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Of Struggles, Truces and Persistence: Everyday Experiences of Women Engineers in Sri Lanka

By Deborah Menezes¹

Abstract

There are more women engineers in road development today than there were two decades ago. This recognition, however, does not necessarily translate into palpable qualitative experiences for women engineers in the sector. Additionally, any problem of discrimination and sexism is hardly acknowledged in the face of numerical justifications. In this paper, the author writes a story about women in road planning and building by developing the importance of their everyday lived experiences. This paper takes as its focus women engineers involved in road development in Sri Lanka. Data used in this paper was gathered through field observations and in-depth interviews with 18 women engineers over a period of 7 months. My argument is built on two pillars: everyday life as an attempt to struggle between roles and everyday life as an attempt to enhance coping strategies. Thus on one hand, the paper gives voice to the feminist concerns for the way in which much of women's time is spent attempting to overcome the separation of roles, and on the other hand, the strategies and agency that women use to establish their presence in professional roles within a highly gendered road development sector. A feminist interpretive lens is used to draw out the continuing problems women face in engineering. I conclude by pointing to bleak prospects for change to cultural practices however these gendered stories need to be written and told in order to understand and appreciate their significance to the women in development discourse.

Keywords: gender, culture change, engineering, qualitative study, persistence, Sri Lanka, Roads

Introduction

“Don't measure the quantity of what she has achieved in her career measure the insides of her and how much she suffered to become a professional” (Pushpa, Engineer, Road Development Agency [RDA]).

Much discussion in recent years has centered on women entering professional domains marked by hegemonic masculinity. These liberal discourses have increasingly focused on women having the same access as men to these fields. Laws and policies, both internationally and nationally, have been put in place to encourage representation and prevent discrimination of women. The focus has been on increasing the number of women entering these fields. Despite these efforts professions like road engineering continues to be male dominated; there are less than

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13% of women engineers even in developed economies like USA, UK and Australia and the percentage is less than 10% for developing economies like Sri Lanka (Ayre, et al, 2013; Jayaweera, 1997; Hoole and Hoole, 2001; Mendis, 2014; Marikar, 2017). Continuing cultural and social barriers limit not just the numbers but more importantly palpable qualitative experiences for women engineers in the sector (Mills et. al., 2011; Savedra et al. 2014; Hoole and Hoole, 2001). Additionally, any problems relating to discrimination and sexism are hardly acknowledged even in the face of efforts made to boost numbers. This understanding along with Pushpa's words above provoked me to further question my understanding of women engineers' palpable integration in the development process, which needs to be problematized and investigated.

Academic research has documented women's experiences in engineering (Faulkner, 2009a; Faulkner, 2009b; Savedra et al., 2014; Ayre, et al., 2013; Watts, 2009; Hoole and Hoole; 2001; Bastalich et al., 2007). These studies have explored women engineers continuing vulnerability to gender asymmetries due to cultural and social factors. Issues relating to women engineers continue to be more visible as women than as engineers and the related burdens of sexual harassment, safety and permeable work-family boundaries have continued to cloud women's experiences within the field of infrastructure engineering. Nevertheless, in spite of difficulties, women have persisted in the profession (Plett et al., 2011). The prevailing cultural model for women's work today, which is both inscribed and ascribed, is a plural model with women managing multiple responsibilities as an everyday experience (Gilroy and Booth, 1999). This everyday management takes place in the midst of numerous struggles, truces and resistance efforts which women engineers, not men, have to undergo in the face of patriarchal cultural manifestations (Knijnik, 2015). Analyzing these enables one to explore how women's everyday experiences are defined by engendered social relations and structures and also how women's everyday actions (re)produce and (trans)form these relations and structures (*ibid*; Spasić, Djurić and Mršević, 2015).

In this paper, I write a story about women in infrastructure planning by developing the importance of everyday lived experiences. My focus is on women engineers involved in road planning, building and development in Sri Lanka. I begin with a section on women in engineering which highlights the broader theoretical discussions in the area. In the following section, I introduce the research methodology that locates the study. In the subsequent sections I highlight illustrations of the implications of the theoretical approaches for understanding everyday lives of women engineers. Finally, in the Conclusion, I analyze these illustrations and draws out their implications.

Women in Engineering

Studies have sought to explain and theorise women's underrepresentation and discrimination in masculinised work environments like engineering (Watts, 2009; Faulkner, 2006; Ayre, et al, 2013; Jayaweera, 1997; Hoole and Hoole, 2001 Mills et. al., 2011; Savedra et al. 2014a 2014b; Bastalich et al. 2007; Plett et al. 2011). One major explanation is in terms of gender symbolic asymmetry. It implies an alterity which is present as a consequence of the androcentric system that prevails in society (Beauvoir, 1989). The implication is a division of the world between genders, where men are considered a symbolic representative focal point and women exist in an alterity to men and whose existence is defined by the family and domestic sphere (Amâncio & Oliveira, 2006). Women's alterity is explained by her historical anchorage to the role in the family and her reproductive role which is socially constructed as a subordinated role (Elson and Pearson, 1981). This kind of gender subordination means that women are unable to take on, contribute and

benefit from work outside home on equal terms as men. Faulkner (2000) explores this theory within the scope of women in engineering when she speaks of gender ‘in/authenticity’ to describe the ‘in/congruence’ of gender and engineering identities of men and women engineers. She argues that engineering is perceived and experienced as an authentic choice for men, but not a genuine one for women. Jayaseekara (1997) in a study on women in science and engineering in Sri Lanka contends that the social construction of women’s reproductive role and the inequitable division of domestic responsibilities have devalued their economic contribution in the perceptions of employers and have limited their own aspirations. Faulkner (2006, 2009a, 2009b) extends this argument by speaking of the ‘in/visibility’ of women engineers who are so visible as women that they are most often invisible as engineers. Consequently, even experienced women engineers need to (re)establish their engineering credentials every time they encounter a new colleague or associate (*ibid*; Savedra et al. 2014a). This represents an additional burden that women, and not men, engineers must undertake in order to be seen as engineers. This limits the recognition of women engineers’ working capabilities and undermining their self-confidence and self-esteem (Faulkner, 2007, 2009b).

Studies using the asymmetry approach in studying women in engineering have essentially taken three positions. The first suggests that cultural and social barriers prevent a high number of women from entering engineering and once these are removed women will be free to compete on equal terms with men (Hoole and Hoole 2001; Parikh and Sukhatme; 2004, Jayaseekara, 1997). The second group has contended that gender in engineering is practiced on an everyday basis within work spaces thus extending the analysis of gendered nature of engineering to the gendered workplace culture (Bastalich et al .2007; Blickenstaff, 2005). Finally, the third position suggests that women’s work-family boundaries are more permeable than those of their male colleagues (Mekonnen Tadesse, 2017). The implication being that social pressures feed into the work culture and this in turn solidifies women’s subordinate position (Watts, 2009; Savedra et al. 2014; Bastalich et al .2007; Spasić, Djurić and Mršević, 2015). I will elaborate on these positions below before determining the framework for this paper.

Cultural interpretations of women’s role in the family reinforce gender asymmetries. In Sri Lanka, for example, gender relations are intricately woven in a system of hierarchical relations and prescriptive codes of conduct. Some features include subordination of individual interests to the welfare of family, gender-differentiated family roles with females being associated with the ‘private’ sphere, gender-differentiated family authority structure², women shifting allegiance to husband’s family after marriage, and an ideology of ‘appropriate’ female behaviour that emphasizes chastity, obedience and modesty (Elson and Pearson, 1981; Jayaweera, 1997; Jayaweera & Sanmugam, 1992; Gupta and Sharma, 2002; Khuzwayo, 2016; Mekonnen Tadesse, 2017). Hoole and Hoole (2001) in a study of women engineers in Sri Lanka, argue that societal differences in learning attributes are responsible for women not entering engineering. Societal reasons include absence of women role models in engineering and the stress on boys doing well in science and math then girls among others. Differences in learning attributes include, women intrinsic attribute to “feel agreeable, complacent and feminine and men to be aggressive, assertive and autonomous” (Hoole and Hoole, 2001: 51). Jayaweera (1993) contends that schools in Sri Lanka had differential behavioural expectations for girls and boys and that girls were socialised into being passive, quiet and obedient. Thus, women engineers in Sri Lanka appear to be exposed to contradictory agendas—high educational and career aspirations juxtaposed with passivity and

² This implies the authority of same-generational males over socially equivalent females, such as husbands over wives, brothers over sisters

deference in behaviour from early on (Jayaweera, 1997). Furthermore the cultural pressures and expectations of balancing career with family roles are directed towards women while men's unconstrained devotion to career progression goes unquestioned (Watts, 2009). Geerson (2004) claims that even when men are committed to be involved fathers social arrangements militate against this. Even in dual career families men are more likely to let their job commitments limit their family work, whereas women take time off (often at very short notice) to attend to unplanned family demands (Coltrane, 2004). Watts (2009) argues, fatherhood is seen as an obligation distant from a man's professional career, whereas a woman engineer with parental responsibilities needs to find a way of combining professional and caring roles. Not only does this subject the women engineers to considerable stress but she risks her genuine commitment to her work by her work colleagues.

Consequently, recent studies have researched ways in which the masculine culture of engineering tends to undervalue and marginalise women within work spaces (Hewlett et al., 2008; Faulkner, 2009a, Faulkner 2009b; Watts, 2009; Ayre, 2013). On the one hand, women who enter engineering have to 'fit in' to 'a masculine culture (Faulkner 2009; Carter and Kirkup, 1990). At the same time, they face pressures not to 'lose their femininity', and behave like men (Jayaweera, 1997). Studies have also exposed sexual harassment and/or heavy flirting from male colleagues or associates faced by female engineers which is not experience by their male counterparts (Hoole and Hoole, 2002; Faulkner, 2006; Savedra et al., 2014). The key analytical point is that women's discrimination and barriers do not end when women make their choice to become an engineer; it means they face ongoing in/visibility issues which men engineers never experience having on an everyday basis to (re)establish their engineering credentials, and being gender/sexually visible (Faulkner, 2006). Kelan (2007) extends the above analysis by arguing that in engineering gender still has to be performed on a daily basis and traditional gender patterns prevalent in society are thus often re-established. Fox (1998) suggests that even when programs for change are based on the assumption that the problem is grounded in the engineering work culture, solutions tend to target women and the creation of alternative, supportive spaces for them. This is because it is an easier and less controversial strategy than attempting institutional change. Even when institutional change is entertained, those working for change often emphasise the need for family-friendly policies and programs to enable women to negotiate the work life balance more successfully. In this view, women are under-represented in engineering because they take career breaks when they become mothers, find it difficult to access part-time and flexible hours, or are penalised when they do (Donovan et al. 2005; Belwal and Belwal, 2014). Although family-friendly policies are undoubtedly important for women, and for improving the gender balance, the relationship between women's under-representation and discourse about motherhood is more complex. In fact some studies suggest that the implementation of family-friendly policies in the name of gender equity may simply reinforce the views that women are the site of the problem and need 'special concessions' in order to succeed in engineering (Mills et al. 2006; Ranson, 2005). Thus the institutional and the social environment are bound together in the lives of women engineers.

Studies have focussed on an interlink between social norms and structural conditions within workplaces that prevent women's full participation in engineering careers (Evetts, 1994; Jayaweera, 1997; Etzkowitz et. al., 2000; Gupta and Sharma, 2002). These studies expose the conflicts between personal and work lives that women face cultural identity crisis where women are expected to be feminine and masculine but are criticised either ways. With this kind of socialization in a patriarchal culture and a lack of family friendly facilities in the workplace, women have to work harder than men (Subrahmanyam, 1998; Mekonnen Tadesse, 2017).

Furthermore, it presents a dual burden for women engineers with patriarchy operating at two levels, the work and home and many women's engineering careers succumbing to this pressure (Chakravarthy, 1986; Jaiswal, 1993; Mukhopadhyay and Seymour, 1994; Kumar, 2001; Gupta and Sharma, 2002; Khuzwayo, 2016). Consciously or unconsciously, in everyday interactions and actions women engineers counter these damaging and discriminatory attitudes in addition to responding to the challenges everyone faces to succeed (Jayaweera and Sanmugam, 1992). Everyday experiences support or compromise an individual's self-identity (Hockey and James, 2003). If these everyday experiences take place against rigid structures which represent power, as demonstrated in literatures above, the outcome is the curtailment of the individual's self. However, expressions of agency can carve out small spaces of autonomy, resistance, and defiance, and at times even help to reconfigure oppressive structures (Scott, 1985; Abu-Lughod, 1990; Kabeer, 1999). These expressions have the capacity to allow the dominated—in the case of my study, women engineers, to manifest their individual selves within the power relations and rigid structures of everyday life. Ethnographic research has shown how through rumours, vulgar songs, answering back, and refusals, individuals (particularly women) have resisted the oppression of the framework of power within which they have to operate (e.g. Abu-Lughod, 1990; Raheja and Gold, 1994; Jeffery and Jeffery, 1996). Within engineering, studies point to different ways that women manage by constantly resisting and complying to the demands spiralling out of hegemonic masculine cultures and practices. Some choose to move sequentially between professional and caring identities focusing on one at a time, some with elements of compromise, some by adopting relentless male-like work patterns and others opt for the balancing act of sustaining these dual identities simultaneously (Gupta and Sharma, 2002, Hoole and Hoole, 2001; Watts, 2009; Knijnik, 2015). Persistence is seen as an important characteristic of aiding women engineers in managing the contradictions, discrimination and subordination (Plett et al. 2011; Ayre et al., 2013).

I take a cue from the above discussions to problematize and investigate the issues facing women engineers in Sri Lanka within the socially constructed gender asymmetry framework. My study builds on the previous studies discussed above to explore how cultural barriers founded on gender asymmetries permeate women engineers' everyday experiences within the work space and result in limiting their career detainment and progression. I further extend my analysis by reflecting on the way the women engineers try and adjust and fit into these cultural ascriptions which most times reinforces the stereotypes. Finally, without stopping my analysis I map the coping strategies adopted by women in managing work life balance (in some cases challenging status-quo) and the resulting resilience and persistence that they exhibit to endure the struggles. Thus, my concern, in this paper, is to make sense of the lives of women engineers' after they have entered the field. My purpose is to tell their stories, as far as possible in their own words, and to convey both the uniqueness and ordinariness of their everyday experiences. Second, I unpack how residents struggle, cope and persist in carrying on with their everyday. This paper, then, not only attempts to understand women engineers' experiences, but also critically explores how culture plays a role in determining and defining them.

Methodology

The analysis is based on data gathered through detailed interviews with 18 women civil engineers. 12 engineers are working for the Road Development Authority (RDA) in the Northern and Western Province of Sri Lanka and 6 are working with the Urban Development Authority (UDA) in the Western Province of Sri Lanka. The RDA is a major Civil Engineering Organization

in Sri Lanka which is responsible for the planning, design, construction and design of major roads in the country while the UDA is a body consisting mainly of planners and civil engineers responsible for urban planning and implementation agency of the country with main focus on physical development including roads. The age range of the 18 women was between 29 and 55. 17 were married and had caring responsibilities and one was engaged. Women had been in the profession for 2 to 30 years, two of these were below five years and the remaining 16 were above five years. My sample showed a bias towards higher ages and a resulting longer experience in the profession which was potentially due to snowball sampling (discussed below). This bias was useful since these women were manifestly stayers, similarly, the higher proportion of women engineers with caring responsibilities was an advantage in view of the many literatures evidenced in the previous section, which discussed the pressures of dual burden for women engineers. I have also interviewed male engineers, contractors and labourers as part of the larger project, however, this paper will limit itself to discussing women engineers.

Women engineers are a minority in both these organizations in Sri Lanka; hence participants were chosen using the snowball technique. Initial and subsequent respondents were asked at the end of their interview to recommend other women engineers from their organisation. This process has been useful in studying specific populations, particularly in qualitative feminist studies (e.g. Dyke and Murphy, 2006). I collected the data through face-to-face, semi-structured interviews. Participants were informed about the goals of the study, and confidentiality and anonymity were guaranteed. Informed consent was gained as an agreement to participate and allow the interviews to be audio recorded. The interviews were audio recorded and transcribed verbatim. The interviews and field observations took place between June to August 2016 and January to April 2017 at venues chosen by the participants. Most opted to be interviewed at their place of work. The interview questions were largely focused on women's entry into engineering, the struggles they face, the highlights of their career, work-life management, career progression, work culture, and coping strategies.

To maintain the rich nature of the interview data, thematic coding was used for the analysis. I began the process by repeatedly reading the interview transcripts and followed it with data coding. Instead of using predetermined categories, all of the themes that emerged from answers to the relevant questions were recorded. As new themes emerged, previous transcripts were re-read and reviewed to ensure that all of the relevant themes were captured in all of the interviews. To allow readers to assess the evidence themselves, I have extensively used direct quotes from respondents throughout the analysis below. I focus on the three main issues which have a universal tone to them; the struggles that women face as engineers, the truces they call during the struggle, and the coping strategies that they use to endure the struggle and persist with their career. In doing so, I start from women's everyday experiences to enable me to underline those aspects of these professionals everyday life which are constituted around brief daily concerns (the thousand little things that need to be done every day) for the self and for others. It is in these concerns that I seek to identify along with the strategies of coping with the seeds of disruption and the negotiation of different daily arrangements. It is also important to read these categories within the prevailing cultural context in Sri Lanka which has been discussed in the previous section.

Everyday Lives of Women Engineers in Sri Lanka

Reading and analysis of the transcripts resulted in identifying three central themes to describe the everyday life of the women engineers I interviewed: 'Everyday life as a struggle',

‘Everyday life as a truce’ and ‘everyday life as persistence’. Within each of these several subthemes emerged. ‘Everyday life as a struggle’ theme presents the social and organisational struggles that women encounter daily, the subthemes within it include: dual burden on women; safety issues that women face and cultural barriers that hinder their progression. ‘Everyday life as a truce’ illustrates the several times in a day when women engineers feel like giving up and/or giving in, The themes include: accepting status quo, trying to fit in, displaced and/or redefined success and compromise as subthemes. The final theme, ‘Everyday life as persistence’ mainly implies not giving up in the face of struggle. It includes the following subthemes: permissions, highlighting feminine strengths and carrying one. Each of these will be discussed below.

Everyday Life as a Struggle

All women in the study reported struggling with various gendered factors which made their life in engineering a struggle. This dilemma ranged from reconciling women’s gender role with the professional role to women having to work much harder than men to prove themselves equally capable. These struggles do not just mean that women have to overwork but additionally the repercussion is that the pressures and constant dilemmas affect women’s capacity to perform. There were four main issues women spoke about, these included managing dual full time roles, constant safety issues and finally cultural struggles. I will elaborate these below:

Dual Burden

Women engineers in my study felt burdened and confessed to struggle in managing house and work life. The double demands of the career and home leads to a dual burden, which has been witnessed in many contexts and is variously referred to as the ‘second shift’, ‘role overload’ or ‘dual role syndrome’ (Rout, Lewis & Kagan, 1999; Hochschild and MacHung, 2012; Chakravarthy, 1986; Gupta and Sharma, 2002). Women engineers believed that their primary role and identity of a ‘house wife’ has remained unchanged even though they are equal contributors to the family income. Their lives are characterized by a need to balance waged work and home care responsibilities:

“I need to cover all the works at home before going out to work.” (Hiruni, female engineer, UDA)

“At work men have no disturbance about the home and while they are working in the office they never consider the family and children they automatically pass the ball to the wife and she has to do everything. I do not have that luxury, no?” (Harmini, engineer, RDA)

“The other day I had a meeting and I got a call from the school saying my child is ill I had take half day and go, no option. In my entire working life I have never heard a single male engineer excuse himself in the middle because of family commitments” (Priya, engineer, RDA)

“Once I had to attend a meeting in Colombo... I would have to spend a night in Colombo. I had to bring my two children to Colombo also as my husband could not take care” (Pushpa, engineer, RDA)

“Everyday I struggle with making my work plans. I can never say I will complete this today because some time I plan for work at the time my husband or children have some obligations like illness or something that time I can't do the work.”
(Viji, engineer, RDA)

Struggling between managing family and work life is seen as a constant daily stress to women in engineering. Since road building requires going out in the field, this issue also affects the way male colleagues are preferred for outdoor assignments, not because a woman is not capable but because her commitment to outdoor work is doubted. Hindrance in career progression is a direct result of this struggle. For women engineers in the study, landing a job in engineering did not give them freedom to progress in it. It was their family commitments and decisions that determined their progress. Additionally, marriage, pregnancy and motherhood have led to a break in career, though this has not been regretted by a single respondent signalling a successful internalisation of social and cultural norms.

Safety Issues

Women struggled with their own safety. All the women I interviewed spoke of safety concerns. These included physical and mental concerns. Many spoke of colleagues leaving the profession as a result or asking for transfers:

“Some areas I cannot go because of no safety, everyone knows that for women it is not safe.” (Pushpa, engineer, RDA)

“I am scared in some parts of the military area, we hear bad things so we cannot go alone or late.” (Anya, engineer, RDA)

“Contractor is difficult to handle because most of the contractors are men then we can't contact directly” (Thulasi, engineer, RDA)

As a result of these concerns women end up isolating themselves and limiting their work mobility which has an impact on their career progression. Women indicated issues related to flirting and lewd remarks at work but did not speak of details. Social norms in Sri Lanka work in a way that puts the blame on the women for encouraging such behavior hence even though it was signaled as being part of her everyday experience women struggled with it alone.

Cultural Struggle

Culture expectations which were implied in the above subthemes present direct barriers to women engineers:

“if we communicate with boys people will think us bad. So I am avoiding going outdoors and just doing office work.”(Thulasi, engineer, RDA)

“Here men have freedom, they can go anywhere and anytime but we women are not allowed to go. Also we can’t go because of safety problem here.” (Anjali, engineer, UDA)

“I had a lot of problem after getting married. After marriage I had to come with my husband to Jaffna. I could not get transfer so I had to leave my job. I had to start looking and only got this contract position now. It is like this here, If girl marries she should follow the men.” (Joythi, engineer, RDA)

“I got engaged and will get married in June so he (fiancé) and his family feels that this job is not suitable for me.... I suffered to study this engineering so we can’t be without job I should do some job. We would like to apply job anywhere in office work.” (Nisha, engineer, RDA)

Men expect women to behave like ‘women,’ submissive and compliant, and do jobs which comply with these characteristics, but when a woman faces a problem typical to her sex such as pregnancy, it is frowned upon. Struggling with these dichotomies leads to sources of stress among women engineers.

Everyday Life as a Truce

Amidst the struggles respondents were seen giving in to retain sanity and peace. There were four ways how most women engineers did this; accepting status quo; trying to fit in; displaced and/or redefined success; and, compromising career progression:

Accepting Status Quo

Internalising practices that are culturally accepted and bring in social respect was common among respondents. This ranges from assuming subordinate position to agreeing to do socially ascribed ‘feminine’ tasks like office work:

“I have been transferred here. Here I don’t need to go to sites directly, we have more paper work here so I am doing the paper works at the office. It deals with different things regarding road construction, billing, tenders and that. I think it is good work for women, in the office.” (Thulasi, engineer, RDA)

“Men engineers feel they are best and they need to be in first. So they don’t allow female to do outside work. We assume secondary place then. Some training program also men think they need to go first. But office work we are strong, they will follow us but in the field work they guild us and if any preference come to take they feel they are best.” (Asha, engineer, UDA)

Silence, both at work and home, was suggested as a way how women used her socially ascribed character to manage their everyday work pressures:

“When I am strong about doing some project, there will be some arguments at my house especially regarding me not caring for the house and that. This is mostly

when I want to go away on meetings or something and I ask my husband for help. At that time I have realized the need to be silent and just do everything myself and not ask for help” (Rashmi, engineer, UDA)

“I never talk loud at team meeting but I let my work speak. I think also because I am quiet I survive here otherwise I would have to ask for a transfer.” (Abhini, engineer, RDA)

Fitting in

Fitting in involved submitting to a masculine narrative of engineering. Women adopt assertive behaviours that are clearly culturally associated with men and valued in male-dominated professional cultures:

“In planning committee meetings I dominate because I talk in a big voice like men, so then we dominate myself and Sapna, both of us we dominate when somebody talk till we get our way.” (Tania, engineer, UDA)

“So, if women have to get her rights they need to fight but once you fight, they have the negative thoughts so you have to be careful.” (Priya, engineer, RDA)

Adopting ‘masculine’ characteristics synonymize with reinforcing gender asymmetries but doing this is seen as the only way to get the job done. These practices however come with repercussions of social sanctions which are stigmatic for women in South Asian cultures.

Displaced and/or Redefined Success

The stress of the work environment and a dual burden had led women engineers in my study to redefine or displace their own success. The implication is that on the one hand women allow for society to credit the family/ husbands for their own success and on the other women redefine success as ability to multi-tasking and balancing between family and home as opposed to promotions and awards:

“They say I can manage because I don’t have kids and my husband also support to me” (Thulasi, engineer, RDA)

“But there is a story about the successful women everybody say you have good husband so that you have achieve. Even for me they say this everytime.” (Malki, engineer, UDA)”

In redefining success women said:

“In fact we are better than men, we can multi-task. Look how I manage my home and work, I have no regrets.” (Asha, engineer, UDA)

“Being a good mother and wife is important as in your old age these are your real medals, what will the material things gain you. So I think I did well.” (Priya, engineer, RDA)

Compromise Careers Progression

Respondents reported compromising career progression as a result of family responsibilities and constraints:

“I got a chance to do professional weekend course two years back, I like to go....but my husband didn’t allow to me go weekend for the lectures so I didn’t do it.” (Anya, engineer, RDA)

“I have lost lot of chances because it involved staying outside. It happens everytime, I have to compromise my professional side. No problem for men, for an example my husband is a branch manager of micro credit organizations, and he can suddenly say that I go to Colombo or somewhere tomorrow last night also he can say but I can’t say.” (Pushpa, engineer, RDA)

The tendency once again reflects an inclination towards social practices and a successful internalization of the gendered social norms. Calling a truce by accepting and absorbing culture, redefining success, accepting displaced success, compromising career progression and adopting male characteristics may bring women relief and give them a sense of job satisfaction however the danger of reinforcing stereotypes and bias remain.

Everyday Life as Persistence

Despite the struggles and the truces, with the exception of one, all the women engineers are persistent and see persistence as the main way to cope with the struggles they encounter. Everyday persistence in the lives of these women engineers takes different forms:

Permission

Asking permission has been historically seen as a way of subordinating women. However, women in my study use this to their advantage to persist with their careers:

“I can get permission from office or my home, based on that I will balance my work and family” (Thulasi, engineer, RDA)

“The Chief Engineer is understanding like that. I have to tell him in advance about my family commitments and he is fairly accommodating. It is another thing that I miss out on some opportunities but at least I have the job no?” (Shanti, engineer, RDA)

Highlighting Feminine Strengths

Majority of women respondents (n=15) highlighted the positive aspects of feminine characteristics. These included high commitment, sensitivity, listening and people skills:

“In my case I am very committed, women generally are. We do not have time so when we are at work we double are efforts.” (Tania, engineer, UDA)

“Women are more sensitive because of the people because when they are crying and we can't we want to give some solution for them otherwise no point of doing planning. Planning is for the people and women know and practice that”. (Asha, engineer, UDA)

“I think women are actually better than men. Two main things, we are good listeners and we can multi-task. It is just that our work is overlooked and hence our contribution is not appreciated.” (Tharindi, engineer, RDA)

Carrying on

Carrying on and not giving up in the face of obstacles was not just helping the women engineers persist but was making them resilient in their persistence:

“I had entered the university in the 1983 finished in 1990, it took me 7 years to complete my engineering degree because of the war.” (Anya, engineer, RDA)

“I am from the east which was under the LTTE and we had the JVP problem there too. I was studying in Peredinya University so when we were travelling we had to pass almost 20 check points each way. If there were any strikes or JVP problems we can't stay at the hostel we had to move our home so we had faced lot of trouble in that time like we had to carry the bags, we had to wait so many checkpoints in the queue and we had to up and down and walk on the street. It was worse for us girls. We were four of only in our entire batch of about 200 and we were three Tamil girl but still we did it.” (Abhini, engineer, RDA)

“I got married soon after my engineering and then had my first baby so I got engineering job but contract only after 6 years after my degree. In 2000 I had to leave work place due to war, it was not safe. We moved to Jaffna where I got a contract position, then I got pregnant with my second child in 2002 didn't get the maternity leave from this job because it was the contract job no, it was a very poor rule, anyway I took the leave without payment. So that is not counted for my promotion. After that I came back and I worked hard, my husband supported me too and now I am executive engineer!” (Harmini, engineer, RDA)

“Women manage career and personal life with struggle. We have to manage with struggle if you have the ability to manage with struggle you can be the winner.” (Rashmi, engineer, UDA)

Finally, a genuine responsibility to future generation of women engineers helped women carry on in the face of struggle and exhaustion:

“I know there is group of engineers coming behind me and I am paving the way. I have to do it for them.” (Viji, engineer, RDA)

This affirmative attitude in a predominantly masculine professional environment which is not just a persistence discourse, it is also a resistant discourse which is in subtle everyday forms manifesting itself against traditional masculine barriers.

Conclusion

In Sri Lanka the ‘problem’ of women in engineering is not simply one of recruitment. Work and cultural practices are bound together in defining the everyday lives of women engineers in Sri Lanka. The resulting every day is characterised by struggles, truces and persistence. Throughout my analysis, besides the major issues relating to work-life balance and women safety issues I have demonstrated how more subtle everyday gender dynamics in engineering workplace cultures can also have a bearing on women experiences.

My argument is built on two pillars: everyday life as an attempt to struggle between roles and everyday life as an attempt to enhance coping strategies. Thus on one hand, the paper gives voice to the feminist concerns for the way in which much of women’s time is spent attempting to overcome the separation of roles, and on the other hand, the strategies that women use to establish their presence in professional roles within a highly gendered infrastructure engineering sector. A feminist interpretive lens is used to draw out the continuing problems facing women engineers. The underrepresentation and discrimination that women engineers in Sri Lanka face are similar to those explored in other studies reflected in the literature review section. Gendered asymmetries prevalent in society have an impact on women engineers through work and family. Universal themes of gendered workplace culture and women’s permeable work–family boundaries were very visible in the everyday lived experiences of my respondents. In addition, however, I explored the unique cultural barriers that my respondents faced in going about their everyday lives which related to their safety and their primary roles as daughters, wives and mothers. These pressures in turn fed into the work culture and this in turn solidifies women’s subordinate position. I conclude by pointing to bleak prospects for change to cultural practices however these gendered stories need to be written and told in order to understand and appreciate their significance to the women in development discourse. Romanticizing with the bleak potential for change has the potential to disregard the persistence that occurs within a restricted context. The respondents in my study were learning to use cultural context to their advantage or least disadvantage and persisting. Thus the experiences examined here can only give a flavor of the breadth and richness of the experiences of everyday life for women engineers. Women engineers are grappling with their lived experience of the problems of daily life and are deeply immersed in practical actions which challenge the mainstream to look at these issues afresh.

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The Author declares that there is no conflict of interest

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References

- Abu-Lughod, L. (1990). The romance of resistance: tracing transformations of power through Bedouin women. *American Ethnologist*, 17(1), 41-55.
- Amâncio, L., and Oliveira, J. M. (2006). Men as individuals, women as a sexed category: Implications of symbolic asymmetry for feminist practice and feminist psychology. *Feminism & Psychology*, 16(1), 36-44.
- Ayre, M., Mills, J., and Gill, J. (2013). 'Yes, I do belong': the women who stay in engineering. *Engineering Studies*, 5(3), 216-232.
- Bastalich, W., Franzway, S, Gill, J , Mills, J and Sharp, R. (2007). Disrupting Masculinities. *Australian Feminist Studies*, 22(54), 385-400.
- Beauvoir, S. (1989). *The second sex*. New York: New York: Vintage Books.
- Belwal, S. and Belwal, R. (2014). Work-Life Balance, Family-Friendly Policies and Quality of Work Life Issues: Studying Employers' Perspectives of Working Women in Oman. *Journal of International Women's Studies*, 15(1), 96-117.
- Blickenstaff, C. J. (2005). Women and science careers: leaky pipeline or gender filter? *Gender and education*, 17(4), 369-386.
- Buse, K. (2011). *Why They Stay: Individual Factors Predicting Career Commitment for Women Engineers*. Paper presented at the Paper presented at the first international conference on engaged management scholarship, Cleveland, OH.
- Carter, R., and Kirkup, G. (1990). Women in professional engineering: The interaction of gendered structures and values. *Feminist Review*, 35(1), 92-101.
- Chakravarthy, R. (1986). Productivity of Indian Women Scientists. *Productivity*, 27(3), 259-269.
- Coltrane, S. (2004). Elite careers and family commitment: It's (still) about gender. *The Annals of the American Academy of Political and Social Science*, 596(1), 214-220.
- Donovan, C., Hodgson, B., Scanlon, E., and Whitelegg, E. (2005). Women in higher education: Issues and challenges for part-time scientists. *Women's Studies International Forum*, 28(2), 247-258.
- Dyke, L. S., and Murphy, S. A. (2006). How we define success: A qualitative study of what matters most to women and men. *Sex Roles*, 55(5-6), 357-371.
- Elson, D., and Pearson, R. (1981). 'Nimble fingers make cheap workers': an analysis of women's employment in Third World export manufacturing. *Feminist Review*, 7(1), 87-107.
- Etzkowitz, H., Kemelgor, C. and Uzzi, B. (2000). *Athena Unbound: The Advancement of Women in Science and Technology*. Cambridge: Cambridge University Press.
- Evetts, J. (1994). Work and Career in Engineering: Continuity and Change in the Organization. *Work, Employment and Society*, 8(1), 101-112.
- Faulkner, W. (2000). Dualisms, hierarchies and gender in engineering. *Social Studies of Science*, 30(5), 759-792.
- Faulkner, W. (2006) *Genders In/Of Engineering: A research report*. Edinburgh: University of Edinburgh. Available at: http://extra.shu.ac.uk/nrc/section_2/publications/reports/Faulkner_Genders_in_Engineering_Report.pdf [Accessed April 2017].
- Faulkner, W. (2007). Nuts and bolts and people: gender-troubled engineering identities. *Social Studies of Science*, 37(3), 331-356.
- Faulkner, W. (2009a). Doing gender in engineering workplace cultures. I. Observations from the field. *Engineering Studies*, 1(1), 3-18.
- Faulkner, W. (2009b). Doing gender in engineering workplace cultures. II. Gender

- in/authenticity and the in/visibility paradox. *Engineering Studies*, 1(3), 169-189.
- Faulkner, W. (2001). The technology question in feminism: A view from feminist technology studies. *Women's Studies International Forum*, 24(1), 79-95.
- Fox, M. F. (1998). Women in science and engineering: Theory, practice, and policy in programs. *Signs: Journal of Women in Culture and Society*, 24(1), 201-223.
- Gerson, K. (2004). Understanding work and family through a gender lens. *Community, Work and Family*, 7(2), 163-178.
- Gilroy, R., and Booth, C. (1999). Building an infrastructure for everyday lives. *European Planning Studies*, 7(3), 307-324.
- Gupta, N. and Sharma, A.K. (2002). Women academic scientists in India. *Social Studies of Science*, 32(5-6), 901-915.
- Hewlett, S. A., Luce, C. B., Servon, L. J., Sherbin, L., Shiller, P., Sosnovich, E., & Sumberg, K. (2008). The Athena factor: Reversing the brain drain in science, engineering, and technology. *Harvard Business Review Research Report*, NO. 10094. Cambridge, MA: Harvard Business Publishing.
- Hochschild, A. and Machung, A. (2012). *The second shift: Working families and the revolution at home*. New York: Penguin.
- Hockey, J. and James, A. (2003). *Social Identities across The Life Course*. Hampshire: Palgrave Macmillan.
- Hoole, D., and Hoole, S. R. H. (2001). Sri Lanka: Women in Engineering. *SWE: Magazine of the Society of Women Engineers*, 47(6).
- Jayaweera, S. (1993). The socialisation of the girl child. In Centre for Women's Research CENWOR (Ed.), *Shadows and vistas: On being a girl child in Sri Lanka* (pp. 148-182). Colombo: CENWOR
- Jayaweera, S. (1997). Higher Education and the Economic and Social Empowerment of Women—the Asian experience. *Compare: A Journal of Comparative and International Education*, 27(3), 245-261.
- Jayaweera, S. and Sanmugan., T. (1992). *Women Engineers in Sri Lanka*. Colombo: Sri Lanka, Federation of University Women.
- Jeffery, P. and Jeffery, R. (1996). *Don't Marry Me To A Plowman!: Women's Everyday Lives In Rural North India*. Boulder: Westview Press.
- Kabeer, N. (1999). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change*, 30(3), 435-464.
- Kelan, E. K. (2007). 'I don't know why'—Accounting for the scarcity of women in ICT work. *Women's Studies International Forum*, 30(6), 499-511.
- Khuzwayo, Z. (2016). Separate Space: An Approach to Addressing Gender Inequality in the Workplace. *Journal of International Women's Studies*, 17(4), 91-101.
- Knijnik, J. (2015). Femininities and Masculinities in Brazilian Women's Football: Resistance and Compliance. *Journal of International Women's Studies*, 16(3), 54-70.
- Kumar, N. (2001). Gender Stratification in Science: An Empirical Study in the Indian Setting. *Indian Journal of Gender Studies*, 8(1), 51-67.
- Marikar, H. (2017). Launching of the Young Woman Engineer Award 2017 *Daily Mirror Sri Lanka*. Retrieved from <http://www.dailymirror.lk/article/Launching-of-the-Young-Woman-Engineer-Award-126518.html>
- Mekonnen Tadesse, W. (2017). Women in Management: Challenges and Gaps in Public Institutions in Ethiopia. *Journal of International Women's Studies*, 18(2), 105-117.

- Mendis, C. (2014). Women in logistics *Daily FT*. Retrieved from <http://www.ft.lk/article/144201/Women-in-logistics>
- Mills, J., Bastalich, W., Franzway, S., Gill, J. and Sharp, R. (2006). Engineering in Australia: an uncomfortable experience for women. *Journal of Women and Minorities in Science and Engineering*, 12(2-3), 135-154.
- Mills, J., Gill, J., Sharp, R., and Franzway, S. (2011). Getting it together: Feminist interdisciplinary research on women and engineering. *Women's Studies International Forum*, 34(1), 13-19.
- Mukhopadhyay, C. and Seymour, S. (1994). *Women, Education and Family Structure in India*. Boulder, CO: Westview Press.
- Parikh, P. P., and Sukhatme, S. P. (2004). Women engineers in India. *Economic and Political Weekly*, 39(2), 193-201.
- Plett, M., Hawkinson, C., Van Antwerp, J., Wilson, D., and Bruxvoort, C. (2011). *Engineering Identity and the Workplace Persistence of Women with Engineering Degrees*. Paper presented at the Paper presented at the 2011 American Society for Engineering Education annual conference, Vancouver, Canada.
- Raheja, G. G., and Gold, A. G. (1994). *Listen to the heron's words: reimagining gender and kinship in North India*. California: University of California Press.
- Ranson, G. (2005). No longer “one of the boys”: Negotiations with motherhood, as prospect or reality, among women in engineering. *Canadian Review of Sociology*, 42(2), 145-166.
- Rout, U., Lewis, S. and Kagan, C. (1999). Work and Family Roles: Indian Women in India and the West. *Indian Journal of Gender Studies*, 6(1), 91-104.
- Saavedra, L., Araújo, A. M., Taveira, M. D. C., and Vieira, C. C. (2014a). Dilemmas of girls and women in engineering: a study in Portugal. *Educational Review*, 66(3), 330-344.
- Saavedra, L., Araújo, A. M., de Oliveira, J. M., & Stephens, C. (2014b). Looking through glass walls: Women engineers in Portugal. *Women's Studies International Forum*, 45(1), 27-33.
- Scott, J. (1985). *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven: Yale University Press.
- Spasić, D., Djurić, S., and Mršević, Z. (2015). Survival in an “all boys club”: Policewomen in Serbia. *Women's Studies International Forum*, 48(1), 57-70.
- Subrahmanyam, L. (1998). *Women Scientists in the Third World: The Indian Experience*. New Delhi: Sage Publications.
- Watts, J. H. (2009). ‘Allowed into a Man's World’ Meanings of Work-Life Balance: Perspectives of Women Civil Engineers as ‘Minority’ Workers in Construction. *Gender, Work & Organization*, 16(1), 37-57.