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# The disappearing women: North West ICT project final report

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# The Disappearing Women: North West ICT Project Final Report

Funded by the European Social Fund (ESF)

**Spring 2007**

Marie Griffiths  
Karenza Moore  
Beryl Burns  
Helen Richardson



**The Disappearing Women:  
North West ICT Project Final Report**

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European Social Fund

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# Project Context

The Disappearing Women: Northwest ICT project was embarked upon to further understand why more women leave the sector than are being recruited, 36% of new ICT recruits in the UK (in the first quarter of 2002) were women, yet in the same period, women accounted for 46% of all leavers or 'disappearing' women (The DTI Women in IT Champions report 2003, Grey and Healy 2004). This continuing trend shows a decline from 27% of women making up the ICT workforce in 1997 with a drop to 21% in 2004 (The DTI Women in IT Industry report 2005b). The number of women in the ICT sector remains disappointingly small considering that women make up around 50% of the total UK workforce and significantly this figure has gradually continued to fall despite numerous initiatives to attract more women into the sector (see Griffiths and Moore 2006 for a list of high profile 'women in ICT' initiatives).

The research team's first gender research project - Women in IT (WINIT) - ran for two years from January 2004 until March 2006 at the Information Systems Institute at The University of Salford and dealt solely with women who worked in the ICT sector in England. The WINIT Project via an online questionnaire and in-depth interviews gathered these women's stories and experiences of up to 500 participants and 19 interviewees respectively. The project enabled these women's voices to be heard but the research team were constantly aware that a certain part of the female ICT workforce - the 'disappearing' women who had left ICT vowing never to return - had been overlooked and effectively silenced. It was these women who once found, may be able to facilitate a more in-depth understanding of why women were leaving the ICT sector. Having amassed skills and expertise, qualifications in ICT and crossed ICT recruitment barriers (DTI 2005a) the 'disappearing' women for whatever reasons decided to change their career trajectories and leave the sector. What 'chilly' (Falkner 2004) workplaces, disinterested organisational cultures and indifferent working conditions had these women encountered that became determining factors in leaving the ICT sector? There has been little (if any) research conducted involving this specific cohort of women and The Disappearing Women: North West ICT (DW: NW ICT) project seeks to make a research contribution to what is a continuing statistical and symbolic under-representation of women in the ICT labour market.

The DW: NW ICT project was partly funded by the European Social Fund (ESF) from April 2006 until December 2006 under ESF Objective 3, Policy Field 5.1: Improving the Participation of Women. The DW: NW ICT project contributes research to priority 5 and its strategic objective to reduce the level of disadvantage faced by women in the labour market. The project was run in the Information Systems Group, Salford Business School of The University of Salford, Greater Manchester, UK.

The report is structured as follows. The first section presents the backdrop for the research, looking in general at women in the ICT labour market in England and then women leaving the ICT sector focussing on the North West of England and more explicitly women leaving ICT employment in the North West of England. The research aims of the project form the following section; they have been loosely classified in to two groupings, the push and pull factors that are contributing to the high attrition rate of women leaving ICT. The methodology follows with the route taken in how this 'hard to reach' target sample were finally located, once contacted the life history interview process and procedures adopted is explained in full. The vignettes of the 'disappearing' women are included to allow the reader an opportunity to 'get to know' these women a little more closely. Key themes that have naturally emerged throughout the interview data analysis process are presented, including hostilities in the ICT workplace, significant events and the process of leaving ICT workplaces and finally stories of the 'appearing' women and their current situations are heard. A discussion regarding the findings of the DW: NW ICT project concludes this report.

## Women working in ICT

Employment in the ICT sector has continued to grow significantly in recent years but this growth has not led to a parallel increase in women's contribution to the ICT labour market. Moreover there is growing unease in the sector regarding a deficiency in key ICT skills. Reviewing the current and predicted workforce, Stone (2003) makes the observation 'you don't need just pale, male and stale guys in the boardroom but a diversity of views'. In comparison to the general increased growth of the sector, women's employment figures are in the decline, despite twenty years of continuous efforts and concerns of policy makers and gender equality practitioners (Webster 2005). Given that there have been decades of equal opportunity and related policies as well as many government initiatives designed to address the gender imbalance in ICT employment patterns, sex segregation in ICT occupations and gender pay gap in the ICT sector we could be forgiven for assuming that these initiatives have had a beneficial effect on the position and number of women in the ICT workforce. However though we cannot make any comment on the success or failure of any specific initiatives the statistics continue to highlight that women are haemorrhaging out of the UK IT workforce (Platman and Taylor 2004). From a high point of 100,892 women in the UK IT workforce in 1999, Platman and Taylor (2004) report a drop to 53,759 by 2003. In probing these statistics even further reveals an additional nuance of current employment trends that female IS professionals are exposed to. In the UK, Office of National Statistics (ONS) statistics indicate that women accounted for 30% of IT operations technicians, but a mere 15% of ICT Managers and only 11% of IT strategy and planning professionals (EOC 2004a). Although women are making inroads into technical and senior professions there remains a 'feminisation' of lower level jobs, with a female majority in operator and clerical roles and a female minority in technical and managerial roles (Griffiths et al 2005). Again this is a classic case of vertical gender segregation with women more strongly represented in lower level ICT occupations than in higher status and higher paid arenas (EOC 2004a).

## Women leaving ICT

We suggest that women who leave the ICT sector form two or possibly three different categories. The first is 'returners' who can be defined as women who left the sector often after a career break to start a family or to care for an elderly or disabled relative and they are attempting to return to work. The second category is 'disappearing' women who have left the sector for wide-ranging reasons vowing never to return (this point differentiates our 'leavers' from female ICT professional 'returners'). However some of the women that made contact with us could possibly fall into a third category, the 'discarded'. These women could be defined as women who tried to get back into the sector but have faced restricted opportunities and barriers such as age, disadvantaging recruitment processes and regional economic disparities. These 'discarded' women who have been unable to get back in to the ICT sector have been forced to find employment elsewhere.

This project is primarily concerned with the second category of 'disappearing' women and follows as a direct consequence of evidence gained from the WINIT project, particularly information gathered from the dedicated 'returners' section from the on-line WINIT questionnaire. Out of the entire sample 479 questionnaire respondents, 48 'returners' completed the questionnaire. The italicised section below is taken directly from the WINIT final report (2006) offering a significant insight into this group:

*The 'returner' respondents from the WINIT Questionnaire were asked to indicate reasons why they left, or were forced to leave, their last IT posts. One respondent, a 40-45 year old ex-IT Manager who left between 3 and 5 years ago, is struggling to return. She warns that we should be, "...aware of the nature of the IT industry being a fast moving sector. Women who need to take a career break will find it difficult to keep up", she has a "large gap in her CV" in a "tight job market". Of those women trying to re-enter the industry, working on a purely contractual basis (and so their contracts had ended), with 14% leaving to pursue other interests, 10% having been made redundant and a further 10% leaving to attend training courses. A further 12% of the returner's sample left (7% on a permanent basis, 5% on a temporary basis) due to having children. The remaining 30% left for a wide variety of (negative) reasons including being passed over for promotion, lack of progression, and sadly bullying and victimisation in the workplace.*

*This indicates an unpredictable, uncertain environment for all IT workers although possibly more so for female IT workers. As Igbaria and Chidambaram noted as early as 1995, women are more likely to leave IS organisations sooner as a possible result of 'the pervasiveness of differential treatment that results in fewer or less favourable opportunities for women with regards job rewards and activities, role stressors and career experiences [which] can affect their subsequent career success in a number of ways' (Igbaria and Chidambaram 1995:170). They hypothesise that 'women will have lower levels of satisfaction and commitment, and are less likely to stay with the organisation' (Igbaria and Chidambaram 1995:170).*

*Again such difficulties faced by women point to support for Acker's theory of gendered organisations (Acker 1990). Being a male worker is the closest someone may come to being the 'ideal type' of the disembodied worker, with no emotions, no sexuality and no responsibilities outside of the workplace. Women, especially are at a disadvantage in the gendered organisation given that they are more likely to have unpaid responsibilities (domestic, child and elder care work). As Demaiter (2006), echoing Simpson (1990), notes 'management often perceives men as more committed to paid employment and...they are more likely to be in higher status positions within organisations (Demaiter 2006:66).*

*43% of WINIT 'returners' had left their previous post in the past year, whilst a further 46% had left in the past five years. On the upper end of the timescale 3% of women wishing to return to IT work had left their last post over 20 years ago. Clearly in terms of encouraging female 'returners', the forms of support required by women on the upper end of the previous post timeframe are likely to be very different to those on the lower end of the scale. 51% of our female 'returners' believe that they are experiencing difficulty re-entering.*

'Disappearing' women from the ICT sector is unquestionably an under-researched area, though the context of the phenomenon is well researched and documented. Our literature review offered little (if any) pertinent research historically or currently, that had been conducted explicitly involving this cohort of women.

## The North West of England





The North West of England was the first industrial region with Manchester recognised as the world's first industrial city (Stobart, 2004). Historically, the region's economy thrived on traditional industries such as textiles, engineering and shipping. Since then England's North West has built on its rich industrial heritage and responded to the shift in global growth of emerging new sectors such as biotechnology, aerospace and ICT, reinventing itself into a leading cosmopolitan region to accommodate the needs of 21st Century business.

The North West is one of nine regions of England and is the largest outside London and the South East. The region is made up of four counties, Cumbria, Cheshire, Lancashire and Merseyside and one metropolitan county, Greater Manchester. This large area has a diverse population and economy and embraces a rich array of assets and opportunities. The north of the region (Cumbria and North Lancashire) is largely rural, whilst the south is dominated by two major cities; Liverpool located in Merseyside and Greater Manchester, the international gateways to the region, with Manchester airport the third busiest in the UK and Liverpool John Lennon Airport the fastest growing in Europe. Liverpool also hosts the region's main port and has won the bid for the prestigious title City of European Capital of Culture 2008 and in addition is a European centre of biotechnological excellence (NWDA, 2006). While Manchester holds the title Britain's Best City for Business 2006 and is recognised as Britain's most creative city (OMIS, 2006). Cheshire has a growing reputation for its financial and service sectors, Cumbria is pioneering cutting-edge nuclear technology and Lancashire has a long history and knowledge of aerospace and advanced engineering expertise. Outside London and the South East, the region is home to eleven universities and has the largest amount of people with graduate level skills.

The region has a £98 billion economy. It accommodates three quarters of the UK's internationally competitive world class companies; has a strong tourist industry; has the largest media production industry outside London with the BBC recently announcing Salford MediaCity: UK as their preferred option to relocate some of their production and commissioning departments; is the largest food and drink producing region in England; is the UK's largest regional hub for chemical manufacturing, and is a world leader in nuclear energy.

In 2001 following the national census the British population was just below 59 million and in June 2005 this figure rose to 60.2 million, with 50.4 million populating England and of that figure 6.8 million populating the North West of England (ONS, 2006), with a regional labour force of 2.9 million (e-skills, 2005). It is commonly acknowledged that the ICT/IT industry is difficult to define, with many people increasingly involving some IT skilled work to conduct their day to day activities, with an estimation of over 20 million people in Britain using IT. In 2005 it was reported that there were 1.9 million IT users in the regional workforce and 116,871 working in the IT workforce. The latter figure was accumulated by the 'recognised' sectors of the IT industry, with 40,504 working in IT Professions in the IT industry, 18,332 working in all other occupations in the IT Industry and 58,035 IT Professionals working in other sectors. In addition it was also reported that there were 422,236 Business Managers using IT for business benefit and it is predicted that the region will see a substantial growth in ICT employment over the next decade (e-skills, 2005).

## Aims and Objectives

The concerns raised by the WINIT project shaped a number of research aims and objectives for the DW: NW ICT, looking at why women based in the North West region of England leave ICT, what push and pull factors contribute to high attrition rates and what these women do after they leave the industry. The following issues are open for us to consider, strategically but somewhat artificially separated out into two forces - 'Possible Push' and 'Possible Pull' factors.

### Possible Push Factors

- Hostile organisational cultures
- 'Aggressive masculinity' associated with technical skill that is out of line with reported skill and business needs of the ICT sector
- Bullying in the ICT workplace
- Pay discrimination and inequality
- Progression based on factors other than merit
- Inflexible working time practices unsuited to women

### Possible Pull Factors

- Leaving representing a resolution of conflict for example family and domestic responsibilities being incompatible with the ICT workplace long hours and presenteeism culture
- Women's perceptions regarding better progression in other sectors
- Personal fulfilment issues
- Age, career-stage and life-stage impacts
- Women moving on to 'pastures new' -Regional displacement, setting up own businesses, personal commitments

In conducting this research the DW:NW ICT project also aimed to:

- Contribute to current academic debates in Critical Information Systems, Gender and Information Systems, and the Sociology of Science and Technology
- Explore alternative modes of qualitative data collection methods via the DW: NW ICT weblog and participants career trajectory images
- Continue to explore the experiences of women who have left ICT remaining mindful of their heterogeneity in terms of age, ethnicity, sexuality, caring responsibilities, regional and organisational location, and career-orientation.

Doorewaard et al (2004) distinguishes the motives of work orientation into three loose groupings; 'job' orientation where individuals are driven towards occupations that interest them possibly using and developing their capabilities; 'people' orientations where the motive is the opportunities that concentrate on social relationships working together with people and the final grouping is a 'money' orientation where job rewards, personal gain, security and income becomes the principle reason driving career choices. Doorewaard's et al (2004) study is primarily concerned with female 'returners' who aim to reenter the workforce after an unpaid career break and not specifically to the ICT sector. Nonetheless there are commonalities in our research to the orientation incentives of these three groupings that is also applicable to what alternative careers (if any) the 'disappearing' women chose. A distinction of our experiential research is understanding 'why' women choose to leave the ICT sector and the complex set of motives involved. When 'disappearing' from established careers, assumptions must be made of the heterogeneous incentives that pull or push some women away from the sector. The women in our sample group all exclusively left without having pre-arranged a future post or new job to move on to. This sample group also included two women who left the ICT sector because of redundancy and another due to regional

# Methodology

This section details the data collection methods that were used throughout the DW: NW ICT project including an account of how we found the 'disappearing' women. The key methods were a series of in-depth qualitative autobiographical interviews (Wagner and Wodak 2006; Jarvinen 2000) with women who had left the ICT workplace in the North West of England vowing never to return and use of a weblog with the aim to initiate discussions with interested individuals in the public domain about aspects of this phenomenon. A third method of data collection was a visual interpretation of the 'disappearing' women's work/life trajectory. We informally asked the women if they would be interested in drawing a sketch of their personal journey. This was usually received with slight bewilderment by some women and always with a claim that they had little artist talent but some of the women agreed. The sketches will form a later section of this report.

## Finding 'Disappearing' Women

The research team were faced with a number of limitations at the start of the project which were highlighted in our risk assessment exercise. Firstly the timeframe of nine months required strict project management directives to be put in place in order to minimise any project slippage. The nine month period enforced boundaries on what research tools could be employed to capture quality data, for instance an online questionnaire was disregarded given the time needed for this. Nine months would not be adequate to write the questionnaire, conduct an awareness campaign and then clean and analyse the data. A second limiter was the 'hard to reach' target group that the research team aimed to make contact with - ICT professional women that had left the sector and were scattered throughout various industry sectors across the North West. A third limitation was the research domain of the North West, ensuring that we remained within the strict boundaries of the project specifications, this required the research team to eliminate any women that came forward from outside the North West district. An awareness portfolio evolved consisting of a website, weblog, contact database, flyers and a newsletter.

## Website

The 'disappearing' women appeared to the research team through a variety of routes. One of the first activities was building the DW: NW ICT website<sup>1</sup> to ensure an immediate project presence. An awareness campaign was then conducted using the existing database of contacts from the previous WINIT project; this included contacts from women's forums, working groups, networks, governmental websites, and from other gender research Networks. This database of contacts were used at different stages of the project. The website was also published on the front pages at the University of Salford's Business School and the Academic Enterprise project website. The call for 'disappearing' women from the ICT sector to come forward was included in the University of Salford's Informatics Research Institute (IRIS) newsletter, the Alumni newsletter and the message board that is displayed as every member of the university connects to its network.

## Weblog

The research team had already decided on using a weblog<sup>2</sup> to supplement the website and the autobiographical interviews. The weblog is multi-purposed and can/is used in a variety of ways, firstly it formed part of the project awareness portfolio and was sent out to the extensive contact database with new postings or activities pushed out rather than left to be found. The weblog was also used to gain feedback and comment from the Project Steering Committee. The team worked closely with a member of the Steering Committee, Frances Bell from the University of Salford, to ensure the weblog became part of the gender weblogging and networking community. Finally the weblog has enabled the team to disseminate aspects of the project findings with the additional benefit of immediate feedback and discussion.

<sup>1</sup> <http://www.winit-salford.com/disappearingwomen>

<sup>2</sup> The concept of the blog was as an alternative research methodology, supplementing the autobiographical interviews and to generate discussion about why women leave the ICT sector (particularly in the North West of England), vowing never to return. This blog is open for comments from anyone who is interested in this issue. We especially wanted to hear from women who had left the ICT industry and would like to tell us about their experiences. (<http://www.dw-nw-ict.blogspot.com>)

## Flyers

A full colour A5 flyer was designed at the beginning of the project and disseminated at conferences both in the UK and internationally. The flyers have also been positioned, by an external agency, at women friendly locations; these include women's health clubs, spas, health centres and sites generally visited by professional women at work and leisure.

## Press Release

A press release was written and sent out to selected academic and commercial publications by the University's marketing office. This proved a fruitful exercise in that the research team were contacted by Computing Weekly<sup>3</sup> who ran a story on the project. This resulted in a flurry of women contacting us and writing their experiences of working in ICT. There were some powerful and emotional stories which have been included this report and we also had permission to publish them on the weblog.

## Networking meetings

Two members of the team attended a network meeting of approximately 75 people where each individual passes around business cards (we passed around the project flyers which attracted immediate attention because of their size and the fact we were academics and not industry based) and has the opportunity to 'sell' themselves for around two minutes. The process is not for the light hearted but very effective in making new contacts.

<sup>3</sup> URL for the article: <http://www.computerweekly.com/Articles/2006/07/25/217101/study-seeks-disappearing-it-women.htm>

# The Interview Process

## Designing and Piloting the Interview Schema

The two interrelated components of gender that have influenced the research direction of this project are gender identity and gender relations. Gender identity is revealed in the sense of the stories the woman tells about herself of what it means to be female, how being female shapes who she is and what happens to her. It is these stories we aimed to capture and experiences we aimed to encapsulate throughout the interview process and it is these identities that the 'disappearing' women crafted that is the focus of our research for this project. Gender relations can be explained as the way the social world is built (in-part) by making distinctions between men and women, differentially shaping the material conditions of our lives (Fletcher and Ely 2003).

The design process of the interview schema was critical with interviews were viewed as a co-productive process between the interviewee and the researchers, as often painful and emotive periods were revisited. For some, it was the first time that a chronological timeframe was requested and this evoked mixed memories and regrets of wasted time, for some it revealed years of remaining in unhappy situations.

## The Interview as Co-Production

We explored the construction of 'knowledge' between female interviewers and interviewees regarding what were perceived as 'significant events' in relation to the process of leaving ICT. Here the work/life history interview was regarded as a momentary social relationship and meaning-making occasion (Jarvinen 2000) during which interactions between the interviewer and interviewee construct past events to make sense of present positions, and future directions (Moore et al 2006). Wagner and Wodak (2006) also add that the biographical interviews are constructed from the interviewee's present social position and life position and are coloured by it together with the interview process itself. During the interview process, women were able to express their disbelief at the way in which they had been treated within the ICT workplace, whilst constructing a current, more self-aware persona through their depictions of the leaving process. For many of our research participants, the sometimes emotional interviews offered a space in which to consider their own 'personal journey' within the broader socio-political context.

Interestingly Wagner and Wodak's (2006) analysis on identifying strategies of self-presentation in women's biographical narratives (they use eight biographies) points to a variety of gendered aspects from a diverse collection of professional roles. When looking at women in ICT roles it is clear that some women follow an apparent career model, aspiring to strategically progress, accepting the conditions for success such as long hours, and hostile working environments. Mirroring certain observations that our research team also highlighted as significant was how 'some women describe a crisis and how it shaped their decision to change something in their life. The notion of crisis is close to fate, to some pre-determined event.' (Wagner and Wodak 2006:390). This mirroring of observations continues when the author's further add that the women somehow then construct their decisions as having been made themselves. 'Disappearing' woman Cassie a 36-40 year old ex Senior Programmer reports that after numerous incidents that undermined her position publicly e.g. employing a junior member of staff on a higher wage than she received, returning from maternity leave to an undefined role, she assumes that it was a voluntary decision of her own making to finally clear her desk and walk, rather than a management strategy of constructive dismissal.

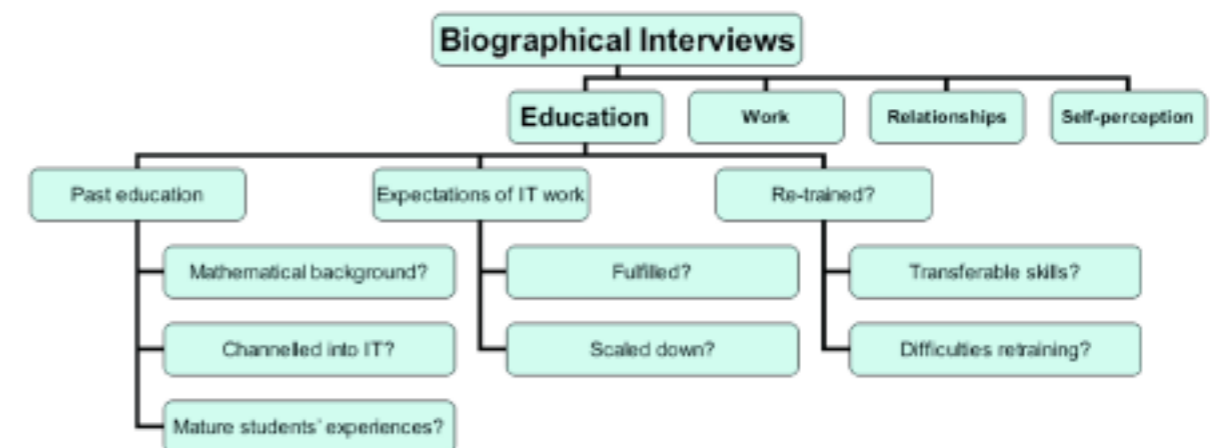
Through the linking of work-based and home-life episodes into long 'causal' sequences, specific events were co-produced as 'significant'. 'Significant events' were generally portrayed as negative with positive outcomes. The co-production of these 'significant events' was used to reflect on complex processes of moving from 'victim' status to 'survivor' status within the context of the work/life history interviews. Many of the interviewees identified a specific occurrence such as illness, geographical relocation, job roles not being kept open following maternity leave, being forced to work overseas despite immediate childcare responsibilities and being unable to return to the industry following redundancy. Such occurrences 'disrupted' the linear 'flow' of their work/life history story (as told within the interview). This 'disruption' allowed for reconsideration, often undertaken with family, friends, and former and new colleagues, of their work/life goals and core personal values.

When constructing the interview schema, using our previous experience and knowledge of interviewing throughout the WINIT project, characteristics that may or may not have featured in a life history or career trajectory were included, told within the context of gendered ICT workplaces and the wider organisation of gendered social relations. The research team had no predetermined expectations that any of these characteristics would be mentioned by the interviewees. Obvious inclusions were whether there was a 'significant other' whose presence would support or influence the women through the process of leaving and secondly and whether there was one 'significant event' that detonated the actual act of leaving. Processes of transition occur within the context of a statistically and symbolically male dominated ICT industry in England (Adam et al 2005) and beyond (Crump 2006). Through our examination of individual women's autobiographies we endeavour to produce a richer understanding of the high attrition rates amongst female ICT professionals.

## Interview Schema

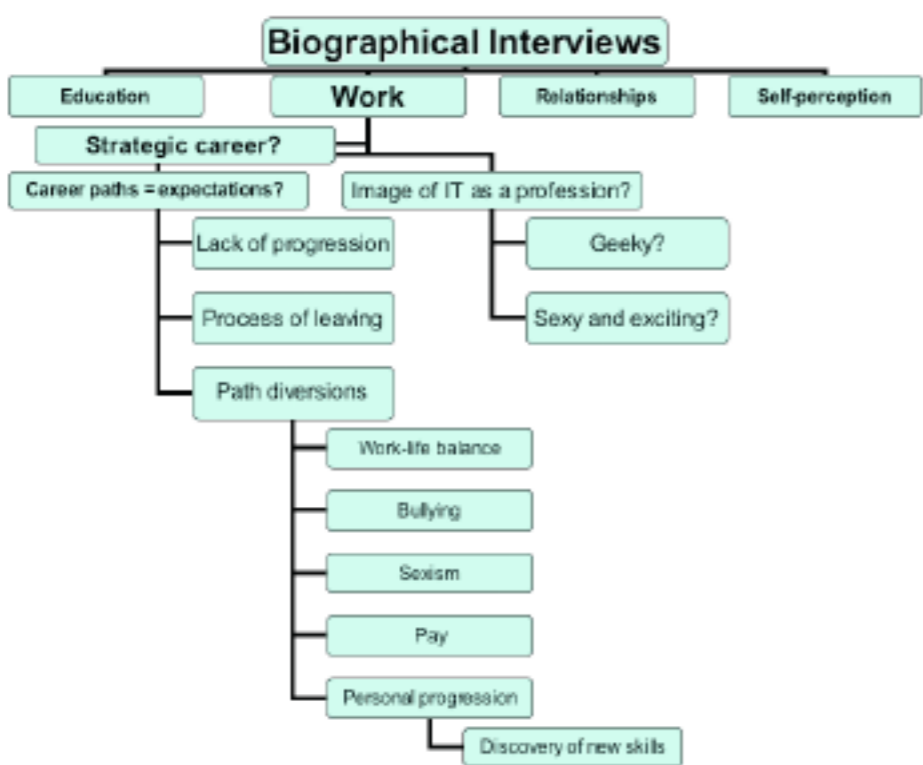
Below is the actual interview schema that we used when interviewing the 'disappearing' women, they were use to guide the interviewers, to act as prompts and to record notes throughout the semi-structured interviews. This schema was tested and adapted following pilot runs and constructive feedback from the Project Steering Committee.

# The Disappearing Women Project: North-West ICT

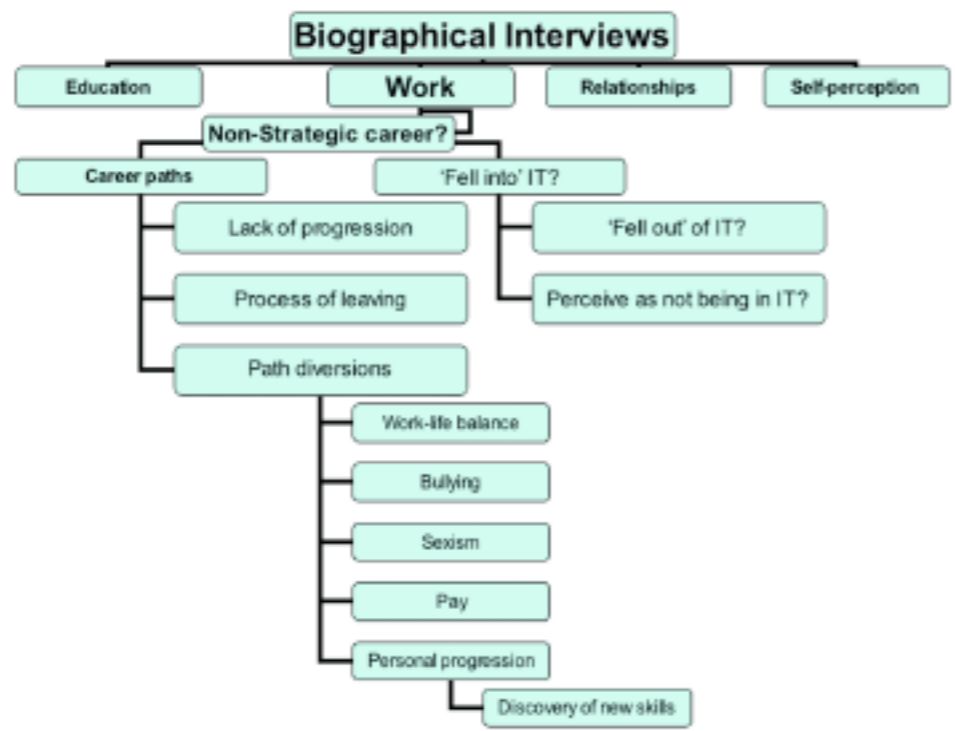




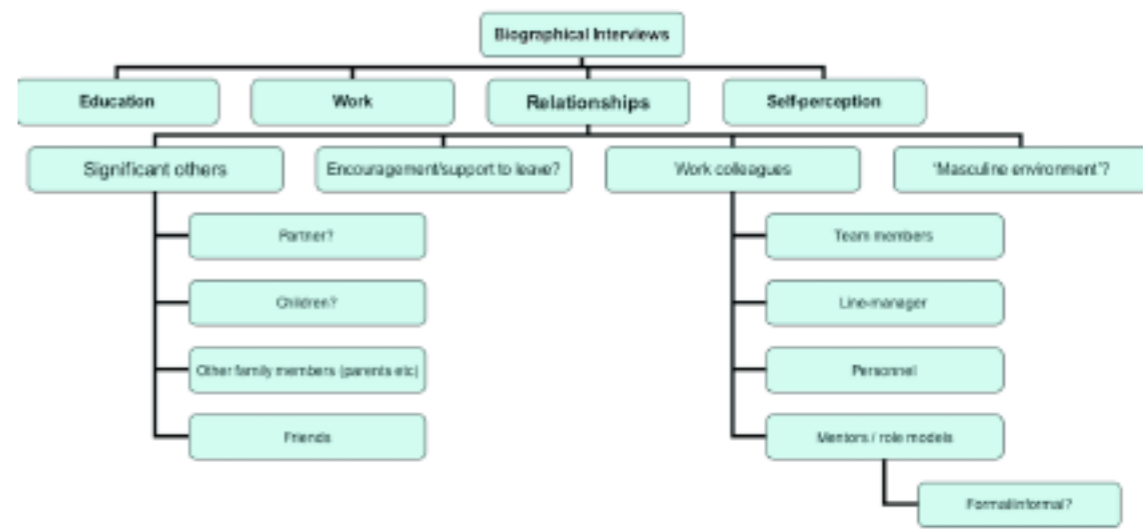
### Expectations/Actuality= Misalignment in Strategic Careers?



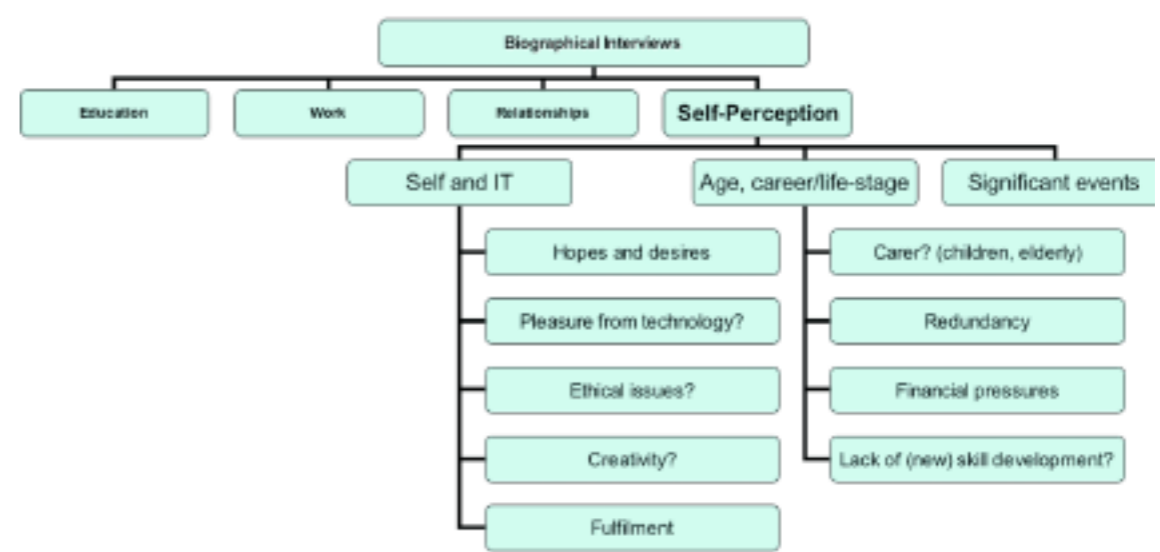
### Non-Strategic Careers?



### Impact of relationships



### Identity Issues



### Demographics of the sample group

We conducted in-depth autobiographical interviews with nine women who had worked in ICT, either in ICT roles in ICT companies, or in ICT<sup>4</sup> roles in other sectors. The women were aged between 25 and 65 years of age, one out of the nine was currently looking for work, with one working in a voluntary position, three of the women were self-employed, one woman was retraining, another woman worked in recruitment and finally one woman working in HR but had handed her notice in on the day of our interview. The women contacted us directly to participate and we met with each woman at a setting convenient for her but also quiet enough so that the recording of the interviews would be audible for transcription. All interviews were recorded and later transcribed. Interviewees were also told that they could halt the interview at any time. Finally, in terms of data collection, please note that all interviewees were required to sign an ethical consent form under the guidelines set out by the Ethical Committee at the University of Salford. Any inclusion of the interview data will be anonymous, and confidential.

### Interviewee's Sketches/Drawings

As part of our aim to understand the complex lives and experiences of women who have disappeared from the ICT sector we also used visual techniques – namely sketching/drawing – as one of our social research methods. As Guillemin (2004) noted in her studies exploring illness experiences, knowledge involving the multiplicity and complexity of human experience is not fixed or stable and the use of drawings can be a powerful way to 'produce visual products and, at the same time, produce meanings' (2004:274). Drawing on Rose (2001) and her critical visual methodology we offered our interviewees the opportunity to draw a picture of their perceptions of their life as a woman in the ICT sector.

Rose (2001) suggests three points of interpretation. Firstly the site where the drawing took place and by suggesting at the time of the interview that women may want to draw their experiences, this offered new opportunities for women to reflect on why they were 'disappearing' women and enabled them to choose to highlight significant moments in their life experience in a way that enhanced understanding – for both the interviewee and interviewers – and produced a richer picture than maybe just words would articulate. Secondly there is the image itself and we include examples below (Figures 1, 2, 3 and 4) not surprisingly there are little commonalities as each woman's experiences are so diverse, but on an individual level one the interviewees described the process as 'cathartic' given that it was the first time that she had 'revisited' what she had experienced. The sketches were also great 'ice breakers' in the interview process, though some women were a little hesitant or embarrassed to commit their life history in the form of a drawing. As part of the data analysis process, the research team returned to the drawings to reflect upon in combination with the interviews and of course the audience of this report who we feel could gain a deep and emotional understanding through the joys and pain reflected in the drawings made. In these terms our use of drawing as a visual method has enabled awareness of 'the social, economic and political relations and practices that are embedded in an image and through which it is produced and viewed' (Guillemin (2004:275).

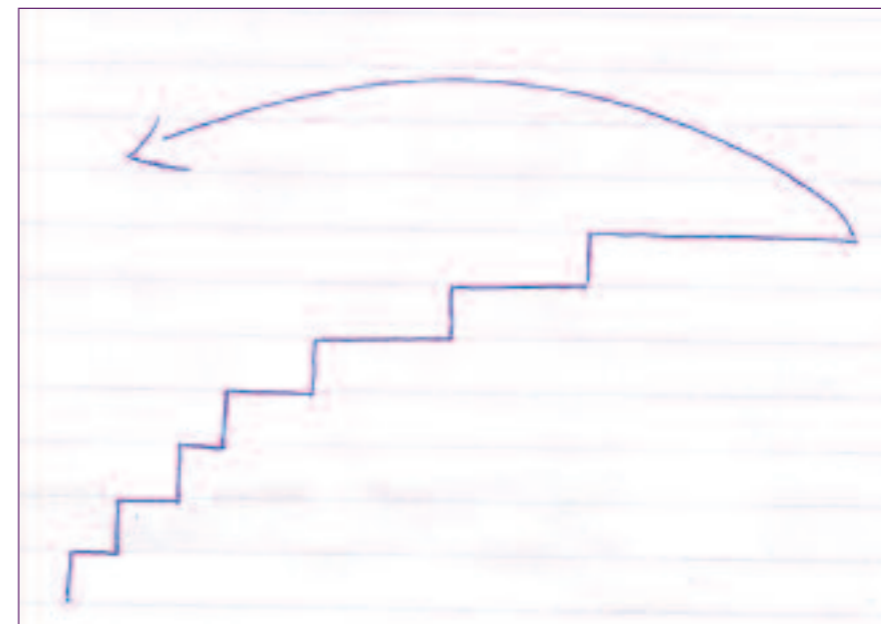


Figure 1: Carla's sketch

The stairs represent a structured career path that progressed significantly at the start but there was sense of stagnation as she moved up the company hierarchy. Redundancy pushed her out of a familiar comfort zone, working for one organization for over 20 years, into the unknown but what eventually became a more suitable career direction. Carla had always preferred aspects of her work that brought her into direct contact with end-users and/or clients and this influenced her judgment when selecting a new career direction in the recruitment sector.

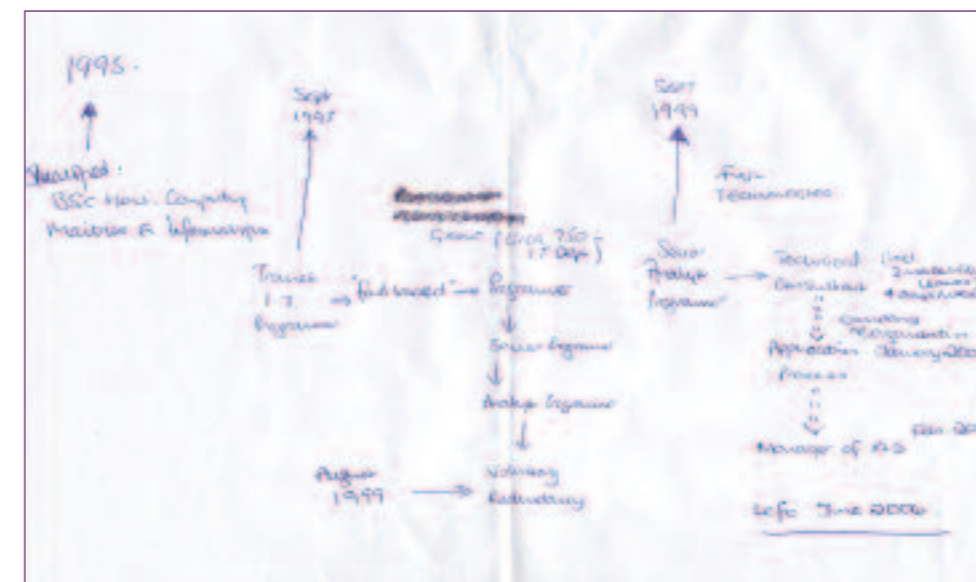


Figure 2: Chrissie's sketch

A structured time line of Chrissie's career path, she was happy to commit to this type of diagram but claimed she could not draw. The date she left the ICT sector was in 'June 2006' and we interviewed her shortly after this time when everything was still 'quite raw' so there is no further information to add to the drawing. If this interview had taken place a year hence we believe that this drawing would be very different as Chrissie's future plans move her into the teaching profession at primary school level. Towards the end of the timeline her work load increases along with her domestic responsibilities with the birth of her two children.

<sup>4</sup>Please see: Duerdon Comeau, T. (2003) Information Technology (IT) Employment: What is IT?, Workforce Ageing in the New Economy (WANE) Working Paper, [www.wane.ca](http://www.wane.ca) for a detailed discussion on the difficulties of defining IT.



Figure 3: Dee's sketch

Dee considered her time in the ICT sector as being a cog in someone else's wheel, contributing to a small part of the bigger picture. There was always a lack of satisfaction on her part of never actually seeing the completed product that was built, so she was an unhappy cog. After a career break she returns to a new career what she describes as 'meaningful, growthful and light' as she turns her skills to helping others as a bereavement counsellor. Dee also highlights that the shapes of the flower head and cog are similar in shape, both contributing to society at large but in diverse ways.

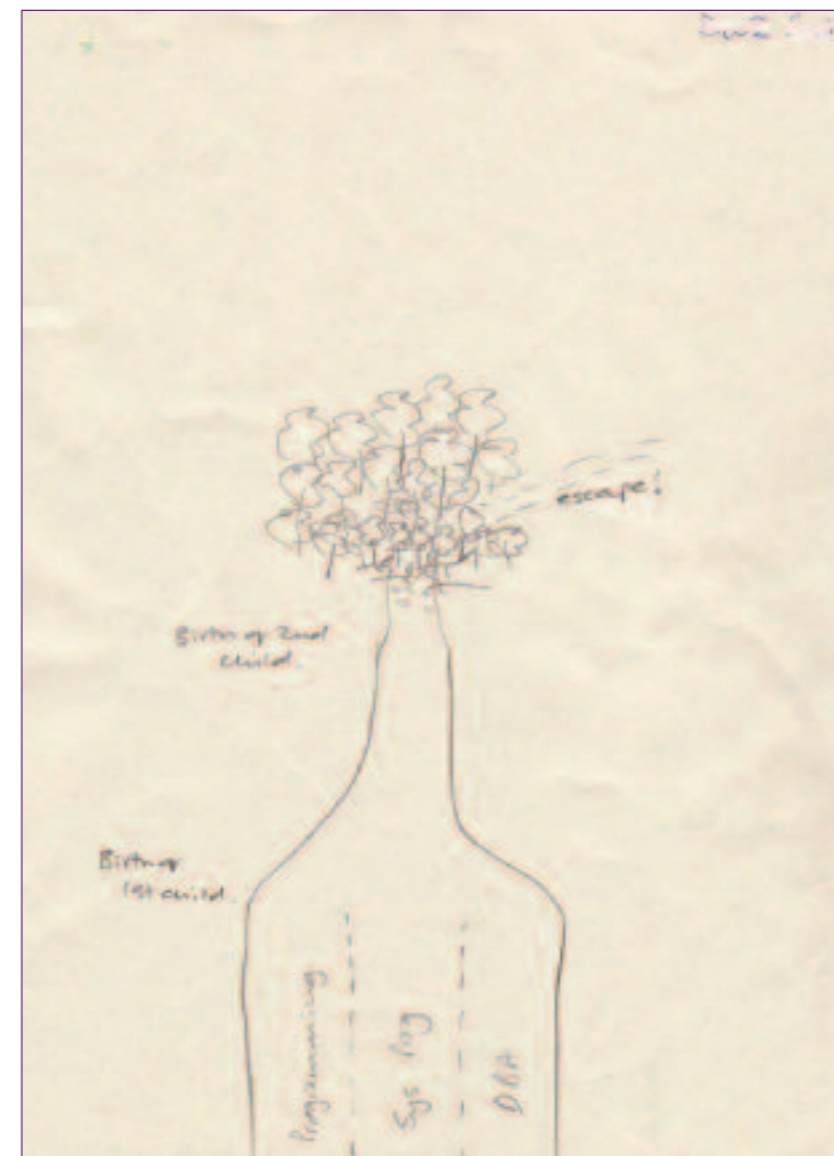


Figure 4: Cleo's sketch

At the start of Cleo's career she has three options available to her as is shown by the three lanes on the road; once her first child has been born her opportunities immediately begin to reduce along with any career advancement. Any movement within the organisation once she became a mother was a sideways move. The arrival of her second child impacted her situation even further; this is indicated by the single lane becoming almost a rocky pathway with brambles preventing any movement forward as her position becomes untenable. Having finally escaped (walked away from her job and left the ICT sector) she finds herself in woodland; the environment was friendly but there were no pathways, no direction. Once she decides upon her new career this guides her away from uncertainty onto a country lane that she can control the pace and route of.



## The Analysis

### Vignettes of Women's Lives

The subsequent 'disappearing' women vignettes allow for a more complete picture of the individual rather than the collective group of women. This added dimension of the collected qualitative data offers the reader an insight into the personal lives of our interviewees on both a domestic and working level.

**Beatrice** is a competent 60-65 year old and is married with no children. Beatrice has worked in the ICT industry all her working life and was eventually 'pushed out' through redundancy - the 'significant event' that saw Beatrice 'disappear' from the ICT industry. She was introduced to ICT whilst in the sixth form at school when she was invited by the school to attend a two day course at a local company who ran an Elliot 803 mainframe. She found computing "fascinating" and from that day knew that she wanted to pursue a career in the ICT industry.

Following her 'A' level studies Beatrice's first role was as a temporary infant school teacher, but she soon learned that she was not cut out for teaching. Beatrice then studied for her Maths degree and in 1963 got a job with a North West electrical engineering company, working as a trainee process controller. She stayed with this company until redundancy forced her to leave. Beatrice was trained to programme code, work she found very interesting. The departmental structure where she worked was quite linear and so there were limited opportunities to progress. After gaining experience Beatrice then worked on systems design as well as coding, her salary increased but her job title stayed the same - "everyone was known as a programmer". Projects were randomly distributed to "who wasn't busy at the time" or whoever the company felt would be suitable to take on a particular project". In the twenty nine years working for the company Beatrice was involved with numerous projects - testing code stores, monitoring and controlling nuclear enrichment plants and software repair to name a few - she never became bored with the work. Leaving the company was never an option, "working on the different projects was almost equivalent to working in different jobs, and different groups of people".

In addition the company valued its staff always accommodating to their needs and Beatrice led a very comfortable and fulfilled working life, so there was never the incentive to leave. The company restructured several times and as ICT evolved over the years so did Beatrice's programming roles and skills. She has seen many changes but feels that modern day technology has taken away some of the excitement of programming "when I started the coding was really quite simple... the sophistication of the coding is now quite mind boggling... I don't find it quite so interesting now... the technology has taken me away from what I found interesting... it's just a tool now." As the years passed Beatrice went through several promotions climbing to senior staff level and her final position in the company was as a team leader over six other women.

As the company continued to restructure rounds of redundancies occurred and departments were closed. Beatrice escaped the first round of redundancies experiencing no problems until the company "started going bankrupt". She was then made redundant from the standard software department and relocated in a more "junior status" in another control department. Her salary remained the same and she worked for twelve months until the department was closed. Beatrice was then made redundant and left the company, but given the chance she would have liked to have stayed on until retirement. She did look to continue working in the ICT industry over a period of three to four years "initially I was hoping to find a job", but found that being over 50 years of age was held against her and her specialised skills were 'none transferable'. Discarded by her employer then overlooked by would be employers, by default she became a 'disappeared' woman from the ICT sector. Ironically Beatrice, in a voluntary non paid role, is currently a gatekeeper of professionalism in the ICT sector and is an associate of an awarding panel that authorises individuals a UK approved certified status. For Beatrice who was over 50 there was no way back into ICT, "they weren't looking for women over 50 for a start so after a while I gave up looking".

**Belinda** a restless 40-45 year old single woman, who is still looking for her ideal occupation, actually handed in her resignation on the morning of the interview "I do like moving around, I have handed my resignation at this job". Since leaving ICT two years ago she has worked in HR and as a Finance Manager but these roles have not yet captured her full interest. Belinda has no strategy in place for the immediate future regarding work saying she will "do some temping and see what comes out of that". This is how she found her previous two positions.

This current egalitarian attitude towards her fate is far removed from Belinda's career history - thirteen years working in the finance sector for a High Street bank. Taking voluntary redundancy provided sufficient financial security for this high achieving ex Project Manager. Working in an organisation that can boast a 2000 strong ICT workforce at its height, enabled Belinda to have career mobility within the same organisation programming, relationship management, communication and training manager, team leadership, project management - are some of the areas she worked in, "I was always looking for a new challenge... it was boredom, always looking for something new". Belinda exploited the processes in place to facilitate employees to change career direction but still job satisfaction evaded her. "I tried a lot of different IT roles, I thought I have been there, done that, I was feeling dissatisfied". There were attempts to counterbalance the feeling by becoming involved in voluntary work with the homeless, "I felt what is the point to all this, I am not doing any good in the world". The higher Belinda climbed the corporate ladder the opportunities reduced and she believed "there was a plateau with lots of others at my level with limited access to the board level".

Once she left the sector, Belinda struggled to switch off from what had been a hectic schedule over the past thirteen years, "going to London two or three times a week, catching the 5.15(am) train, back at 9.30(pm) being in work the next day", she also added that if you wanted to get on and be well thought of you put in the extra hours, "I quite often worked Saturday mornings, Sunday afternoons - would be travelling Sunday night to be somewhere Monday morning... twelve hour days, I always tried to be home about 7pm".

Consequently it took her a long time to wind down working after working at that pace for thirteen years as she recalls "you really did not have a life outside the office". That said Belinda enjoyed her time in ICT, gaining a multiplicity of transferable skills and financial security "it taught me a lot about myself". However there is strong sense that Belinda's professional life was all consuming leaving little time for personal development and she looks forward to another stage in her life "this is my time". Belinda as 'disappeared from the ICT sector.

**Dee** a self-confident married mother of four in her mid forties has led what she describes as "a colourful life". Throughout adulthood Dee has encountered recurring health problems affecting both her social and working life which eventually forced her to rethink her career path moving from working in the ICT industry to presently working contently as a self employed bereavement counsellor. The swing from programmer to counsellor was a long slow journey mainly triggered by personal life and medical experiences which finally steered her to a career working with and helping people. With no prior knowledge of computers until studying at university Dee graduated with a Maths and Computer Science degree, specialising in ICT. She found some aspects of her first post as a trainee commercial programmer with an international confectionary and beverages company 'unexciting' and 'unchallenging'. Dee felt she was nothing but "a cog in somebody's wheel... a piece of machinery just churning out the goods".

An additional aspect affecting her work was her recurring back problem, a problem that was intensified through lifting heavy coding manuals from shelving. The department showed little empathy towards her medical condition. It was these two factors that led Dee to taking a two-year "mini career break". Although still experiencing medical problems, she made the decision to go back to work on a part time basis but found it difficult returning to work and failed various medical assessments at interviews. Dee eventually found employment in the statistics department as an analyst programmer at the University she graduated from, but there was still a hint of disillusionment on her part regarding programming work. After eighteen months Dee took maternity leave to have her first child with every intention of returning to work, but a set of personal "circumstances dictated otherwise", her health issues had deteriorated and her husband was made redundant and found a new job which meant leaving the Midlands.

Over the next few years her family increased and they relocated several times. Her career was 'put on hold' for a ten year period to raise her family. Dee embraced motherhood with a passion "I loved it, to me that's the best job I have ever done and ever will do" she stated. Sadly her second child was ill and died not long after birth. Living in Central England and new to the area she contacted the National Child Birth Trust thinking she would join their support group, but there was no group in the area, this is when Dee undertook voluntary work starting up a National Child Centre Support Group where she was group leader for five years until relocating to the North West. This was the turning point in her career and explains why she 'disappeared' from the ICT sector. Dee realised she was a "people person" she valued interacting with and helping

people and recognised that this was why she didn't find IT fulfilling - she had found something more *"meaningful and satisfying... it's lives and people that matter"*, but it had taken the experience of losing a child to realise this.

This was the significant event that eventually led her to undertaking a two-year training course and pursuing a career in counselling for the Family Children's Bereavement Service. Dee is a contented mother of four, but the circumstances regarding the death of her child still remained a prominent feature in her life, so when new information regarding the circumstances of her child's post-mortem had come to light she had to take a four month career break from counselling in order to close that chapter in her life. She has since written a book about her experience.

On returning to work she found her client list had depleted, the excuse being *"we don't have the work"*, but Dee knew this was untrue as she had seen advertisements in the papers and on the internet for more counsellors. Dee had her own views of why no work was being put her way, *"without actual evidence I seriously suspect that they thought I wasn't fit to come back to work after what I had been through"*. This prompted Dee to once again rethink her career path and in 2002 she became a self employed bereavement counsellor. IT's loss is counselling's gain.

**Cleo** a perceptive 40-45 year old married mother of two is currently achieving a work-life and family balance whilst enjoying her career as a lifestyle consultant. This shift to consultancy work once she left the ICT Sector had to be purposely planned as her new role involved an intensive three year retraining programme. This was a radical departure from what was a 'high flying' technical career as a software developer specialising in legacy systems. Leaving University with a language degree Cleo began a graduate scheme training in computer programming, at a typically English organisation with a strong patriarchal culture. Interestingly Cleo was not fazed by this sudden switch in career direction as she saw programming as yet another foreign language so she felt she was on familiar territory.

Cleo achieved job satisfaction immediately especially enjoying the technical aspects of ICT. Her career trajectory was strategically determined by the senior manager roles she aspired to. A fresh start in the North West sees newly married Cleo employed in the retail sector in a multi national organisation. Cleo stayed with this organisation for 13 years witnessing many administrative changes due to economic pressures.

On returning to full time work from maternity leave to no specific job role or even a desk to work from, Cleo acknowledged that becoming a mother had altered others perceptions of her. The organisation suddenly became 'chilly'. The economic climate became precarious over the next four years as ICT projects dried up and recruitment was frozen. The ICT department faced further restructuring and a round of redundancies occurred placing high demands on the dwindling workforce. Cleo was under a lot of pressure during this period of time and believes her two miscarriages were job stress related *"I took a lot of time off with the second one because I was a wreck"*.

This confidential information was leaked to the department and Cleo began taking a fresh look at her lifestyle. Happily a second child was born. On returning to work total chaos had taken root in the department - the pattern of reorganisation and work load increase was a never ending circle. Furthermore Cleo realised the newly recruited individual who covered her maternity leave was earning £10,000 more than her. The argument was that he was recruited from outside the company. An indicator of Cleo's self-worth can be illustrated here when it is the newly recruited male that resigns when Cleo returns to her post as his superior. However Cleo's competence continues to be undermined and her expertise denied but yet she still resists being 'pushed' out of her role.

Eventually a significant event occurred resulting in her 'disappearing'. In a further attempt to devalue *"they wanted me to train up some other members of the department with my (specialist programming) skills and they wanted me to do something different and I thought hang on a minute isn't that reorganising me out of a job?"* it was at this point Cleo cleared her desk and literally *"walked out"*. A lack of confidence regarding her skills and communication abilities have always tainted how Cleo perceived herself, this continued until after she had left the sector, always assuming that her skill and experiences were deficient and non-transferable. It was not until she became a 'disappeared woman' that she had enough breathing space to reflect on what she had achieved throughout her career.

**Chrissie** is a well organised, focussed 30-35 year old married mother of two who is presently unemployed. Chrissie's career path was directed towards working in ICT from the outset, but brought to a halt due to a set of unfortunate incidents taking place in her personal life. She studied computing at GCSE level and knew that she wanted to eventually attend University. On leaving college Chrissie studied for a BSc (Hons) Computing degree and French in the evenings.

She took a gap year to go and work in France in the ICT industry then returned to the UK to do her final year of study for her degree which she completed in six months. Enjoying her work in France Chrissie once again returned to live there and to study for her Masters degree in Computing. Chrissie then looked for employment and got a job in the ICT department of a telecommunications company in Paris specialising in databases, where she worked for thirteen months. Wanting to move on Chrissie was searching for jobs in France but instead relocated back to the UK after applying for and getting a job in the ICT department of a large High Street store in based in the North West.

Employed on their graduate ICT training programme and following a structured career path, she steadily progressed from a being a trainee to a programmer, then to senior programmer status, then analyst over a period of three years. A year later the company was taken over and the new management team who were *"well known for slicing and dicing"* started making cut backs and jobs were no longer 100% secure, so Chrissie opted to take voluntary redundancy. Unknown to the company Chrissie had already *"lined up another job"*. She was employed as a senior analyst programmer at a locally based SME software company and was recruited for her database programming expertise using a specific language.

The company's employees lacked this expertise and Chrissie was brought in to *'set the ball rolling'*, getting a team together and training them. In the six years Chrissie worked for this company she had two maternity leave career breaks and returned working four days a week.

Following a restructuring of the company Chrissie applied for and was appointed to the role of senior manager of Research and Development (R&D) but knew that she was not on the same pay scale as her male peers in similar roles. During the final twelve months of her employment at this company, Chrissie saw dramatic changes which affected her personal life. There were huge cut backs and as people were made redundant their workload was passed on to Chrissie - she was doing the equivalent of three people's jobs with no extra pay. Her workload and hours increased immensely leaving little precious time for family life - she was finding it increasingly more difficult to 'juggle' work life and family balance and *'the lid on the pressure cooker was starting to blow'*.

Everything came to a head when Chrissie was unfortunately involved in a road traffic accident which left her immobilised for six weeks, additionally Chrissie and her family were coping with another family member's serious illness and furthermore she was suffering from post traumatic stress.

Whilst at home recovering, the company were constantly ringing Chrissie for help regarding work issues which added to the pressure. It was at this point Chrissie began to rethink her career path. Not fully recovered and still suffering from post traumatic stress Chrissie returned to work - that day a close family member died and the company insensitive to Chrissie's condition and needs would not allow her to take a full day off to attend the funeral. Moreover, she found her department depleted and she felt she could no longer cope with the stress and workload, so she left the company after serving her notice. It was the accumulation of these significant events that contributed to Chrissie radically departing from the ICT industry. Chrissie is now pursuing her career as a primary school teacher.

**Carla** is a highly motivated, confident, married 50-55 year old currently enjoying her role as a careers advisor working with students and various schools within a North West University. Carla 'inadvertently' left the ICT industry thirteen years ago. The 'push' from her dual programming and management role was due to redundancy. She describes the shift from ICT as a positive diversion in her career trajectory.

Carla worked in the ICT industry since graduating with a degree in Computation. From the outset Carla had set her career sights on working in programming development and she fulfilled her ambition. During her working life she held several linear positions with four UK and one European company involving a range of roles which included programming, program reporting, computer training, recruitment and managerial work.

Carla's first work in programming was with two Manchester based companies. Her first post consisted of training to work on *'small computers'* a contradictory in term as the computers were *"huge machines"*. After nine months, once trained, she was asked to commute nationwide delivering training courses, but this was not part of Carla's work strategy, she declined and was asked to leave the company.

Her second post involved programme development work, although happy there for thirteen months, herself and her husband, also a programmer, made the joint decision to look for work in Germany. He found the first job over there and they relocated. Carla soon found work at a US Army Base working as a language programmer on report writing, working there for six months until a vacancy became available working with her husband on a project for the European Space



Agency. Eighteen months later they returned to England once their contracts had ended.

Carla then found work with her previous employer supporting their file tab compiler - she stayed there for two years until the opportunity arose for Carla to work for a local University in the Bursars Department doing similar support work but producing program reports. She worked there for two and a half years but what was promised at the interview did not materialise and Carla became a little pessimistic regarding her future there and looked to further her career elsewhere as she *"was going nowhere fast"*. She decided to move into management - the reason being *"because at that stage I had decided that I could do my manager's job better than he could"*.

She was then employed for six years by a large British computer hardware company, again Manchester based, and worked in a programming combined with a management role. She *"hated the programming side, but loved the team leader side"* of the job and this is where she developed an interest in recruitment and was put in charge of recruitment in another department, an additional 'sideline'.

Her work was diverse, regularly being restructured to work on various technical, analysis, development and support projects and finally on the *"quality project"*. Over a three year period the company had gone through several *"rounds of redundancies"* reducing the number of departments, until local management announced that they were *"getting rid of people with quality in their title"*. Carla never intended to 'disappear' from the industry planning to work in ICT until retirement age, but redundancy, her significant event, encouraged Carla to re-think and she decided the type of work she most enjoyed was recruitment, hence the move to working currently as a careers advisor.

**Gill** is a single, self-motivated, confident 45-50 year old who is currently enjoying life working as a self-employed health therapist after disappearing from the ICT sector. Her working life journey has been quite an amazing one. Gill grew up in the North West and from a young age described herself as a mathematician. In her teenage years she set herself one goal - to attend a prestigious London University to study maths. The entrance exam was extremely difficult and she had to make the choice of studying maths elsewhere or taking the offer of studying physics at the University she had longed to study at, she chose to study physics. After graduation her first job in ICT was as a trainee data processor in the oil industry. She trained at the company's headquarters and then spent seven years working overseas, two years in South Africa, a year in Papua New Guinea, a few months in Nigeria, two years in Norway and two years in Sultanate of Oman.

Gill had fulfilled her dream and described ICT as a *"nice mixture of applied maths and common sense... it was absolutely marvellous. It was a life of science and adventure."* The work was shift work, seven days a week, three months on and one month off. At the age of 30 Gill's outlook on life started to change, she was now looking for more stability and made the decision to leave her job and return to the UK to attend university in London undertaking a twelve month, full time, Master of Business Administration (MBA) course. Gill then got a job in consultancy working for a London based company on ICT related projects. Her life style had completely changed, it was a *"culture shock"* and she found difficulty in adjusting to working a nine to five, five day week with twenty days holiday a year from *"working for ninety days at a stretch without a break and then just going and having thirty days off"*. She had to 'put on a persona' something she had never had to do before.

Gill worked there and played the *'politics game'* until she was made redundant. From there Gill then worked in a Southern University as a self-employed freelance assistant to the Rector, still using her ICT skills, working on the plans to transform the University - the project was a success but once completed Gill had to move on.

Her ICT journey then took her in to a large banking organisation working on a smart card electronic cash system project, the project expanded and involved overseas banks and Gill again left the UK for three years to work in New Jersey. During that time the company and project continued to grow *"the bigger the company and project got the more political it got"* and Gill became more disillusioned - this was a turning point in Gill's ICT career and she left the company.

Gill then took a six month career break to travel around the USA. Gill now aged 39 returned to London and worked half heartedly for twelve months for an internet software engineering company, it was this company that brought Gill 'back home' after putting her in charge of starting up the North West office. Gill relocated to the North West, but six months later the company folded and Gill was made redundant. This was the significant event and marked her exit. She knew that if she was going to stay living where she was she would have to be self employed. Initially she thought about studying for a PhD but after much deliberation decided against this. It was when she was thinking about her topic of research for the PhD and which companies she would be interviewing that she became interested in looking into life coaching.

One company *"bombarded"* Gill with information about their training courses, she enrolled on a course to become a hypnotherapist *"that was nearly six years ago and I have established a very successful practice... its gone beyond hypnotherapy... I call what I do emotional health"*. Gill now works as a self employed emotional health therapist and has disappeared from the ICT sector.

**Lydia** an enthusiastic, practical married 30-35 year old cheerfully works as a business advisor for a women's charity organisation. Lydia *'fell into'* the ICT sector purely by chance; it was totally unplanned, as was her exit. After leaving school she attended College studying for a BTEC National Diploma in Business but *'dropped out'* and started working at the age of seventeen. The only link to ICT was at home where Lydia and her brother played games on the families BBC Acorn computer. Her initial work plan was to follow on the family tradition working in electronic and electrical engineering, but this never materialised and so instead she focussed on working in Business and Finance. Her first job was in security as a research statistician and was the launch of her ICT career.

The job was quite technical, Lydia generated and analysed reports of void or suspicious till activities recorded in stores by CCTV cameras which Lydia thought was *"a brilliant piece of technology... I do have an interest in technology in that way and how it can be used, and I suppose abused in some ways"* Although an interesting and exciting job 'the internal politics' involved left Lydia disillusioned and after a few months she left the company. Her next job was with a family run business dealing in wooden furniture – here her interest in ICT came to the fore. She had a dual role as a sales clerk and as personal assistant to the sales director.

Lydia saw the opportunity to introduce an ordering and accounts system to replace the paper-based system. Once the software had been developed and *"tweaked"* Lydia helped with the implementation of the system and used her accrued knowledge to her advantage *'to climb the ICT industry ladder'*. After five years the company restructured and Lydia opted for voluntary redundancy. Lydia then worked for a promotion handling company initially as a temp then in permanent positions as an Account Executive then progressing to Account Manager, until the age of 27 when she decided to have a gap year working in Australia, where she had numerous general administration jobs.

On her return to the UK she started where she left off, once again working as a temp then relocating *'down south'* working for another promotional handling company as an Accounts Manager, where she then specialised in e-commerce. The ICT infrastructure at the company was limited and as the company progressed new initiatives were introduced and Lydia took on the role as Help Desk manager setting up a new help desk. She was first line support to 150 people, from there she progressed to ICT training manager, a specialist trainer of bespoke systems. Family commitments required Lydia to relocate back to the North West where she continued working for the company as an ICT training manager from home. Over the next year the workload greatly increased and the role became more time consuming and demanding. Lydia found travelling, delivering her training and juggling her personal life becoming more and more stressful resulting in Lydia finally succumbing to the pressure, this was her significant event.

She took a two-week holiday and the day she returned she had to attend a meeting in Birmingham and driving home she thought *"I can't do it and I phoned my boss up I'm giving in my notice"*, this was the turning point in her career. Lydia served her notice and took a six month career break.

During the six months she undertook a Current Affairs course and is now working towards a City and Guilds qualification. She deliberated and made the decision to *'disappear'* from the ICT sector, she didn't want to work for a private company again, working eighteen hour days and opted to work instead for the *'third sector'* as a Business Advisor, she has exchanged her *'IT armour image'* for a *'softer image'*.

**Maddy** is a disillusioned unemployed woman in her mid twenties whose ICT career path was 'cut short' due to relocating to the North West of England. Maddy has a general interest in ICT and after leaving College she worked for a short period of time in an office working on dumb terminals before travelling and living abroad for five years.

By the time she returned to the UK Maddy found that ICT had vastly moved on and so she embarked on an ICT related fast track course at college where she found she "thoroughly enjoyed the programming side of the course", which then led to attending a London based University where she studied to gain a BSc Information Systems degree. Part of the course included a one year placement working in a dual role as a Database Administrator and ICT Help Desk supervisor for the National Housing Federation; it was here Maddy got the taste for working in the ICT industry.

She carried on working and studying the degree course on a part time basis. Maddy then relocated to a different area of London and took "an extra year out", during this time she again got a job working as an ICT Help Desk supervisor. She then continued with her final year of study juggling both her academic and work life. Once gaining her degree Maddy had planned to relocate in the North West region to be with her partner who had been commuting. Whilst looking for work Maddy handed in her notice and left work.

Now living in the North West Maddy took a one month career break, she had never experienced problems in getting work and so was quietly confident that within a three month period she would be in employment. Fifteen months later Maddy is still struggling to find work in the ICT industry. This is not through lack of trying, on average Maddy has attended one interview per week applying for a myriad of ICT roles.

It was not unusual for Maddy to be the only female attending interviews, she was never phased by this and went into interviews with her usual gusto, but after being 'knocked back' so many times she became suspicious that her being a female applying for male dominated roles was a possible Barrier to employment. She thought that it might be a regional problem and she changed what she disclosed about herself on application forms concealing her past status in case she was thought to be over qualified; she also removed her engagement ring at interviews because "they look and think oh child bearing age... so not worth training her up on their system because she'll leave". She stopped telling close friends and family about attending interviews because she "felt embarrassed" to tell them that yet again she had been an unsuccessful candidate.

Maddy has endeavoured to get to the roots of the problem but to no avail - leaving her more negative and nervous in interviews and over time she has lost her confidence. This problem has left a gap in her CV and Maddy knows that the longer she is out of the ever evolving ICT field the more difficult it is for her to keep her skills updated.

Maddy is still in contact with prior colleagues in London and knows that if she returned to live there she could be in employment in a matter of days, but because of her partner's work commitments this is not an option. Not through choice and not through lack of trying, Maddy has disappeared from the ICT sector.

The significant event that led to this was relocation to the North West of England. Maddy has now had to rethink her career path and until recently has never looked beyond working in the ICT industry. She has applied for a teacher training course with a view to becoming an ICT teacher.

## Interview Data Analysis

Particular consideration was paid to the interview process, as it was quickly established that once we made contact with a 'disappearing' women from this 'hard to reach sample group' we really had to make the most of what was a rare opportunity. Research informs us that this group is increasing in number but these women do not exist on a central database or work in a particular sector, they are found at school gates, are friends of friends or are unearthed through a series of coincidences. Autobiographical interviews were the principal medium for data collection alongside commentaries collected from our weblog. Key themes and issues emerged organically from our analysis of the transcripts and these themes are divided into four main areas, which we have named 'hostilities in the workplace', 'significant events', 'disappearing' women and 'appearing' women.

## Hostilities in the ICT Workplace

### Workload and long hours

*"It was long hours, it was weekends it was you would get called out in the night, you know that whole thing, but I didn't have any kids and I enjoyed doing the work, erm I liked the problem solving."*

Whilst the knowledge economy continues to overtake manufacturing production and labour and capital is being usurped by information and communication the character of the typical worker and workplace is having to adjust (Edwards and Wajcman 2005). Edwards and Wajcman (2005) also comment on other observable changes experienced by the workforce, increased working hours and workloads with UK employees working harder than ever before. Against this backdrop we view the working environment of the 'disappearing' women in the ICT sector. Given that there is an assumption that typically ICT work does not impose strict spatial and temporal demands on the workforce as other traditional roles, including through enabling mobile technologies and virtual workplaces, nevertheless there is still the reported long hour culture and presenteeism to contend with (Griffiths et al 2006; DTI 2005a). The 'disappearing' women in our sample all reported a lack of job satisfaction, a continuous struggle to maintain a family/work/life balance due to long periods at work and a burgeoning workload. Cleo recalls how her workload appeared to increase as she reduced her hours to part time after her second child, "Team leader, performance management, NQ theory and I still had various bits that were, you know you tend to have legacy of things that you have always done and nobody else does, on a part time basis the burgeoning work load was debilitating". The reality was squeezing a full time role in to part time hours without the benefits. Colleagues were phoning her at home, she dealt with emails while her baby slept and worked into the evening. This is equally more surprising when Cleo describes what happened when she left on maternity leave "that was interesting, yes because that was when I was team leader for the Data-Base Administrators (DBAs) and I went off on maternity leave and to cover my maternity leave they had to get three people in to do it, which tells you something".

Others report long hours associated with travel; Lydia a specialist trainer of bespoke systems remembers "there would be hours when you know if I had to go off and do training and I went to the Birmingham site, erm you know it is about setting off to get there for nine that was one of the things my boss was like, you know, if you are on another site you need to get there for nine, it started off like that but then I started to work on him. But for me that would mean me setting off at five to get back at six". Though she negotiated extra expenses "I said I am not doing that any more, I'm setting off on a Sunday and you can pay for the hotel. Which made it better for me, but you are leaving here (home) at six o'clock (on the Sunday evening), it meant even more hours away from home".

A third 'disappearing' woman also reports of coping with changing workplace dynamics, redundancy and a tumultuous economic conditions adding pressure onto her organisation, who in turn then demanded extra from their workforce. This vicious cycle had huge implications on Chrissie. During the last twelve months of her employment Chrissie saw dramatic changes which affected her personal life. There were huge cut backs and as people were made redundant, their workload was passed on to Chrissie; she was doing the equivalent of three people's jobs with no extra pay. Her workload and hours increased immensely leaving little precious time for family life and "the lid on the pressure cooker was starting to blow". Loyalty and commitment to the organisation is constantly being tested along with job security, even as the world celebrated and Chrissie was being treated with 'contempt' at work yet she was on hand for an Y2K issues, "I did the millennium I sat in at midnight I was there at midnight at the millennium", this she regrets as she looks back.

Gill was situated at various international settings which was initially part of the 'charm of the job' but the work was intense and almost had a military feel in the working structures and terminology used, "this lifestyle would not suit everyone,

working three months on and one month off, the three months involved working seven days a week including nightshifts. This continuous-operations working pattern would not be well suited to most domestic situations especially when you find yourself cohabitating with your work colleagues working living and drinking with the same people". Not for the faint hearted, but Gill remained there for seven years. At the age of thirty Gill realised that this is not where she wanted to be in the future, she wanted to be living alone, have weekends off and return to some kind of normality. Realising that a certain dissatisfaction was creeping into her what had been an ideal job that she loved she explained her dilemmas to senior management in her organisation. What would have been an ideal solution and what she requested was to become an 'unmarried married' even though she was a single woman. People on married contracts have their own flat and have annual leave once a year rather than at three separate months. Gill wanted to return to a more typical life structure and becoming an 'unmarried married' would have solved this dilemma. Her request to alter her contract was refused "it was basically tough shit from them", she was informed that nobody had made this request before. here was no debate to resolve Gill's problem, who was a long term serving member of the work force, they did not attempt to prevent the inevitable and she left and returned to the UK to complete an MBA.

Belinda stayed with her company for thirteen years. She struggled to switch off from what had been a hectic schedule over the past thirteen years, "going to London two or three times a week, catching the 5.15(am) train, back at 9.30(pm), being in work the next day", she also added that if you wanted to get on and be well thought of you put in the extra hours, "I quite often worked Saturday mornings, Sunday afternoons – I would be travelling Sunday night to be somewhere Monday morning...twelve hour days, I always tried to be home about 7pm" she recalls though not negatively "you really did not have a life outside the office". Belinda enjoyed her status and accepted that working such long hours was necessary to progress. Another 'disappearing' women who has experienced a diverse sample of working practices makes the observation,

"Yes, yes people can miss out on their parents dying their kids growing up... you know I worked for two years in Norway; Norwegians almost make it a point of pride to be the first to leave the office, there was none of this leaving your jacket on the back of your chair."

## Relocation

Gill was overseas for seven years with atypical working patterns, after an immediate relocation after a years training, she found herself (happily) overseas working across several continents in exotic locations, South Africa, Northern Europe, Papua New Guinea, Nigeria - to name but a few - "from the age of twenty-three until thirty I was an ex-pat" and she loved the experience "Marvellous. It was absolutely marvellous". Later Gill again jumped at the opportunity to relocate to the USA and she worked for three years in New Jersey as Vice President of Implementation North America. But Gill admits that she could not have dreamt of this lifestyle had she had a family. Nevertheless Gill's work commitments were all consuming leaving very little personal time. As her career progressed the international relocation dimension of her work began to make a mark on her personal lifestyle, "I was on the road most weeks, say you know Monday morning maybe fly to Detroit for several days in Detroit, fly to Chicago, get back home on Thursday night go to office and collapse in a heap at the weekend". This impacted on her ability to create or join a social network, she comments "I was lonely, I found it very difficult to make friends". After another relocation, but this time within England "so we (with her partner) you know took the decision that one of us would move and it was more logical for me to move. At that stage I was earning more than him that's worth pointing out at this point". Her 'company was being taken over' for the second time in two years so that influenced the move. It was redundancy in the end that finally transformed Gill into a 'disappearing woman'.

Relocation to the North West region had serious consequences for Maddy. Leaving the Thames Valley region from a well paid ICT role as a Help Desk Manager she was unable to obtain any ICT work becoming a 'disappearing' woman by default. Maddy has attended on average one interview per week Maddy is now planning to fast track a Post Graduate Teaching Diploma in ICT to teach 11-16 years olds.

## Pay

"I was a team leader for this guy who was on ten grand more than me"

The gender pay gap is a well researched phenomenon; the facts are bleak for working women with the average hourly pay gap currently standing at 18% between men and women working full time hours. Women working part time compared to men working full time can experience an average difference in hourly pay of 41%. A further discouraging statistic that working mothers have to accept is the 'mother gap' which can equate to a loss in earnings of £140,000 over a lifetime. The Directing Equal Pay in Information and Communication Technology project (DEPICT)<sup>5</sup> team at Salford University are concentrating research into the gender pay gap in the ICT sector They have found that 'individualised' pay packages are common in the ICT industry, which involves strong negotiation skills coupled with a high level of confidence. Additionally they add that there is a culture of 'salary secrets' in the ICT sector and women have reported that they only find out about pay inequalities once they reach management level and have access to the information (Keogh and Tattersall 2007).

The DW: NW ICT team did not specifically ask about the gender pay gap but throughout the interviews some of the participants considered salaries as contributing to hostile workplaces. None more shockingly than Cleo's situation when on her return from her maternity leave she found out that a newly recruited work colleague who also covered her leave was being paid substantially more than she was, "so I went back into that team because they needed my skills, they employed a guy to do the systems programming and he was on ten grand more than me a year... when I found that out, ten grand! When I queried it they told me it was because he was coming from outside and they have to pay a bit more to bring people in from outside". We can assume that the new recruit negotiated an 'individualised' pay package. What is also revealing in this situation is that Cleo accepted the situation to some degree and this is not why she 'disappeared', in fact the new member of staff left because he did could not work for a women boss. Lydia has a similar story about a male colleague that she has recently trained in her help desk team who eventually took over her role, "the interesting thing was the guy that took my job, he was the guy that I had trained up to take over my clients... he was paid more when he started my job than what I was on when I left because his salary was £500 more doing his current job so they just kept him on that".

## Lack of Progression (boredom)

"I was just like a piece of machinery just turning out the goods"

Avoidance strategies were suggested by Cleo's immediate manager "she (her line manager) knew I was getting a load of hassle and she said look this will get you out of it you know you can do this and it's a much nicer job, but its not what I wanted", it was a move sideways to project management because her manager "did not understand her desire to be technical". The suggested move was into a similar role to her line manager, a move away from her technical role to project management. Cleo considered this strategy as a sideways shift; it was a role that had been successfully fulfilled by a woman so therefore was viewed as 'women's work'. Resonating the women in Kanter's (1977) study, Cleo viewed this as being offered a safe role, 'put out to pasture' but she wanted to maintain a challenging technical role. Cleo believed she was being protected by her line manager who had previously aired her own fears regarding the potential implications of straying off the expected female route, so whilst trying to safeguard Cleo she managed to suppress her ambitions. This 'role entrapment' confirms dominant stereotypes, the strategies by some are to lay it safe or revolt. Women, Kanter (1977) suggests, need to steer a course via protectiveness or abandonment allowing others to fight their battles for them standing behind a mentor or alternatively they shield a manager or standing in the open alone. The latter option is not for the faint hearted as in Cleo's situation, which became untenable. Moreover these options echo similar behavioural requirements for female workplace survival tactics as those reported upon in Table 1 below.

Lydia was invited to apply for an internal interview of a newly organised ICT support department, her then line manager attempted to control the situation, "well its interlaced with politics isn't it and its not really good form so erm I got the job. I was really a bit upset because my line manager he wanted to come, and he wasn't like an over all department manager he was just my next step up really and he wanted to come in on my interview this guy, he wanted to come in on my chat". Once her new role was authorised the same line manager still attempted to control her by not releasing her, maintaining that she was still needed. Dee's perception of what working in ICT was very different to the reality "I had anticipated it being exciting, interesting, challenging, problem solving and it didn't really match it because some people further up in the structure were doing all sorts of analysis and I was then just, I used the expression in the email 'a cog in somebody's wheel' that was just erm going through the motions", she became bored and disillusioned.

<sup>5</sup>Depict Project found at <http://www.iris.salford.ac.uk/GRIS/depict/>



## Ostracising and Hostilities

*"I was almost like a square peg you know I was still the only technical woman in the department"*

All of the 'disappearing' women that contributed to the research spoke at some level of being excluded or ostracised in some way within the workplace – well known as an aspect of bullying and harassment at work. Forms of hostilities took on many guises; **overtly** "well I wouldn't anyway, I'm not big on cleavage anyway but a lot of playful talk about my chest all the time, so I always dress, you know covered up"; **covertly** on her return to work after maternity leave "I came back and there was no desk for me...well it felt kind of difficult really but it wasn't great but you know it wasn't entirely surprising"; **discriminatory** "from the direct, for example, we used to have a weekly meeting in his office and he used to make sexist jokes and I would just say to him that I don't find him funny. So I wasn't his sort of girl really I didn't flirt with him. You know I wasn't his thing"; **slanderosly** "yes that helped a lot although inevitably then you get the all the stuff about, you must be having an affair. Of course and that whole thing you know like you can't go for lunch with anybody in your team, despite the fact that everybody in your team is male. So you either go with a male or you go on your own". It appears that women are still undervalued in the ICT sector and that a loutish behaviour is tolerated in some ICT organisations. How do female ICT professionals respond to this 'chilly' ICT workplace culture where such sexist stereotypes continue? To One woman poignantly says "It can be dangerous and it can be undermining and sometimes I think it might determine your position".

The team draws upon Kram and McCollom Hampton's work on the heightened 'visibility and vulnerability spiral' when women move into managerial and leadership roles (see Kram and Hampton 1998) as a suggestion of how women may empower and protect themselves in continuing 'chilly' ICT workspaces. They suggest three basic responses or reactions that individuals may make when devalued, criticised or demoralised; they also warn that each response has associated consequences. We include an adapted version of, what we consider appropriate analysis because of its commonalities in the experiences our 'disappearing' women reported with the women manager/leaders in their study. These suggested 'Fight or Flight Responses' (our adapted title) for women in precarious work situations could equally be adopted by the female ICT professionals involved in our studies (see Table 1).

Kram and McCollom Hampton (1998) describe the collective dynamics of the minority status of women once they move in to a leadership role as the visibility-vulnerability spiral. Women, they argue still, hold a inimitability function particularly at senior levels - we support this argument adding that this novelty value is also echoed throughout the ICT sector (DTI 2005b, Kanter 1977).

We position the women that have 'disappeared from the ICT sector as those that have responded by **Internalising**. Kram and McCollom Hampton (1998) suggest that women often intuitively respond to criticism by looking inwards at their behaviour, and actions that have made others react so negatively towards them. They continue to suggest that internalisation is thus a reflexive response with women aiming to meet others expectations leading to "attempts to accommodate by altering our fundamental style, by devaluing important aspects of their self identity and ultimately by leaving (disappearing) the organization' (Kram and McCollom Hampton 1998:220). The **Externalising** response involves shifting the blame away, not looking at personal behaviour of why others may have negative reaction towards them but looking to outside influences, which Kram and McCollom Hampton (1998) suggest is the 'thick skin' response. This is a reaction to protect ones self identity and esteem, but for those that externalise lack empathy and sensitivity towards others it is suggested leading to perhaps a disregard for others opinions. The third response is **Integrating** a process of questioning ones actions through a self-reflection process regarding the impact of ones behaviour on others.

This is a self-learning process, not letting vulnerability disrupt self worth or identity. In applying aspects of this framework against the 'disappearing' women in our study, the women can be easily positioned. Through the approach adopted the research team had access to often untold, unpublished stories of the realities these women faced day to day, enabling an understanding why they 'disappeared' from the ICT sector.

	<b>Internalisation</b>	<b>Externalisation</b>	<b>Integrating</b>
<b>Basic Stance</b>	Looking inward  Blaming the self  Accommodating	Looking outward  Blaming the system  Confronting	Looking inward and outward  Using interpretive skills for complete understanding  Listening, empowering emphasising self and others
<b>Consequences for the Individual</b>	Suppression of valued parts of self  Loss of self esteem  Pressure to conform	Limited Personal learning  Self esteem maintained  Personal beliefs and style are maintained	Enhanced personal learning  Self esteem enhanced  Adaptability
<b>Consequences for the Organisation</b>	Risk of derailment  Loss of valuable resources (disappearing)  Diversity in leadership discouraged	Risk of derailment  Loss of valuable resources (disappearing)  Adaptability in leadership is minimal	Better assessment of organisational dynamics  Better leadership  Organisational learning from a variety of sources
<b>Consequences for the ICT Sector</b>	Workforce time bomb  Skills shortage  Loss of future leaders	Workforce time bomb  Skills shortage  Loss of future leaders	A diverse workforce supporting the ICT sector  Active development of new products and services  A diversity of future ICT business leaders

**Table 1: Fight or Flight Responses (adapted from Kram and McCollom Hampton 1998)**

## 'Significant Events'

*"You need to let go of all that history and that time I needed to cos it's like when you are turning a corner, the first bit of turning the corner you are still looking behind at where you have come from and then there is a point when you go around the corner where you can't see behind you can only see ahead"*

'Significant events' naturally evolved from the interviews - each woman could identify an episode in their life history that either, was the last straw or allowed time for reflection. Generally the 'disappearing' women portrayed these 'significant events' as negative with a positive outcome. Many of the interviewees identified a specific occurrence such as illness, geographical relocation, being undermined, being forced to work overseas despite immediate childcare responsibilities, and being unable to return to the industry following redundancy. Such occurrences 'disrupted' the linear 'flow' of their life history. This 'disruption' allowed for reconsideration, often undertaken with family, friends, and former and new colleagues, of their work/life goals and core personal values.

### Ageism

*"I suppose it was a combination of age and being a woman"*

The plight of older workers being discriminated is well documented. Research about older workers has been largely been gender specific focussing on the exit from the workforce of older men (Ainsworth 2002) - there has been a tendency to 'turn a blind eye' in relation of ageism against women workers especially in the ICT sector. The term ageism was coined in the 1960's, defining it as a process of discrimination and stereotyping against people just because of chronological age. Ageism makes many assumptions none other than it views all older people as the same regardless of their different life trajectories and has implications with regard to discrimination at work, loss of status, stereotyping and dehumanisation. Age Concern suggest that ageism not only affects the lives of older people, but, like ageing itself it affects everyone from birth onwards, placing constraints and limits on experiences, expectations, relationships and opportunities ([www.ageconcern.co.uk](http://www.ageconcern.co.uk)). Sam Mercer Director of The Employment Forum on Age (EFA) ([www.efa.org.uk](http://www.efa.org.uk)) further adds "Sexism and racism are like drink driving, totally unacceptable and something nobody will admit to; while ageism is like speeding, everyone does it and nobody thinks it's that bad." The EFA report suggests that if people can't get work because of their age, age discrimination is crippling – to individuals, organisations and society at large<sup>6</sup> especially given that by 2041, more than 20 million people will be over 60 – or 37% of the UK population.

The new employment laws that came into force on 1st October 2006 will be making it illegal for recruiters and organisations to refuse employment or promotion to anyone because of their age. The wording on recruitment material will not be able to state age suggestive terminology such as 'young' or 'enthusiastic' workers or specify a minimum number of years' experience. The employment arbitration body - Advisory Conciliation and Arbitration Service (ACAS) has warned that almost a quarter of companies currently specify maximum recruitment ages and many also use age to fix a starting salary. Rita Donaghy, chair of ACAS, said: "Organisations need to be aware of the changes they need to make so that they don't discriminate and miss out on valuable skills" (McCruie 2006).

Beatrice Rogers from 'Intellect' the trade association for the UK hi-tech industry believes ageism is not endemic across the ICT industry but it does continue to be an issue. Rogers warns that organisations that continue to discriminate against older staff place themselves at a competitive disadvantage for the future as the UK faces an ICT skills shortage "One of the factors the EU and the UK have to face is that we are becoming an ageing population. If you continue to discriminate against older people you will have a much smaller pool of resources to tap into. In today's society business cannot afford to be ageist." However gendered age discrimination has been indicated in our previous research at all ages and stages for women in the ICT sector (WINIT and WINWIT reports) It is against this backdrop that the DW: NW ICT team consider Beatrice's reported age discrimination, who was made redundant "I managed to escape the first round of redundancies but I had been made redundant from standard software department and I had been promised a job (in another department) on my elevated salary and he wasn't pleased." and found herself on the job market after 29 years with the same organisation at the age of 51. Beatrice never attained paid employment in the ICT sector again, despite retraining and updating her skill-set "I was quite active in doing courses and brushing up on my interview skills". Discarded by her employer then overlooked by would be employers, by default she became a 'disappeared' woman from the ICT sector "initially I was hoping to find a job". For Beatrice who was over 50 there was no way back in to ICT, "they weren't looking for women over 50 for a start so after a while I gave up looking".

<sup>6</sup>For a more details of the full report go to (accessed 10/01/07): <http://www.efa.org.uk/publications/downloads/Working-Age-Issue6.pdf>

### Illness/Disability

*"My first job I got actually because I had a good degree that was alright but then after sick leave I would sort of go places and they would give me a medical and I would say for gods sake I'm not carrying the computer I'm sitting at one."*

Of the nine 'disappearing' women who contributed to this research, three experienced periods of illness and/or disability leading to sick leave. Dee suffered all her life with crippling back pain, "I had what I call a mini career break for two years where I was on incapacity benefit because I really wasn't well enough to hold down a job so I felt like the invalid until I sort of decided well I am not getting better like this so I decided to go back to work part time". Cleo suffered two miscarriages "He (her son) was born in '99 and in the mean time I had two miscarriages as well in between which I think were stress related because I was under a lot of pressure at that point. I took a lot of time off with the second one because I was a wreck" and a third woman Cleo places responsibility of a serious road accident on to her employer because of intense workload and stress.

The ICT sector's long hour ethos, higher job demands, 'chilly' workplace culture (Faulkner 2004), and lack of take-up of work-life balance initiatives (DTI 2004, Kodz 2002) have contributed to high levels of stress. Stress levels are amplified even further by managing multiple roles (e.g. parent and IT professional) and decreased psychological well-being as a result of the experiences of the 'disappearing women' highlighted above. Stress possibly contributed to their weakened emotional well-being and increased sickness absence "I took a lot of time off with the second one because I was a wreck".

There has been increased awareness and legislation for family-friendly schemes and the provision of work-life balance initiatives for those with dependant responsibilities. Conversely more attention is being paid to encourage organisations to include those employees that do not necessarily have dependents (Bond 2004). Research suggests that the greatest impact on work-life balance is organisational culture rather than laws or policies (Bond 2004).

This resonates with the DW:NW ICT team's research, the women who spoke of associated stress related illnesses and disability all worked at large multi-national companies where policy and practice can be described as misaligned (see 'Hard Labour: the sociology of parenthood' Gatrell 2005 for a comprehensive overview of the landscape of working parents in the UK). When Cleo was on sick leave after a miscarriage her boss told her work colleagues against her wishes, "I really didn't want people to know all that so, yes so all that was all going on, but that was definitely stress related". Cleo felt undermined and generally overwhelmed - the culture was such that no-one spoke openly about their children or family situation - 'work was work'. Without the foundation of a supportive organisational culture to build upon any work life balance initiatives become 'empty shells: they contain nothing of substance or value' (Hogue and Noon 2004:482) with the family-friendly schemes depending upon the attitudes of their individual line manager illustrated by the experiences of women in our study.

Dee believes that her job role in the early stages of her career contributed to her back problems, her then manager was very unsympathetic "I would have to get out a manual to look it up and put that coding into my coding and this manual was this thick and I could not lift that manual off the shelf so I would ask my colleagues who was sitting in like a group of six desks, so I just asked can you get me this so eventually my manager said Dee you are hardly ever here but when you are can you not disturb those who are trying to work".

### Dual roles

*"The problem was from my point of view is when I got back into technical role if you had a crisis at 4 o'clock when I was leaving your stuck. And from my point of view that was additional stress for me. It was the role I wanted to do it was the front line support stuff that I really liked doing but it didn't really work with what I was trying to do with the family."*

We have included this section to highlight a subtle distinction regarding women who want to pursue a full time career and want to be at work rather than at home, "Well I still did (work long hours and weekends) I still did, I went full time with (my daughter) I used to go in very early in the morning and my partner would drop her at nursery and I would, you know, I still went in and did what I was doing before... And I was keen to go back to work as well she was a very unhappy baby it was a bit grim really being at home." Others spoke honestly about their situations "no I definitely wanted to get back and it felt like real freedom to get back to work". However once these women return to work full time the reality is different. The issues of managing a work-life balance threads throughout this report but perceptions alter when women professionals become mothers at an organisational and personal level. Despite wanting to maintain her career in ICT this 'disappearing' women was impeded "once I took maternity leave and in my view that was when the rot set in I didn't have another promotion after Lisa was born". Hennig and Jardim (1977:17) suggest a cause for the struggle faced by women as they endeavour to manage domestic and work duties, they say that unlike men 'one lives two lives'. Hennig and Jardim (1977) argue that men are more able to separate career and personal goals trading one off for the other to maintain equilibrium but women struggle to make that distinction. Furthermore in attempting to detach the two (domestic and work) encourages a personal conflict in how that the distinction is negotiated and maintained (ibid).



Gill, reporting on her observations of her female colleagues, adds to the flavour of how challenging it is to want to work but also want to be mother. We are given an insight into the pressure 'Amy' is under to be seen to perform regardless of just having her baby.

*"The image I have is in a New York hotel room, this woman Amy who had given birth a month or so before expressing her own breast milk in the hotel bathroom and I'm just thinking that's wrong. She should be with her baby or there are so many ways you can work now from home, that it should now be more women friendly. And I could see the whole pressure on Amy that she didn't want to, she felt that if she didn't go to this meeting in New York that she'd lose out somehow she would lose the momentum of the job she didn't want to be a stay at home mum but she was desperately torn about leaving her baby, desperately and it was utterly painful to watch."*

Already questioning the ethics of her workplace and, the organisational culture that permitted or possibly facilitated her female colleague back to work so soon after childbirth, this experience obviously made an impact. Gill who at this point held a senior management position in the USA and had strategically managed her career, began to reflect upon her ICT career, gradually beginning to arrive at life changing decisions

*"But then again how much do you need to be really ambitious in your career? There's lots you know they often say women do not reach the top well that's thoroughly sensible because there are lots of really comfortable back waters on the way to the top. And why do you have to reach the top? Why do you have to be so ambitious? Because if you are going to reach the top you have got to be ruthless and women obviously don't want to, so why so why is it so de-valued, not reaching the top?"*

However, problems of coping with work and domestic responsibilities remain relentless for both male and female employees with caring responsibilities but the consequences on the career trajectory are believed to be most salient for women (Griffiths and Moore 2006).

### The 'realisation'

*"I don't mind doing the hard work but where the hard work is purely down to the money and the money goes into somebody else pocket not necessarily for a good, and I wasn't sure what good was but it wasn't the company."*

Some of our disappearing women gradually realised that they were surrounded by individuals that had very different values "people had values like they wanted the next BMW... it was all very status conscious". One of the 'disappearing' women questioned her motivation to leave the ICT sector "but my move out of IT was not for that, it was really, although I didn't get it at the time it was because I didn't find it meaningful." Another 'disappearing' women echoes word 'meaningful' regarding her perception of what working in the industry meant to her "you know like typing data into a machine what's it for? It's not meaningful."

Lydia began to look at what working for a private organisation actually meant and realised it was not contributing to society on the whole, as she re-evaluated her life she realised that she:

*"didn't want to work for somebody who, I don't mind doing the hard work but where the hard work is purely down to the money and the money goes into somebody else pocket, not necessarily for a good, and I wasn't sure what good was, but it wasn't the company, you know, so it was more yes I'm sure I didn't want to work for a private company again. People slogging their guts out people sleeping in cars people working eighteen, twenty odd hours cos somebody wants to make a bit more money and I don't agree with it. But my experience of a private company, especially when you are in to marketing as well, so I just didn't want to do that I wanted to work for not for profit, work for a charity and do something that I'd like. Also cos I knew that the skills that I had I could really help somebody'.*

Disillusionment regarding her career was beginning to overwhelm Lydia; she was finding it hard to justify her position at work and her role in society. Another of our 'disappearing' women was also disheartened with the corporate life:

*"Yes it was project work and sometimes you would be working on project, sometimes you would be working on writing proposals. And I found that there was a disingenuousness.... The consultants, management consultancy is essentially parasitic it feeds off its clients weaknesses".*

When her organisation "were now selling to South African banks and African banks but I couldn't bare the thought of that because I knew I would not, I would not want to lie to a third world operation" one of the 'disappearing' women had to make a decision "I would have been flying business class all over the place and they were even going to pay me more than they had before and it would have been a doddle. But it was no, I don't want that politics, I don't want that lying" and she resigned. She could not cope with "actually lying to cover their tracks... a kind of 'fluff' kind of gloss over you know well you know cover that up or keep them going".

Gill talks about a gradual awareness about what direction her life was going, "Yes, so there was a great disillusionment, I was at a stage in my life where, I never wanted to be anybody's mother I never wanted to have kids and so there I am I'm thirty nine I'm single I don't have any dependents I don't have any debts, the job was really, it was like there was this terrible disillusionment there was something we had all believed in that was just going sour and bad relations with people and ...." so she got her road map out. Belinda enjoyed her career in ICT but there was a sense of dissatisfaction which she could not identify, "I tried a lot of different IT roles, I thought I have been there, done that, I was feeling dissatisfied". There were attempts to counterbalance the feeling by becoming involved in voluntary work with the homeless, "I felt what is the point to all this, I am not doing any good in the world".

Cleo eventually negotiated part time status but as previously reported her time away from work was not respected and she was constantly contacted at home. Cleo felt that her individual self esteem, well being and performance were not effectively being managed by her or her manager but constantly under attack and this contributed to her leaving ICT. She was undermined by what she perceived to be a role overload, a close scrutiny of her actions, her team leader style, and her increasingly strained performance. The pressure to perform under these circumstances along with juggling two children, one a new baby, was immense and consumed a huge amount of energy. A sense of isolation also began to seep in as she felt her situation generally went un-discussed because who was there to consider these types of issues with when it was her female manger who relentlessly undermined her,

*"... significant event, really there was probably other stuff that went on in between but this was the main thing she er... she erm, another working mother she worked full time and she worked long hours and I think she didn't support my part time status... she had no technical understanding and I think she was very threatened by the fact that I understood the technical stuff and I think she wanted to undermine me."*

### The 'bolt of lightning'

*"you don't have to prove anything and it was that realising it is ok I don't have to prove anything. I don't have to prove anything in the job; I don't have to prove that I can build a social life."*

There was a resonance echoing throughout all the women's interviews about what actually led to the decision to leave, what was the deciding factor? We describe it a 'bolt of lightning' but it was also called 'the straw that broke the camels back', the significant event. Gill's refers to hers as an event on her 39th birthday; she had nobody to celebrate with. A serendipity meeting with a stranger, she finds herself on her own at a clients Christmas party she spoke with a female city lawyer and explained her predicament of being alone and her intolerant working and domestic situation,

*"Well the event I could tell you about, of the change, was my thirty ninth birthday, I didn't have anyone to celebrate my birthday with and I had been invited to another IT company's Christmas kind of do. So I went along to this, so its someone else's works Christmas do, on my own its my thirty-ninth birthday, I end up sitting with this woman who's a lawyer for the city for New York and we had a really good conversation and somewhere in the conversation I said can I tell you its my birthday and will you have a birthday drink with me cos I've got no one to have a birthday drink with, and we had a drink, and she said "Happy Birthday" and she was a really good listener and she said "its hard for you isn't it" and I was able to just open up and talk to someone about what it was like and she said, and I remember her saying, she said "when you find yourself banging your head against a brick wall it is ok to stop" because it hadn't occurred to me, it hadn't occurred to me that it was ok to stop until that point and it was from...then I started thinking that actually I don't have to do this job'.*

Cleo's 'significant event' witnessed her walking out of the organisation and never returning, "they were going to, they wanted me to train up some other members of the department with my...skills and they wanted me to do something different and I thought hang on a minute isn't that re-organising me out of a job? I felt it was de-skilling me. So I packed up my stuff that day and I never went back." This 'disappearing' woman was being pushed to breaking point, her emotional condition was completely anxiety laden, and her self identity was under constant attack. It was constructive dismissal after years of loyalty. There were other instances when it would have been understandable if Cleo had resigned none other than finding out that her team member earned £10,000 more than she did, what is significant.

Cleo's 'significant event' was the attempt to devalue her individual achievement seizing those skills she was recognised for, her self-worth. Another 'disappearing' women simple could not cope with the disregard of professional ethics that she witnessed on a daily basis, *"So I left because of this whole waste, the whole in efficiency and waste the whole ethics and the lying and, and because I wasn't really political if you were going to go further you had to be, you have to be political"*.

Lydia recently married with a sick mother to care for in the North West was being asked to work away from home Monday through to Friday indefinitely. She gave in her notice after returning to work after a holiday with the realisation that 24 shifts were soon to start.

When asked if this was an immediate response to the situation without any discussion with her family and friends she replied *"Yes yes and I just said I can't, its no life I can't do this any more"*.

## 'Disappearing' Women: Processes of Leaving

*"A head hunter once asked me why I left that job because I had a grand title I was Vice President Implementation North America and erm, why did you leave and I said why does a dog lick its balls... cos it can! I could leave. I could leave I had no debts, no dependents, so I left so I simply resigned and they were all worried that I resigned because I was going to the opposition or anything like that but no I just resigned because I just didn't want to do it any more. And I gave away my furniture put what I needed in the car and spent six months driving very slowly across America and it was wonderful."*

### Moving out

Jacob (1989) using a 'revolving door' metaphor to explain the continuing occupational sex segregation in certain sectors, suggested that for every eleven women who gained entry into male dominated sectors ten exited. Supplementing this theory, but with evidence pertinent to the ICT sector, is the data gathered from the WINIT study, of 479 female ICT professionals in England, that indicated a high level of job churn, the 'revolving door'. 25% of WINIT respondents reported that they changed jobs within the last year with a further 40% looking to change jobs in the coming year (Griffiths and Moore 2006).

Research from the salary specialists 'Computer Economics' indicates that the proportion of people leaving their jobs for new roles has risen from 4.6% in the last year (2004) to 7.1% in 2005 (ComputerWeekly.com 2005). This job churn or high turnover of ICT staff has plagued many employers and continues to fuel occupational sex segregation and preserve male dominated sectors. Having overcome any recruitment obstacles, women are still being excluded from core organisational activities resulting in the loss of social and material benefits from internal networks (Adam et al 2005). The issue of job satisfaction, pay satisfaction and organisation identification are suggested factors that contribute to 'turnover intention' (Van Dick et al 2004). *"When an individual observes that her social category rather than her effort or ability determines her outcomes she becomes aware of the constraints of her social position on her outcomes which undermines self-efficacy."* (Chang 2003:29).

Chang (2003) further argues that women who have a lower self-efficacy are more likely to change from male to female dominated sectors which we have observed with the women that were involved in this study. Cleo moved from an R&D Manager to train as a primary school teacher, Maddy to train as a senior ICT teacher, Dee moved from Senior Programmer to bereavement counselling, Belinda moved from senior Management role to become a HR manager, Carla moved from ICT to work in recruitment. This move away from the ICT sector into predominately female dominated sectors may be related as Chang (2003) suggests - to gaining control of their environment and destiny - certainly Dee's move was, *"I knew I like people I wanted to work with people, I was already thinking counselling along that kind of line... and I thought well I've been through a rough experience myself"*. When an individual's sense of worth is mistreated or derived an immediate response is to protect, maintain or enhance what is being devalued; in effect the need to fight the situation or flight from the situation becomes a coping strategy. Chang (2003) explains that those being undervalued can leave the social context that threatens them, propelling women to voluntarily leave their workplaces and preserve their self-worth. The significant events that influenced women's disappearance in our study certainly imitates aspects of Chang's (2003) research.

### The Aftermath

*"I felt lighter really yes"*

Some 'disappearing' women spoke of a sense of euphoria once the decision to leave had been made, one women says *"I was excited and for quite a while it was an inner secret and I wasn't going to tell anyone until I had worked out how I was going to do it"* this made her untenable working conditions palatable while she devised her exit strategy. Another said *"I woke up one morning and I'm not going into work no more that was a huge blessed relief"*. These women report of working through extreme conditions, and there is a initial exhilaration once they had arrived at their life changing decisions, The realisation dawned *"so I could just walk out of my job so I did, and I walked out with a completely opened mind of what ever lies ahead and I somehow naively expected that if I just kept travelling something would happen"*, are indeed walking and not running. *"I didn't tell anyone what I was doing I just said I was having a tidy up, at the end of the day..."* and another realising once she made her decision to leave *"You know there is light at the end of the tunnel"* regardless of this frankness *"I didn't plan it at all"* when asked about her exit strategies.

Hand in hand with the euphoria came also a sense of despair for some of the 'disappearing' women in our study. Cleo was, she believed, *"constructively dismissed"* through a tirade of harrying and undermining tactics over a long period of time, she finally could not cope and walked away. This however left her in an uncertain situation with regards to her legal position, *"No, nothing, there was nothing, I could do, in fact I did go to personnel about it and all they were interested in was there not being a court case they were protecting the company and that was there stance"*. Her line manager contacted her to ensure that there would be repercussions for himself or the organisation, *"My boss rang me and said "ok so its stress you're off with stress are you" and I said if that is what you want to say you know you can say that "right ok ok, your off with stress ok fine ok"*, Cleo received three months salary under the guise of sick pay. At that time Cleo was too physically and emotionally unable to challenge or dispute the situation.

After working long hours for a number of years some of the 'disappearing' women reported that *"It was very hard to adjust and what we did was we kept the structure the same"* within the family unit, they maintained the same childcare arrangements. Others realised that they could not just stop, *"Yes, yes without sort of something to do, I would have just sunk because I was in London where I knew some people but though I didn't have anything, I'm not very good at getting out of bed"*. A coping strategy for Lydia was to view her situation as *"It was nothing...I'm stopping for six months"* while another participant missed her working life *"It is different but I mean yes I miss doing the, I really liked doing the technical stuff there...and I got on really well with the other guys"*.

### Choosing a new career

*"Well I started putting my CV together and I did kind of look a bit at IT but ultimately I said to (her partner) you know after a couple of months I said I don't really want to go back into IT I have had enough"*

A high proportion of the 'disappearing' women embarked upon a radical shift away from a technical, intensive, dynamic and often authoritative work life, either through choice or circumstance, to work in caring, listening occupations, with a face to face mode of working. The process of finding a new career has not come easily for all of our participants as reported with Beatrice who became a 'disappearing' woman by default because she was deemed too old by employers at the age of 51 to be recruited as an ICT professional.

Temporary work was a flexible option that both Lydia and Belinda used after leaving the ICT roles. Each had a different attitude of what potential opportunities temporary work may bring, For Lydia, temporary work provided a wage and maintained some momentum of working but mainly offered the opportunity to unwind, *"just mooched I really did. (Her husband) worked from home so that was nice I was just padding around the flat got a temp job, and just temped whilst I looked for the job that I wanted. It was good to be in that position I would temp take a couple of weeks off and then temp again until I applied for this job"*. Belinda realised that temporary work was an entry into an organisation. Her two last posts, Finance Officer and HR Manager were offered to her while she 'temped' at organisations. On the day of the autobiographical interview for this study, Belinda had handed in her notice on her HR post, she became bored of the job but is optimistic that future temporary work will again be a fruitful recruiting opportunity *"temping and seeing how it goes from there"*. There is a sense that Belinda is still looking for her ideal job, all be it very casually.

Working a strict nine to five day, she appears in control not allowing work to overwhelm her life in or out of the office. However Gill needed to complete detach herself from actually working in ICT, after a six month career break spent travelling around the USA she was back and ready to work. She was immediately recruited to work in an Internet software engineering company but *"it felt like defeat getting a job again"*.



Lydia is determined to find the right job for herself after her eighteen months at a not-for-profit organisation and to help her in this challenge she has recruited the services of a Life Coach, *"initially you agree what your goal is, what is going to be your goal for the outcome of the programme. And then she works with you, and it could be picking up... she doesn't advise, she shouldn't, well life coaches shouldn't advise. So it would be looking at certain areas 'what is your goal' and certain tools that will go towards that. There might be a couple of questionnaires you know about what are my career anchors what are my personal values because my personal values come quite strong in my decision making"*. At the time of the autobiographical interview Lydia was at the start of her programme with the Life Coach so we have no current information regarding how successful this process was.

Coincidentally Gill was considering the option of becoming a life coach to finance her PHD *"I got interested in you know this new phenomenon life coaching, I thought well maybe I could do that, and that would enable me to pay my way through the PhD"* but *"somehow ended up on a hypnotherapy training course and I really still don't know to this day how"*. Gill recalls how she realised that she, all be it with a touch of serendipity, found her way, *"so I went I've been out of work a few months its time I did something. I had no idea, it rather appealed to me that I had no idea what this was and it was about as kind of leftfield as something could be, you know it was really, I had no idea, so I just turned up and did this very intensive course for two weeks at the end of this I knew right this is it, this is me, this is what I'm here for what ever lies ahead there is no going back this is it."*

### Support Networks: Financial and Emotional

Indicative of how desperate their situation had become a number of our interview participants walked out of their jobs not informing their partners, families and friend after the event. *"so I packed up my stuff that day and I never went back"* and another *"I drove home and I was just thinking, I can't do it and phoned my boss up and said I'm giving my notice"*. Both these women did have the financial support of a partner but *"In a way, I'd be earning a lot more money, but that's not the be all end all we have got used to not having as much money now"*. Money is not the major driver of these women, one 'disappearing' woman turned down a similar role that she was offered so she would not leave, *"although it was a well paid job as well it was not the most important driver"*.

In contrast two of the 'disappearing' women were single so made their decision knowing that they would have to be financially self-supportive. One of these women had walked out of a highly prestigious job and associated pay package. Gill's decision to leave created a major family disruption, her father's traditional values on both a domestic and working level added an extra burden, *"couldn't handle me leaving "You don't leave a bloody good job until you've got another one!"* The rift took years to heal, *"we can speak to each other now, there was a time, oh leaving the job violated all my fathers' values...I am now twenty miles from my parent's house but for years we couldn't talk to each other"* and as she was single *"my father thought that if, if I wasn't, it's almost like if I'm not some other mans problem I must be his."* Regardless of the fact that Gill had been independently financially secure for the last twenty years.

## 'Appearing Women'

*"I absolutely love what I do"*

### Where I am now (caring careers)

Autobiographical interviews have enabled the 'disappearing' women in our study *"to grab hold of feelings that would be otherwise inexpressible and unmemorable. For better or worst, stories reinforce and amplify feelings at work"* (Sandelands and Boudens 2000:58). The stories recalled periods in these nine women's lives that have been painful but also enlightening, one of the women admitted that the interview and sketching process was the first time that she had returned in any detail to the 'whole sorry episode' and recalling some of the events had been very emotional for her *"Its hard thinking about it actually"*. As researchers of 'disappearing' women from the ICT sector the storytelling was an all-encompassing process. We were told how these women 'moved in', 'moved up', 'moved out' of the ICT sector (Griffiths and Moore 2006) and finally their current career stories 'where they are now'.

In choosing a new career almost all of the 'disappearing' women in the study gravitated towards caring occupations that dealt primarily with people, *"I am a people person...and I just loved interacting with people. If I was able to help them and I don't mean that in a sort of goody two shoes way but they didn't even have to say thank you, you saw it in their faces that I had given them something that had helped them on their way and that to me was just like enough, I didn't need a thank you. And I thought that's why I didn't find IT satisfying"*. Dee says of her role as a bereavement counsellor her main priority was to work with people regardless of what job role enable her to achieve this, *"How I moved into counselling?...when he (her son) is in school full time I could then hopefully be ready to go back to something, but its that thinking, what do I do? And I knew I like people I wanted to work with people, I was already thinking counselling along that kind of line...and I thought well I've been through a rough experience myself"*.

A successful and recognised practitioner Gill *"... and that was nearly six years ago and I have established a very successful practice this is it. And its not just hypno, its gone beyond hypnotherapy I now what I call what I do emotional health"*. Once more this 'disappearing' woman talks of how she enjoys working with people in a caring role, *"Yes well I get fulfilment in helping people, I get fulfilment in competency in being good in something cos I'm really good at this and I get fulfilment in freedom... I'm self employed I've arranged my work week the way I want it to be I work"*. Both these women are self employed and enjoy the flexibility that this brings *"I am now though my own gatekeeper"*. Nonetheless one 'disappearing' woman warns of the potential drawbacks, *"gone from working in a huge organisation loads of things organised, your days organised and you have gone to self employment which is completely different beast all together, because you have to get yourself motivated find your own clients its a different sort of approach"*.

A commonality that evolved from the 'disappearing' woman sees a third woman following a similar route in her move into life style therapy, *"But I was looking at different things, like I was looking at either gardening because I like gardening either that or nutrition for that reason and...yes I noticed they were doing interviews for that and I thought should I, shouldn't I, and my partner said "look why don't you go down and see what its like and the worst that could happen you would do a year of it and if you don't like it all you have gained it extra knowledge"*. Acquiring this extra knowledge took a three-year intensive course. Cleo was convinced of the beneficial role of nutrition *"It was something I have been interested in, it was really when I had the miscarriages, I think when you have your kids anyway you start thinking about what you are going to eat and all that sort of stuff, but when I had the miscarriages I had two miscarriages. It is probably the IT person in me that thought there must be a reason for this and I had stuff done at the hospital and it was all inconclusive, no particular reason and I thought well that sounds rubbish to me and you can't have two in a row and there not being a reason for it so I looked at other aspects and nutrition was one of them and I changed what we were eating in the house"*. Similar to the other woman in the study, Cleo now has an established practice and recently she has formed a partnership with another therapist offering a complementary service with future plans to expand the services offered.

People were a familiar theme that can be observed from where the 'disappearing' women are 'appearing'. Carla who makes the comment that she did not think she was good with people in fact she was rather shy, *"people person, I didn't think I was"*. After a restructuring of the organisation Carla found herself managing twenty one ICT support workers, there was an immediate resistance as she had never worked closely with clients, *"When I started in support working with people, joking with people on the phone, they had problems, I found solutions or work a rounds, I loved it, that contact with people"*. Finding herself on the job market after another round of redundancies this exposure to working and helping people influenced her career choice and she moved into recruitment, *"teaching and helping people get jobs they want"*.

Two of the 'disappearing' women are planning careers in teaching, Chrissie will be half way through her Post Graduate Certificate in Education course (PGCE) and Maddy was on the threshold of committing herself to further training and fees. Given that Beatrice, Maddy, Lydia and Belinda have not yet 'appeared' in new professions not all of our autobiographical accounts have been conclusive. Both Beatrice and Maddy became 'disappearing' women by default as they could not get back in to the sector due to ageism along with other discriminating recruitment barriers. Belinda is still casually searching, tentatively '*dipping her toes*' into new sectors and job roles with no real sense of urgency. However Lydia is also searching but with a determination, employing the services a life-coach she has high aspirations of finding the right job in the right sector.

## Discussion

In this report we have mapped out the DW: NW ICT research aims and objectives, explained how we attempted to contact this hard to reach cohort of women, documented the ways in which we endeavoured to meet project aims through various research activities such as autobiographical interviews, the weblog and use of sketches. The Interview process followed experiences gained from the recent WINIT project. Data analysis has highlighted reasons why our disappearing women did not want to stay in ICT the catalytic significant events that influenced the women, the processes of actually leaving once the decision to go was made and finally 'appearing' women discussing what these women are doing now.

These findings are based on an interview sample that is small in number but large in importance in revealing issues relating to 'disappeared' women from the ICT sector in the North West of England. Further research is recommended in order to fully explore the phenomena adequately taking in the other regions across England.

Key findings are:

### Heterogeneity:

Given that the women who participated in this study were self-selected this ensued that they were also heterogeneous in terms of the age (25- 30 years old to 60-65 years old) which reflected a wide range of career stages in ICT - exploring/starting out, establishing/progressing and reflecting/retiring (Moore et al 2006), a variety of job roles (a Help Desk team leader through to a Vice President) and a range of ICT organisational responsibility, pay and rewards. Only three women out of the nine women had children with seven out of the nine being in a relationship. Despite this heterogeneity there were a number of shared experiences reported.

### Workload/ Long hours:

The 'disappearing' women in the study all commented upon a burgeoning workload and increased working hours. Not only are individuals spending more time in the workplace they are even working harder than their peers were in the 1980s and 1990s (Edwards and Wajcman 2005). A number of the women who travelled because of their work reflected on the extra time this added to the working week often needing to leave the night before for a prompt start the next day. Long days, working weekend and being overwhelmed by the workload were common characteristics of the current ICT workplace. Furthermore redundancy was a reality with eight out of the nine women being made redundant in their career history, some more than once!

### Chilly Workplaces:

All of the 'disappearing' women that contributed to the research spoke at some level of being excluded or ostracised in some way within the workplace. The forms of hostilities took on many guises some overt such as openly discussing women's personal appearance, one woman being paid £10,000 less than a male member of her team, spreading of rumours insinuating sexual relationships with male colleagues. There were covert hostilities for example ageism and gendered recruitment barriers, being requested to travel for a week to Asia a week after returning from maternity leave. Such behaviour indicates a culture of bullying and harassment in many ICT organisations with women remaining as undervalued

### Significant Events:

'Significant events' naturally evolved from the interviews; each woman could identify an episode in their life history that either, was the last straw or allowed time for reflection. Generally the 'disappearing' women portrayed these 'significant events' as negative with a positive outcome. Many of the interviewees identified a specific occurrence such as illness, geographical relocation, being undermined, being forced to work overseas despite immediate childcare responsibilities, and being unable to return to the industry following redundancy.

### Illness/Disability:

Of the nine 'disappearing' women who contributed to this research, three experienced periods of illness and/or disability leading to sick leave. The ICT sector's long hour ethos, higher job demands, 'chilly' workplace culture (Faulkner 2004), and lack of take-up of work-life balance initiatives (DTI 2004, Kodz 2002) have contributed to high levels of stress.

### Dual Roles:

Only three of the 'disappearing' women had children yet the issues of managing a work-life balance threads throughout this report. Two of the women returned to work after their maternity leave determined to maintain their careers in ICT and also be mothers. These aspirations were impeded almost immediately with one woman realising that her career moved only sideways once she became a parent and any career progression ceased after her second child. Perceptions alter when women ICT professionals become mothers both at an organisational and personal level. However, problems of coping with work and domestic responsibilities are relentless for both male and female employees with caring responsibilities but the consequences on the career trajectory are clearly most salient for women (Griffiths and Moore 2006).

### Realisation:

Disillusionment regarding their careers was a general factor. Some of our disappearing women gradually realised that they were surrounded by individuals that had very different values "people had values like they wanted the next BMW or they, it was all very status conscious". One of the 'disappearing' women questioned her motivation of leaving the ICT sector "I didn't get it at the time it was because I didn't find it meaningful." Others reported a gradual awareness of unethical organisational practices introduces a huge sense of disillusionment. There was sense of dissatisfaction that was hard to identify.

### 'Appearing women':

A commonality that evolved in choosing a new career was that almost all of the 'disappearing' women in the study gravitated towards caring occupations that dealt primarily with people in a caring role (a bereavement counsellor, a nutritionist, emotional health therapist, careers advisor, two are planning to train as primary and secondary school teachers). Three of the 'disappearing' women are self employed and enjoy the flexibility that brings "I am now my own gatekeeper". Given that four of the women have not yet 'appeared' in new professions not all of our autobiographical accounts have been conclusive. Two of the participants became 'disappearing' women by default, as they could not get back in to the sector due to ageism along with other discriminating recruitment barriers. Another participant is still casually searching, tentatively '*dipping her toes*' into new sectors and job roles with no real sense of urgency while the fourth is also searching but with a determination, employing the services a life coach she has high aspirations of finding the right job in the right sector.

Autobiographical interviews have enabled the 'disappearing' women in our study "to grab hold of feelings that would be otherwise inexpressible and unmemorable. For better or worst, stories reinforce and amplify feelings at work" (Sandelands and Boudens 2000:58). The stories recalled periods in these nine women's lives that have been painful but also enlightening. As researchers of 'disappearing' women from the ICT sector the storytelling was a very all-encompassing process. We were told how these women 'moved in', 'moved up', and 'moved out' of the ICT sector (Griffiths and Moore 2006) and finally their current career stories 'where they are now'.

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