not been much evidence of that so far).

Back down on the editorial floor, Dominic hands Harold a copy of that day's storylist. He likes everyone on his team to see what is planned and hopes that soon the storylist will be on the Intranet so he can stop having to print out so much. He tells Harold that he wants him to cover the World Congress of Ostrich Farmers, which is being held in Wallyford this year. Harold smiles as he takes the clipping from the New South Wales Gazette that Dominic has grabbed from their Web edition. He's going to have some fun with this one. But first, he needs to find an ostrich farmer. He looks across to the other side of the room, where the Evening News people live, pausing briefly to take in the panoramic view of the park behind the building that the glass walls provide. Jessie McGregor on the Evening News features desk had done a story about Scottish farmers with unusual livestock a few weeks ago. Harold craned his neck, hoping she was about and could give him some contacts. Another story lifecycle begins...

## Appendix 1 - The Activity Checklist

### PREAMBULE

	<b>Means/ends (hierarchical structure of activity)</b>	<b>Environment (object- orientedness)</b>	<b>Learning/cognition/ articulation (externalization/ internalization)</b>	<b>Development (development)</b>
	<p>Human beings have hierarchies of goals which emerge from attempts to meet their needs under current circumstances. Understanding the use of any technology should start with identifying the goals of target actions, which are relatively explicit, and then extending the scope of analysis both "up" (to higher-level actions and activities) and "down" (to lower level actions and operations).</p>	<p>Human beings live in the social, cultural world. They achieve their motives and goals by active transformation of objects in their environments. This section of the checklist identifies the objects involved in target activities and constitutes the environment of the use of target technology.</p>	<p>Activities include both internal (mental) and external components which can transform into each other. Computer systems should support both internalization of new ways of action and articulation of mental processes, when necessary, to facilitate problem solving and social coordination.</p>	<p>Activities undergo permanent developmental transformations. Analysis of the history of target activities can help to reveal the main factors influencing the development. Analysis of potential changes in the environment can help to anticipate their effect on the structure of target activities.</p>

**EVALUATION VERSION**

	<b>Means/ends</b>	<b>Environment</b>	<b>Learning/cognition/ articulation</b>	<b>Development</b>
	<p>People who use the target technology</p> <p>Goals and sub-goals of the target actions (target goals)</p> <p>Criteria for success/ failure of achieving target goals</p> <p>Decomposition of target goals into sub-goals</p> <p>Setting of target goals/ sub-goals</p> <p>Potential conflicts between target goals</p> <p>Potential conflicts between target goals and goals associated with other technologies and activities</p> <p>Resolution of conflicts between various goals.</p> <p>Integration of individual target actions and other actions into higher level actions</p> <p>Constraints imposed by higher-level goals on the choice and use of target technology</p> <p>Alternative ways to attain target goals through lower-level goals.</p> <p>Troubleshooting strategies and techniques</p> <p>Support of mutual transformations between actions and operations</p>	<p>Role of target technology in producing the outcomes of target actions</p> <p>Tools, other than target technology, available to users</p> <p>Integration of target technology with other tools</p> <p>Access to tools and materials necessary to perform target actions</p> <p>Tools and materials shared between several users</p> <p>Spatial layout and temporal organization of the working environment.</p> <p>Division of labor, including synchronous and asynchronous distribution of work between different locations</p> <p>Rules, norms, and procedures regulating social interactions and coordination related to the use of target technology</p>	<p>Components of target actions which are to be internalized</p> <p>Knowledge about target technology which resides in the environment and the way this knowledge is distributed and accessed</p> <p>Time and effort necessary to master new operations</p> <p>Self-monitoring and reflection through externalization</p> <p>Use of target technology for simulating target actions before their actual implementation.</p> <p>Support of problem articulation and help request in case of breakdowns</p> <p>Strategies and procedures of providing help to other users of target technology</p> <p>Co-ordination of individual and group activities through externalization</p> <p>Use of shared representation to support collaborative work</p> <p>Individual contributions to shared resources of group/ organization</p>	<p>Use of target technology at various stages of target action "life cycles"—from goal setting to outcomes</p> <p>Effect of implementation of target technology on the structure of target actions</p> <p>New higher level goals which became attainable after the technology had been implemented</p> <p>Users' attitudes towards target technology (e.g., resistance) and changes over time</p> <p>Dynamics of potential conflicts between target actions and higher-level goals</p> <p>Anticipated changes in the environment and the level of activity they directly influence (operations, actions, or activities)</p>

## DESIGN VERSION

	Means/ends	Environment	Learning/cognition/ articulation	Development
U S E	<p>People who will use new technology</p> <p>Goals and sub-goals of the target actions (target goals)</p> <p>Criteria for success/ failure of achieving target goals</p> <p>Decomposition of target goals into sub-goals</p> <p>Setting of target goals/ sub-goals</p> <p>Potential conflicts between target goals</p> <p>Potential conflicts between target goals and goals associated with other technologies and activities</p> <p>Resolution of conflicts between various goals.</p> <p>Integration of individual target actions and other actions into higher level actions</p> <p>Constraints imposed by higher-level goals on the choice and use of existing technology</p> <p>Alternative ways to attain target goals through lower-level goals.</p> <p>Troubleshooting strategies and techniques</p> <p>Support of mutual transformations between actions and operations</p> <p>Goals that can be changed/ modified, and goals that have to remain after new technology is implemented</p>	<p>Role of existing technology in producing the outcomes of target actions</p> <p>Tools available to users</p> <p>Integration of tools</p> <p>Access to tools and materials necessary to perform target actions</p> <p>Tools and materials shared between several users</p> <p>Spatial layout and temporal organization of the working environment.</p> <p>Division of labor, including synchronous and asynchronous distribution of work between different locations</p> <p>Rules, norms, and procedures regulating social interactions and coordination related to target actions</p>	<p>Components of target actions which are internalized</p> <p>Time and effort necessary to learn how to use existing technology</p> <p>Self-monitoring and reflection through externalization</p> <p>Possibilities for simulating target actions before their actual implementation.</p> <p>Support of problem articulation and help request in case of breakdowns</p> <p>Strategies and procedures of providing help to colleagues/ collaborators</p> <p>Co-ordination of individual and group activities through externalization</p> <p>Use of shared representations to support collaborative work</p>	<p>Use of tools at various stages of target action "life cycles" -- from goal setting to outcomes</p> <p>Transformation of existing activities into future activities supported with the system</p> <p>The history of implementation of new technologies to support target actions</p> <p>Anticipated changes in the environment and the level of activity they directly influence (operations, actions, or activities)</p> <p>Anticipated changes of target actions after new technology is implemented</p>

D E S I G N	<p>Parties involved in the process of design</p> <p>Goals of designing a new system</p> <p>Criteria of success/ failure of design</p> <p>Potential conflicts between goals of design and other goals (e.g., stability of the organization, minimizing expenses, etc.)</p>	<p>Resources available to the parties involved in design of the system</p> <p>Rules, norms, and procedures regulating interaction between the parties</p>	<p>Representations of design which support coordination between the parties</p> <p>Mutual learning of the content of the work (designers) and possibilities/ limitations of technology (users)</p>	<p>Anticipated changes in the requirements to the system</p>
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**SAMPLE QUESTIONS**

	<b>Means/ends</b>	<b>Environment</b>	<b>Learning/cognition/ articulation</b>	<b>Development</b>
	<p>Are all target actions actually supported?</p> <p>Is there any functionality of the system which is not actually used? If yes, which actions were intended to be supported with this functionality? How do users perform these actions?</p> <p>Are there actions, other than target actions, which are not supported, while users obviously need such support?</p> <p>Are there conflicts between different goals of the user? If yes, what are the current tradeoffs and rules/procedures for resolving the conflicts?</p> <p>What are the basic limitations of the current technology?</p> <p>Is it necessary for the user to constantly switch between different actions or activities? If yes, are there "emergency exits" which support painless transition between actions/activities, and, if necessary, returning to previous states, actions or activities?</p>	<p>Are concepts and vocabulary of the system consistent with the concepts and vocabulary of the domain?</p> <p>Is target technology considered an important part of work activities?</p> <p>Are computer resources necessary to produce a certain outcome integrated with each other?</p> <p>Is target technology integrated with other tools and materials?</p> <p>Are characteristics of target technology consistent with the nature of the environment (e.g., central office work vs. teleworking)?</p>	<p>Is the whole "action life-cycle", from goal setting to the final outcome, taken into account and/or supported?</p> <p>Does the system help to avoid unnecessary learning?</p> <p>Is externally distributed knowledge easily accessible when necessary?</p> <p>Does the system provide representations of user's activities which can help in goal setting and self-evaluation?</p> <p>Does the system provide problem representations in case of breakdowns which can be used to find a solution or formulate a request for help?</p> <p>Are there external representations of the user's activities which can be used by others as clues for coordinating their activities within the framework of group or organization?</p>	<p>What are the consequences of implementation of target technology on target actions?</p> <p>Did expected benefits actually take place?</p> <p>Did users have enough experience with the system at the time of evaluation?</p> <p>Did the system require large time/effort investment in learning how to use it?</p> <p>Did the system show increasing or decreasing benefits over the process of its use?</p> <p>Are users' attitudes towards the system becoming more or less positive?</p> <p>Are there negative or positive side-effects associated with the use of the system?</p>



## Appendix 2 – ABC National Newspaper Circulation Figures (Average Daily Sales per 6 Month Period)

Title	Aug 98 – Jan 99	Sept 99 – Feb 2000
The Mirror	2 322 550	2,280,244
Daily Record	678 817	634,026
Daily Star	551 515	513,882
The Star (Republic of Ireland)	92 001	91,580
The Sun	3 682 395	3,568,695
The Express	1 115 356	1,047,355
The Daily Mail	2 350 048	2,382,385
The Daily Telegraph	1 050 319	1,033,987
Financial Times	372 952	432,485
The Guardian	393 231	397,830
The Independent	221 186	224,609
<i>The Scotsman</i>	<b>80 362</b>	<b>75,169</b>
The Times	751 076	727,901

Source: Audit Bureau of Circulation (<http://www.abc.org.uk>)

## Appendix 3 – Scotsman Library Enquiries, by Source

Period: First Six Months of 1998

WEEK	EPA	PIX	BRS	DBS	OUT	NET	BOOK	CUTS	MFILM	REF	CCN	OK	DK	total
29-Jun	79	80	163	79	1	8	45	15	2	5	0	4	0	481
22-Jun	96	151	153	77	0	9	44	4	1	10	1	9	0	555
15-Jun	91	122	151	84	0	8	51	10	1	5	4	11	0	538
08-Jun	130	178	150	60	1	8	47	6	1	10	1	6	0	598
01-Jun	120	173	178	111	2	17	47	11	2	0	6	7	0	674
25-May	137	150	139	69	0	12	51	16	1	9	7	5	0	596
18-May	132	140	199	84	2	9	66	13	4	5	5	10	0	669
11-May	125	132	177	66	0	14	44	7	0	5	0	7	0	577
04-May	116	162	179	78	0	16	65	10	5	7	9	5	0	652
27-Apr	150	186	153	68	0	6	41	12	8	4	12	5	0	645
20-Apr	93	189	197	75	0	10	62	5	2	11	0	8	0	652
13-Apr	119	139	191	58	1	7	55	10	1	5	3	5	0	594
06-Apr	121	185	203	52	0	11	65	9	2	7	2	9	0	666
30-Mar	150	198	207	75	3	6	72	15	2	7	4	5	0	744
23-Mar	165	208	204	69	0	8	64	10	2	7	1	8	0	746
16-Mar	110	190	192	67	0	4	61	5	1	5	10	4	0	649
09-Mar	106	218	206	57	0	7	45	7	3	4	1	6	0	660
02-Mar	120	160	174	54	1	5	42	10	2	8	0	0	0	576
23-Feb	109	141	174	64	0	5	39	12	1	5	0	0	0	550
16-Feb	120	215	164	63	0	3	46	11	3	6	0	0	0	631
09-Feb	110	171	185	83	0	2	53	8	3	6	0	0	0	621
02-Feb	109	217	170	77	1	7	55	9	6	6	0	0	0	657
26-Jan	95	107	158	63	0	9	38	5	3	2	0	0	0	480
19-Jan	108	162	161	69	0	2	28	9	2	3	0	0	0	544

<b>12-Jan</b>	126	182	162	50	0	1	49	10	3	6	0	3	3	595
<b>05-Jan</b>	100	170	171	46	0	3	18	7	1	6	0	0	0	522
<b>29-Dec</b>	63	287	150	70	1	2	34	7	0	4	0	11	11	640
<b>Total</b>	<b>3100</b>	<b>4613</b>	<b>4711</b>	<b>1868</b>	<b>13</b>	<b>199</b>	<b>1327</b>	<b>253</b>	<b>62</b>	<b>158</b>	<b>66</b>	<b>128</b>	<b>14</b>	<b>16512</b>

**Key:**

EPA = Phrasea, the electronic picture archive

PIX = Pictures from Library collection

BRS = Scotsman Group's own database

DBS = other databases (e.g. Profile etc)

OUT = outside source

NET = net (principally WWW)

BOOK = books

CUTS = articles from Scotsman Group's own collection of newspaper article cuttings

MFILM = microfilm, Scotsman Group's collection of microfilmed newspapers

REF = referred on (principally used when queries are from members of the public)

CCN = an online company and electoral roll information service

OK = own knowledge (librarian's rarely bothered to record queries they had answered in this way)

DK = don't know

## Appendix 4 - Scotsman Library Classification System

6	Addresses	79	Games	60	Technology
38	Air Force	91	Gazetteer	75	Television
56	Animals	92	Genealogy	77	Theatre
73	Antiques	50	Geography	55	Trees
93	Archaeology	50	Geology		
72	Architecture			38	War
70	Art	61	Health	38	Weapons
6	Associations	93	History	53	Weather
20	Astrology			67	Wine
52	Astronomy	70	Illustration		
		33	Industry		
38	Battles	57	Insects		
67	Beer	60	Inventions		
63	Bikes				
92	Biographies	81	Language		
59	Birds	34	Law		
63	Buses	82	Literature		
22	Business	35	Local Government		
57	Butterflies				
		77	Magic		
62	Canals	91	Maps		
63	Carriages	61	Medicine		
73	Collecting	38	Military		
6	Communities	57	Moths		
60	Computer Science	78	Music		
8	Current Affairs	20	Mythology		
39	Customs				
		81	Names – personal		
93	Dates	91	Names – place		
38	Defence	38	Navy		
81	Dictionaries	7	Newspapers		
56	Dogs				
67	Drink	91	Placenames		
		65	Planes		
37	Education	82	Poetry		
39	Etiquette	34	Police		
		35	Politics		
39	Fashion				
39	Festivals	80	Quotations		
76	Films				
33	Finance	66	Railways		
58	Fish	20	Religion		
91	Flags	58	Reptiles		
55	Flowers	92	Royal Family		
39	Folklore				
67	Food	50	Science		
		37	Schools		
		64	Ships		
		36	Social services		
		52	Space		
		79	Sports		

## Appendix 5 – Publications Arising from the Thesis

Macaulay, C., Benyon, D. and Crerar, C. (in press) *Ethnography, Theory and Design: From Intuition to Insight*. To appear in *International Journal of Human-Computer Studies*.

Kaptelinin, V., Nardi, B. and Macaulay, C. (1999) The Activity Checklist: A Tool for Representing the "Space" of Context. In *interactions*, Vol. 1(4) .

Macaulay, C. (1999). Inscribing the Palimpsest: Information Sources in the Newsroom. In *Proceedings of Ethnographic Studies in Real and Virtual Environments Workshop*, Edinburgh, UK, January 24-26 1999.

Macaulay, C. and Crerar, A. (1998) Observing the Workplace Soundscape: Ethnography and Interface Design. In *Proceedings of the International Conference on Auditory Display (ICAD '98)*, Glasgow, November 2-5 1998. BCS/EWiC.

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