International Institute of Social Studies

Ezafus,

Understanding the Configuration of "Glitchy" Lives The Experiences of Transgender Sex Workers Organising their Online and Offline Existence

A Research Paper presented by:

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(Pakistan)

in partial fulfillment of the requirements for obtaining the degree of MASTER OF ARTS IN DEVELOPMENT STUDIES

Major:

Human Rights, Gender and Conflict Studies: Social Justice Perspectives (SJP)

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The Hague, The Netherlands December 2019

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List of Acronyms

AIDS Acquired Immunodeficiency Syndrome

AIOU Allama Iqbal Open University

CA Capability Approach

CNIC Computerised National Identity Card

CTT Critical Theory of Technology

CTA Criminal Tribes Act 1871

EUR Euro

GPS Global Positioning System

HIV Human Immunodeficiency Virus

ICT Information and Communication Technology

ILO International Labour Organisation

IM Instant Message

INGO International Non-Governmental Organisation

IPC Indian Penal Code and Act XLV of 1860

LGBTIQ lesbian, Gay, Bisexual, Transgender/Transsexual, Intersex and Queer

MBBS Bachelor of Medicine, Bachelor of Surgery

NADRA National Database Registration Authority

NGO Non-Governmental Organisation

NSWP Network of Sex Work Projects

PBS Pakistan Bureau of Statistics

PI Privacy International

PKR Pakistan Rupee

PPC Pakistan Penal Code and Act XLV of 1860

PSPO Punjab Suppression of Prostitution Ordinance, 1961

PTA Pakistan Telecommunication Authority

SMS Short Message Service

STIs Sexually transmitted infections

UDHR Universal Declaration of Human Rights

Abstract

The emergence of digital technology especially the internet and the fast development of the mobile phone technology and the ever-increasing role of social and commercial networking platforms have changed the formation of businesses. A profession like sex work is no exception. Though scholars have started investigating about the impact of ICT especially the internet in the organization of sex work, most of the research work has been focused on global north while southern part of the globe has not been covered in terms of academic inquiry. This thesis is an attempt to contribute to bridging the gap of the knowledge by studying the role of ICT in the lives of transgender sex workers in Pakistan. While agreeing to the changes taking place rapidly because of the use of ICT, this thesis draws upon the social challenge, also called the digital divide, which keeps people from taking full advantage of the ICT and internet to their benefit, especially, when it comes to the most marginalised communities such as transgender sex workers located at the lowest layer of the hierarchical ladder. This research focuses on the opportunities and the possible constraints that ICT can present to the transgender sex workers.

Relevance to development studies

Development studies place the well-being and welfare of sex workers within the broader perspectives of sexuality, gender equality and human rights. The implications of digital technologies on human rights and social justice have also been among the key concerns of development discourse. Anchored in the social justice perspectives, this research paper contributes to the body of crucial scholarly engagement about the socio-economic and political rights of most disadvantaged and marginalised communities such as transgender sex work in the digital era focusing not only their economic rights but also on their well-being in terms of health, education, safety and security.

Key words

Sex Work, Technology, Transgender Sex Workers, ICT, Capability Approach, Human Rights, Well-being, Digitalisation, and the Internet

Acknowledgements

Firstly, I would like to express my whole-hearted appreciation to my supervisor Dr. Karin Astrid Siegmann for her continuous guidance, enormous support and patience. I could not have imagined having a supervisor and mentor with such an immense knowledge in the field of my research subject and beyond. I also express my sincere gratitude to the second reader of this research paper, Dr. Helen Hintjens, whose invaluable feedback, academic advice and helpful practical input helped me to widen the scope of my research from various perspectives. I am also grateful for the unforgettable hug she gave me when I was lost and disillusioned during the finalisation of my research topic. My admiration and respect for her throughout support and guidance.

I am also greatly indebted and thankful to the research participants, who trusted the worth and value of this thesis and very kindly agreed to share their life stories and personal experience without which this investigation would not have been possible.

Let me also take this opportunity to appreciate and thank my friend and better-half, Mazhar Ali, who was a great support during the whole journey of my studies.

Chapter 1 - Introduction

1. Background

Development planners have invested massively to explore the potential of digitalization and information and communication technology in empowering people and transforming their lives across the globe (Karim et al., 2011; Rahman, 2016; Roztocki & Weistroffer, 2011; Sey et al., 2015; Zunguze, 2007). According to Sanders et al (2018) ICT has changed the way people organize their lives, manage personal and professional relationships in terms of business, commerce and retail.

Like other professions, sex work has also become a part of the digitally networked sector across the globe. Similar to other businesses conducted online, sex services are also being bought and sold at the virtual marketplace that Internet has become (Sanders et al, 2018). There is a whole body of knowledge which highlights how technological advances have provided people with new opportunities in different sectors such as business and commerce, however, academic research has not adequately captured the degree to which technology has impacted the ecosystem of sex work.

I was lucky to come across a useful research work titled "Beyond the Gaze (BtG): Working Practices, Safety and Regulation of Internet based Sex Work" which traces the impact of technology especially the internet on the sex work. Though it is mainly focused on the sex industry in the United Kingdom, it still offers very interesting insights about the way digital technologies have affected the lives of sex workers in that country. It suggests that the tasks of identifying the best service providers and attracting good customers on digitally mediated spaces for sex work are being overwhelmingly accomplished by using internet-based facilities such as websites, emails, Whatsapp, Skype and google hangouts. This means technology has become a means not only for in-person sex services but also for offline sex encounters.

BtG study underpins the benefits of ICT usage by sex workers and maintains that the online modes of sex work industry offer more fluidity, flexibility and autonomy to exercise choices to the sex workers (Sanders et al, 2018). They argue that digital technologies play an important role within safety practices of internet-based sex workers. Internet-enabled facilitation and arrangements, such as screening through digital tools available in many worker's safety features in their phone's app stores, are helpful. Nevertheless, the report also cautions about the disadvantages of ICT usage related to unpredictable earnings, enduring stigma, facilitating "crimes against sex workers or generating new harms and risks of privacy violations."

Cunningham et al (2011) while referring to Levitt and Venkatesh corroborate the suggestion regarding the limitation of literature around sex work by saying that most of the studies around sex work are focused on street-based or brothel-based sex work taking place off-line and the internet-mediated sex work is less studied (Levitt and Venkatesh, 2007). According to them, reliable data about sex work involving the use of ICT is still available. There is a body of literature which includes the features, services, income and behavior of sex workers who do their business via internet-mediated platforms such as apps and websites. However, this literature is too inadequate to provide researchers evidence and steer towards discovering more critical facts and findings.

According to Scott Cunningham and Todd Kendall (2011), sex services were available long ago in large cities via street "strolls", call operations, advertisements in public phone

booths with contact details and some other secondary services in legally authorized businesses such as massage parlors etc. But the Internet has dramatically enhanced the ability of sex workers to "(a) reach large numbers of potential clients with informative advertising, (b) build reputations for high-quality service, and (c) arrange discreet assignations in which screening methods can be used to reduce the risk of discovery by the police and others".

Also, the works of Cunningham et al (2011) highlight two key aspects related to ICT-enabled sex work that are crucial to understand: i) Whether modern technologies are enhancing the market for sex work or simply displacing older and riskier means of solicitation, such as streetwalking? ii) Are risk behaviors among sex workers soliciting online similar to those associated with older modes of solicitation? They share the key findings of their work claiming that online solicitation among sex workers largely displaces streetwalking, "with its associated nuisance externalities and worker exploitation and that the new market institutions associated with online activity incentivize reputation-building and screening, which reduce the risks and social externalities of prostitution". Scott Cunningham and Todd Kendall (2011) conclude that the frequency of engaging in high-risk sexual practices is less among those sex workers who solicit clients online.

I was able to find some useful academic resources that documenting the perils and pitfalls of ICT for sex workers. For example, the book titled "Routledge International Handbook of Sex Industry Research" includes a chapter written by Helen Rand (2019) in which she acknowledges that the sex workers having access to internet connection and laptops create online profiles to easily sort and contact clients using digital platforms. She also mentions that technology-mediated sex service providers offer a variety of goods and services demanded by the sex market. However, she argues that the technology-mediated sex industry is part of "gig economy" which involves a higher degree of precarity with this form of ondemand labour because of the stigma and the so-called morality which accompanies the selling of sexual services. While referring to the research of Harvey and Ong (Harvey 2007; Ong 2007) she anchors her argument in the global neoliberal model of economy which considers individuals solely responsible for their own fate. She is of the view that the role of welfare state has shrunk creating a shift that has pushed citizens to become 'self-sufficient' entrepreneurs who contribute to the state's economy but do not need and expect any support from the state. According to her, "this cultural shift, alongside technological developments, has impacted labour markets and the organisation of work, including sex work. The result is that non-standard forms of work, such as temporary contracts, self-employment and part-time work, are increasing and as Beck (2000) predicted, work that is full-time, permanent, unionised and subject to state labour regulations is diminishing." Further explaining her ideas about the 'gig economy', she says that digital platforms are now matching workers with the potential employers seeking services and digital platforms are acting as 'labour brokers'. Helen describes the provision of technology-mediated sexual services as an arrangement of online demand labour. She comes up with a strong argument about the workers selling sex as part of a 'gig economy' where they get paid for the 'gig' being performed with set time limit of the particular task. She suggests that in such economy, sex workers are not employed by any platform or an individual hence there is no protection of labour laws for them.

While acknowledging the importance of the academic work done by various scholars about sex industry, I subscribe to the apprehensions originating from the works of Angela Jones (2015), who has used extensive dataset to highlight some of the limitations and dilemmas about the digitalization of sex industry. She argues that the literature about sex work visà-vis the use of internet-based technology is too optimistic and it has its own limitations because it mostly focuses on the affordances of Internet-based sex work and overlooks the new perils that occur and keep on emerging in different ways online. She also claims that this

literature presents a homogenized picture of digital sex work and it is inattentive towards the diversity of sex workers' labour. She suggests that this body of the literature also overlooks the diversity among the sex workers such as race, class, gender, age and ability etc.

Jones (2015) further states that investigation about the role of digital technologies especially the internet as regards sexual commerce is not old and has started in recent years and because of that the mushrooming body of the literature, which empirically explores the ways in which internet facilitates the sexual commerce, has developed instead of research based on theory or pure logic. She claims that a marked growth in literature about sex work in digital era has been observed only in recent decade, but she admits that still we do not have enough information about how the use of "internet has affected the work experiences, wages, and working conditions of many sex workers." Her perspective provides me a departure point for my research subject because I agree that the literature per se needs to be reoriented in a manner that produces more information about how sex workers are using ICTs especially the Internet to earn their livelihoods and how it has actually reshaped their profession?

A guide produced by the NSWP-Global Network of Sex Work Projects titled "ICT and Sex Work" is another interesting resource which considers ICT as a transforming tool and acknowledges that the ICT has made sex work much easier and safer for sex workers and has improved the working conditions in terms of flexible working hours, minimized or utterly slashed the role of third-party mediation, enhanced screening processes for safety and security, and opened innovative online marketing and payment systems. The analysis includes the example of the internet usage in different countries such as the US, Sweden, Guyana, Kazakhstan, Mexico and Vietnam. The guide argues that the sex work has experienced a global shift as it has moved from outdoors to indoors in different countries despite different socio-economic and political contexts, regulations and laws. People in relatively less technologically advanced countries are also users of the internet, and internet-based communication means such as WhatsApp, Facebook, Viber, Skype and other online platforms. They have now more potential to engage in digital sexual commerce. While narrating the benefits or advantages of ICT, sex workers interviewed for the purpose of developing this guide, however, cautioned that ICT is a double-aged sword. With all its advantages and benefits, the ICT has triggered and added new risks to the ordeal of the sex workers especially in terms of their privacy and confidentiality. Another dilemma that the sex workers reported during the interviews was that the organisations working for the health, safety and human rights services for sex workers have been unable to keep pace with the increased use of ICT. On the other hand, organisations consulted during the above referred research project stated that it is very difficult, if not utterly impossible, for them to find and access sex workers who work online in private spaces because they are invisible.

The problems highlighted by the sex workers themselves and those reported by the oganisations working for them, offer interesting insights which uniquely contribute to the academic work done on the topic of the sex work in relation to ICT. This point of view underscores the gap between the online existence or presence and off-line invisibility of sex workers with its own advantages and disadvantages. At the same time, the available research work again points out to the dearth of the literature in this area and the need for further academic inquiry that is, ideally, at par with the speed with which internet serves the sex workers in organizing their lives and work.

1.1 Typologies of internet-mediated sex work in the global context

On the basis of worksite, primary method of soliciting customers, or sexual practices Harcourt et al (2005) identify 25 types of sex work ranging from brothel, street based and escorting to lap dancing. These types of the sex work are generally grouped under the descriptions of "direct" and "indirect" sex work. Harcourt and Donovan in their article titled "The Many Faces of Sex Work" state that policing of sex work may affect its typology or location, however, its prevalence is seldom affected. The description of these typologies is presented as Appendix-A.

1.1. A snapshot of sex work in Pakistan

Since sex work is illegal in Pakistan, there is no statistics of the people involved in this profession in official census, the latest of which was conducted in 2017. Another reason for unavailability of official data on prevalence of sex industry in Pakistan is that sex outside the marriage is a crime in Pakistan. Hence, the sex industry can only afford to operate clandestinely. It is because the state founded on the puritan principles of Islam cannot tolerate the existence of an industry that involves the act described by the faith as 'sin'.

Sex work takes place often in abusive and unsafe conditions. Literature on sex work in Pakistan mostly covers women sex workers conveniently ignoring the share of male and transgender people in the industry.

A sizeable population of sex workers is based in large metropolitan cities like Karachi and Lahore. The work force in the sex industry predominantly consists of women and transgender people.

There were designated red-light districts in major cities during—and some of them before—the colonial era in the regions forming south Asia. The famous 'Heera Mandi' (market of the diamonds), also known as Shahi Mohallah (neighbourhood in service of the people affiliated with the royal court) in Lahore predates colonial period.¹ Equally famous area known as Bulbule-Hazar Dastan (The nightingale that tells a thousand tales) was established on Napier Road in Karachi during the colonial rule.² Nevertheless, this was an informal arrangement. Designating places for sex work in the cities and towns was never covered by any laws. There is no data available on whether or not transgender people also worked as sex workers in the Heera Mandi, Bulbule-Hazar Dastan or any other places designated for sex work.

Before the advent of ICT communications, both urban and rural men would come into contact with female and transgender sex workers as per their income and ease. In urban settings, female sex workers would come to the places preferred by their clients, which included hotels, motels as well as the *Deras* or *Baithaks* (guest or rest houses.)

People living in the villages would find female sex workers on shrines of Sufi saints or at the occasions of the seasonal fairs and festivals. Some well-to-do clients used to provide houses and apartments to the sex workers to stay there as their "keeps" (loyal informal partners).

¹ British colonial rule was instituted in 1858 when the rule of the East India Company was transferred to the Crown. The region of the Punjab was however, conquered by the East India Company in 1849.

² Sindh was conquered by the East India Company in 1843. At that time Karachi was a small coastal town.

1.2. Research problem

The literature reviewed for the purpose of this thesis suggests that the formation of professions like sex work has changed a lot in the digital era (Jones, 2015) and it has reshaped the organization of sex work worldwide. While agreeing to the changes taking places rapidly because of the use of ICT, I am aware of the fact that people do not have equal access to the ICT. The social challenge called the digital divide keeps people from taking full advantage of the ICT and internet to their benefit, especially, when it comes to transgender sex workers, who, according to Weitzer (2009) occupy the lowest layer of the hierarchical position in a society maintaining discriminatory divides.

In aforementioned backdrop, this research paper is an attempt to further verify some of the assumptions reported in the literature and understand that what opportunities and constraints ICT presents to transgender sex workers and what are their general experiences with these technologies.

The Central Question:

How has the ICT impacted the way in which transgender sex workers in Pakistan organize their lives and conduct their work? What are their experiences in terms of any ICT-related opportunities and constraints?

1.3. Justification and relevance

The justification for choosing this topic is based on two key considerations which motivated me to opt for this area as a topic for my research paper. Firstly, as presented by Lin et al (2015), many development agencies and stakeholders consider ICT crucial to achieve socio-economic advancement for developing countries and underprivileged groups. The major problem that confronts the researchers is that the impact of this development on the sex work has only been studied at a limited scale. Cunningham et al (2011) also refer to the available literature highlighting this limitation of the scholarships. Most of the studies around sex work are focused on street-based or brothel-based sex work taking place off-line (Levitt and Venkatesh, 2007). This establishes that the internet-mediated sex work is less studied.

With this red flag raised by Cunningham et al (2011), their work also indicates the availability of limited but reliable data about sex work involving the use of ICT for instance, the features, services, income and behavior of sex workers who do their business via internet-mediated platforms such as apps and websites. While agreeing to the changes taking places rapidly because of the use of ICT at global level, I am of the view that largely the available literature in relation to ICT revolves around the opportunities and benefits of ICT to those involved in sex work, while the issues related to uneven distribution as regards access to, and use of the Internet and ICT, or its possible varying degrees of impact on the social groups located at the bottom of hierarchal order are either largely overlooked or inadequately captured in the academic scholarships.

Nevertheless helpful, the literature I reviewed for the purpose of this research paperrevealed that research on sex work vis-à-vis digitalization or the use of ICT is not only a recent and evolving development like its subject but very limited in its scope. At the same time it is anchored in the context of global north and global south appear to remain overlooked. Given the different social and cultural contexts of the South Asia in general and Pakistan in particular, I have tried to dig up the relevant literature to find out that there is a body of work available which focuses on the mega development projects funded by northern countries and implemented by southern countries involving huge top-down technological interventions.

This literature highlights the "transformative" potential of digitization in agriculture, education and entrepreneurship, however, it not only sounds more optimistic about the role ICT can play in bringing about the positive change but it subtly and conveniently ignores the issues related to equal access, control and use of ICTs by the haves and the have nots in societies struggling with the huge power imbalances.

"The highest form of knowledge... is empathy."

My motivation to embrace this academic journey emerged from the fact that the research focusing on the potential of ICT in terms of 'transforming peoples' lives is largely absent in the context of sex work being performed by transgender sex workers generally in the global south and specifically in the context of Pakistan. I have observed transgender people surfacing and disappearing now and then into the ocean of binary world since my childhood. To me they are at the lowest level of the bottomless pit of exclusion that societies create and usually states reinforce. As it happens in case of the abandoned wells, often creatures like snakes fall into them and get trapped. Transgender persons in south Asia in general and Pakistan in particular, are trying to get out of that deep dark well full of snakes and serpents. Their bodies and souls are bruised and stung. Despite decades of struggle aimed at upward mobility, they have only risen to a negligible level and have to struggle for more decades to come out of this poisonous pit. Together with them in the same pit are other socially excluded people such as untouchables of south Asia and communities trapped in several forms of slavery.

Most studies about transgender people – majority of which is conducted by researchers, academicians, civil society organisations in India – have tried to capture several aspects of the existence of this community. The areas of the inquiry e include their history of alienation, state and society's attitude and evolution of social organization of transgender persons in India or south Asia and so on. But there is almost no literature available on this community's use of ICT as a survival strategy. On the global scale, again the resources are very limited. However, the available research work on transgender people as sex workers using ICT only revolve around the use of the ICTs in terms of prevention from and awareness on HIV AIDS and STIs. There is no credible work probing ICT's role focusing on sex work done by the transgender persons in Pakistan.

I took the absence of data in this area as a challenge and it proved one of the key motivations for me to focus my research on this subject. This research work is my humble attempt to analyse the impact of ICT on transgender sex workers in which I have tried to identify and document some of the emerging trends regarding advantages and disadvantages of ICT being used by them.

In the aforementioned context, this research work will be an attempt to contribute to bridging the gap about the role of ICT in the lives of transgender sex workers in Pakistan. I wish this work helps the transgender community, researchers, knowledge managers and policy makers to understand the role of ICT in organising life and work of the transgender sex workers in Pakistan. And I hope it helps the transgender community in articulating their interests by developing concrete proposals to influence and shape up policies ensuring a dignified life for them as equal citizens of Pakistan.

1.4. The structure of the paper

The organization of this research paper is as follows: following this introductory chapter, 2nd Chapter presents the contextual background in which transgender sex workers live their lives and perform their jobs. This includes the socio-economic, political and legal context in which

transgender sex workers navigate through the maze of complex challenges. 3rd chapter explains the conceptual framework which will be used throughout the paper. 4th chapter revolves around the methodology employed for carrying out this study. 5th chapter presents the data and includes a descriptive analysis. The 6th chapter presents the conclusion and at the end a list of references has been enclosed.

Chapter 2 – Operating Context

2. Transgender community – The outcasts

This chapter provides an overview of the context in which transgender community lives in Pakistan. It also covers the socio-economic condition of transgender people, their social positioning, political and legal framework within which they exist and perform sex work. This chapter also includes insights about the social organisation of transgender community in Pakistan.

According to Khan et al (2009), transgender persons, locally called the *Hijras* and also known as the 'third-gender' persons, have existed for centuries in the Indian sub-continent, however, they are situated at the extreme margin of socio-economic and political exclusion with no space to lead a life with dignity. The deprivations of transgender people are anchored in their non-recognition as human beings with different gender identity which is beyond the male-female dichotomy.

The situation of transgender persons in Pakistan is no different than other countries of the region with similar cultural contexts. Theirs continue to be an alienated, isolated, oppressed and excluded community in society since centuries. These unlucky souls are abandoned rather banished by their families and are forced by the conventional social order to live at the margins. Rejected as they are, they take shelter with other transgender people only to live miserable lives stung by the stigma. Forgotten by the state, laws, policies and political rhetoric, they often have no permanent address to receive mail nor have official documents to prove their identity. Before their 'confused' gender is fully established, their parents register their names with the local municipal record usually in the list of boys, thus imposing a certain gender identity on them. And then they are dogged by it almost for entire life. Their souls are trapped in alien bodies and the official demographic records do not represent their reality, rather make them invisible. However, like other socially excluded groups, they cling to the very identity which has been used to oppress them. It is their coping method to form a community based on their identity.

The rise of the ICT has massively impacted the society in all aspects but not necessarily or entirely on the positive side. It is generally believed that for the transgender persons involved in sex work, ICT has opened new opportunities. But it needs to be added that it has exposed them to equally new risks in terms of socio-economic organisation and power relations.

According to the provisional results of the recent population census data released by PBS, population of the transgender people stood at 10,418 or 0.005% among over 207 million people living in Pakistan. The census data further reduced the community into an insignificant group which is unable to attract the attention of the policy makers. In my opinion, their being small in numbers gives the community an advantage when compared to other socially excluded people. Their problems are manageable, and they can get rid of the exclusion and stigma more conveniently if their struggle is supported by trans-inclusive state policies and investment for their social empowerment and development.

2.1. Social organization of transgender people

As mentioned earlier, the social organization of the transgender community reflects a coping strategy against vulnerability. According to the respondents participating in research projects (including this one), the transgender people are divided into following three categories depending upon their situation.

- Khusras: All transgender persons are called Khusras.
- Khotkis are the Khusras who look more like females; and
- Banthas are Khusras who look more like males

The transgender persons have been assigned roles and are further identified as per the following categories mentioned in the Mehreen Fatima's (Fatima, 2019) insightful article "Trans rise in the digital age". (The exact titles may vary depending upon locations, regions and languages):

Guru: Literal meaning of Guru is spiritual master / teacher /mentor. The Guru provides shelter to the family of transgender persons. Sometime Guru also finds clients for them and negotiates the costs. Usually the Gurus are selected from among Khusras. The Guru is usually a kind and compassionate individual but as a mentor, he has only limited skills to impart to them such as begging or dancing for alms, and pursuing people to offer sex work. The members of the family headed by the Guru are called "Chellas" which literally means "disciples or followers".

Kachey: They are the *Khotki Khusras* who are recent entrants and are not much experienced in terms of finding clients independently.

Bachay. They are very young transgender persons in their teens.

Pakkay: They are transgender persons of 18 years age or above. Majority of transgender sex workers belongs to this category. They are experienced and have the ability to independently find clients. They earn more in comparison to others when they are good looking and have predominantly feminine traits.

Normally, they stick to fewer regular clients. Attracted by their looks, their clients pay more to have their company. In some cases, they discover a client more loyal to them. After some time, this client gets special treatment and earns the title of "Yar". The relationship between the couple is similar to that of a marriage.

The community and the family try convincing the *Yar* to allow them to organise a formal marriage ceremony which is called *Jalsa*. The *Pakkay* hardly find a *Yar* ready to be openly part of such ceremony. The couple, however, lives like husband and wife and are expected to be strictly faithful to each other.

When without a Yar, the Pakkay get a partner from among Khusras or Banthas for assistance in managing their sex work.

2.2. Role of the *Guru* in the lives of transgender community

Everyone in the family follows the rules defined by the *Guru*. The shelter where they live is called *Dera*. The *Guru* has the power to allow or disallow visitors or clients coming to the *Dera* and receives a certain share of the income from *Chellas* who earn their livelihoods either

¹ Trans rise in the digital age". Author: Mehreen Fatima, published on July 23, 2019 accessed on October 26, 2019 at: https://digitalrightsmonitor.pk/trans-rise-in-the-digital-age/

by begging, dancing or performing sex work. Though the *Guru* consults others, but usually makes most of the decisions at his own. The *Guru* regulates all the rituals of the family and family's relations with other families or the larger community of transgender people.

The *Guru* attains this status on the basis of age, seniority as sex worker, some leadership skills and connections among the larger community. A new transgender person can join the family only after making allegiance to the *Guru*. By virtue of this allegiance, the new family member gets the title of *Chela* (disciple). A *Jalsa* (ceremony) is organised to declare the enlistment of the new *Chela*. In presence of the community members a ritual is performed in which the *Guru* pierces the ear of the *Chela*.

2.3. Persecution of transgender community during colonial rule

Transgender people were called *Khawaja Sira* during the Mughal period. Till today, they prefer to be called *Kawaja Sira* as it has some element of respect attached to it. As most trusted servants, they were deployed as guards and guardians of the Harem i.e. the secluded part in the resident quarters of the palaces where queens, concubines, and female servants used to live. As they could spy both on male and female sections, the Kings would respect the *Khawaja Sira* and grant them gifts which included gold as well as *Jageers* (agriculture lands).

British colonial rulers did not like *Khawaja Sira* known as Eunuch in the language of the colonial rulers. Because of their confused gender, they viewed them as a threat to public order. In 1871, they introduced the Criminal Tribes Act (CTA) to control criminal tribes. Eunuchs were part of the list of the "criminal tribes".

The law even required to punish those "persons of male sex" who were found impotent by a doctor during a medical examination. The impotent men would automatically fall into the category of the Eunuchs and would face the same fate as that of the Eunuch.

Section 24 to 31 of the law in its Part II of the CTA required the municipal authorities to keep a register of the Eunuchs and have effective control on their movement. The crimes Eunuchs were suspected to be involved in included: attempt to kidnapping, castration of minors and sodomy etc. The law declared wearing female clothing by men a punishable offence. Last but not the least, the law also deprived the community of their assets revoking their right to possess land because they had not inherited the land through blood relations. The CTA effectively excluded them from mainstream Indian society for the centuries to come.

2.4. Criminalisation of sex work in Pakistan

Since sex work is one of professions transgender persons involve in to earn their livelihood, it is pertinent to assess the legal framework on sex work in Pakistan in order to contextualise the vulnerability of transgender sex workers and precarity of their work.

Article 37 (g) of the Constitution of Islamic Republic of Pakistan declares that "State shall prevent prostitution, gambling, taking of injurious drugs, printing, publication circulation and display of obscene literature and advertisements" for "promotion of social justice and eradication social evils". Since prevention of prostitution being part of a 'law and order' which is provincial subject in Pakistan, each province has enacted its local law to enforce Article 37(g)

within their respective jurisdictions declaring prostitution as a criminal act punishable by the law.¹

And since all the provincial laws aimed at 'Suppression Prostitution' enacted to enforce Article 37 (g) of the Constitution of Pakistan in the same year (1961), they are largely similar in terms of definitions, prosecution, trials and penalties. I would therefore refer to only one of them for the benefit of the space, and that is The Punjab Suppression of Prostitution Ordinance, 1961 (PSPO, 1961).

The definition of the prostitution in PSPO 1961 is "promiscuous sexual intercourse for hire with payment in money or kind." Prostitution is gendered as the law defines "prostitute" as "a female available or known to be available for purposes of prostitution." Any sex workers other than females are beyond the ambit of this definition. Any sex work performed by transgender people is, therefore, not "prostitution" within the meaning of PSPO 1961.

A new law "The Offence of Zina (Enforcement of Hudood) Ordinance" introduced in 1979 with an overriding effect on PSPO 1961 declared the act of engaging in sex work invariably an offence of "Zina" – consensual sex between unmarried man and an unmarried woman. It criminalised any form of penetration between men and women outside of marriage, but it did not cover voluntary or consensual sexual acts between same sex people, or between transgender persons and men. Therefore, transgender persons involved in sex work barely survived culpability of their act under this law.

There is an archaic provision of Section 377 of Pakistan Penal Code (originally known as Indian Penal Code and Act XLV of 1860) which targets same-sex people as well as transgender community. It declares "voluntarily carnal intercourse" with any man, woman or animal against the order of the nature and an "unnatural offence" punishable by imprisonment for a term up to 10 years. There is no mention of any kind of same-sex sexual activity, but taking advantage of its vagueness, police uses or threatens to use section 377 PPC to arrest gay people as well as transgender persons to extort money from them.

Same section 377 of the Indian Penal Code (IPC) has been struck down by the Supreme Court of India in September 2018, saying "Criminalizing carnal intercourse under Section 377 IPC is irrational, indefensible and manifestly arbitrary."³

Section 377 is fossilized into the Pakistan's penal code. Pakistani LGBTIQ community in general and transgender people in particular received this development in India with joy and envy.

2.5. Citizenship, population and political rights

In December 2009, Supreme Court of Pakistan passed a landmark order in a Constitution Petition saying that transgender have equal basic rights as all citizens.⁴ After extension of

¹ Provincial laws declaring prostitution as a punishable offence include: i) Punjab Suppression of Prostitution Ordinance 1961; ii) Sindh Suppression of Prostitution Ordinance 1961; iii) Baluchistan Suppression of Prostitution Ordinance 1961; and iv) North West Frontier Province Suppression of Prostitution Ordinance 1961

² The Punjab Suppression of Prostitution Ordinance 1961 Section 2(e) 'prostitute' means any female available or known to be available for purposes of prostitution.

³ Supreme Court of India Judgment in Writ Petition (Criminal) No. 76 of 2016 Navtej Singh Johar & others Versus Union of India (Sep 06, 2018), page 7 of Part A

⁴ Constitution Petition 34 of 2009 Khaki v. SSP Operations Rawalpindi and others, Supreme Court of Pakistan (12 December 2009)

legal recognition to transgender people by the Court, parliament passed Transgender Persons (Protection of Rights) Act, 2018 just before general elections of 2018 and NADRA began to offer identity cards with an option to mark "transgender."

Since September 2017, NADRA has started accepting applications of transgender persons for issuance of Computerised National Identity Cards with the names of their *Gurus* as parents in the related field. This means from now on those Gurus whose names are written as parents of the transgender persons enjoy the status of being legal guardians of the card holders.¹

According to the census held in 2017 Pakistan's population is 207.77 million (207,774,520). The population of male is 106.44 million (106,449,322) and that of females is 101.31 million (101,314,780). The number of transgender citizens counted in the country of 207.77 million stood at 10,418 which is widely disputed and rejected by the transgender community.² There are no figures of their population available in the data of previous censuses of Pakistan as they were never counted.

The total number of voters registered in Pakistan's electoral register was 105.96 million as of July 2018 when general elections held in Pakistan. Of these, 59.22 million were male and 46.73 million were females. The number of transgender voters was 1882 who were registered on the basis of their gender X mentioned in their computerized identity cards. These include 11 in Islamabad, 11 in Azad Jammu & Kashmir, 127 in Khyber Pakhtunkhwa, 80 in Balochistan, 338 in Sindh and 1315 in Punjab.³

2.6. Cell phone and internet penetration

According to the PTA, 70 million people in Pakistan are currently using internet either on broadband, 3G, 4G and landline internet. And there are 161 million subscribers of mobile phones. As there is no credible data on the population of transgender persons in Pakistan, it is difficult to determine a baseline of how many transgender persons are using cell phones and internet.

2.7. Perils of being online in Pakistan

While it is generally believed that ICT has opened new opportunities for all workers including transgender sex workers, the fact that it has unleashed new challenges to their work and their lives is less reported or discussed.

Pakistan enacted Investigation for Fair Trial Act 2012 which authorises the law enforcement agencies to intercept people's phone calls, emails and text messages, etc., and where required present this information as admissible evidence in the courts. In addition, Prevention of Electronic Crimes Act was enacted in 2016. According to a report of Privacy International titled "Tipping the scales: Security & surveillance in Pakistan" released in 2015, this

¹ "Trans people can use guru's name as parent in CNIC" – Dawn, September 27, 2017. Accessed on the newspaper's internet edition on November 21, 2019 at https://www.dawn.com/news/1360320

² Press Release on Provisional Summary Results of the 6th Population and Housing Census 2017, Government of Pakistan, Ministry of Statistics, Statistics Division, Pakistan Bureau of Statistics, accessed on Oct 18, 2019 at http://www.pbs.gov.pk/content/provisional-summary-results-6th-population-and-housing-census-2017-0

³ https://www.urdupoint.com/en/pakistan/all-pakistan-transgender-election-network-exp-399097.html

⁴ Investigation for Free Trial Act 2013 accessed at the website of National Assembly of Pakistan http://www.na.gov.pk/uploads/documents/1361943916_947.pdf

law has enhanced the powers of Pakistan's notorious agencies to intrude deeper into the privacy of citizens. Now they intercept almost entire traffic on internet making virtual policing much more effective. Abusing their communication surveillance powers, intelligence agencies have been spying on leaders of the rival political parties as well as judges of the superior judiciary.¹

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¹ Tipping the scales: Security & surveillance in Pakistan page 1, accessed on Oct 13, 2019 at the website of Privacy International:

https://privacyinternational.org/sites/default/files/2018-08/PAKISTAN%20RE-PORT%20HIGH%20RES%2020150721 0.pdf

Chapter 3 – Conceptual Framework

3. Approaches for assessment

This chapter presents the overview of the relevant conceptual framework and theoretical considerations which will shape data analysis for this research. The key concept used in the chapter is the Capability Approach (CA) of Amartya Sen while some insights have been extracted from Feenberg's Critical Theory of Technology (CTT). These two concepts have been employed to develop this thesis because of their commonalities for the purpose of analyzing the data and framing the impact and influence of technology on the work and lives of transgender sex workers in Pakistan.

First of all, the commonality between CA and CTT is the desire of "a good life". Secondly, both concepts are normative, and both are anchored in moral principles aiming to make a difference. Also, these conceptual frameworks assign democracy and empowerment a place of significant importance.

The choice anchor my data analysis in the CA and using CTT, is based on two considerations: 1) I want to move beyond the linear and one-dimensional view about the ICT offered by the debates between technological determinists and the social constructivists because their polarized frameworks contribute neither to technology nor to society; and 2) Given the inadequacy of the CA in some areas such as collective agency and conception of technology, incorporation of some insights from CTT provides me with an enriching experience to examine and review my field data in the light of a broader conceptual framework. Therefore, for the purpose of this research, I use ICT as the part of "technologies as shaping and being shaped by evolving social processes" (Richardson et al, 2006. P. 269) and combination of these two concepts helps me to use a socio-techno lens while collecting and analyzing data for this thesis. As the point of departure for this research is to ascertain the role of ICT in terms of presenting opportunities to transgender sex workers in order for them to achieve "a good life" or resulting in creating constraints for them to attain their desired life, these two concepts complement each other. It is important to mention here that, while placing this thesis in the core concepts of CA and CTT vis-à-vis the role of ICT, the data analysis will also take into account other conceptual insights in support of or against these two key concepts to further enrich the data analysis assessing the impact of ICT in the lives of transgender sex workers.

3.1. The nexus between capability approach and ICT

Amartya Sen's CA is rather new to the social science studies about ICT, however, its growing use in social research refers to the relevance and importance of CA as it has been used in academic research on poverty eradication, gender parity and democracy etc. According to Zheng and Stahl (2011), the CA is also being used to investigate the impact of design and favorable reception of information and communication technology (ICT) in a society. This concept was recently used to deliberate upon ICT as a means or an end for development (Garai and Shadrach,2006), Evaluating ICT related development projects (Madon, 2004) is also one of the examples of CA application where Madon (2004) used CA and went beyond the conventional ideas of evaluating e-governance project in Kerala, India. She didn't only measure expenditure, access and skills or infrastructure but she strongly argued that its essential to measure that what is the use of ICT in terms of people's experience of using ICT

applications and whether or not people effectively benefit from the ICT applications offered in these projects. Johnstone (2007) also did her research work on computer ethics by employing CA to broaden the research agenda around computer ethics. Zheng and Walsham (2008) used the CA concepts to investigate social exclusion in the e-society in order to assess the inequalities in different "spaces". Another systematic inquiry of the CA in relation to the Information Systems (IS) was done by Zheng (2009) to identify ways of using CA concept to examine the role of ICT in socio-economic development. While acknowledging the contribution of CA, Zheng and Stahl (2011) maintain that "In general, the capability approach has provided an invaluable analytical and philosophical foundation to be built on (Evans 2002), and a conceptual basis upon which many critical issues and embedded relationships are sensitised for investigation. Therefore, the CA is not only applicable in empirical studies, but also can be drawn upon for purposes of analytical reasoning or as a critical lens." Before moving to unpack the CA framework, I would also like to refer to the work of Garnham (1997) applying CA to ICT. Where he speaks about "thinking of entitlements in terms of functioning and capabilities" and argues that it "allows us to look beyond the superficial indices of access and usage that we so often use" for the purposes of ICT related policy. The available literature shows that since last 10 to 15 years, a considerable number of scholars seem to realise the potential of Sen's capability approach for the debates about ICT. For instance, Van den Hoven and Rooksby (2008) recognise the depth of Sen's critique about the concept of primary goods presented by Rawlsian in their argument regarding information and distributive justice. Also, Sen himself has taken up the topic of ICT (Sen, 2010), deliberating on the positive contribution mobile phone has made to the global expansion of human capabilities. According to Oosterlaken (2013) technical artifacts have barely been recognised as an input for human capabilities in the literature on the CA. Though, Sen and some other authors sometimes include the example of a bicycle that can enhance one's capabilities to move around. Oosterlaken (2013 P. 9) while using the analysis of Bijker about the history of the development of the bicycle, argues that an artifact's design details are very important to see its impact on human capabilities. The current practice of designing the technical artifact too shows that much attention is paid to the things such as usability and user satisfaction. Oosterlaken (2013) refers to Buchnanan's argument insisting that the technical artifact should be designed by grounding it in human rights and human dignity. He further adds that "I propose human capabilities as an alternative. Due to the functionalistic orientation of the CA, this alternative may be more fruitful and appealing to designers. Analogue to 'value sensitive design' – an emerging approach in the ethics of technology – we should thus look into the possibility of 'capability sensitive designs'."

3.2. The capability approach – What it is all about?

Amartya Sen developed capability approach (CA) partly in response to the critique of growth-centric approaches towards development that revolve around income and commodity control and partly responding to the utilitarian concepts which were introduced to measure people's 'happiness', 'aspirations' and fulfillment of their 'desires' as typically referred in the conventional welfare economics (Sen 1985). The term "capability", as used by Sen, is quite different from the way it is used commonly referring to trained potentials such as skills, abilities and aptitudes. Instead, "capability" in Sen's concept indicates the real opportunities – the opportunities related to an individual's environment or surroundings and individual abilities required for that individual to lead a life that he or she values (Gasper 2007).

Sen's capability approach to development is anchored in the process of expansion of people's freedoms. He stresses on the individuals' capability to function which is essential to lead a reasonable life. According to Sen, the capability of function goes beyond the simple availability of goods and commodities. Functionings are defined as what individuals "do and are". It is about what an individual "manages to do or wishes to be" (Sen 1985aSen, A. K. (1985a). According to Ai-Thu Dang, Functionings refer to achievements for example "being wellnourished, being healthy, not suffering from a lack of self-respect, taking part in social life, and so on." Thus, "a person's capabilities reflect the different functionings he or she may achieve. In other words, capabilities incorporate the idea of freedom and refer to real opportunities to live the life that one has reasons to choose and value." As presented by Oosterlaken and Hoven (2011) "These are the effective freedoms or real opportunities of people to achieve valuable 'beings and doings' (also called 'functionings' by capability theorists). Resources – including technical artifacts – may contribute to the expansion of one's capabilities, but there may also be all sorts of 'conversion factors' in place to prevent this. The approach highlights the 'multidimensionality' of well-being and sees people as active agents shaping their own lives". So, let me reiterate that functioning is an achievement while a capability is the ability of an individual to attain that functioning. This means functionings refer to living conditions, while capabilities, on the contrary, speak of freedoms.

To understand the expansion or enhancement of human capabilities because of ICT (or the situations in which it doesn't happen), it is essential to unpack conversion factors of Sen's CA concept. According to Sen, there are three conversion factors that can either hinder or boost the transformation of characteristics into functionings (Sen, 2000; Robeyns, 2005). These factors are grouped together as: (1) personal characteristics e.g. intelligence, physical or mental health, height, psycho-motor skills, and metabolism etc.; (2) social characteristics e.g. gender, social norms, policies of state institutions and social hierarchies etc.; and (3) environmental characteristics e.g. infrastructural facilities like street light, water supply, parks etc. The CA framework can be employed by using ICT as means to development while inquiring about the conversion factors required to be in place to help in achievement of potential freedom that technology offers. (Oosterlaken and Hoven, 2011. P. 66)

As it revolves around individual's well-being, Sen's capabilities approach acknowledges that freedom rests on the social environment and possibilities of variables. I agree that achieving a functioning may vary from a person to person, for instance; being healthy and well-nourished not only depends on the availability of commodities and services, it also depends on one's ability to makes use of what is in their command depending on their age, gender, health, and information around nutrition etc. While capabilities refer to people's options essential to achieve valued functioning, it is basically about an individual's freedom to choose. This means that the capabilities are an individual's opportunity set. Cutting it short, Sen's capabilities consist of two things: 1) functionings; and 2) freedom to select or choose from them.

Given the subject of this thesis, I want to understand what role ICT plays, whether taken as means or resources and/or input or may be considered to be one of the constituents for the environmental factors, in facilitating transgender sex workers to achieve functionings necessary to lead a dignified life. Also, whether or not, it assists them in developing or enhancing capabilities needed to attain those functionings required to have a 'desired' life? How it impacts their freedoms (or unfreedoms per se) and choices to accomplish the 'life' they value. How those freedoms get transformed into choices and opportunities?

To further this debate, I derive the basis of my argument from the works of Marco J. Haenssgen and Proochista Ariana, who make a convincing case for the integration of technology within the capabilities approach by adding a new category to Sen's conversion factors. Haenssegen et al (2018) call our attention to the fact that technical objects have a 'generative'

and a 'transformative' value which enables capabilities and influences other inputs in the attainment of valuable capabilities. They refer to Oosterlaken (2011) who expands upon the notion of technology in the capabilities approach focusing on the correlation between the technological artifacts, individuals and social structures. Also, they explain the development impact by arguing that technology-empowered capabilities approach does not only underline the contribution of ICT to the capability set of an individual, but it also suggests that the interpersonal variation in the use of technological objects can make inequalities more prominent.

Marco J. Haenssgen and Proochista Ariana maintain that the impact of the technological context heavily relies on individual conversion factors. They argue that if someone lacks the technical literacy or he/she has an impaired eyesight problem, this situation may restrict their use of computers. This suggests that these factors can leave the underprivileged social groups worse off. On the other hand, if an individual is handicapped or is differently abled (for instance a wheelchair-bound person), disabilities may be alleviated or mitigated using interactions between individual and technological conversion factors. According to Haenssegen et al (2018) "This indicates that technology as a conversion factor is in a dialectical relationship with other conversion factors."

Sen's capability approach proves instrumental in my research as it shows that the role of ICT cannot be examined and judged without relating them to the personal, social and environmental conversion factors and their interplay in terms of opportunities (or constraints for that matter) it presents to transgender sex workers in Pakistan.

3.3. Contributions from the critical theory

As we know that CA scholars, who use this approach to study Information Systems and other ICT related subject, use technologies just as means to expand human capabilities. The reason is that Sen or other CA theorists do not provide any explicit theorisation of technology. This means that there is a risk for the CA to be applied or adopted with a simplistic view about technology by rendering it as a sort of commodity, like goods and resources that user can readily engage with (Zheng 2009; c.f. Oosterlaken 2009. P. 58). Given this insufficiency, the critical theory, having a rich history of engagement with technology and ICT, lends us a useful perspective in terms of analysing the technology, because it offers an understanding that technology should not be considered as a value-neutral object. The CTT "provides a more sophisticated and critical account of technology beyond the simplistic notion of goods and resources." Oosterlaken and Hoven, (2011) while referring to the works of Zheng and Stahl, suggest that expansion of human capability and agency is possible with the help of ICT, if the issues related to design and regulation of technology are addressed. This is the point where critical theory comes handy as it sees technology in relation to the distribution of power and, sometimes it relates to the oppression hence it has "ideological qualities" According to Oosterlaken and Hoven, (2011. P. 66), this is the reason for which Zheng and Stahl has warned us about the critical theorists who are prone to getting trapped in "debunking positive myths" about technology. Another useful contribution of CTT is that it focuses on the agency of people while CA revolves around individual agency.

Chapter 4 – The Process Followed

4. Methodology

This chapter covers the methods, strategic techniques and field related information employed for the collection of data and analysis. After the finalization of research objectives and research questions, it becomes significantly important to establish as to how the data will be collected and used to examine in order to explore and identify the qualified responses to the key questions. This consideration led to identify and employ the appropriate research methods, procedures and techniques that helped the researcher to come up with the diagnosis and substantial evidence that corroborates it. I have attempted to carefully negotiate this process and this chapter briefly documents the process followed.

4.1. Sources of data

The basic source of data which has informed this thesis is the primary data collected by conducting semi-structured in-depth interviews. However, secondary data includes the sources from various researches, laws that govern the sex work directly or indirectly, reports and policy documents produced by different stakeholders such as reputable NGOs, INGOs and governmental organizations. I have made every effort in my command to ensure that the reliance placed in this project should be academically credible.

4.2. Sex worker or prostitute?

This is the first question that confronted to me when I started working on this research paper. Following in the footsteps of some highly credible researchers referred in this work, and convinced by the arguments that I have carefully sorted and examined, I would prefer to use the term "sex worker" for the people simply called "prostitutes" in laws, official documents and reports of the past years. I prefer to do so because the term "sex worker" derived from the decent work agenda introduced by ILO in the International Labour Conference in 1999 is more humane and liberates the community from the stigma. The ILO considers sex work as "work" because it involves an exchange of money or profit in exchange of labour. Heumann et al. (2016) also define sex work as the exchange of sexual services for material gain.

Another reason for preferably using the term of "sex worker" in lieu of "prostitutes" is that this approach allows us to consider sex work as work. The term "prostitution", in contrast, represents the traces of immorality because of stigma and archaic notions around it. Even people who sell sex also don't like to be called "prostitutes".

However, I am constrained to use the term "prostitution" while referring to the original text used in the literature for the sake of consistency.

4.3. Suitable methodological approach

This academic inquiry is necessarily limited by the research constraints in Pakistan around sex work. The sex is a taboo and a no-go area when it comes to debate and discussion around sexuality and sex as an income generation activity or work. Given the criminalization and social stigma, the sex work happens in a secretive and hidden manner and this phenomenon

makes sex workers a considerably hard-to-reach community in Pakistan especially for the purpose of research interviews. Another constraint for identifying suitable methods for this thesis was the unavailability of reliable data about transgender community in general and transgender sex workers, in particular. Also, given the nearly unreachable population of transgender sex workers, it was not easy to identify the appropriate research methods and techniques such as structures surveys or other quantitative methods.

While discussing the appropriate methodology and sampling techniques, I was quite worried that how will I find and convince transgender sex workers for the interviews. More so, while thinking what sort of sampling techniques will help me to collect the relevant data in a representative manner.

Given the diversity and broadness of sex industry despite its covert existence and the necessity of the conceptual framework that I wanted to use for this research such as capability approach, the critical theory or insights from the concepts of power and intersectionality while framing it in the context of ICT use, the available literature presented several limitations with regard to each sampling techniques. I was initially upset but later I found Patton's (1990) strong argument about the purposeful sampling quite useful because it helps in the identification and selection of information-rich cases at great length. He suggests that the purposeful sampling focuses on identifying and selecting individuals or groups of individuals that have good grasp on the knowledge and information about a phenomenon of interest or have a great experience which can minimize the risk of misleading and biased data. Needless to say that, much of the anecdotal evidence as well as the empirical accounts narrated by the fellow researchers based in Pakistan were also very helpful. Also, I was not an alien to Pakistan. I have been based in cities such as Karachi and Lahore for years where most of this evidence has been collected.

After discussing various research and sampling techniques with my supervisor, 16 of which are explained by Patton (1990), we agreed upon a combination of two sampling strategies which include maximum variation sampling and snowball or chain sampling to identify and select the respondents which in my research project are transgender sex workers. This idea was guided by the central question, fundamental elements of research interest, and shared scope that cut across a diverse sample of transgender sex workers. I am satisfied that this method provided me with the opportunity to document unique as well as dissimilar variations among the population of transgender sex workers on the basis of their different identities in terms of gender, language, socio-economic situation, age and sexual orientation and practices.

4.4. Field locations

Since the community of sex worker is not homogenous in its characteristics and nature, my research considers sex workers as a diverse population that includes females, males, transgender persons and other groups self-identifying themselves with the wider LGBTIQ community scattered across Pakistan. However, due to the research limitations, I opted for two major cities of Pakistan namely; Lahore and Karachi to interview the transgender people involved in the sex work.

I chose Lahore because it is known for its traditional and establishment-based complex of old brothels such as *Heera mandi* (Market of the Diamonds) which Louise Brown termed as "an ancient pleasure district of Pakistan" in her book. And my next destination was Pakistan's port city and commercial capital Karachi, which is known for its multicultural population and being a trade hub, offers more diverse group of sex workers in terms of their culture,

religion, language, ethnicity, gender identity and sexual orientation. Given the earlier explanation about research interest, I had different variables in my mind for selecting the respondents such as the ones who use ICT for their work and the ones who do not have access to internet-based communication services due to different reasons such as being uneducated, less or no tech-savvy, trapped into extreme poverty or being controlled by third-party management. I intended to interview a very diverse group of people and finding this kind of respondents belonging to a hard-to-reach community in one city was not easy for my research questions hence, I chose Lahore and Karachi as my field locations.

4.5. Of the interviews and interviewees

Despite all odds and difficulties, I conducted 15 interviews of transgender sex workers in Lahore and Karachi. Of 15 transgender persons, 3 identified themselves as *Shemale* — a term used for those who are called feminized males. The remaining 12 transgender persons identified themselves as transwomen. The group of transgender persons also included 3 *Gurus* who identified themselves as sex workers having additional responsibilities of being *Gurus*. I focused my investigation on adult transgender persons who reported to have been engaged in sex work in the streets, *Deras* and other venues such as hotels/motels, parlours, and providing sex services as home-based sex workers. The 15 interviewees included both ICT users as well those uninitiated to this technology. (The non-users reported not having smartphones and access to internet. But they had simple mobile phones.)

All 15 semi-structured qualitative interviews were conducted in the homes of three sex workers. Except one, all transgender sex workers I interviewed, said they were not into sex industry because of choice, but circumstances had forced them to do the sex work. The exception was a transwoman pursuing her MBBS degree (to become a medical doctor). She admitted that sex work was her choice and she does not repent to admit this. None of the sex workers I interviewed reported that they had been trafficked. However, except 4, all other respondents said that they were not born in Karachi or Lahore and they belong to other smaller cities and towns. They reported that they fled their homes because their parents did not accept their gender non-conformity and they had no other option but to run and join the transgender community where *Guru* gave them shelter.

Though, as a as development practitioner, I had previous experience of employing snow-balling method which I had conducted for the unmarried women and girls who opt for abortion which is illegal in Pakistan. As done previously, I contacted two non-governmental organisations based in Lahore and Karachi whom I knew already and requested them to connect me with some transgender sex workers after letting them know the purpose. Since both the organisations work with ministry of health in Pakistan and are mandated to work for the prevention of HIV/AIDs and reproductive health, they agreed to facilitate me initially with the condition that their details will remain anonymous. According to the founder of one of these organisations, "you know if someone in the government gets to know that we work with sex workers, it can bring trouble not only for us as an organisation but also for the sex workers we work with."

The first transgender woman they connected with me agreed to be interviewed. The day interview was scheduled I went to the given address. The transwoman, aged 31, was quite welcoming and she served me with a *Doodhpati Chai* (milk tea) and biscuits. However, when I started interviewing her, she said she doesn't do sex work while earlier she told me on the telephone that she is a sex worker. I had a good brief discussion with her regarding other casual stuff but told her that I am here to interview only transgender sex workers. It was surprising for me and I left. However, she called me up in the evening and said that she was

afraid because I had a recording machine in my laptop. I told her that if she is still interested, I will just take notes in my notebook and will not audio record our conversation. She agreed and we rescheduled the interview. The next day was helpful in breaking the ice (either because of her previous interaction with me and my assurance worked or because the organisation that referred her to me had convinced her that it was safe to speak with me on this topic.) She shared her story not only as a transgender sex worker but as a person who was HIV/AID positive. After interviewing her and getting to know so much details about her personal life and her struggle to survive, I had difficulty hard time to sleep that night. It was difficult to take her story off my mind and I was in tears while reflecting on my notes. However, I had a dialogue with myself that how I must keep myself composed and carry out the task professionally while collecting and processing data. I also convinced myself that while analyzing the data, I will have a chance to review the situation of interviewees from different angles and will use my emotional lens as well. After interviewing her, she arranged an interaction with a transgender sex worker who was completing her bachelor's degree and belonged to a Christian family. After interviewing the Christian transgender sex worker, I was able to interview 4 other transgender sex workers including a Guru. After these six interviews, snowballing method led me to reach out to other sex workers as each one of them was connecting me with the other. I also interviewed a very young transgender person who had just joined the family led by a Guru and was learning the code of life in a new community. It also enabled me to interview a transgender rights activist. This way, I conducted all interviews. The participants interviewed for this research, were different from each other in various aspects, but one thing in common was their stigmatized identity and discrimination that they reported to be facing every day at every step of their lives.

The organisations who facilitated this process as gatekeepers, asked me to pay the sex workers for their time or if not, give them money for their transport cost and one meal. Though some of them were reluctant to accept the money (which was PKR 1000 each as advised by the facilitating organisation) but I convinced them to accept it saying their time for this research is far more worthwhile than this nominal travel expense reimbursement.

After interviewing the research participants in Karachi, I invited them for a dinner at the residence of my sister who is based in Karachi. Some of the participants told me that since they don't usually have to cook at their places because of time constraints, having "Ghar Ka Khana", (home-cooked food) was so lovely. That was the time when eliminating shyness and awkward unfamiliarity we cried together, laughed together and danced together to the famous Bollywood tunes. I will never forget that life-changing experience.

4.6. The field work

For the purpose of the safety and security of those interviewed, I have withheld the names of the respondents. I explained the purpose of the interviews in Urdu (the national and local language of Pakistan). All respondents provided me with the verbal consent to be interviewed which was recorded. I also explained that that it was their right to decline to respond to any of my question or terminate the interview at any time if they disagree with the questions.

Later some of them explained that they suspected that the recording device of the researcher may also be recording their videos alongside audio. They had given consent for conversation to be audio recorded only. However, a detailed demonstration of how the device will record their interviews only in audio dispelled their suspicion. At times, they asked me to turn it off so that they could share something they did not want to be quoted or recorded.

4.7. Intersectionality and power – adjusting the lens

I used the lens of intersectionality for the data analysis which allowed me to examine the interplay of power which may work for the advantage of some sex workers and disadvantage for the others on the basis of the identity they are associated with. This strong theoretical approach served to guide the research objective and the key research question around ICT and its role in supposed empowerment.

Sex workers in Pakistan are perceived as a homogenous group while the reality is different. They include men, women and transgender persons who belong to different social categories, speak different languages and associate with different religions. They also belong to different social classes, ages and subscribe to different sexual and gender identities in Pakistan. The definition of intersectionality as a 'catch-all' phrase aims at making visible the multiple positions that constitute everyday life and the power relations that are central to it (Nair et al, 2012). The use of this concept as a tool was an interesting input for my research because it highlights at least three key points:

- (i) making visible multiple identities;
- (ii) which are relevant in daily life, and
- (iii) acknowledging that this does not happen in a power-vacuum."

As Professor Kimberlé Crenshaw's intersectionality theory sums up the exercise of power, it is collision and intersection, therefore, it served as a good mechanism to examine the data I collected during the field work because I wanted to explore the interlinked aspects of social categorization of sex workers on the basis of their multiple identities such as gender, class, religion, sexual orientation and age with several overlaps and interdependencies. This tool helped me connecting the dots as regards interplay of power in the everyday lives of transgender sex workers in Pakistan.

4.8. Ethical considerations, challenges and the dilemmas of a reflexive self

I opted for the qualitative approach as the research method and analysis for this study because I considered it to be the one of the most appropriate ways of capturing the nuances of sensitive and extremely personal experiences of sex workers in a country where sex is a kind of taboo or a no-go area and sex without marriage is not only considered a "sin" but is punishable by laws as explained in the 2nd chapter of this thesis. It was a deliberate choice because this approach helps understand the complexity of a respondent's existing situation. I chose one of the key qualitative methods such as face-to-face semi-structured interviews as a primary source of data collection because during the course of my studies, I learnt that several researchers had discovered that there is a growing number of sex workers who use the internet as a tool to market sexual services but their work is focused on the traditional locations and sites such as brothels. Some studies related to the recent research work investigating the aspects of sex work taking place on-line are based on the quantitative analysis of websites and information surrounding online advertisements that attract clientele. This triggered a thought to explore this phenomenon by learning more about the live experiences of transgender sex workers in Pakistan and situating their stories and experiences in a broader context for the future academic inquiry.

Let me also explain the challenges for me as a person as the journey of this research project started. I am sure it cannot be understood until I refer to the power-knowledge nexus

explained by Foucault which suggests that "The formation of objects and subjects can best be studied in an emerging power – knowledge nexus, where power relationships are not yet settled".

I imagine a scenario comprises several actors: the ISS as an organization or as a body of power; the professors or teachers as 'discipline' enforcers—they are also to be appraised against their performance; students, having their degrees and careers (read future) at stake are both afraid of the 'punishment' but being aspirants of the reward for their being good students follow all 'disciplinary' instructions set in place to ensure 'standardized' educational outcomes. Comprising all of us, there is a system meant to 'discipline' every individual.

While discussing the ISS as an organization and myself as an individual, I just realized there was a 'power' at play that excluded the ones I interviewed. Those, who, very kindly agreed to be part of my research project without knowing the 'benefits' or 'consequences' of the 'request' as some of the initial respondents were approached by the gatekeepers helping them to access health services related to HIV/AIDS and other sexually-transmitted disease. The 'power' of these so-called 'gatekeeper' organizations over sex workers was of course obvious, but the power of the bigger 'disciplinary body' such as the state and its institutions cannot be overlooked as both of these organisations were running the projects given to them by the health ministry of Pakistan ostensibly to work for the reproductive health of citizens and prevention of HIV/AIDS. After the launch of new INGO and NGO regulatory policy that is a code of several 'punishments' for the not for profit organisations. For instance, threatens to de-register the organisations who do advocacy work for democratic governance and it ensures 'rewards' to those working on charity projects that they "will continue to be allowed to operate." And the ones 'defaming' the state by raising concerns related to human rights abuses will be sent packing and 'punished' according to the law.

Writing this is essential to explain the power dynamics within which I had not only to navigate to collect the required data, but it was my ethical responsibility as a social researcher to ensure the quality of research by eliminating the chances of fabrication and falsification. To this end, I tried my best to ensure that the data is not misrepresented. I made all the respondents aware of their right to discontinue if they deem it necessary. Given the sensitivity of the subject, the confidentiality and anonymity of respondents was also ensured.

Chapter 5 – Analysis and Findings

5. Presentation of findings and data analysis

This chapter covers the analysis of the findings and data collection from the field based on the conceptual framework shared in chapter 3. As mentioned earlier, Sen's capability approach and its conversion factors i.e. personal, social and environmental have helped me frame this analysis. Homogeneity of transgender sex workers has been delinked because interconnecting and intersecting aspects accompanying conversion factors do not allow to discuss the power dynamics in isolation.

5.1. Nature of the digital technology and its utilisation

According to the collected data, respondents admitted having used one or the other kind of communication devices. All of them said they use their phone and phone-linked internet for their work. This study found out that most sex workers who participated in this research, were users of SMS, IM, and Whatsapp. The study also revealed that transgender sex workers were using internet-mediated communication means for their work more frequently than was expected. In addition to the SMS via simple mobile phones or smart phones, they use various online platforms such as Facebook, Twitter, Instagram, and Skype. The transgender sex workers informed this research that they also use some free dating websites for instance Mingle2, Match and Waplog, online chatrooms and some apps such as Imo, Tingle and Tinder and SingleAroundMe for free video calls and chat. Many of the transgender sex workers reported that they also use apps like Tik Tok to make their erotic videos to share with their clients. Some of them said that they do web-camming, cam-sex as well.

This exercise also revealed the use of ICT based money transfers by transgender sex workers to receive their payments. The study results showed the use of digital payment services popular in Pakistan such as JazzCash, Easypaisa (Easy Money)¹ by transgender sex workers interviewed in this project. In addition to these, some sex workers also reported using two virtual money transfer services: Western Union and the *Hawala*².

In response to the research question, the data and findings about the role of internet and other ICT based communications on the lives and work of transgender sex workers in terms of opportunities and constraints, have been grouped together and divided under the following descriptions.

5.2. Income and independence

The experiences shared by the transgender sex workers showed a varying degree of income between those who use smart-phones or online platforms and the ones who are working as

¹ JazzCash and Easypaisa are two digital payment services or virtual accounts for financial transactions. They are also called mobile wallet or mobile payment services. https://www.easypaisa.com.pk/consumer/mobile-account/easypaisa-mobile-account/easypaisa-mobile-account/easypaisa-mobile-account/easypaisa-mobile-account/

² Hawala is an illegal money transfer from one country to another. Hawala is used for money laundering as well. It is a technique of transferring money where money transfer takes place without any physical movement of money or cash. https://www.treasury.gov/resource-center/terrorist-illicit-finance/Documents/FinCEN-Hawala-rpt.pdf

street-based sex workers and do not use or have smartphones and internet access. The respondents mentioned that the clientele of the street-based transgender sex workers was reported to be belonging to low to middle-income group. They would roughly earn PKR 500 (EUR 2.91) to 1000 (EUR 5.81) per sexual transaction. This deal is often risky and insecure as clients quickly pick the sex workers from street leaving no room for proper negotiation. Those transgender sex workers, who have greater visibility and following on social media platforms were reportedly earn more. Their income per transaction ranges from PKR 1000 (EUR 57.18) to PKR 25000 (EUR 142.95) depending on the nature of the sexual services they provide.

With the exception of 4 respondents, others not only had smart phones, but they seemed well-versed with the use of social media platforms such as Facebook, Twitter, SnapChaat, Skype and Instagram etc. They reported using all these communication means for their work and not just fun. They reported that they use these tools to directly connect with their clients. As per their community rules, whatever they do (means not only sex work) they will pay a token amount as contribution to the *Guru* because the *Guru* provides transgender people with shelter, moral courage and community related social benefits. All the respondents said that there is no arbitrary or fixed cost to be paid to the *Guru*. One of the transgender sex workers said:

"We receive money directly from the clients as we directly negotiate the price with them. What we share with our *Guru* is the voluntary contribution in exchange to the role *Guru* plays in our lives from sheltering to teaching us the survival means within and outside our community in a situation where no one in the society owns us. There is no fixed amount but when client is referred to us by the *Guru*, we consider it an obligation to share at least 30 percent of our earning to him in exchange of the role he plays. But nowadays it happens rarely because we often find clients directly on internet".

The technology savvy transgender sex workers informed that while using online means and social media platforms to hunt for the clients, they do not introduce themselves as sex workers because they can get arrested. They informed that they use attractive photos, most of the times with revealing dresses. They use coded language which their clients understand and then they use inbox messages and exchange WhatsApp numbers. I had a chance to see the facebook profiles of three transwomen and I myself could not believe that they could use photos with revealing dresses in Pakistan. One of these three respondents, a transwoman with an appealing profile on Facebook and Instagram, shared said "the rise of high-speed internet and online social platforms have changed several things for us. There are different opportunities for us that were not there before." While sharing that she does all her marketing and client hunting via online means, she added "there is a lot of violence we, the transgender people, often face when we find clients on streets. It is not safe. Whether we do 'online stuff' or contact clients via internet or meet with them face to face or online, it's easier and safe. You know there are many free dating websites and apps. I use them and after some online scrutiny get enough well-behaving customers. Sarkon pe kon zaleel ho khuwamkha. (Why one should spoil oneself on the streets unnecessarily) when you have smart phones and internet access available. I earn more than what my street-based fellow sex workers do".

One of the respondents who finds her clients in the streets shared that "I know having smart phones and internet is very important nowadays and not having one impacts on one's income and can even also result in bad experiences." She explained it further by saying "it is not just me, there are several of us wandering in the dark streets in the night and clients know it. If I take more time in negotiating, they will pick the other one. Hence, we have little choice but to agree whatever is being promised. I seldom find good clients. Recently, a car stopped

by and the guy asked me if I can go with him, he negotiated for one person. I got in the car and when we reached the place there were 3 more guys waiting for me. They raped me, did not pay a single rupee and subsequently threw me from the car."

This shows that those using ICT are doing the marketing and client-hunting themselves hence there is no third-party role involved in the transaction. This not only refers to the increased degree of independent work but indicates that relatively more choices are available to them.

Given the flexible and multipurpose characteristics of ICT, I would say that ICT generally provides a lot of basis in terms of expending people's choices and strengthening the agency of individuals as defined in the Capability Approach. The above discussion suggests that the well-versed and skilled transgender sex workers have relatively more choices available to them in comparison to those who do not have access to ICT based communication tools. The absence of the third-party management enables them to directly negotiate payment and other matters.

5.3. Education, health and well-being

There is no doubt that for living a healthy and productive life, one needs to have a strong foundation based on quality education. The data, covering these two key aspects for people to lead a 'good life' as presented in Sen's capability approach, reveal that ICT has significantly helped the majority of those transgender sex workers interviewed for this thesis. A young transgender sex worker who joined the community by fleeing her home 6 years ago, reported that "I ran away because I was being forced to not only look like but also behave like a boy otherwise, I will certainly bring disgrace to my family. Though, my parents were loving but they did not let me be what I am. I had to leave them. I am grateful to my community which adopted me." Having tears in her eyes she went on saying "you cannot imagine the struggle I did to survive and live the life that I wanted for myself. It was not possible without this internet connectivity; I completed my online bachelors and did my master's from AIOU (Allama Iqbal Open University). It was an online distance-learning programme and was free as well."

Another interviewee, a young transgender sex worker, with a strong presence on social media, is currently completing her MBBS. While sharing her thoughts as regards the role of ICT she said, "I use all relevant internet-mediated platforms to market myself and earn enough income in order for me to continue my studies". She added that "Technology has really helped my community as whole and myself as an individual to do the things which, in my view I wouldn't be able to do without it. Belonging to a country where transgender community has literally no access to health, education, and social services, the ICT provides a platform to effectively use for survival." She reported that she used to do escorting and webcam-based sexual role plays as well. "Online dating apps and websites are great sources to increase income, be a little independent and improve one's living standards. Also, it gives the world an idea that we too exist". Speaking more about her webcamming ventures she said, "My favorite role play is being a mistress and a slave. The role play gives you freedom of expressing your fantasies to your partner and being in another skin of your choice for the time being and getting pleasure that way".

One of my respondents, a transwoman living with HIV/AIDS said that "like other job markets, this industry also needs healthy workers. We work without any job guarantees, pensions and health insurances. If we fall sick, there is no one to help us. After having diagnosed with HIV, I was living a life in isolation. Until recently, I was not only physically ill, but mentally disturbed as well. Then one of my friends took me to a workshop organized by an

NGO. There I met with people who were facing same problems. We developed a WhatsApp group. Now I am connected to several people who keep sharing useful medical information and offer emotional support. For me it is of a great value".

A transgender sex worker, struggling with depression and anxiety reported "I have this problem since many years, but I did not tell it to any one because I myself was not sure what is happening to me. When I attempted to end my life, my *Guru* realized that I have this problem. The *Guru* is an educated girl with a kind heart. She took me to a therapist. I felt good after that but couldn't complete the prescribed number of sessions. But I had to quit as I could not afford the per-visit cost of PKR 3000. Then I heard about an organisation which offers free online counseling sessions to mentally ill people. I am not educated enough to manage that online stuff. One of my friends helped me in creating an account on a website. It helped me a lot until my friend moved to another city. I forgot all sign in information of my account that she had generated for me. Suddenly, I felt as if I am banished from another realm. I really miss my friend. Had she been around, I would have been much better".

A good-looking transwoman sex worker said "I do all online stuff including webcam sex. It is necessary to earn not only the basic living but we transgender sex workers have to spend a certain portion of our income on ourselves because we have to look young and that too like a woman. So we need some hormones like estrogen injections. Nowadays it is easier. We google videos for it and administer the injection ourselves. I also go to the gym to keep myself fit. If I don't do that, I may lose my clients. When you do online work for international high-end clients you need to work on yourself." Since she reported to be un-educated, I asked how does she follow the instructions given in those videos, she mentioned "Arey, Youtube pe sara tareeqa Urdu main aata hai. (Everything is available with tutorials in Urdu on YouTube.)

As these findings reveal, that even if taken as only 'means' or 'commodities', ICTs has contributed significantly to the individual's well-being or in other words human capabilities which is the prime concern of CA. As the capability approach considers well-being and development in terms of capabilities that are essential for people to function or achieve functionings required to lead a life they consider valuable, therefore, ICT provides them with opportunities to take on activities or actions they want to participate in and become what they may want to become. Given the CA perspective, achieved functionings for people are, for instance, being educated, being well-fed and healthy, being represented and respected. In this backdrop and nevertheless a small sample size, it appears that ICT has enabled transgender sex workers to achieve such functionings by enhancing their capabilities. Those using ICT to their maximum benefit, seem to expand their capabilities to attain functionings such as being educated, healthy and well-connected to the virtual communities to seek psycho-social support. Keeping the value-neutrality debate about technology aside for a while, it can be concluded that those sex workers with access to and skills for ICT are taking full advantage of it in terms of expanding their capabilities to take actions needed to function as an educated and healthy persons in the society, state and market which values only 'skilled, healthy and robust' work force and rules for sex workers are even harder. The data also highlights a grim reality that the ones who are not able to benefit from ICT for various reasons are not even part of the race because there is no level-playing field among the users and non-user of ICT.

5.4. Safety, security and screening

Impact of the ICT on the safety and security of transgender sex workers was one of the key data variables for this research. The transgender sex workers interviewed for this thesis,

claimed to be able to conduct pre-meeting screening of their clients carefully through internet. They also reported that they avoid more notorious clients based on internet screening and warn each other about them. One of the transwomen I interviewed said, "We have multiple profiles on social media, we use various communication means and we directly connect with clients. We double-check their credentials. If there is a doubt, we check their GPS location, save the screenshots of WhatApp and note down their phone numbers in order for us to report to the authorities, if anything goes wrong." She asked me "don't you read newspapers about our murders and everyday incidents of violence against us? What happens to those of us who do not have access to internet or are street-based?"

Another transgender woman said that "the street-based transgender sex workers without phones or access to the internet have no bargaining power. Often our clients determine the value and venue. It could be a guest house, entertainment area, or a hotel room. We are often not aware of the venue beforehand." While sharing one of the bad experiences she said, "the two of us were standing on the road late night waiting for clients. A car came, and someone sitting in the car, threw an egg towards my friend standing with me and drove away. She shouted an abuse out of anger. The car took a U-turn, returned and came in speed to hit her. She died in front of me." She added that "had I been educated a little, had I known how these internet machines operate, I would have worked from my home or my place."

One of the respondents shared that "in addition to all that screening that we make, now-adays we use online cab services such as Uber and Careem using apps for these services. We pool money, hire a cab and go wherever we want to go. These internet-based services not only save us from the harassment that we face in public transport on everyday basis, but they also help us ensure our security." Explaining this, she said "for example, if I agree to meet with a client at a place that I am not sure about, I hire Careem, note down the details of the car and the driver. I not only send the screenshot of those details to my *Guru* or a friend, but I also share the tracking link of my ride with them to let them know the location where I am destined to end the ride." She added: "but it is not all about the devices we use. We have to also rely on our own instincts and experiences. I use phone for my security, but I use my sense as well to assess whether the client is not nice and can harm me. I give a call to someone and use coded language. For example, if I call and say, 'I think I have forgotten my eyeglasses at home and they need to check, they will understand that I am in trouble."

Except street-based transgender sex workers, all of them reported using their own venues or mutually agreed venues in order to prevent their exposure to violence and abuse. However, they said that taking all these measures doesn't necessarily mean we are completely safe because ICT, does not always help or come to rescue.

Speaking about the downsides of using ICT, another transgender interviewee highlighted the issues related to identity theft, cyber bullying and stalking and shared a horrible example: "There was a maniac official of a secret agency. He somehow accessed online profiles of many of us and managed to pick a few of us and through them reached to others and assaulted them. I was one of them. By and by he made it a kind of a routine. He used to pick at least 8 to 10 of transgender sex workers each day and bring them to a state run 'safe house' equipped with a torture cell where he used to compel them to do several odd sex acts. He used to force them to sit naked before him. We begged him to just have sex and let us go but he wanted some of us to do massage, others to please him in other ways etc. Somehow, our colleagues informed human rights organisations who ran a campaign on media and managed to approach high ups. This is how our ordeal ended".

As discussed in chapter 3, the CA assigns a degree of great moral importance to freedom of individuals to achieve well-being or a life of their choice and it refers to "effective freedoms" or a "real possibility" to lead a life they have reason for. CA also requires us to evaluate social arrangement linking it with the degree of freedom individuals have to cultivate to attain valuable functionings. Given the findings of this thesis about the safety and security, I argue that the freedom from fear is a fundamental human right enshrined in the UDHR¹ and ICT has a great potential to contribute towards the safety and security of transgender sex workers because freedom from fear is equally important to achieve a functioning such as peace of mind by being less worried and more 'productive'. However, the data shows that a totally unregulated or unchecked ICT can impact the lives of sex workers negatively and can lead them towards losing their capabilities and even destroy their functionings.

¹ Preamble and Article 25 of the Universal Declaration of Human Rights. Available at https://www.un.org/en/universal-declaration-human-rights/ accessed on 21-11-2019

Chapter 6 - Conclusion

6. Key Conclusions

First of all, let me highlight an important point: Nevertheless this thesis is based on semistructured qualitative interviews of transgender sex workers as primary source of data and is supported by the academic inquiry conducted by various researchers, however, the sample used for the purpose of this research is not sufficient to be used as a basis for generalization. With this honest admission, following are the key conclusions drawn by me from this research.

6.1 Google – the new 'Guru'!

As discussed in chapter 3, looking from the CA perspective, human capabilities seen as the genuine opportunities or effective freedoms for individuals to do and be what they consider valuable, the role of ICT (especially the internet and the mobile phones) seems instrumental.

Given the responses of the research participants, one can conclude that ICT has facilitated the majority of transgender sex workers (interviewed for the purpose of this thesis) to enhance their capabilities enormously in terms of achieving the capability set needed to attain a good life such as being educated, healthy, free from fear and connected to social groups (physical or virtual). Given the extreme marginalization of transgender sex workers in a highly transphobic or biased society, where they are discouraged from claiming or participating in real physical spaces such as schools, hospitals, workplaces etc., ICT provides them with considerable opportunities to become part of virtual spaces to expand their capabilities, achieve functionings and it facilitates them to progress towards their desired life.

6.2 To have a cake and eat it too!

Being a 'people-centred' concept, CA puts human diversity at the centre-stage and recognises that human being differ from each other in several aspects. This diversity is manifested in our internal characteristics such as gender, age, specific talents and aptitudes, susceptibility to diseases and our external conditions such as possession of assets, social settings, environmental barriers etc. According to CA, this diversity determines the "spaces of equality" and "inequality" per se.

As explained in the conceptual part of this paper, it simply means that the role of ICT cannot be properly examined without employing the conversion factors of the CA. While considering ICTs as means or commodities to development, the CA emphasises on the role of conversion factors (personal, social and environmental). And an interplay between them either enables individual to use the technology in expanding their capabilities or hinders them from using technology to their benefit. I support this argument with my humble view that even taken as means or commodities, availability of ICTs do not ensure that everyone will equally benefit from them. For example, until recently women in Saudi Arabia were not allowed to drive that fact that cars, bikes and numerous other vehicles were always parked in front of their houses. They have only recently been allowed to drive but with some conditions and caveats. This simply means having a smart phone or any other ICT-based device in

possession does not automatically enable people to use it to their advantage. The case of a transgender sex worker suffering from a mental illness illustrated in this research paper shows that it is not easier for her to benefit from the online counseling services because she lacks the capability to operate the device.

Same is the case with street-based transgender sex workers who either being uneducated or being part of a very low-income group are not able to use ICT and progress towards the life they value and cherish. This is because -- as presented in the section of CA -- an individual is required to convert the direction of commodities into functionings and this conversion relies upon personal, social and environment factors.

6.3 Intersectionality and insights from Critical Theory of Technology (CTT)

I employed the CA for this thesis also because it offers more room for the positive contribution of ICT while embedding the discourse around ICT in personal, social and environmental factors. The purpose was to investigate the role of ICT without being carried away by the polarised debates between technological determinists and the social constructivists. However, it doesn't mean that I was not aware of the inadequacies of the research work done by CA theorists, but because they tend to present ICT only as goods or commodities which are value-neutral, and anybody can equally benefit from it.

As releveled in the findings, one of the conclusions is that the degree of ICT exposure of research participants varied demonstrating that some respondents were more exposed than others because of conversion factors well-explained in Sen's capability approach. However, when we ask questions such as why this variation? And what are the factors responsible for this variation? The pursuit of answers to these questions lands us in the realm of critical theory of technology (CTT) which questions the nature of technology and considers it to be socially shaped and suggests that the shape of technology is heavily reliant on the give and take between devices and interest of social groups. This view indicates that technology is not value-neutral and cannot be set in place with the assumption that it will serve the purposes of human development across the board. As I have mentioned in the methodology chapter of this research paper, I was conscious about the power dynamics and intersectional aspects of this debate while conducting this research. Hence only relying on the CA did not sound a very good approach of inquiry. The transgender sex workers carry multiple identities which include their gender identity, their age, their sextual orientation or sexual practices and these all identities intersect and are inter-locked, therefore, considering them as a homogenous group and labeling them as mere 'users' or 'non-users' will not do justice to this research. This research shows that the majority of transgender sex workers have benefited from the ICT, nevertheless it has also created a group of 'haves' and 'have-nots' among them. I argue that even those who have use ICT to their benefit and have considerably transformed their situations, are still at margins in one or the other aspect. For example, the ones who are educated (Ref: example of a transgender sex worker doing MBBS, or the one who completed her online bachelors course) are moving upwards because of the ICT and have been able to do so because of their identity as 'transgender marginalized community' not because of just being 'sex workers'. I am sure that even after having achieved a marginal uplift in their lives, their gains will be immediately reversed in a society and state like Pakistan if they assert their other identities such as sex workers or LGBTIQ, This means that ICT has contributed to the change of their 'condition' but not in their 'position'. This further shows that ICT by itself cannot empower, it depends on the ability of persons to use it because ICT is not value-neutral, embedded in power structures, and operates within social relations. However, economic value of ICT and its related social incentives on the basis of economic uplift of a social group like transgender sex workers must not be underestimated.

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Appendix—A: Typologies of internet-mediated sex work in the global context

Direct types

Streets: Sex worker solicits clients on the street, a highway, or any public place. The work is performed in deserted places, cars or behind the trees

Brothels: This is formal establishment known and designated for providing sex services to the visiting clients. Where legalised, it is considered safer and secure.

Escort: This is done very clandestinely. Pimps or other mediators bring sex workers on demand often made via phone to the premises where the client is based which could be a hotel or his own house.

Private: Done on the demand of the client, the service provided at the place of the sex workers. Clandestinely done like the Escort. Client approaches through phone or any webbased means of communications.

Windows or doorways: Sex establishment where sex workers stand in windows or doorways as if they are showcased

Dancing clubs, pubs, bars: Sex workers get in touch with clients and provide them services elsewhere

Other all-male venues: Sex worker pursues clients at barbershops etc. and provides services at the place of their choosing

Door knock: Sex worker contacts unaccompanied male in hotels guest houses

Passenger transfer service: Sex worker driving car solicits clients in the garb of passenger transfer service at bus terminals, jetties, train stations etc

CB radio: While driving on expressways, workers contact passengers and drivers through Citizens Band radio. CB radio is land mobile radio system for short-distance voice communication. Business is done at layby areas or trucking stations

Other methods of solicitation: potential clients are approached through different media such as noticeboards newspaper bids with mobile phone numbers, the internet via virtual sex zones, etc. Services are delivered at the agreed places

Indirect types

Bondage and discipline: Role play arousing sexual fantasies. Intercourse may or may not be part of it. Acts causing pain may be likely to occur

Lap dancing: Erotic dance without sexual contact

Massage parlour: Sex services provided in the garb of massage

Travelling entertainers: Entertainers ready to offer sex work

Beer girls: Girls working in bars provide sex services to supplement their income

Opportunistic: A person randomly agreeing to provide sex service finding a good opportunity to earn

Femme libre: Women, providing sex services for precious gifts which can later be sold for cash

Individual arrangements: Kept" women or men, concubines, women agreeing to have sex in lieu of paying house rent, sex workers occasionally dealing with selected clients, etc.

Swingers clubs: Swinger or Couple Clubs recruiting sex workers to complete the couple arrangement

Geisha: Women hired as a guide or a driver agreeing to provide sex service

'Sex for drugs': Women providing sex service in drug houses in exchange for free drugs.

Beachboys, burnsters, and gigolos: Young men hired by women for social company agreeing to provide sex services.

Survival sex: Sex provided by someone in an urgent need because of financial bankruptcy or vulnerability