

WOMEN SOFTWARE ENGINEERS IN PRIVATE COMPANIES OF KOLKATA: A SOCIOLOGICAL STUDY

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ABSTRACT

Title of the dissertation: **Women Software Engineers in Private Companies of Kolkata: A Sociological Study**

This research is undertaken to highlight the everyday realities of women software engineers. It has attempted to explore whether their experiences are gendered. There are three main objectives of this study. Firstly, it attempts to understand the changes brought about by their employment. I have tried to understand whether their economic independence has enabled them to challenge the dominant familial ideologies which constructs women primarily as self-sacrificing mothers, good wives and economic dependents. Secondly, it attempts to explore whether there is a gendered division of labour in software industry as a consequence of work being socially constructed as masculine and feminine. Thirdly, it attempts to explore the kind of gender issues that women encounter at work and whether these affect their career mobility, compared to men. The study has adopted a mixed-methods approach, where major weightage has been given on qualitative aspects. I have also used some quantitative data, in the form of percentages to denote the responses of women. For the purpose of study, fifty women software engineers from three renowned IT companies of Kolkata have been chosen, through purposive sampling and snowball sampling. Data has been collected through face-to-face interviews and these have been recorded and later transcribed for analysis and interpretation.

My findings have indicated that employment in the IT companies have made women, the consumers of the new economy. It has given them increased economic power and self-confidence as they decide in matters of marriage. Yet they have not challenged the dominant ideas of womanhood and uphold 'respectable femininity' in the course of navigation between work and home. This was evident in the 'gendered balances' which women undertook of prioritizing family over work. They were guided by familial norms and ideologies of a 'good wife' and 'good mother'. The study further highlighted that women are largely concentrated in lower-end software tasks (like: testing, debugging, quality assurance) while they are under-represented in higher-end software tasks (like: architecture, design or consultation). I have explored that skills and technical knowledge are socially constructed and the fact that high-end software work is marked by a masculine culture. The findings have also suggested the different kinds of gendered practices at work and how marriage and family stereotype women as

‘inflexible workers’ which affects their growth in companies and their recruitment. A major highlight of the study was that women software engineers had to adopt masculine style of work in order to survive or cope in the IT companies.

CHAPTER I: INTRODUCTION

In neoliberal India, the state has strongly encouraged the flow of foreign investment into India. The Information Technology (IT) industry boom celebrates the educated workforce of ‘knowledge professionals’ who are said to be the beneficiaries of the new globalised economy. They are a part of ‘new transnational capitalist class’ (Radhakrishnan, 2011) and constitute a socially significant segment of the ‘new middle class’ in India. It is also one of the best prospects for the urban educated middle class Indian women due to its office based environment, higher income and intellectually stimulating work (Varma 2002, Patel 2005). The entry of women into the IT industry became vital for both the corporate sector and the Indian state as a symbol of modernity, attracting foreign multinationals and justifying a neoliberal economic reform (Mukherjee, 2008).

There has been a generous flow of literature on Information Technology and women in India. Various studies have noted the increasing employment of women in the IT industry. However, there are processes of exclusion operating within the industry. Both in Indian literature as well as that of the Global North, there are evidence of gendering within IT industries (Wajcman 2006, Upadhyaya & Vasavi 2006, Kelkar & Nathan, 2002, Dermaiter & Adams 2009). Giau (1995) conducted a study on software industry in Brazil and found that women contribute to ‘soft technical skills’, dealing with communication and interaction tasks, while men do their bit in tasks requiring hard skills. Wajcman (2007) and Raymond et al. (2007) showed an under-representation of women in high skilled IT jobs (specification, architecture and design phases) and over representation in low-skilled works (like: debugging/coding and testing). In India, The National Association of Software and Service Companies (NASSCOM) in its 2017 report noted that the overall representation of women in the software engineering workforce of IT firms is around 34%. Moreover, about 65% of women software professionals in IT belong to a large pool of young unmarried women while only 7% senior women software engineers are found in IT companies (Raghuram et al, 2018). Much of the research, in India, in this area is at a descriptive level and lacks an in-depth qualitative approach to the study. Quantitative studies, using a positivist approach, fail to capture the perspective of the people they are studying (Bryman, 2001). The data from such interviews are not detailed and often does not give the respondents the scope to understand the problem from their perspective. My dissertation is a part of an attempt to look into the everyday realities of women software professionals and analyse the issues, as gathered from their perspectives. I have used a mixed methodology

approach, with more weightage on qualitative data, to understand the everyday realities of women software engineers.

Relevant Literature

Regarding the impact of IT on women's lives, the focus of much of this literature is on whether IT can be a driving force for women's empowerment and more generally have a positive impact on development (Wajcman, 2006). Although new fields of work are being created, gender relations and gender identity are being redefined. In spite of the changes in the organization and location of computing work, women's position remains marginal and problematic. A recent report about women in Information Technology, Electronics and Communications (ITEC) sector noted that few women were entering technology related careers (Millar & Jagger, 2001). Even after they enter, they often have to compromise in terms of pay, conditions and training opportunities. It is seen that skills and competencies are perceived and labelled in stereotypical ways. This affects the ability of women to participate in and benefit from the knowledge-based economy.

Skilled IT work is now a masculine domain where women are a minority (Dermaiter 2009, Wajcman 2007). The type of behaviour that are identified in these studies as being masculine includes an assumption that work must be the main focus of one's life leading to long hours of working culture, an aggressive and competitive way of working and an emphasis on technical rather than interpersonal skills (Cooper, 2000). The IT worker is seen as an 'antisocial geek', with taped glasses who spends long hours in front of a computer totally engrossed with almost no attention to family and other needs, with poorly developed skills in terms of working with others is considered to be an extreme example of 'masculine' behaviour in this context (Kleif & Faulkner 2003, Wajcman 2006).

As women in India enter the rapidly expanding (IT) workforce, it could be predicted that their active participation in this sector will change their socio-economic status within the employing organization and the communities in which they reside. However, the IT companies in India face a significant problem of retention of women and are concerned about the number of women not returning to work or 'dropping-out' (NASSCOM, 2017). For example, Kelkar and Nathan (2002) noticed the existence of biased gender relations at the workplace. Upadhyay (2006) studied the causes of marginalisation of women engineers in software industry in Bangalore through quantitative studies and found that gender stereotypes and domestic responsibilities hamper their career growth prospects. Bhattacharya (2018), Upadhyay (2006)

in their respective studies on software employees in IT industries pointed out the marginalisation of women software employees in IT industries.

Objectives of the Study

My objective in this research has been to understand whether the employment of women in the IT industries has brought any change in their everyday lives. I have also attempted to explore whether their experiences in IT companies are gendered. There are three objectives that have been addressed in the study:

Firstly, it attempts to understand the everyday experiences of women software professionals and how they deal with their work commitments and home. I have further tried to explore whether the employed women have been able to challenge the dominant familial ideologies which constructs women primarily as self-sacrificing mothers, good wives and economic dependents.

Secondly, it attempts to explore whether is a gendered division of labour in the software industry as a consequence of work being socially constructed as masculine and feminine. Here, the focus is on whether Information Technology is gendered.

Thirdly, it attempts to explore the kind of gender issues that women experience at work and whether these affect their career mobility, compared to men.

Methodological Parameters

In the present study, I have used a mixed methods approach in order to explore the gendered identities of women software engineers in IT industries of Kolkata. The mixed methods approach has emerged as an alternative to the dichotomy of qualitative and quantitative traditions during the last twenty years. I have used mixed methods because as a set of interpretive activities, it does not privilege one single methodological perspective over another. Mixed methods enables researchers to simultaneously ask confirmatory and explanatory questions and thus verify and generate theory in the same study (Denzin & Lincoln, 1994). The research questions in mixed methods guide the investigations and are answered with information that is presented in narrative as well as numerical forms.

I have used a partially mixed concurrent dominant status design, with major weightage given on qualitative data. Biber (2010) says qualitative methodologies are particularly sensitive means of capturing the lived experiences of groups or individuals. In this study, the focus being more on qualitative aspects has provided a detailed and in-depth understanding and exploring of the lived realities or experiences of urban-educated women software professionals in IT industry. However, I have used some quantitative data, in the form of percentages to denote the responses of women.

In addition to a qualitative approach to mixed methods research design, I have also used feminist research method in the study. I have found the “feminist standpoint” theory relevant to understand the subjective positions of women software professionals in their personal and professional life. The standpoint theory acknowledges the significance of women building knowledge from their own experiences and lived understanding as foundational for a certain feminist epistemology. In my study, the standpoint theory has been useful in understanding the everyday experiences of women, especially from their point of view.

The primary method used in the study is face-to-face interviews because it offers researchers to access people’s ideas, thoughts and memories in their own words rather than in the words of the researcher. I have used semi-structured interview as a tool to collect rich data from the respondents about their lived realities and subjective experiences that often lie hidden and unarticulated. The questions were largely open-ended to allow the respondents to express their opinions freely. Such questions are without presumptions and can be used to uncover varied and in-depth views of all the interviews. Hence the interview process was generally flexible as the respondents have amount of leeway of how to reply. I have also used narratives of women as they are important strategies of data collection in qualitative studies and feminist research. It made the interview process more like story telling sessions which made it interesting for both me, as a researcher, and the respondents. It helped me to explore the subjective meanings and experiences of women which allowed for new insights and awareness into social processes and gave them a voice to talk about their work experiences in the high-tech workplaces.

Since the study is a mixed research design with major focus on qualitative aspects, I have addressed the issues of validity and reliability as done in qualitative research. Internal validity is one of the strengths of qualitative research and it is based on determining whether the findings are accurate from the standpoint of the researcher, the participant or the readers of an

account (Cresswell & Miller, 2000). Internal validity was established in my study through respondent validation. Another procedure for validity used in the study was spending a prolonged time in the field. The third procedure of validity used was rich and thick description of themes supported by the narratives of the respondents. According to Cresswell (2007) this kind of detailed description makes the results more realistic and richer.

Women software engineers in the IT industries were the unit of analysis in the present study. Fifty women software engineers were interviewed working in three renowned IT companies of Kolkata, the names of which have been not been disclosed in order to maintain anonymity. I have referred to them as Company A, B and C respectively. All the women were computer science engineers from recognised institutes from either Kolkata or outside. The age composition of the sample varied between 24-45 years. To gain a male perspective into the research, I have interviewed 10 men software engineers.

I have used the method of purposive sampling and snowball sampling to select the respondents. I started my field work with contacting my friends and acquaintances who are working in IT companies. After that, I used their recommendation to get in touch with other women in IT. The same procedure was followed for men as well. Initially I contacted some of my male relatives and friends working in IT. They recommended more men in their company who could be contacted for the interview.

I have used qualitative analysis in my study to analyse the collected data. Data gathered from the interviews and narratives were thematically coded and analysed. With the feminist goal of asking questions and exploring issues that are of particular concern to women's lives and give them a voice, I recorded the interviews so that their content is exactly retained. I transcribed them as early as possible after each interview was over and each respondent was given a pseudonym. After the process of transcription was over, I went through it multiple times and began to create an order from the large mass of data and created codes. Descriptive codes and analytic codes were gradually developed, as I read and re-read the transcripts word-by-word and line-by-line and understanding the participant's view of the world. The re-reading of transcripts often helped me to refine the actual codes. This refining has been helpful in revisiting the passages to see whether it is better coded in another way and whether there are examples elsewhere in the same transcript or in the transcripts that need coding using the new codes. This also provided a chance of making initially descriptive codes more analytic. The

process of coding and recoding has helped me to generate the different themes for the study. These themes appear as major findings in this study. Each theme has been described, in detail, with “rich” information. They contain multiple perspectives from the respondents and are supported by their narratives.

CHAPTER II: THEORETICAL OVERVIEW

In my study, relevant theoretical perspectives from various sociological traditions have been used to analyse the issues of women software engineers.

Feminist Theorization of Gender and Technology

Masculine Culture of Technology

Technology is a paradigmatic masculine ideology in which women are represented as non-technical, as incompatible with machinery (Mellstrom, 2004). Thus, it is largely understood as a male activity. Biology has been used as a powerful tool to make sex as basis for sex roles. Western technology embodies patriarchal values and like science, technology is also seen as deeply implicated in the masculine project of domination and control of women and nature. The binary opposition in western culture, like culture vs nature, reason vs emotions and hard vs soft, have privileged masculinity over femininity. Hence, the initial challenge for the feminists was to challenge the enduring identification between technology and ‘manliness’ as inherent in biological sex differences.

Scholars like: Judy Wajcman and Cynthia Cockburn have theorised on the culture of technology, that it has a strong association with masculinity. They note that masculinity or ‘masculinities’ are central to the construction of technologies and also technological know-how. Wajcman (1991) views engineering as a unique example of an archetypical masculine profession since it goes beyond physical and intellectual work and still maintains strong elements of mind /body dualisms. Men and women have different attributes. Women are perceived as more closely associated with nature, emotions, less analytical and hence weaker than men. The advanced industrialised economies, specially the Western, conceive women ideologically constructed as ‘inferior’ and more value is placed on scientific technical rationality which is associated with men (Cockburn 2009, Wajcman 1991). Thus masculinity is expressed both in terms of muscular physical strength and aggression and in terms of analytical power. The construction of masculinity is such that it re-establishes the connotation that women are ‘ill suited’ to machines.

Wendy Faulkner (2009), a prominent figure in the field of technology and masculinity notes that in order to understand the association between masculinity and technology, it is important to look at the three gendered dichotomies. The first is the mutually exclusive distinctions between being ‘people focused’ and ‘machine focused’. The second is “hard vs soft dualism”. Thirdly, the hard–soft dichotomy extends to the styles of thought in technology because of the association of engineering with scientific methods, which brings with it the longstanding gender dualisms. On the masculine side of those dualisms there is an objectivist rationality associated with emotional detachment and with abstract theoretical, especially mathematical, and reductionist approaches to problem solving. On the feminine side there is a more subjective rationality associated with emotional connectedness and with concrete, empirical, and holistic approaches to problem solving. The above ideas of Wajcman, Cockburn and Faulkner have been helpful in understanding that skills and technical knowledge are socially constructed as masculine and feminine. This explains the gendered division of labour in IT industries.

Feminist Theorization of Gender and Organizations

Hierarchies, jobs and gender

Joan Acker, one of the most influential figures in the theory of gender and organizations, noted that organizations are seen as one of the locations where both gender and class relations are inextricable interlinked. According to Acker (1990), gendering occurs in five interacting processes in organizations. The first one is the construction of divisions along lines of gender. The second is, construction of symbols and images that explain, express, reinforce, or sometimes oppose those divisions. The third one is interactions between men and women, women and women and men and men. The fourth one states that these processes help to produce gendered components of individual identity. The fifth process is that gender is implicated in the fundamental, ongoing processes of creating and conceptualizing social structures.

Acker discusses the concept of ‘job’ and ‘job evaluation’ to identify the gendering of organizations. The concept of a job is inherently gendered even though organizational logic presents it as gender neutral. It contains the gender based division of labour and the separation between the public and the private sphere. The gender-neutral status of a ‘job’ and of the organizational theories of which it is a part depend upon the assumption that the worker is abstract, disembodied, although in actuality both the concept of ‘a job’ and real workers are deeply gendered and ‘bodied’. Job evaluation is a “is a management tool used in every

industrial country, capitalist and socialist, to rationalize the organizational hierarchy and to help in setting equitable wages” (Acker, 1990). In job evaluation, the content of jobs is described and jobs are compared on criteria of knowledge, skill, complexity, effort, and working conditions. When job evaluation is done, the characteristics of the job is evaluated, and not the incumbents who vary in skill, potential or capability. The ideas of Acker (1990) on gender and organizations have been useful in my study to show that the work culture of software firms have an underlying masculine connotation- long working hours, culture of prioritising work life over family life, focus on competition and growth.

Gendered Practices and Processes

Patricia Martin in her seminal work “Saying and done versus Saying and Doing: Gendering Practices and Practicing Gender at Work” (Martin, 2003) has theorised about gender and organisations in terms of “gendered practices”. Viewing gender as practice means to view it as a “system of action” (Martin, 2003) that is institutionalized and widely recognized. It also refers to seeing gender as something which is dynamic, emergent, local, variable, and shifting. One of the important ways in which organisations practice gender is masculinity. Organizations perpetuate masculinity by portraying a particular form of masculinity – “hegemonic masculinity” (Connell, 2005). Hegemonic masculinity and ‘emphasized femininity’ are essential to understand the relations between and among masculinities and femininities in the patriarchal societies. Martin (2001) talks about focussing on practicing femininity or femininities and practicing masculinity or masculinities rather than practicing gender. The ideas of Martin have helped in understanding that the problems faced by women in IT companies, in terms of child bearing or maternity issues or marriage are gendered ‘practices’. Connell’s (2005) ideas have been helpful in understanding that IT companies uphold a masculinity in the sense that women working in male dominated domains have to be like ‘one of the men’ in order to be accepted. Thus practicing gender or masculinities often translates into marginalisation of women from tasks of technical expertise in the IT industries as well as construction of workplaces as inherently masculine.

Inequality Regimes

Acker uses the term “inequality regimes” (Acker, 2006) instead of glass ceiling to show the gendered nature of organizations. She defines inequality regimes, as “loosely interrelated practices, processes, action and meanings that result in and maintain class, gender and racial inequalities within particular organizations” (Acker, 2006).

There are different components of inequality regimes (Acker, 2006). The *first* one is bases of inequality. The *second* is steepness of hierarchy. The *third* one is degree and pattern of segregation along the lines of race and gender. The *fourth* component involves the difference in wage gap. The *last* one is, severity of power which also varies according to gender. The concept of inequality regimes has been useful in analysing organizational inequality in terms of gender, emphasizing those processes that result in the relative absence of women at the top. It is an analytic approach in order to understand the ongoing creation of gender inequalities in organizations. This approach is useful in order to identify the inequality producing practices and their locations in particular organizing processes.

Sociology of Power

In my work, I have used Foucauldian concept of power and a conventional understanding of patriarchal power, as explained by radical feminists. Radical feminists see family as the key instrument of oppression of women, through sexual and maternal obligation, as is male control over bodies of women. Radical feminists rely on the concept of patriarchy in order to explain the universal and trans-historical oppression of women. In fact, patriarchy is one of the key concepts in radical feminism which is an essential tool in analysis of gender relations and is used to explain the subordination of women in society. In my study, I have used Foucauldian concept of power to show how discourses produce subjectivity so much so that individuals themselves ‘voluntarily’ create their disempowerment. The concept of power has been helpful in understanding women software engineers’ internalisation of ideologies of a gendered body and its roles.

Foucault’s analysis of power emphasizes micro level power relations. He argues that power is exercised by ‘surveillance’. Modern power is bound to knowledge, as in the age of free subject, and power cannot be exercised through prohibition, but is exercised through the production of discourses that shapes individuals’ selves and self conceptions. Since modern power plays a vital role in shaping the social body, it is best grasped in its concrete and local effects and in the everyday practices which sustain and reproduce power relations. In fact, power is significant to understand how femininity disempowers us and how the values of a system that oppresses us are able to stay within our minds. It is ‘hidden’ in the social body (Bartky, 1988).

Foucault ascribed the term ‘docile body’ to a historically specific type of body borne out of a form of modern power called the disciplinary power (Bartky, 1990). It is ‘disciplinary’ power that makes human subjects more obedient and “unthreatening as political subjects” and is

exercised through the techniques of surveillance. One of the regulatory modes of power/knowledge, Foucault cited (that 'disciplines' human behaviour) was the Panopticon, an architectural design developed by Jeremy Bentham in the mid-nineteenth Century for institutions like: prisons, asylums, schools, hospitals, and factories. The Panopticon was a metaphor that allowed Foucault to explore the relationship between systems of social control and people in a disciplinary situation. The surveillance resulted in the acceptance of regulations and docility - a normalization of sorts, stemming from the threat of discipline. It is the emphasis on the regular everyday practices through which power relations are reproduced and has converged with the feminist project of analysing the politics of personal relations and altering gendered power relations at the most intimate levels of experience in the institutions of motherhood, marriage and compulsory heterosexuality, in the 'private' relations between the sexes and in the everyday rituals which govern women's relationships to themselves and their bodies. The Foucauldian concept of power has been helpful in analysing how 'knowledge, that is, the dominant ideologies of femininity gets transferred into subjectivities of women software engineers. This perspective has helped in explaining that irrespective of being employed, women internalise the gendered identities as a 'good daughter in-laws' or 'good wife'.

Social Construction of Motherhood: Intensive Mothering

The ideology of motherhood posits women as producers of children and of labour power (Hays 1996, O'Reilly 2010). In my study, I have primarily focussed on motherhood as an ideology and social construction and how women professionals internalise it and face conflicting situations at work.

The social constructionist approach to motherhood rejects the assumption that the practices of mothering, characteristics of mothers, and meanings of motherhood are in any way natural, biological, essential or inevitable. This approach deconstructs the social and cultural constructs of motherhood that are often taken for granted. Efforts to define the ideology of motherhood return to Sharon Hay's work on "intensive mothering" (Hays, 1996) as the dominant mothering ideology of our culture. This ideology of intensive mothering is a dominant one in North American mainstream culture. According to Hays, intensive mothering is "child centered, expert-guided, emotionally absorbing, labour intensive, financially expensive ideology in which mothers are primarily responsible for the nurture and development of the sacred child and in which children's needs take precedence over the individual needs of the mother" (Hays, 1996). Intensive mothering rests on four core beliefs: firstly, children need and require constant

and ongoing nurturing by their biological mothers who are mainly responsible for meeting those needs. Secondly, mothers should rely on experts to guide them in meeting their children's needs. Thirdly, mothers spend a good amount of time and energy on their children. Fourthly, mothers should regard mothering as more important than paid work. Hays argued that motherhood is largely dictated by the ideology of intensive mothering. The concept of "intensive mothering" has been helpful to explain the mental strains women face in trying to look after children's needs and balancing career demands. While the women software engineers are economically independent yet they do not challenge the belief that they should be the primary caretakers of the family, specifically speaking, children. The internalisation of this ideology is strong enough to make some women opt out of IT work, to look after the child and then plan to join work later on.

CHAPTER III: WOMEN, WORK AND FAMILY IN THE NEW ECONOMY

My aim in this chapter has been to highlight that on one hand women are having access to independent income, are self-confident and engaging in consumerist attitudes but at the same time they have not been able to dissociate themselves from the familial ideologies. I have divided the chapter into three themes. In the first theme, I have explored their socio-economic background with the 'cultural advantages'. In the second theme, I have highlighted that women are managing their income and asserting their independence by taking financial decisions, deciding about their choice of partners in marriage, on the factors of relocation and so on. In the third theme, I have highlighted that while they are employed and financially independent, yet they continue to uphold 'respectable femininity' in everyday life. Their employment has not led them to question the dominant ideologies of femininity, like: domesticity or being care-givers of family. This has been theoretically analysed by Foucauldian idea of 'power' which controls women 'unconsciously' and confirm to ideals of womanhood.

Socio-Economic Background of the Women

The women software workforce, in my study, primarily consisted of urban educated women from Kolkata. Their education and 'privilege' give them access to the relatively well paid job in the transnational economy. As suggested by Upadhyaya and Vasavi (2006) in their detailed report on "Work Culture and Sociality in the IT industry: A sociological study", software companies look for candidates for the right of 'cultural capital' (Bourdieu, 1986), a requirement that tends to exclude those from weaker and socio-economic backgrounds and from rural areas.

As a service industry with software professionals working in diverse transitional spaces, hosting foreign clients, interacting with them over the digital media or taking on-site visits to Western countries, there is a demand of certain skills and knowledge. Apart from technical skills, emphasis is also given on right communication skills, and good grooming. Hence, social characteristics of employees have become a key aspect of their employability which includes fluency in English, access to technical and professional qualifications as well as more intangible attributes such as cosmopolitan outlook, the ability to interact with people outside one's own caste group, exposure to metropolitan lifestyles and familiarity with a broader range of cultures and languages. These are captured in Bourdieu's (1984) notion of "cultural capital" and it has become a key aspect in the division of labour in the new information or service economy.

Beteille (1993) argues that parental involvement creates both the skills and the motivations to succeed. He also notes, the transfer of cultural capital is "guided by complex social and psychological processes whose outcome is never guaranteed", still the emotional, financial and social investments made by middle class parents in their children have definite consequences for their success. In this study, women spoke of the emotional and financial motivations that women have received from families. Their socio-cultural and economic 'advantages' helps them acquire the skills and professional education to become upwardly mobile. The middle class, in neoliberal India, having access to a significant amount of economic capital are consciousness of the importance of schooling and have great desire to provide a global standard of education to their children. In this study, most women (86%), continue to uphold the value the education as their parents did and investigated the 'best' options for their children. They aspire to send their children to expensive private school for world-class education and some even look forward to sending their children abroad for higher studies. This highlights how cultural capital is transmitted, by the middle classes, from one generation to the next which perpetuates the class differences and maintains status quo. These findings resonate along with previous work on the IT industry that state, privileges of the class continue to influence individuals' life chances and that employees in the IT tend to be overwhelmingly from urban backgrounds (Upadhyaya 2008, Upadhyaya & Vasavi 2006, Krishna & Brihmadേശam 2006).

Economic Independence of Women and Changes in their Lives

Involvement in the neo-liberal global economy now involves living within the individualistic ethos of global capitalism and consumerism. The post-liberalization discourse on the new

Indian women co-opt many of feminist ideals, choice, autonomy and freedom to recreate women as consumers and encourage their participation as workers in the transnational economy. In my study, I attempted to analyse the professional employment of women software engineers and whether they felt it brought about any change in their relations within families. Women frequently expressed their feelings of self-confidence through their involvement in gainful employment in the IT companies. For most of them, the reasons for joining the IT industry was the global appeal of the software industry and the opportunities it provided, with high-tech offices and frequent foreign travels. All these added to a 'prestige' and 'social status' associated with working here. A common theme derived from the narratives was the relatively high salaries guaranteed by IT firms, than other private sectors or government sector. They believed that the attractive salary packages of IT professionals have given the contemporary women access to much disposable income at a relatively young age, enabling them to engage in high levels of consumption. This enabled them to engage in an upper middle class lifestyle which included: having access to globally branded lifestyle goods -gadgets and electronic equipments from the glitzy new malls for branded items, apparels or shoes rather than at the local market; dining out in expensive restaurants of the city (even take their parents along) or even going on foreign holidays once a year. Women used their income for self-consumption as well as for their families (both natal and conjugal). Purchase of a vehicle like two wheeler or sometimes four-wheeler, enabled through low interest loans and high salaries, foreign vacations – was referred to as 'promising mobility', comfort and status. Of all the women interviewed, 4% owned a car independently and 10% owned a scooty. Such 'signs' of wealth represent the new symbols of national progress in India (Radhakrishnan, 2011). They are the central indicators of the benefits of economic liberalization and women derived feelings of being self-sufficient and independent for their work.

Fuller and Narsimhan (2008) said that given the normally subordinate role of women in Indian society, the experiences of women in IT professions as a result of high earning are more significant than they are for men. Many of them noted that representing themselves as IT workers increased their confidence and that the consequent image mattered to themselves and also to 'others' (here, others implied family members). Their involvement in the competitive IT companies showed their ability to cope with 'pressure'. It brings out one's 'inner ability', which creates a sense of satisfaction and achievement for them which is otherwise scarcely found for them. Upon deeper exploration, it was evident that such feelings was often linked to the 'exposure', achieved in IT, which is a common term in middle class discourse in India

(Fuller & Narsimhan, 2008). Exposure both inside and outside the workplace enables individuals to improve their career prospects and their overall life-chances and the family members. For many women IT software professionals (52%), it was noted that exposure comes from working in IT with diverse people as well as travelling overseas on project assignments, working in new environment with new people which enriches a person socially and intellectually. This 'exposure' and high income in IT coupled together suggest a sense of pride and shifting social status, engendered by the IT industry (D'Mello & Sahay, 2009). This gave them a sense of self-reliance and helped in earning much respect from family members because of their achievements at work. For many women, this even strengthened their position in families as well as increased their 'desirability' among social circles.

Rajan (1994), in her examination of the new Indian woman says that they no longer view themselves as submissive and solely involved with domestic responsibilities. In this study, it was noted that their education and professional employment significantly mattered as it made them equal partners in marriage when it came to financial expenditures or deciding over monetary matters. Women (65%) felt their gainful employment did not only make them economically independent but they also could decide for themselves, manage their own finances and make their opinion 'count' within families involving financial investments which were previously a male domain primarily. They also noted that their increased economic power made them feel 'stronger' to stand up for themselves in case they had any marital issues. The conversations of women highlighted feelings of self-reliance among women involved in the software industry. This is even reflected in the 'choices' that women exercise or decisions they take when it came to matters of marriage. This has been taken up in the next section.

Decision-Making in Matters of Marriage

Here, I tried to understand whether the increasing economic power and 'shifting social status' of women brought about any change in the way they participate in marital alliances. I found that the institution of marriage prevails for most of the women and the general age of marriage was 28. All the women I interviewed had a strongly developed sense of self-worth, often independent of family or husbands. They wished to achieve financial independence prior to getting married. Although arranged marriages was found to be prevalent, but there were significant modifications. A common point of agreement among all of them was that, being confident of their value as potential partners in marriage, young women could actively resist being pressurised into marriage when men or potential partners do not meet their expectations

or when they feel it is not the ‘correct time’ to get settled. They noted that, given their economic independence, employed women have relatively more freedom in choosing their own partners. Thus, they are no longer submissive, rather view themselves ‘at par’ with men. Moreover, it also highlighted that the parameters of middle class marriage have expanded to include ‘companionship’ as a primary determinant (Fuller & Narsimhan, 2007). Thus, the advent of neo-liberal economy and globalization has intensified the celebration of individual choice, especially for women. Women (32%) not only had the liberty to choose partners of their choice but had the right to express their wish delaying their age of marriage (upto age 32) and planning for children. Sometimes they wait for a period of minimum three to four years in IT before settling down. With marriage, there emerged consequent discussions on relocation with husband, in different city. To this, many of them noted that marital relocations to different cities depended to a large extent on their possibilities of transfer to the particular city or availability of appropriate projects. Thus, the public visibility of women and the freedom to pursue careers are together seen as major achievements for women within their classes. However, in the study, I wanted to explore whether the employment and assertiveness of women software professionals led them to challenge the dominant notions of womanhood while they navigate between work and home. Upon deeper explorations, it was found that economic independence of women does not mean rejecting the ideologies of femininity or domesticity. Their ‘choices’ were found to be constrained within a structure, which is patriarchal. This has been taken up in the next theme of this chapter.

Upholding “Respectable Femininity” in Family and Work

The term “respectable femininity” is an ideological construct leading to a set of behavioural norms commonly linked to the 19th and early centuries (Fernando & Cohen, 2013). The discourse of “respectable femininity” validates a particular kind of femininity- one that is not submissive but rather confident and professional. However, her ‘personal choices’ ultimately uphold the sanctity of the Indian family. Domesticity is a central component of ‘respectability’ where women are constructed as prioritizing family and holding them responsible for preserving family’s culture as ‘good wives’/effective housekeepers and dutiful mothers and while pursuing their careers and being financially independent (Radhakrishnan, 2009).

The professional women in IT, while being independent and confident at their work, draw upon resonant notions of family even as they reconciled those meanings with notions of individual

achievements imbibed at workplace (Fuller & Narsimhan 2008, Radhakrishnan 2011). In this study, women were found to be career oriented, but rarely at the expense of the family which is almost always privileged over the stimulation of work or even the high salary a woman may receive from her IT job. They tend to view career as something supplemental to a married life with family and children. The experiences shared by women suggested that although they are committed to their work and derive satisfaction from their economic independence, yet pay considerable importance on family values. Thus, technically qualified and professional women trying to reproduce the notion of ‘good woman’ can be explained by the feminists’ perspective on Foucault’s understanding of knowledge/power and how it exerts pressure on the subjectivities of the individual. Women internalise the feminine notions (of family responsibilities or domesticity), in Foucauldian terms ‘disciplinary practices’, into their subjectivities in course of everyday lives. Interestingly, it is family which plays an important role in indoctrinating women to accept the power of men in both private and public realms (Rainbow, 2010). In doing so, they are constantly involved in striking a ‘balance’ between work and family and hence ‘adjust’ their work life after marriages, which is still unheard of in case of men. The way in which women strike this ‘balance’ along with its implications have been analysed in the following sub-themes.

Family comes First, then Job: The ‘Gendered Balance’

Masculine domination takes its power from the fact that women accept the domination as something that is ‘legitimate’ and ‘natural’. This domination, as Bourdieu (1894) says, is established historically and is internalised, naturalised and essentialized. The symbolic use of violence to women, is not physical, but is carried out by the imposition of a particular image and personality. The conditions of femininity that are accepted include: domesticity, docility, adjusting or compromising, tolerant, subordinate and being dependent of men’s expectations (Bartky, 1990). In this study, the responses suggested that women software professionals internalise the conditions of femininity, as mentioned above, which take the form of ‘balance’. The new gendered ‘balances’ recreate older strategies of cultural preservation that seek to prevent the feminized private sphere from being ‘degendered’. In this ‘balance’, most women professionals (although may not acknowledge) continued to prioritise family and its needs over their work and this took different forms. Women software engineers who have been in the industry for more than seven years (and have stayed through marriage and children) expressed their views on the dilemmas balancing the demands of home and work, going beyond the

navigations of the gendered division of labour in the home and hinting at the more symbolic aspect of these 'balances'. Although they are successful in their career, yet use various strategies to uphold the ideals of womanhood. Sometimes women make 'negotiations' between work and home by opting to keep housemaids (sometimes full time) to compensate their absence. Sometimes it is also seen that women involve in cooking on a day for family members to compensate for their absence at it. However, their conversations brought out occasional thoughts of feelings of 'inadequacy' even behind the negotiations, of not being able to deliver the duties towards family and home. They felt that their status as a bearer of 'culture' in the family is somewhat compromised due to the work culture in IT like: erratic work schedules like: staying back late at night, working at odd hours (sometimes even on weekends); not being able to give adequate time to family, especially children and family members like in-laws. It suggested that although women are confident, strongly tied to their work and value their financial independence, yet they are products of a gendered subjectivity. The dominant notions of femininity, the 'power', is transferred into the subjectivities of the individual thus disempowers them. It gets reflected in the form of 'balance' which women continuously strive for and failing which makes them feel 'inadequate'.

Upadhyaya and Vasavi (2006) noted that the need to look after the household, especially after childbirth, often leads to a tendency of self-selection of women in tasks in lower end software tasks like: quality assurance, testing or support. These jobs are considered to be lower-end and are usually paid less and offer fewer channels for growth; yet women prefer them as they have regular working hours with little chance of being sent abroad or long hours of work in office. In my study it was found that women (38%), unlike men, took such voluntary 'choices' where they preferred to be in software tasks like: support or quality assurance or testing which were lower-end and did not require long working hours or frequent travels. Such self-made 'choices' of women to prioritize family over work (to the extent of choosing to remain in particular jobs in IT) while interpreted as an entirely individualistic decisions works in recreating or reaffirming the gendered notions of a 'woman' where the culture of the middle-class families lie at the importance (or construction) of women being the care-giver and nurturer of the family. By "balancing" the desires and motivations of the individual with the duties and obligations of the family, the software professionals of the neo-liberal era reproduce the gendered ideals of femininity that draws upon the notions of a sacred, feminized domestic sphere while also engaging in the progress of economic and social development (Radhakrishnan, 2011).

At the core of the discourse surrounding respectable femininity, lies the issue of women's sexuality (Phadke, 2007). In this study, I have attempted to explore what women felt about their leisure time after office hours. To this, it was noted that generally their leisure was limited to 'coffee-breaks' or 'pizza-breaks' on working days within the office hours so that there is not much delay in returning home after finishing work. Married women rarely went out for dinner with friends or colleagues because of their responsibilities at home. Given their long working hours, women preferred to give time to family, after work, rather than hanging out with friends. For unmarried women, although there was no such binding at home yet they felt the need to return home early after work before it gets too late. On rare occasions, (may be once in four or five months) they were found to visit near-by restaurants for a drink with their close friends or colleagues (who were also women). Such occasions were largely unknown to their guardians (parents or in-laws) at home, as they did not appreciate women drinking and hanging out with friends after office. The fact that women believed in the norms of marriage and familial ideologies highlights that sexuality of women is channelized through marriage. In between conversations, women often acknowledged their family 'backgrounds'. 'Good family backgrounds' essentially consist of heterosexual families in which middle class women make 'appropriate' choices or decisions for their husbands and children- decisions that are enacted self-consciously and enthusiastically by most women interviewed. In fact, in Foucauldian terms, women are guided by the patriarchal construct of a 'good woman' and they 'discipline' themselves by being self-consciously professional, competent and ready to go home to be with family on time. Their frequent references to 'good families' suggested the ways sexual limits are set, reinforced and enacted by women in IT. According to feminists, for most middle class Indian women, the boundaries for acceptability within families is to have sexual restraint. Their respectability is linked to their being able to demonstrate on a regular basis their conformity to familial norms of being a 'good' or 'responsible' woman and any transgression from this is considered 'disrespectful' in middle-class families. Thus, in case of the women software engineers, their reputation is linked with familial ideologies maintaining sexual restraint and 'honour' and 'respect' of the family.

The Dilemma of Childcare and Motherhood

The first major problem highlighted by women software engineers was regarding childcare provisions in IT companies. Given the fact that it is mandatory to offer near site or onsite day-care facilities for employees under the Maternity Benefits Act, 2017, the three IT companies studied in this case, did not have in-campus day care. There are 'near site day-care' facility

which is availed by some working women. Given the long and erratic work hours of IT industries, women shared problems in picking up their children from day-care centres. Mostly, it was women who took up the responsibility of picking up and dropping children to day care centres. But in some cases, both men and women made adjustments for their children. It was noted that, sometimes even men (the fathers) took up responsibility of childcare in the absence of women. These were exceptions which broke away from the conventional gendered ideologies involved in parenting and roles of mothers. The discussions with women led to understanding the importance of motherhood and how it constructs women socially and culturally. It is taken up in the following section.

Conventional notions of the good mother who places her child's need over her priorities present the new modern women with implications and complications that put their domestic lives in conflict with their professional lives. Most of the women believed in the continuity of motherhood as compulsory and felt responsible for the childcare responsibilities, and spread this with their own consent. They believed that mothering is the most important aspect of themselves and their lives and staying at home with their children is more important than working outside the home for pay. Most women felt that after childbirth their identities become irrevocably changed and every relationship comes second to motherhood. This could be understood among the women, where they generally agreed that once they have children, their familial responsibilities reach a new level, such that childbirth rather than marriage by itself usually has greater impact on women IT professionals' working lives. Women (27%) were found to make adjustments after child-birth, in different ways like: cutting down on their travels after child-birth; sometimes refusing to take up projects that would require to work on weekends or on-site travels or frequent travels within the country till their children were old enough or letting go of challenging projects that are important for career growth in IT. Sometimes, women were found to leave work and decide to 'choose' full time motherhood or part time work as the best option for the happiness of family, especially children, and to meet their own emotional needs as mothers and wives. An interesting point here was the role of family. Responses of women ruled out an absence of family pressure on women to decide about their work and 'choices' they make. I interviewed three such women who left IT jobs after five-six years of work because of their inability to cater to their motherly duties. They shared their experiences of the emotional conflict and 'maternal guilt' of not being able to provide the care and nurturance to the child as 'expected'. One of them stayed with her in-laws and yet was unable to continue her work given the frequent absence of housemaids along with inability of

elders to deal with her absence at home coupled with her long working hours sometimes extending on to weekends. Other two women spoke of their anxieties to pick up late from day care or keeping the child alone with a baby sitter at home without anyone's supervision. All these underlie the dilemma of motherhood and the problems they pose for working women. As Hays (1996) has observed, the essential and ideological construction of motherhood puts women in a difficult situation. They cannot bring their individualism to their lives or their mothering because the institution of motherhood views them first and foremost as mothers, not people. The responses of women suggested that the construct of motherhood runs strong among the professional women. They internalise the patriarchal construct which positions a woman as the 'best' or 'sole' care-taker of the child and one who is best suited for all childcare duties. They believe in the ideology of "intensive mothering" (Hays, 1996) where they see themselves ensuring that they look after the emotional well-being and daily needs of the child.

It was interesting to note alternative perspectives, as well, about women resisting dominant gender constructions. Some women (3%), although a handful, were found to resist the ideal of motherhood where they opted for frequent travels (either with their children or without them), took up projects that would demand strenuous work. Although it did not bring full support from parents or in-laws (initially), women were not deterred from doing what they desired for. For this, sometimes they were even regarded as 'less feminine' by her family and relatives. In one case, it was noted that a woman walked out of her marriage due to lack of support from husband and mental trauma caused by family problems. She continues to work in the IT company and stays with her parents. Lack of support from family suggest how the subjugation of women is rooted in family, as noted by radical feminism. The fact that they are perceived as 'less feminine' suggest the social constructions of women in terms of dominant familial ideologies. In a culture, where sociality is presumed to be a key aspect of being a 'woman' and where men and women are presumed to be different, not confirming the gendered ideals make women techies something 'unseen of'.

Conclusion

To conclude, this chapter has highlighted that while women are economically independent and have access to individual income, yet they are guided by the dominant notions of a 'good woman' or a 'good wife'. They internalise the familial ideologies and constantly strive to maintain a 'balance' between work and home. Foucauldian idea of power and Bourdieu's

concept of masculine domination are helpful in understanding how women legitimise their inequality by reproducing the feminine ideals.

CHAPTER IV: GENDER AND INFORMATION TECHNOLOGY

My aim in this chapter has been to explore whether is a gendered division of labour in software industry as a consequence of work being socially constructed as masculine and feminine. I have divided the chapter into four themes. The first theme deals with the nature of work that software engineers primarily do in IT and the way work is organised in such companies. In the second theme, I have discussed the number of men and women in IT companies chosen for the study and noted that women are comparatively less in number when compared to men. Here, I have also presented data which notes that women gradually decrease as one goes to higher levels in organisations. The third theme deals with the social construction of skill and technical competence. This has been analysed under three sub-themes, as to how and why there persists a gender-based segregation within software work. The last theme looks at software technology and masculinity. It highlights that the high-end software tasks are associated with masculinity and a ‘geek culture’ which make them predominantly male dominated. Here, I have also explored the problems women face in this domain.

Nature of Work Performed by Software Engineers in IT Companies

In India, two basic kinds of services are in increasing demand- software and IT enabled services. Software engineers provide both kinds of services in the IT industry. In my analysis I have focussed on the services provided by software engineers (women, in my study) in IT companies.

Software engineers primarily work as software developers, designers, quality assurance engineers, support engineers, programmers or coders and so on. Each has its own set of tasks which have discussed in tabular form in Fig 1 of the thesis.

Distribution of Men and Women in IT Companies

With regard to the number of men and women software engineers, it was found that the were comparatively less number of women in all the three IT companies studied. For instance, in Company A, there are 57% men as against 42% women. In Company B, there are 44% women

and 56% men and in Company C, there are 43% women and 57% men. Even within the company, there was also a gradual decrease in the number of women from junior and middle level to senior levels. For instance, in company A, there is a decline from 56% in junior level to 32% in middle level to 12% in senior level. In Company B, it can also be seen that the number declines from 61% in junior level to 30% in middle level to 9% in senior level. A similar trend is noted even in Company C, where women software engineers decline from 63% in junior level to 26% in middle level to 11% in senior level. Thus, although IT companies recruit large number of women software engineers, yet they are concentrated mostly at junior levels. Their numbers start declining as one moves up the organizational ladder. This phenomenon is indicative of the fact that there is a demarcation and gender differential in access to employment in IT sectors.

Social Construction of Skill and Technical Competence

In this theme, I have attempted to show that technology and skills are socially constructed and it is reflected in the way tasks are distributed in software companies between men and women.

Perception of ‘Hard Skills’ and ‘Soft Skills’

Workers in the era of Information Technology have a combination of both hard skills as well as soft skills. Thus one hand the software professionals are expected to be equipped with programming skills and technical abilities, yet they are also expected to be competent in interpersonal skills, communicative abilities, creative thinking and problem solving. In my study, it was found that men are usually engaged in use of hard skills, while women are deemed as ‘better suited’ for softer skills like: communication abilities, creative thinking, support jobs etc because they ‘talk better’. Women (44%) noted such presumptions, since they are called for communication with clients, handling stressful situations, while men are generally called in case of ‘help’ regarding hard skills like: involving logic or analysis in software planning or designing. The gendered notion of skill is more evident when women noted how the maternity leave is associated with a period of lack of skill acquisition and hence being put in tasks like client management for a stipulated time. Married women (38%) said such random placement of women employees, created problems in their career growth in the long run as expertise in technical areas like designing and development is more valued than support or testing jobs or client management. The assumption about women being ‘better’ in soft skills, is historically rooted in cultural systems of meanings and ideas about what is ‘feminine’ or ‘masculine’ and

thus considered 'suitable' and 'appropriate' work for men and women. Hard skills are seen as "masculine" as they deal with technical abilities, whereas 'soft' skills deal with interactional abilities and communication which is believed to be a feminine domain. Masculinity stresses features like: being action-oriented, analytic or explicit. It is measured in terms of machine related skills, physical strength, self-esteem and women are not seen as 'suitable' for more technical jobs. Femininity on the other hand is characterised by being intuitive, cooperative and understanding. They are seen as 'technically unskilled'. Historically and conventionally, this tends to stereotype jobs as masculine or feminine (Wajcman 2010, Faulkner 2001).

Biasness About Technical Knowledge and Women in IT: Techno-Hazing

In studies of work allocation in IT companies, the underlying gendered assumptions about technical competence was understood by the way in which women and men software professionals are placed in different projects and job roles. Women (46%) spoke of biasness about technical competencies which determined who gets what projects and gets absorbed in teams. They (45%) noted that in their everyday interactions in the workplace, being taken seriously is a stronger challenge for women 'initially'. There are situations which question their technical abilities. Women lamented that they had to strive harder to convince team leads of their capabilities, unlike men. In fact, this phenomenon of being suspected of not having enough 'technical' competence was considered a 'typical' problem for women and was mentioned by many of the young women software professionals. This tends to undermine the career of women. Firstly, the doubts over the engineering abilities of women do not merely stop after crossing the 'apprentice' or training stage. Some of the senior women engineers (11%) noted that they have had to establish their engineering credentials every time they encounter a new colleague, associate or client for the first time. Hence, there is an extra layer of practitioner identity work which women, unlike men, have to do throughout their career in order to be taken seriously as engineers. Faulkner noted (2009), a recent study conducted by European Union (EU) of women engineers in industrial research found that such pressure is aggravated by the widespread and extremely undermining perception that women engineers benefit from 'preferential' treatment due to 'positive discrimination' - for instance the belief being, they got the job by the virtue of being a woman not because they were deserving or were 'good enough'. Secondly, there are subtle and ongoing mechanisms which undermine women's 'visibility' (Faulkner, 2009) and credibility as engineers. In particular, 'labelling' (Faulkner, 2007) as a mechanism can be significant. For instance, women (32%) noted the frequent use

of 'he' while referring collectively to engineers or technicians. The gendered messages operating through the 'labelling' render women's membership as 'real engineers' more fragile than men. Some senior women also shared their experiences in the IT industry of how men and women are assessed informally among men managers in their 'informal clubs', who are a majority in IT. Such tendencies of men undermining the technical capabilities of women is understood as the phenomenon of "techno-hazing". DiDio (1997) studied a number of women software professionals in the Silicon Valley and instances of women still grappling with problems of being assigned tasks not of their choice while men counterparts with similar backgrounds were given a 'choice' of assignments and it is here that he developed the term 'techno-hazing'. The feminist explanation of such biasness can be understood by the fact that science and technology has an image problem which impairs attempts to recruit women since the classic stereotype is heavily gender marked, the 'man', who 'loves' technology but rather socially withdrawn if not socially inept. This image draws on the conventional gendering of a dualism or dichotomy between the 'technical' realm and 'social', by which men or masculinities are so readily associated (symbolically, at least) with technology and women or femininities with people. Faulkner (2001, 2009) notes that the positing of these sides as mutually exclusive (to be technical is not be social and vice-versa), is a key reason why technically skilled women in engineering are perceived as 'gender inauthentic'.

Many young women were noted having a 'fragile' (Faulkner, 2008) status in IT companies and this has had an impact on their professional self-esteem and confidence. They internalised a sense of their 'fragile' status as engineers and it was felt as well as 'perceived'. Their responses demonstrated quite clearly the sense of women software engineers lacking 'authenticity' as engineers. Shaky self-esteem and confidence tends to undermine and has damaging consequences for the retention and progression of women, especially in higher-end tasks in the IT companies. While most the women engineers are aware of their gender visibility and of the need to work harder than men to prove their credentials, few seem to be aware of the more subtle dynamics within the workplace by which their professional self-esteem is undermined. For example, the feelings of lack of confidence or 'authenticity' are rarely discussed in public and specially in the presence of men. These suggested the implicit gendering within IT industries. While on one hand, the invisibility of women professionals as 'engineers' implies that they have to do extra layers of practitioner identity work, on the other hand, their invisibility as women often implies paradoxically that they have to do extra layers of gender identity work. Faulkner (2007) notes that, women note this 'gender (in)authenticity' as personal

failing rather than something for which the wider community, or social constructions, bear responsibility. It is largely attributed to the notion that the definitions of skill is saturated with sexual bias and is socially constructed (Wajcman, 1991). Far from being an objective economic fact, skill is an ideological category imposed on certain types of work by virtue of the sex and power of the workers who perform it. This idea that 'skill' has more to do with social constructions rather than technical competence gives rise to jobs being socially constructed as 'unskilled' and thus relatively undervalued.

Gender-Segregation within Software Work in IT

In this study, women are largely found to be concentrated in tasks like: coding, testing, debugging and quality assurance, which are relatively low skilled; while men occupied major high skilled jobs like: software development and designing and programming. In case of the IT industry, the segregation of men and women within the IT industries is a result of blatant or overt gender bias (Upadhy 2008, Bhattacharya 2018). This results in variations in pay packages and promotional scopes for women employees. I found this phenomenon covertly pointed out by many women professionals in all the three IT companies. Women (59%) noted that one of the key reasons for gender segregation is due to the nature of work and also employer's, or specifically speaking men's, perception in skill possession between men and women and their suitability for particular type of work. Commonalities noted among the responses was that such notions arise out of the ideological and social constructions rather than technical competency possessed by the male or female employees. Women (about 38%) pointed out that covert discrimination continues to take place because of gender based beliefs about jobs, roles, tasks and people that are communicated and indirectly reinforced continuously within organisations. While exploring gender segregation, I attempted to understand how or why certain jobs in IT have large concentration of women over others. Qualitative interviews with women and men illustrated this interconnection between gender and skills in software work. Men software engineers were asked questions like: *'Why are there relatively more women software engineers in testing and quality assurance, in the IT?'* Their answers came in different lengths and expressions, but they all had commonalities. Firstly, there was an assumption of women being 'better' in testing and quality assurance than men because the former are relatively calm and patient. They said women can and usually spend hours running the same test; while system design is primarily male dominated because men have a natural inclination and they can spend relatively more time than women at work to

invent ideas. Secondly, some men also spoke about women preferring themselves to be involved in some projects over others for their own convenience and hence a matter of ‘choice’. The fact that women are ‘naturally’ seen to be suited for certain tasks suggest the gendered assumptions held by men and the inherent politics involved in science and technology, which the feminist scholars have been trying to question and challenge since the early 1970s. To understand how the enduring identification between technical skills and masculinity happens, Cockburn’s (1981) theorization of understanding masculinity and technology as a social product is helpful to understand how the enduring identification between technical skills and masculinity happens. The affinity of men with technology is seen as integral to the constitution of male identity. In this regard, Cockburn (1981) notes that technology enters into our sexual identity, such that femininity is incompatible with technological competence, and to feel technically competent is to feel ‘manly’. Thus, technology plays an important role in the social construction of gender.

Masculinity and Experiences of Women in Higher-End Tasks in IT

This theme pays attention to the association men have with the technology (here, it implies computer) and the culture it creates to strategically or informally ‘keep women out’. Under two-sub themes, I have attempted to explore how masculinity is constructed and experiences of women in this domain.

Construction of Masculinity in Software Tasks

Software engineering, like other streams, education consists of endless drills of mathematically based analytical problem solving. This induction acts to ‘legitimise’ and habituate a reductionist way of approaching the world that is stripped of both social and emotional complexity (Murray, 1993). The engineers should not only be ready to engage in technical exchanges during work but also be interested in participating in them during breaks. Hence, to be seen as a competent engineer one must “throw himself into these rituals of tinkering” (Hacker, 1990). In resonance with the literature on masculinity and technology, I attempted to understand the cognitive feelings of software engineers with regard to their machines (in this case, the computers). In the software industry, the engineers are associated with a visible artefact and see themselves as “hardware men”- where the design jobs hold highest status. The finished product is a manifestation of one’s technical expertise and labour. Most of the male software professionals felt intimately associated with their technology, in the sense that they knew it profoundly and were familiar with it. However they did not use the word ‘intimacy’

during conversations. All of them reported experiencing more 'highs in their work' than people in any other occupations, even though they also experience lows like: difficult in maintaining work-life balance, coping with corporate pressures and so on. Whether they are involved in development or design work or programming work, I found that all typically feel a real thrill about something that they have helped to create – the software system –and are happiest when some part for which they have been working on (for hours or weeks) for the first time. However, it was largely men compared to women, who felt “deeply engaged” with the technology they are working. These suggested that men celebrate their technical competence and derived pleasure from it. A major part of this is due to the “pleasure in technology” (Faulkner, 2008). In their eyes, technical competence is what defines engineers as powerful people (Faulkner, 2001). These form an important feature of engineers' shared culture.

Paul Edwards suggested how men associate themselves with microworlds of computers. He noted that the 'microworlds' of computer programming offer a retreat from the unwanted emotional complexity, for whom power is an icon identity and an index of success. He further suggested, a microworld could become a challenging arena for an adult in the quest for power and control (Webster, 1996). All the men software professionals, I interviewed, not only enjoyed working but took 'great pleasures' in being associated with such a publicly visible technology (in this case, it is the software that they are creating) and this was generally what they chose to highlight when informing non engineers about their work. They thought of themselves to be of having an 'aesthetic creativity' which they felt proud of. They noted their 'ecstatic' feelings while working on computers and felt their family members sometimes failed to understand the connection that they share with their machines or the happiness if a code works or the passion with which they spend hours behind a software. As Flis Henwood says that technology offers a symbolic promise of power, as well as the potential to compensate materially for their relative lack of class power by acquiring technical expertise and so “strengthening their gender power” (1993).

Women Encountering 'Geek Culture' and 'Micro-Aggressions'

The 'happiness' and “*glint in the eyes*” of tech workers suggests the persistence of “geek culture” in software industries (McArthur, 2008). The term “geek” is currently associated with a specific class-inflected form of masculinity, masculine dress code, leisure activities, and personality traits. Something that was formerly stigmatised, 'geek' now has become an aspirational identity for most software techies. The 'geek culture' operates as a form of

masculinity that shapes certain fields of software work in IT- as seen in cases of software development and designing. Geekness is measured by one's technical skills, but also by specific personality traits, styles of dress, interests, forms of cultural knowledge, and gender presentation. In the study, I wanted to understand how women associate themselves with technology. Some senior women (33%) working as software designers or programmers in the IT industry reportedly actively rebelled against the type of relationship that men have with machines – the 'geek culture'. They spoke about their rejection against the emotional thrall of the machine by insisting that it is 'just a tool'. Some women (27%) shared their experience which how certain software tasks like: software designing and programming are informed by stereotypical 'working culture' and how men construct these as a core masculine domain. In doing so, they discussed men's 'naturalisation' of their (what women called) 'obsession' with machines how it became 'natural' for men to be in higher numbers in technical stuffs than women and hence their domination. Hence this 'geek culture', in IT industry creates "*a culture of engineering*" (McIlwee & Robinson, 1992) which plays a vital role in creation of gendered identities at work. Faulkner (2007) notes that gendered engineering culture is not only experienced among engineers but it's gendered roles are also known, produced and reproduced by society as a whole – codes that are based on male dominated courses that have been monopolizing the terrain of technological innovation.

I further tried to understand whether women face any problems in male-dominated teams of software engineering. Most women experienced "micro-aggressions" (Russell-Brown 2009, 25) during some point of time in their career, while working with their male co-workers. Although micro-aggressions appear as often unintended and may be invisible to the person enacting them, yet the recipients experience them as hostile or threatening. Women (31%) shared their experiences in male dominated software teams of how working culture in high end software tasks serves to exclude women 'informally' for instance: being reminded of being the only woman in teams or not giving priority to their views, avoiding eye contact and so on. Not being part of these circles, conventionally, created feelings of isolation, alienation and despair among women. The fact that high end software tasks are constructed as masculine domain is due to the gendered habitus, which is internalised by both men and women consciously and unconsciously (Powell & Sang, 2015). In this case, male bodies (through the culture they create) unconsciously pursue an embodied form of 'hypermasculinity', an exaggeration of male traits and there is an embedded view in it that it is opposite to all things feminine. Thus, the male

self-identity becomes an important issue in the construction of high-end software tasks like: designing or architecture, development or programming.

Conclusion

In this chapter, I have highlighted how software work is socially constructed in IT. The findings have been analyzed using Wajcman's and Cockburn's arguments on technology and masculinity. Faulkner's ideas of hard vs soft and techno/social dualism has also been useful in analysing how identities are constructed in technical fields. Women working in male dominated fields face 'microaggressions' and reported feelings of being isolated or reminded of being a woman.

CHAPTER V: GENDER ISSUES THAT WOMEN ENCOUNTER

The analytical focus of this chapter has been to explore and understand the different kinds of gender issues faced by women software engineers in IT companies. I have attempted to explore how family, marriage and childcare tend to create stereotypical images of women software professionals and act as constraining factors in the participation of women software engineers in the IT industry. The analysis has been presented under certain themes. In the first theme, I have discussed about work-flexibility in IT companies with reference to flexi-timing and Work From Home (WFH) and the problems they pose. I have mentioned about the gendered implications of WFH. In the second theme, I have spoken about how marriage and family creates stereotypical image of women as 'inflexible workers'. The third theme deals with gendered interaction at workplace and the final section deals with the survival strategies adopted by women in IT companies.

Problems Associated with Work-Flexibility in IT Companies

In order to reduce attrition in IT companies, especially women employees, the IT companies resort to various measures to ease the working conditions and provide a family friendly environment. These are '*flexi-time*' and '*work from home*'.

Although IT companies have 'flexi-time' policy, they normally have 'core hours' during which everyone has to be in the office – a policy that further contributes to the long working hours. Thus, it creates longer hours because people are expected to be in office during certain core

hours because meetings may be called for early morning or late evening and because of the need for client interface at certain times of the day. Men and women are in general praise of both flexi-timing and WFH which is said to be helpful for women – in balancing work and family and avoiding long hours of stay at office.

Interactions with women suggested that the policy of WFH has ambiguities within companies as well as across companies. For some companies (here, company A and B) the policy of WFH is available for employees to work two days a week, officially. Moreover, the company offers an amount upto Rs. 2000 towards reimbursement of use of Internet at home. However, in these cases, the employees are of the view that the option of working from home is not available for all projects. It depends on the kind of projects and the clients involved. Sometimes, clients do not agree for their employees to work from home as they do not want to compromise with their data or environments and ask everyone to work from the concerned ODC (Off Shore Development Centre) only. Similarly, WFH also depends on the ODC (Off shore Development Centre) or company concerned. Women were of the view that availability of WFH depends on internal dynamics like: kind of relationship that one shares with project lead or project manager. Getting access to projects, which permit WFH is determined on the kind of networking one has with seniors and colleagues. It also depends on whether employees have ‘good terms’ with seniors.

Gendered Implications of Work from Home

The ease of being able to work from home in IT companies brought out the mental anxieties which often lead to stress for working women. The responses of women were suggestive of the fact that work-friendly policies provided by IT companies does not necessarily help in what it is intended to (for women), rather it increases the work load. Women noted unlike office, they needed to have a high ‘self-discipline’ to be able to work from home. However, achieving it is often a daunting task for women. Elaborating on this, most women (79%) say that distractions caused by family issues and needs of children led them constantly looking into household activities. So, there is a constant pressure on women to balance between work and household activities, which was unheard in case of men. Sometimes this becomes problematic for those with small children without support at domestic front (absence of house help or illness of family members). The women software engineers constantly juggling or ‘balancing’ between work and home further aid in perpetuating gender stereotypes where women are perceived as ‘good managers’. The flexibility at work does not in effect challenge the gendered constructions that account for women’s dual burden of managing home and work. Rather it further re-entrenches

the ‘unique and legitimate’ role of woman within the family. It underlies the narrative of ‘respectable femininity’ which implies domesticity as a central component. This may be explained from the feminist perspective of Foucault’s understanding of power, that the dominant knowledge of femininity is internalised into the subjectivities of the individuals. The fact that women look after household needs and that of family implies that women ‘discipline’ themselves in terms of ‘good wives’ and ‘self-sacrificing mothers’. Thus, gendered subjectivities are created and internalised, irrespective of their technical education and engagement in high tech workplaces.

Stereotypical Image of Women Professionals as ‘Inflexible Workers’

The key characteristic of the IT workforce comes largely from its role in the global informational economy which requires workers who are mobile and flexible. Within the values of the new economy, an ideal worker is characterized as one who is flexible, mobile and willing to allow work to enter personal time zones and spaces (Mukherjee, 2008).

Feminists have long identified how women have been subjugated primarily through their bodies and how gender ideologies arise from perceived biological differences between men and women which are supported by dualistic paradigms that have characterized Western thinking from the philosophers of ancient Greece to Enlightenment and beyond (Bordo, 2008). Alvesson and Billing (2009) note that workplace culture is seen as constructing beliefs about and self-understandings of men and women about what is masculine and feminine thus shaping the gender identities. In India that women software professionals are largely stereotyped as the “inflexible workforce” (Bhattacharya, 2018) due to marriage and family and this has an impact on their career at multiple levels (Upadhya 2008, Kelkar, 2006). Women in my study were of the view that IT culture demands workers who are flexible— someone who can stay for long hours in office or even late at night, are readily agreeable to mobility at any place and at any point of time irrespective of any issue, ready to work in the weekends and even till late nights— especially during the critical period of 24*7 support— all of which seem to be compatible with the ideas of ‘masculinity’. The narratives of women were reflective of how married women and working mothers often become vulnerable to stereotypes of not being ‘flexible enough’ at work. The general point of view which came up was that a married woman is viewed as a liability because company has to take into consideration if she opts for relocation, maternity leave in future and so on. Young women reported that during interviews in IT companies, questions about their plans of marriage were quite common as the employers were keen to

know when they plan to settle down or have plans for family (for those women who were married). News of both marriage as well as pregnancy temporarily stalls the chances of mobility which affects career growth so much so that it was a common practice that women hide it (till the date approaches) in fear of losing out on projects and opportunities that are essential for career enhancement in IT.

Gender stereotyping is also evident when the temperament of management is observed with regard to maternity break in IT. Women software engineers (23%) with experience of six to seven years, who join after a maternity break of six or eight months are ‘suddenly thought of as not resourceful enough’. They are initially not considered for any project because of ‘assumed’ reasons like: their inability to keep track of recent projects due to their absence from office; lagging behind the latest technological developments in the IT field, given its constantly changing nature; doubting whether ‘new mothers’ would be able to give time at work. In such cases, women were often ‘benched’. This period of being ‘benched’ can range from few weeks to about three months. Senior women (18%) noted that the IT companies being highly competitive, this period of being ‘benched’ may be detrimental for an employee as it creates a ‘gap’ in the career graph. With no project at hand, it leads to insecurities (about being employed) of being on the ‘pay-roll’ without any task. Managers and leads start doubting women about their potential and abilities, unlike men. This phase act as ‘test of patience’ where they need to stick around and be patient. Even when women are absorbed into projects, they feel a lack of support and empathy from male colleagues. The period of maternity break is viewed as a ‘vacation’ by most men. There are doubts over their ‘commitment’ to work and constant comparisons are made with other employees regarding their work ‘output’. Those failing to keep up with this ‘pressure’ are ridiculed or mocked. Sometimes women (27%) missed out on appraisals or promotions since that they are not ‘performing well’ after child-care leave or because they are not working on any project since maternity break. This not only leads to frustration and dissatisfaction at work but becomes one of the many factors which make women opt out of work. The lived realities of women imply how gender relations influence the fundamental functioning of organisations and our general way of thinking about aims, rationality, values, leadership and so on. Women being ‘benched’ puts them in a ‘temporary’ halt on the career graph of some women software engineers. The outcome of such practices is sometimes called as “*the mommy track*” (Bhattacharya, 2018). Schwartz’s article in “The Harvard Business Review” first drew attention to this phenomenon of ‘mommy track’ and claimed that while the cost of employing women in high positions like that of management

is greater mainly because of the gendered expectations of the workplace and women's duties of raising children and looking after families. This may be explained by the fact that, a woman is defined in terms of her bodily functions and therefore as an inextricable part of 'nature'. A woman is essentially perceived as a vehicle for reproduction and her life, her roles, her position and status in society, are defined by this primary bodily function (Bordo, 2008). Hence, there is no place within the disembodied job or the gender-neutral organization for other "bodied" processes, such as human reproduction or the free expression of emotions (Acker, 1990). The 'bodies' of women- their sexuality, their ability to procreate and their pregnancy, breast-feeding, and child care, menstruation, and mythic "emotionality" (Acker, 1990)- are suspect, stigmatized, and used as grounds for control and exclusion.

Gendered Interaction at Workplace

In this theme, I have attempted to highlight that despite the fact that male and female software engineers work together in teams at workplaces, yet the interactions among them are marred by gendered behaviours and identities which cannot be erased by enlightened management practices, training programmes and so on.

In most IT companies, 'greasing the boss' is an integral determinant for promotion and informal networking acts a medium for it (Bhattacharya, 2018). In my study, women noted that this tends to work against their interests who are unable to network and fit into the male dominated social group in the same way as men and this in turn might adversely affects the performance of women. Their experiences noted how behaviours of men in IT companies are culturally and structurally embedded in gendered organizational arrangements. The number of hours one invests at work is a crucial determinant of ratings in all the IT companies. Here, 'visibility' is a key factor, as one has to be 'visible' in the office and cannot miss team meetings because leads and managers take a note of it which might get reflected during ratings. Women noted that mostly men do not leave office before their managers and they have their own social life (like *chai-adda*, coffee breaks, *sutta breaks*) which motivate them to stay after work. All these create a culture in which staying late in office becomes an indicator of 'dedication' and 'sincerity'. Women rarely become a part of such groups and prefer to leave after they finish their work. Given the competitive scenario of IT work culture, these cause relatively lower ratings for women which eventually might affect their appraisals, because those leaving early may be perceived as 'non performers' or as being 'unavailable' or 'not pulling their weight in the team'. These bring back Acker's argument that gender and hierarchy are important factors

to understand the ways in which men, masculinity and hegemonic masculinity continue to dominate in the structure, culture and practices of work organizations. Gender at work is at work not because the workers inappropriately bring it with them and “pass it around like a virus” (Martin, 2003) but because paid work is currently conceived, organized and practiced springs from and is shaped by gendered conceptions.

It is not just ‘visibility’ in office, but there are other ways which suggest how gendered pattern of interaction affects men and women differently. A central feature of all IT companies is the existence of ‘informal knowledge networks’ and exclusion of women from them. These social networks take different forms like: (*week-end boos sand after office hang-outs, sutta-breaks*) which are essentially ‘male groups’. Participation in these social networks is important because it helps in gathering information (about forthcoming onsite projects, who is in consideration in the ‘eyes’ of managers, the project management involved, success of projects, promotional aspects and so on) and disseminating to others about their areas of strengths, positions, roles and sometimes even their success in teams. These cumulatively taken together increases chances of better ratings and better promotional opportunities. Women remained largely excluded from such internal networks not only because of their inability to participate but and also because it is male dominated. The ‘informal’ processes or networks by which recruitment often takes place in IT companies is termed as “*hiring through informal networks*” (Acker, 2006). These act as exclusionary mechanisms, as gendered characteristics are embedded in the ‘ideal worker’. These processes also perpetuate ‘inequality regimes’ in organizations where inability of women to participate in ‘informal social networks’ puts them in a relatively disadvantaged position. These informal networks are not only organizationally powerful but they play a vital role in terms of how the job gets done and who gets promoted.

Women, in the study, noted facing sexist comments or jokes at work, when they get selected for onsite opportunities over men or they get better ratings than their fellow men colleagues or getting promoted before a man in the team does. Women noted that there are gossips about their ‘closeness’ to men (leads or managers) when they get better ratings within team or get a good appraisal, before a man in the team gets it. Women also noted such gendered presumptions if they get a leave ‘relatively easily’ or a transfer sanctioned without much delay. Thus, it is generally seen that as men and women do their everyday work, they routinely tend to use gender-based assumptions about those with whom they interact. Summing up, the kind of issues shared by women (within IT companies) talks of how the material body is gendered through discourse and how ‘individual action’ produces and is produced by a constructivist

gender system. The fact that women's work is devalued or looked at with suspicion, their promotion is linked with the 'perceived' relation with men also implies how they are viewed as 'sexualized bodies' (Thapan, 1995). Men can devalue women (in workplaces) by behaving in a masculinist manner. Thus sexuality, gender, and the body, in a complex interplay of dominant forces, are at the root of women's oppression in contemporary society through the objectification of the female form in everyday life.

Sexual Harassment at Work

A crucial aspect of organizational culture is sexuality. Sexuality affects social relations and is perceived as a source of pain and pleasure for organizational members (Hearn & Parkin 1987, Alvesson & Billing 2006). Women, in the study, spoke of non-tolerance policy for sexual harassment in IT offices. The companies had Internal Complaints Committee or redressal cells to report cases of sexual harassment. Women said these issues are taken seriously and in case any one reported such a complaint, the companies were found to take cognizance of it and punish the person concerned. In one of the cases, an employee of the company was fired when the complaints of harassment was registered against him and he was found guilty of the offence.

In the study, women noted instances of being 'watched' or 'gazed'. This phenomena of watching girls or evaluating them is a disputable form of sexual harassment and has been termed as "girl watching" by Quinn (2002). The analysis of girl watching is grounded in the works of masculinity scholars like R.W. Connell (2005) where it attempts to explain the subject positions of the men and not the abstract and gendered subjects of patriarchy but the gendered and privileged subjects embedded in the system. It operates as a targeted tactic of power. The male gaze demonstrates their rights as men, to sexually evaluate women. It may take the form of a verbal or gestural message of what men and women say 'checking out' that boasts of sexual prowess or comments about bodies or appearances of women. In my study, I have attempted to understand whether women face 'girl watching' and their the feelings about it. The respondents (women) noted experiences being 'looked' at during lunch breaks or during office. Such 'girl watching' was more common in case young women employees join office. Although women did not speak of any harassment or sexual misconduct or vulgarity in the course of talking about 'girl watching', yet they expressed feelings about being uncomfortable in such situations. Such gazing was not frequent, yet women noted feelings of being uncomfortable when sitting for lunch amidst a group of men. The phenomenon of girl watching, as noted in the study, functions as potentially powerful sites of gendered social action. In fact, the practice

of gazing at women and vying for their attention acts as a dramatic performance where men together participate and a certain type of masculinity is produced and heterosexual desire gets displayed (Quinn, 2002).

Survival Strategies Adopted by Women in IT

As more women have entered science and engineering there has been a growing interest in how they learn and negotiate the categories of “difference” that mark these historically male dominated areas. Researchers have been trying to understand how and why women in fields of technology are disadvantaged in their positions and are producing literature to gain legitimacy by drawing attention to the daily ‘performances’ or how femininity is being constructed in the technical workplace (Kvande 1999, Jorgenson 2002).

McIlwee and Robinson (1999) in their study on engineers pointed out how male defined interactional rituals are a factor in withdrawal of women from some engineering firms and noted that the engineering culture prevailing in these workplaces had male-defined styles of work and interaction, like: aggressive displays of technical ability, self-promotion and self-confidence. In such an environment, women reportedly felt a sense of incompetence and as a result their mobility was slowed in the male defined interactional rituals that was demanded (Kvande, 1999). In this study, I attempted to understand how women survive in competitive IT industries or construct femininity in areas that are stereotypically masculine. They were asked about their experiences of the ways in which women negotiated their place in the male dominated teams in the software industries. The narratives of women implied that there are limited ways of constructing femininities in the IT companies. As Kvande (1999) says, it is a profession, where the “settlers encounter the immigrants”. Emulating masculine styles of work and values and becoming “one of the boys” (Kvande, 1999), in terms of participation and competition, has been the road to acceptance for women in IT companies and to be treated like men in their teams. Women in high-end software jobs and those who have been in this industry for more than ten years said they had to act like the men when they wanted to be treated in the same way. By adapting the masculine styles of work, they gained the confidence of fellow men at workplace gradually to the extent that adapting such behaviors made them more ‘acceptable’ in teams and managers were happy in promoting them. It included: being cut-throat in terms of performance evaluation and employee assessment, refusal of projects or to be in a team irrespective of childbirth or any personal issue, accepting random travels both national and international, making official work the priority and taking lesser number of holidays or

agreeing to work even on holidays unless of urgent requirements and so on. These gave them a 'ground' so much so that they are sometimes (informally) called as the "techie lady" in their social circles. Thus, the cultures and practices at workplace are reflective of the structuralist emphasis on the historical roots and durability of cultural equation between masculinity and technology which emphasis on being materialist, aggressively competitive and controlling. The experiences shared by women are suggestive of how hegemonic masculinity is upheld at workplaces which rests on ideas of 'male worker' being independent risk taking, aggressive and rational (Connell, 2005). Such ideas are internalised and unquestioningly performed by both men and women as 'gendered practices'. As a consequence, it becomes 'legitimized' and 'natural' at workplace.

Conclusion

To conclude, although IT companies boast of their egalitarian policies, yet the experiences of women suggest that gender is deeply embedded in IT companies. I have outlined the various kinds of gender issues that women software engineers encounter in IT companies. Organisations practice gender in different ways. Factors like marriage and family lead to gender stereotyping which affects their opportunities and growth in companies. Findings suggested that working 'like a man' is the way to being accepted in teams. Hence corporate companies act as 'gendered institutions' which uphold hegemonic masculinity.

CHAPTER VI: CONCLUSION

To conclude, it may be said that there are different dimensions of software engineers which have been explored in the study. The findings suggest that the socio-economic composition of the workforce is homogenous, as the women came from urban educated middle class families. The social characteristics of the employees have become a key aspect of their employability which includes class, language skills, appearance- the entire set of traits that is captured in Bourdieu's (1984) notion of "cultural capital". Women have access to independent income and manage their own finances and this makes them consumers of the new economy. Their economic independence has given much freedom in choosing partners in marriage as well as deciding on factors of relocation. However, women mostly drew upon notions of family while being independent and confident in their work even as they reconciled those meanings with notions of individual achievements imbibed at workplace. In spite of being financially strong yet they have not resisted the socially constructed ideas of womanhood. They uphold

‘respectable femininity’, which perceives women in terms of domesticity, care-giving and prioritizing family. These findings have been analysed with feminist perspective on Foucauldian idea of power. Women making ‘choices’ and being constantly involved in striking a ‘balance’ between work and home signify that gender ideologies are powerful in ‘disciplining’ women according to the dominant notions of femininity. Thus, power gets transferred into the subjectivities of individuals (here implying, women) and disempowers them.

The findings of the thesis also highlighted that there are gendered perceptions about skill in IT companies. This is historically rooted in cultural systems of meanings and ideas about ‘masculinity’ and ‘femininity’. While masculinity is measured in terms of technical skills, physical strength, aggressiveness, action-oriented and impersonal; femininity is marked by being intuitive, cooperative and so on. Faulkner’s conception of gendered dichotomies, in fields of engineering, and the fact that technology has a masculine image fits well into explaining the gendered nature of work in IT companies. The higher-end software domains are male dominated. It perpetuates a masculine ‘culture of engineering’ that is created and maintained in an unquestioned manner. It is so deeply ingrained and established that they function as a “habitus” (Powell & Sang, 2015), specially speaking a “gendered habitus”, due to which women find it difficult to break through. Women working in these areas reported ‘microaggressions’ and feelings of isolation or ‘informal’ exclusion from teams during meetings or discussions and it took time for women to feel accepted in such tasks. Wajcman’s idea that skills are not ‘capacities’ of individuals but rather ideological and social constructions has been helpful in analysing the experiences of women in IT companies and explore the gender segregation.

Findings also suggested the gendered implications of Work From Home (WFH). While women valorise WFH as it is helpful in managing office and home simultaneously; however it does not give respite to women in terms of domestic tasks and responsibilities. It further re-entrenches the position of woman within the familial ideologies. The stereotyping of women as ‘inflexible workforce’ due to family and marriage affects their career mobility in IT companies. The everyday experiences of women suggested that their ‘bodily processes’ (like menstruation, child rearing, breast feeding and so on) are subjected to suspect and even stigmatized and seen to interrupt the working of organizations. An important highlight of practice of masculinity was the phenomenon of ‘girl watching’. Connell’s ideas of hegemonic masculinity have been helpful in understand that this practice builds shared masculinities and

social relations at work (Quinn, 2002). The final section of this chapter deals with the survival strategies used by women to cope in the higher-end software tasks of designing, architecture or consultation that are predominantly masculine areas. Women adapting masculine behaviours implied the power of ‘hegemonic masculinity’ at workplaces which rests on ideas of ‘male worker’ being independent risk taking, aggressive and rational. As a consequence, it becomes ‘legitimized’ and ‘natural’ at workplace.

However, the study has some limitations which can be taken up for future scopes of research in this domain. Firstly, to make it specific, the location of the study has been chosen in Kolkata with three renowned IT companies. However there are various other IT companies of Kolkata that employ thousands of employees. This is a drawback of the study as it concerns with cases of women only in the three IT companies looked at. There are avenues for future research if different IT companies of Kolkata are also taken into account. Inclusion of men and women from different IT companies would also make the sample more heterogeneous. Secondly, the study has focussed mainly on women who are currently employed in the IT companies. However, there are many women who are unemployed, either by choice or by circumstances. Those experiences would have provided more insight into their lived realities as well. I have only been able to include two such women who were working in the IT companies, of my sample. This is an area of future research where data can be collected from women who are currently unemployed. Thirdly, categories like rural/urban divide and caste have not been highlighted and the study lacks this perspective. Conducting a research that would include women software engineers across caste and rural areas would lead to a variation in data and make it more enriching.

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