

**QUESTIONING TECHNOLOGY IN IRAN:
TRACKING THE INTERSECTION OF ISLAM,
CULTURE AND PHILOSOPHY**

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**FACULTY OF SCIENCE
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CULTURE AND PHILOSOPHY**

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ABSTRACT

This dissertation explores the relationship between technology and religion, a field that has been studied by philosophers such as Marx, Ellul and Noble. However, this study uniquely looks at the technology of death in two distinct but interrelated cases in Iran; first the slaughterhouse and second the automatic corpse washer. The slaughterhouse is a unique technological system that has a history of almost one hundred years in Iran. It has throughout the years, slightly changed in form, but its significance and nature has remained untouched. The slaughterhouse transgresses boundaries of human-animal relationships and deeply influences embedded religious values and practices of ritual slaughter. The automatic corpse washer, with a history of only two years in Iran, has targeted another critical aspect of religion and life that is 'death'. This ethnographic research was inspired by three broad lines of inquiry: First, what was the basis of accepting or rejecting (or at least opposing) a certain type of technology? Second, what role does Islam as the accepted and governing religion in the country have in terms of its relationship with technology and how do Islamic scholars view certain types of technologies? And finally, how does the case of the automatic corpse washer and the slaughterhouse shed light on broader questions of philosophy, technology and Islam? Death and its ritual practices reflect and shape social and religious values. Modern ways of rationalizing death including issues of efficiency, calculability and hygiene practices have transformed how death is perceived in the Iranian Islamic society. With the help of Transcendent Philosophy, this research reveals hidden issues of fetishism and alienation and investigates how modern religious provisions and modern technologies challenge one another.

ABSTRAK

Disertasi ini meneliti hubungan antara teknologi dan agama, satu bidang yang telah dikaji oleh ahli falsafah seperti Marx, Ellul dan Noble. Walaubagaimanapun, kajian ini secara khususnya melihat kepada melihat teknologi kematian dalam dua perkara yang berbeza tetapi merupakan kes yang saling berkaitan di Iran; pertama rumah sembelihan dan kedua pembasuh mayat automatik. Rumah penyembelihan adalah sistem teknologi yang amat unik yang mempunyai sejarah hampir satu ratus tahun di Iran. Sejak beberapa tahun, ia sedikit berubah dalam bentuknya, tetapi kepentingannya dan keasliannya kekal tidak terusik. Rumah penyembelihan melampaui batas sempadan hubungan manusia-haiwan dan mempengaruhi nilai agama dan amalan ritual penyembelihan yang sudah lama tertanam. Pembasuh mayat automatik, dengan sejarah hanya dua tahun di Iran, telah mensasarkan satu lagi aspek kritikal agama dan kehidupan iaitu 'mati'. Kajian etnografi ini diinspirasi oleh tiga persoalan utama iaitu: Pertama, apakah asas penerimaan dan penolakan sesuatu teknologi? Kedua, apakah peranan Islam sebagai agama utama di Iran dalam konteks hubungannya dengan teknologi dan bagaimana sarjana Islam menanggapi sesuatu teknologi? Dan yang terakhir, bagaimana pembasuh mayat automatik dan rumah penyembelihan membawa kepada persoalan yang lebih luas dalam konteks falsafah, teknologi dan Islam? Kematian dan amalan ritual menggambarkan dan membentuk nilai agama dan sosial. Cara moden merasionalisasikan kematian termasuklah isu kecekapan, pengiraan dan amalan kebersihan telah mengubah bagaimana kematian dilihat dalam masyarakat Islam Iran. Dengan bantuan *Transcedent Philosophy*, kajian ini mendedahkan isu fetisisme dan pengasingan dan menyiasat bagaimana peruntukan agama dan teknologi moden mencabar antara satu sama lain.

ACKNOWLEDGEMENTS

'It is said that when the race of Adam began to reproduce and multiply, humans spread across the earth, land and sea, mountain and plain, everywhere freely and securely seeking their own ends. At first, when they were few, they lived in fear, hiding from the many wild animals and beasts of prey, taking refuge in the mountain-tops and hills, sheltering in caves, and eating fruit from trees, vegetables from the ground, and the seeds of plants. They clothed themselves in tree leaves against the heat and cold, wintering where it was warm and summering where it was cool. But then they built cities and villages on the plains and settled there.' (Ikhwan al-Safa from the Epistles of the Brethren of Purity)

I would first of all like to thank Allah. I neither knew where I had come from, and I neither know where I am going to. It is only He who is guiding me throughout my life insha' Allah.

The major part of me is deeply dedicated to a community of all animals, plants, trees, rivers and whatever is now referred to as nature. I would have not been able to begin this quest without the help of the cows that desperately looked at me before being stunned-- they were so kind as to join into my dreams; the sheep that would look so kindly at me when they were twisting their tongues; the goats that would shout when they saw their kind already dead under their feet; the battery chicken that were so boozed out, and only able to make the tiniest noises prior to slaughter.

قى مكل امرى مى چنه

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Modern relationships and interactions between technology and religion or techno-religious dialogues which move deep into the very nature of social relations are complex and stimulating (Noble, 1997). Upon the emergence of the 1979 Islamic Revolution in Iran, government authorities have disputed over the popular 'Islamization' of the society which in turn has confronted the society with various unprecedented challenges. Examples are the so called Islamic banking (mainly concerned with the enactment of 'usury free' banking), Islamic development (mainly concerned with substituting western oriented development models with Islamic ones), Islamization of the Humanities (mainly concerned with embedding Islamic presuppositions in predominantly secular human sciences) just to mention a few. Such an orientation has continuously raised concerns or even vehement debates around how emerging modern issues should be defined, interpreted and enacted based on Islamic principles.

One of the issues which has progressively gained momentum is the murky domains of technology and religion. The emergence of modern pieces of technology has often been accompanied with various even contradictory reactions on the side of policy makers, producers and end users of the technology. While various forms of technology are sweeping the society, this intricate and multi-faceted relationship has swung back and

forth from resistance to embracement, from affection to hatred. For instance, washing clothes with bare hands, soap and a certain amount of water (considered as running, *kurr* water) according to Islamic *fiqh* is essential and abided by, within the traditional Iranian society. Removing the *najis* (impurities) from the clothes was so crucial that it required Iranian women to follow certain steps when cleaning and cleansing clothing items. Upon the introduction and later popularization of the automatic washing machine, which used circular motions to mix detergent and rid extra water, initially caused challenges with regards to whether or not this technological device observes Islamic principles of washing and cleansing. Other examples that witnessed resistance include technological devices which acted as mediums of transmitting irreligious contents such as TV or radio channels, and more recently they include satellite programs that broadcast programs in contradiction with Islamic principles.

1.2 Problem Statement

This is not the end of the story. The latest reviews (Tabnak, 2016) of the current Iranian society reveals how technological devices have penetrated pervasively into the ordinary lives of individuals. For example, this impact can be seen in the point that the Iranian population is currently seventy million with eighty million active SIM cards. The extensive and sometimes surprisingly ‘over use’ of ATM cards in less than five years was the topic of discussion in the 2014 Web and Mobile Application Conference in Tehran. Iranian scientists in universities and private sectors are continuously coming up

with new technological innovations. More significantly technology has carved a niche into deep-rooted religious affairs. While 3D virtual tours and live broadcastings of sacred sites are not as fascinating as they used to be in the past, present technological development has created the platform for anyone desiring to connect directly to the sacred shrines, most notably the shrine of Imam Reza (as) –the eighth Shia Imam and the only Imam buried in Iran- to dial their call center. After a dial tone and a short prayer, the live sound of the crowd performing their pilgrimage in Mashhad is heard. In the same way, the recitation of the Quran may be accessed conveniently through any landline phone. There is the option to choose among a variety of reciters, to have the translation or the interpretation of the verses for the exact Surah and verse. What needs to be emphasized is that on a majority of occasions such technological devices are appropriated by religiously inclined professionals and academicians with professional backgrounds in science and technology. A noted example in 2012 is during Aerospace week when Dr Roosta Azad, the president of Sharif University of Technology (SHUT), the most prestigious university of technology in Iran who stated that his biggest wish was ‘holding congregational (*Jama’at*) prayers in one of the celestial planets’. He continued that ‘in this wish there is both development of technology and the development of spirituality’ (Mehrnews, 2012).

This technology and spirituality that Dr Roosta Azad yearns for, is intertwined with issues of modernity, technological development, philosophy of technology, rationality,

culture and Islam. It is a question that knowingly or unknowingly resides in the minds of many modern Iranian Muslims.

1.3 Rationale of the Study

As a doctoral student of Science and Technology Studies (STS), with a background in technology (more particularly IT) and an enthusiasm for practicing an Islamic Iranian lifestyle, the intricate coexistence of technology and religion within the Iranian society has sparked interest and motivation to launch an ethnographic study which will delve into the nature of such coexistence and bring to light the existing connections and complexities. Throughout this longitudinal study, data was gathered from a number of sources of inquiry including close encounters and scrutiny of technology embedded sites of study (well-accredited slaughterhouses and corpse washing centers using the automatic corpse washers), in-depth interviews with religious authorities, lay people and significant others were performed. All this revealed to be invaluable sources of insight enriched and deepened the understanding of the complex social interactions involved in the research, and in the long run it all enabled the objectification and triangulation of the data. Moreover juxtaposing various pieces of evidence and counter evidence enabled the substantiation of the claims necessary for validity checks.

The professionalization mentality that ‘we have to be the best in technology in order to promote Islam’ strives to exist among religious intellectuals even up to now. The close

relative of one of the highest ranking Ayatollah's in Iran who also happens to be a professor at a university in Tehran made a statement that *'Imam Zaman –the twelfth Shia Imam and the 'future savior of the world'- will most probably rise in a location like Dubai, since they have been successful in implementing the real Islam, an Islam that is well developed and modern'* (F. Ashoori, personal communication, June 25, 2013). In the same manner, a construction engineering professor teaching at SHUT who had returned from a conference in South Korea contrary to how he brings his religious ceremonies to his private residence, remarked that South Korea, was much more 'Islamic' than Iran: *'It is not only their technology, their high speed internet and they don't lie like us'* (M. Ghamsari, personal communication, November 3, 2014). Another striking example is from the number one scorer of the 1985 Konkoor who in the midst of discussing religio-technological issues at a meeting stated that *'I always thought that the path towards serving my country and more importantly my religion was to study electrical engineering and to get a PhD from the best universities in the world. Now I can see that I was wrong'* (M. Tehrani, personal communication, October 13, 2014). Again he seriously reflected on how he had decided to put an end to this endless academic race by not applying for associate professor position even though he had been teaching since 1999 and the necessary requirements were already in his documents.

In line with Rousta Azad's dream of having congregational prayers on another celestial planet, the novel technologies of the 'Automatic Corpse Washer' and the 'Praying Robot' also made the headlines in 2013. Akbar Rezai, a twenty seven year old Quran

school teacher, from Varamin, a city south of Tehran, designed the praying robot to popularize praying among children. He has named the robot '*weldon*' which in Arabic means children of heaven. He explains how he came up with such an idea:

I had gone to a family gathering. I saw a girl playing with a toy that would sing and dance. This toy and the way the little girl treated it made me think about constructing a robot that while having religious objectives, would be amusing as well (Rezai, 2013).

In order to religiously support his invention, he and his robot met with Ayatollah Makarem Shirazi (one out of the six approved Shia *Marja's*) as well as Ayatollah Mahmoodi, the representative of the Supreme Leader in the city of Varamin. Ayatollah Makarem Shirazi defended Rezai and his technology: 'we support whatever tool that brings children closer to *namaz* (prayers)' (Rezai, 2013). This invention was broadcasted on Iranian national TV and the Associated Press covered the story through an extensive interview. The TV clip named as 'teaching prayers using new technologies' shows children enthusiastically learning from the prayer performing robot. Some students say 'it was very interesting for me to see a robot pray, that is why from now on, I will always do my prayers'. Another girl says: 'the robot does its prayers very beautifully and it taught me how I should do my prayers'. A school teacher explains: 'this robot can help out teachers in teaching students how to pray'; and finally a boy says: 'before this, I was always used to doing my prayers hastily, but after seeing this robot pray slowly, I have also decided to do my prayers slowly'. A short search however reveals that this is not the first praying robot as it was earlier developed in

IIUM (International Islamic University Malaysia) around the year 2007 in Malaysia (Zuldesigner, 2007). Naming the robot as a Shia praying robot may be a sign that the model developed in IIUM followed the Sunni sect. Discussing the benefits of the robot, an eight year old boy told me that the robot is a better teacher than his mother or father because *'it won't get angry if I don't learn how to learn the namaz (prayers) and it can continuously teach me how to do my namaz'*. He then pointed to his five year old brother and said, the robot can be problematic in a sense: *'Kazem (his younger brother) does not understand and will disrespect the robot and think of it as a toy, for example when the robot is bowing during the ruku', Kazem will push it and it will fall on the ground'* (J. Kani, personal communication, February 20, 2014). Mechanical engineers at SHUT have also joined the event and have constructed their own version of the robot called Sadra. This new version is programmable, and capable of turning its eyes while performing prayers and it recites the prayers digitally instead of using a recorded audio.

The above are some examples of how the Iranian society is making a strong effort to keep up with technological changes in the world while remaining 'religious'. It is however sometimes difficult to blend issues of modernity and religion together and at the same time avoid bipolarity. The issue that is necessary to be studied is how far can a Muslim embed modern values within him/herself without tarnishing his/her religion?

1.4 Research Questions

This research required a broad understanding of economic, social, religious and political instances which shaped a relationship between the Iranian people and modern technology. It was also necessary to explore the process of religiously validating or invalidating certain forms of technology while creating a critical interpretation of the Shia *fiqh* and its modern forms of interactions. These interactions have varied deeply within time and may be considered very different from their original form.

This research was thus inspired by four broad lines of inquiry: First, what was the basis of accepting or rejecting (or at least opposing) a certain type of technology? Second, what role does Islam as the accepted and governing religion in the country have in terms of its relationship with technology? Third, how do Islamic scholars view certain types of technologies? And finally fourth, how does the case of the automatic corpse washer and the slaughterhouse shed light on broader questions of philosophy, technology and Islam?

In order to address these questions it was necessary to collect data on the historical background of the process that Iran went through for modernization. Then, Study the changing role of religion in influencing governmental policies and emerging within socio-cultural contexts through in depth discussions with representatives of different involved communities such as religious intellectuals, policy makers in charge of

enforcing technological standards and policies, employees of slaughterhouses and cemeteries. This gradually paved the way for exploring the relationship between technology and religion as a complex interrelated network present in the ordinary daily life of the Iranian society.

1.5 Research Objectives

In order to shed light on the relationship between technology, Islam and culture the objectives of this research are:

- (i) Study the intersection of technology, Islam, culture and its underlying philosophical presuppositions in order to develop an understanding of the conflicts/similarities between religion and technology.
- (ii) Construct links between historical events in Iran and the framing of modernization.
- (iii) Explore the changing role of religion in the Iranian- Islamic society in respect to the entrance of modern forms of technology, in the two case studies of the automatic corpse washer and the slaughterhouse.

1.6 Review of Iran's Technological Development

1.6.1 Developing the Underdeveloped Technology

The issue of development and more specifically technological development is currently a heated debate in Iran, a country that carries the so-called label of a developing country that was first proposed by the United States. US President Truman's speech in 1949 is a key turning point in development history when he blatantly divided nations into developed, developing and under developed. Countries falling within the developing or under developed category have been tirelessly striving to reach the 'developed' status. Being technologically developed would mean to have a say among technologically advanced countries. For example, Iran proclaims that in fields such as biotechnology, nanotechnology, aerospace technology and more recently nuclear technology it is among the top ten countries of the world.

In the same way some local and international elite professionals, policy makers and even simple users of technology, perceive technology as neutral and value free, thus permissible to import and imitate (Mitcham, 1994). This community mainly views technology as a tool that can be either used in a positive or negative manner. A knife is similar to a double edged sword that can help save a life and also take it away; it all depends on how it is used. This means that no matter what the technology is, the users of that technology can decide on whether to use it in a way that is beneficial to the society or to use it in a way that is destructive. Importing technology or imitating

technology does not necessarily mean to stay in the copying position for ever. Imitators of technology seek a time when they are no longer imitators but rather innovators (Tatsuno, 1991). For Iran the archetypal countries that have shifted from imitators to being imitated and whose development models are usually followed are first Japan, followed more recently by Korea, Singapore and Finland.

Some policy makers believe that instead of being forced by outside pressure –such as sanctions- it is necessary to develop local technology in the first place. This form of technological development is not limited to necessary technology (that might one day be unavailable), but is rather rooted in the belief that a large bulk of imported technologies do not properly fit into the cultural and religious values of Iranians. A group of scholars in Iran challenge the sole imitating trend that has kept its pace even after the Islamic Revolution in 1979. They believe that while the country has become independent mainly in terms of its political decision making and policies, it is relatively dependent when it comes to technology. The newly developed guided missile destroyer ‘Jamaran’ from the Iranian Naval industry is considered one of the great achievements of its kind. Iran is a large importer of cargo ships from countries such as China and Korea, and at the same time it develops highly sophisticated military ships of its own. The country was sanctioned from buying military ships but not sanctioned from buying cargo ships.

The twentieth century brought profound changes in almost all aspects of Iranian life. At the beginning of the century, the total population was less than twelve million Tehran's population hardly reached two hundred thousand; sixty percent villagers, twenty five to thirty percent nomads, and less than fifteen percent urban residents. Infant mortality was as high as five hundred per one thousand births (Abrahamian, 2008). By the end of the century, the population of Iran reached over sixty nine million, while the nomadic population shrunk to less than 3 percent, and the urban sector grew to more than sixty six percent. Today, Tehran is a mega-metropolis of more than twelve million. This means that twelve million people permanently live in Tehran. This number increases every morning when people from Karaj, Shahriar, Parand, and other outskirts of Tehran, enter the city for work, business or other occasions. At the start of the century, the literacy rate was around five percent – confined to graduates of seminaries, Quranic schools, and missionary establishments. Less than fifty percent of the population understood Persian – others spoke Kurdish (west), Arabic (south), Gilaki (north), Mazanderani (north), Baluchi (south east), Luri (west), and Turkic dialects such as Azeri (north west), Turkman (north), and Qashqa'I (central). By the end of the century, however, the literacy rate reached eighty four percent; some 1.6 million were enrolled in institutions of higher learning, and another nineteen million attended primary and secondary schools. More than eighty five percent of the population could now communicate in Persian although some fifty percent continued to speak their 'local language' at home. Public entertainment shifted from local gatherings in homes and masjids to soccer matches, films, radio, newspapers, and, most important of all, videos,

DVDs, and television – almost every urban and three-quarters of rural households own television sets (Abrahamian, 2008). Websites have been created to show the type of food that is being given out as votive during Muharram ceremonies commemorating the martyrdom of the third Imam. People would therefore have a choice of ceremony participation based on the type of food offered rather than demanding its religious quality.

In the early twentieth century modern modes of travel were just making their debut – paved roads and railways totaled fewer than three hundred forty kilometers. Mules and camels were the normal means of transport since there were almost no wheeled vehicles. The Shah was the proud owner of the only motorcar in all of Iran. This private automobile had arrived in Iran in the first years of the twentieth century. It was only close to 1915 when the automobile became a more common means of transportation among the elite. In 1925 there were around two thousand private cars in Iran. In 1930, there were more than eight thousand motor vehicles in Iran, two thirds of which were cars and the rest were trucks. By 1937 there were around 5,127 cars, 7,844 trucks, and 6,597 buses and motorcycles for a rough total of twenty seven thousand motor vehicles (Schayegh, 2009). Under favorable conditions, travelers needed at least seventeen days to cross the three hundred fifty miles from Tehran to Tabriz, fourteen days, the 558 miles to Mashhad, and thirty seven days, the seven hundred miles to Bushehr. Gas lights, electricity, and telephones were luxuries restricted to a few in Tehran (Schayegh, 2009).

By the end of the century, the country was integrated into the national economy through roads, the electrical system, and the gas grid. Many homes – even family farms – had running water, electricity, and refrigerators. In 2015, the country has ten thousand kilometers of railways, fifty nine thousand kilometers of paved roads, and 2.9 million motor vehicles – most of them assembled within the country. Travelers from Tehran can now reach the provincial capitals within hours by car or train – not to mention the airline services (Abrahamian, 2008).

In the 1930s and when the country was running on an economy grounded by agriculture, the British backed Shah of Iran, Reza Shah Pahlavi, dismantled the Safavid water management system and deployed his policy of switching from traditional to cash crops, mainly from rice to cotton. In the 1960s, his successor and son, Mohammad Reza Shah Pahlavi through his American inspired ‘White Revolution’ constructed factories in or close to major urban areas without a proper long-term study of the local ecosystems and the necessary infrastructure. He also carried out land reforms as part of this so called Revolution (Foltz, 2002). Traditional Iranian clothes practically vanished during these years and can now only be found in exhibitions, celebrations or in very remote and traditional villages far from the capital.

Two main areas which were heavily affected by the modernization and the arrival of new technologies were transport and communications. The trans-Iranian railway connected the Caspian Sea to the Persian Gulf and the 19th century dream that had not

come true because of Russian or British interference, was finally launched in 1927 and completed in 1938. Before this huge railway track there were only a few railways in and around the capital Tehran (Schayegh, 2009). The telegraph and the telephone technology had also become very popular at a rapid speed. Newspaper advertisements showed gentlemen in suits and ties tranquilly placing a call.. Mechanized transport became a main cause for epidemic diseases especially close to the country's borders. Increased speed also became a threat to the physical safety of people who were used to much slower traffic. Recent statistics show that roughly twenty thousand people lose their lives annually because of car accidents in the country. There was also the strong feeling that modern transport systems and telephonic communication would contribute to a feeling of lack of time, stimulate stress and ultimately trigger disease (Schayegh, 2009).

While these technological changes were taking place, Iran was experiencing other significant stages of transformation that were mainly religious and cultural. The country went through an Islamic Revolution when Islamic values largely replaced values that were mainly advocated by modernism.

These changes, however, came at a price. Iran, after the Revolution, suffered a wide range of political turmoil. At the beginning of the Revolution, main revolutionary figures and scholars and even people with a beard who looked religious were the target of assassination attacks. Shahid Motahhari a renowned Islamic scholar was martyred

after being shot in the head by a passing motor cycle and the responsibility of the attack was admitted by the Forghan group. Shahid Beheshti, the head of the judiciary and the Supreme Court was martyred along with seventy two other high ranking officials in a bomb explosion during a meeting. The Mojahedin Khalgh Organization or as they call them in Iran the Monafeghin (hypocrites) claimed the responsibility of the attack. Shahid Rajai the president and Shahid Bahonar the Vice President of Iran were also martyred during this period. Ayatollah Khamenei (the current Supreme Leader) and Hashemi Rafsanjani (the current head of the Expediency Council) were also the target of assassination. Ayatollah Khamenei lost a hand while Rafsanjani was unhurt.

Saddam Hossein took the lead of the next wave of attacks on the country. This time through an eight year imposed war less than two years after the beginning of the revolution. Although the war was of course very destructive in nature, it united different parties inside the country to fight the common enemy and in many ways strengthened the political integrity of the country. More than thirty years after the revolution Iran suffered from another wave of assassinations, this time targeting its nuclear industry. After the Islamic Revolution in 1979, followed by a wave of Islamic values, ideals and principles, the impact of technology and technological development has not been meticulously and comprehensively studied. The technology policy makers after the Islamic revolution more or less followed the same paths of western technological development and placed extreme worth and significance on modern forms of technology. As a result, factories –mostly with high degrees of pollution- continued to

pop up across the country, traditional systems of agriculture and of water management were completely destroyed and the country fit right into the necessary requirements of a 'developing' state.

These developments ignited competition and rivalry. In the past fifteen years a semi-cold technological contest had broken out in Iranian cemeteries, each striving for developing the first and most efficient automatic corpse washer in an attempt to offer a replacement for the current practice guided by Islamic ritual of washing the dead by a human being. The issue of how cemeteries in Iran first considered the development of an automatic corpse washer were not successful in doing so mainly because of not being able to acquire religious approval occurred in 1999 (Adelkhah, 1999). Cemetery and Municipality officials in Esfahan and Tehran (*Beheshte-Zahra*) pushed for the construction of such a system and held initial discussions with mechanical engineering companies but were unsuccessful at the very first step. Karaj, the fourth largest city after Tehran, Mashhad, Esfahan, failed in its promise to develop this device for *Beheshte-Sakineh* (the name of the main cemetery in Karaj). The only two standing opponents of the automatic corpse washer were Qazvin and Mashhad. The historic city of Qazvin, the renowned capital of Iran in 1546 during the Safavid dynasty, developed a local automatic corpse washer for its newly built *me'raj* (place of ascent) building. Mashhad, the second largest city of the country and home to the eighth Imam of the Shias (Imam Reza, as), with the help of Ferdowsi University in Mashhad, successfully created an automatic corpse washer. The robotics professor of SHUT, Meghdari -the designer of

one of the versions of the automatic corpse washer that did not reach its development phase- views the design of the automatic corpse washer a ‘novel idea to solve a social problem’. In the Sharif School of Mechanical Engineering website he explains the origin of his idea: ‘If you are able to solve a problem of your society, not only you will prove your abilities but you will also make use of its advantages’ (Meghdari, 2012).

The forty year old central cemetery of Tehran, *Beheshte-Zahra*, which is located south of the city is home to over one million corpses. This cemetery is neighbouring the meat hub of the eight million people of Tehran that is supplying the capital’s meat through its network of slaughterhouses. With the rise of population in Tehran and after the Islamic Revolution in 1979, the slaughterhouses were moved to the outskirts of the city. Tehran’s hungry meat eaters sleep through this sophisticated system of animal slaughter and meat distribution and while they are mostly asleep, animals are slaughtered early every morning starting from one a.m. up to five a.m. and their meat are then transferred throughout the city in order to reach the customers in extra fresh quality.

The methods and ways of food production have significantly changed throughout the past fifty years in Iran. Along with the industrialization of animal husbandry, food is being distributed to far distances which were unimaginable for the previous generations. The Iranian national meat consumption is on the rise (Rajanews, 2011), on the National TV doctors and nutritionists repeatedly warn that not eating the standard amount of

meat in the daily diet results in weakness and malnutrition. Ironically the same professionals prescribe that an over consumption of meat leads to cardiovascular diseases (Tebyan, 2009). In order to make up for the high demand, meat is being imported to Iran from all around the world. Previously large quantities were arriving thousands of kilometres away from Australia and now from Brazil. As part of the international trade, Iranian Muslim representatives monitor the slaughter process and the hygiene conditions of the slaughter houses. Live sheep are imported from neighbouring countries such as Azerbaijan and Iraq, and poultry are imported in large quantities from Turkey and Brazil (Hamshahrionline, 2013).

Due to over thirty years of sanctions imposed on the Islamic government, and the unavailability and increase in prices of animal feed, the prices of meat have skyrocketed and then lowered down again and have been in continuous fluctuation. At the social level this created chaos at poultry shops in 2014 where people lined up to buy chicken at a lower subsidized government price while each customer was only entitled to buy two whole chickens per visit. These chickens are supplied mainly from slaughterhouses south of Tehran where ten to fifteen thousand chickens are slaughtered per night at each slaughterhouse. The fluctuating poultry market even raised the attention of the *Maraje'* (plural form of *Marja'*). Ayatollah Makarem Shirazi, one of the prominent *Ulama* in Iran stated that because of the current chaos in the poultry market he will no longer eat chicken and that it is even healthier to eat less (Shirazi, 2012). His statement has however created uproar and sometimes even ridicule among people who imagined that

skipping chicken from their daily diet maybe impossible. The beef and lamb market has also been influenced by the poultry market and experienced a significant rise in prices (Yousefi, 2015). Poultry has become popular only in the past few decades and the research interlocutors mentioned that only thirty years ago mainly because of its unavailability, chicken was only served at very special family gatherings and was considered a luxury. Chicken were usually raised not for their meat but for their eggs. Now that these significant changes have occurred, lamb meat is the most expensive, beef an economically rational choice for red meat eaters and poultry meat is not economically affordable, it is quickly prepared and thus the most efficient choice.

The extensive changes that have happened throughout the past century in Iran have influenced the social fabric of the society in many different ways. A strong Islamic awakening has coincided with a stout and brutal modernity, each trying to outnumber the other. Scholars from both sides are at the forefront of this dichotomy, striving to find ways for a common understanding or to draw clear lines between what is acceptable and what is not.

1.6.2 Modernization and Technological Change

This research explores the roots and influences of technology in the case of the automatic corpse washer and the slaughterhouse and how it shapes a society's lifestyles. It attempts to move away from conventional statements surrounding the issue of

technology and its hazards but to illustrate a profound examination of the root consequences of technology on society, culture and religion. The context of the study will be Iran, a country which has undergone a series of modernisation efforts and is currently attempting to take a grasp on novel ideas and actions which propose new models of development and create new and unvisited paths and structures of human technological encounters. The slaughterhouse as a technologically oriented site has been introduced both from the inside and outside of the country from around one hundred years ago. The production of the automatic corpse washer, however, has a history of less than two years. The relationship between technology and religion is usually interpreted as a strict antagonism; the latter belonging to the primitive past and the former to the developed future. This study however makes an attempt to shed light on the issue that technology and religion are not in conflict but they rather undergo series of complex interactions. A classic example may be how some scholars refer to the possibility of the Christian roots in the making of the atomic bomb and of designing artificial intelligence (Noble, 1997) Mirbagheri finds technology as the new form of religion (Mirbagheri, 2013) since it sets the standards and boundaries or takes on what used to be the responsibility of religion. The interconnection or, as seen by many, the intersection of technology and religion has been and continues to be a heated debate among scholars. The late David F. Noble (1997), in his book *Religion of Technology*, points to how religion and technology have always worked hand in hand and how technologies that are perceived as neutral carry deeply embedded religious values. Mirbagheri (2012), on the other hand, asserts that while technology must complement

religion, its modern form has become a new religion in itself. It performs the duty of religion and sets the rules of communication through the use of online networks, mobile phones, telephones, and so on. Noble believes that technology and religion, mainly in the Western world, are flourishing together and hand-in-hand. He states that technology and modern faith have never been distinct from one another and that the technological enterprise is an essentially religious endeavour. This does not mean that it is possible to expect technology and religion to fall within the exact same boundaries. Technology will not necessarily involve devotion, omnipotence, religious emotions and articles of faith. It rather means that 'technology and religion have evolved together and that as a result, the technological enterprise has been and remains suffused with religious belief' (Noble, 1997).

Noble sees the obsession in technological advancement and continuous gratification for new technological products, however unsuccessful and fruitless they might be, as further proof that strengthens the argument that technology is essentially religious. Although in many secular nations religion might presumably belong to the past, in Iran it is the principle guiding vigour behind most decisions. Thus, a decision to develop a technology that automatically washes the dead is not by any means secular and, as will be illustrated further, its initial thoughts were proposed by a young religious scholar. The reason for selecting these two cases of technological development is that while they are both utilizing combinations of latest forms of technology, they are encountering issues that run deep into the fabric of society and of religion. As I will discuss further in

detail, death and death rituals and practices not only reflect social values but are also important forces in shaping them. Death in animals and how humans treat them prior to and during slaughter illustrates a deeper reflection of human-nature-self relationship.

1.7 Description of the Study

In the chapters that will follow first a literature review surrounding the issue of religion and technology will be provided (chapter two). This chapter delves upon the meaning of technology, religion and culture. The issues and discussions surrounding the philosophy of technology, its ownership and its obstacles. In chapter three, the research methodology used in this research will be extensively discussed. Ethnographic research will be explained in detail and the limitations will be discussed. The conceptual framework that invests deeply in Transcendent philosophy will be elaborated. Later in chapter four, I will look into the novel automatic corpse washer and will thoroughly examine it in a way to connect it to issues of rationality, philosophy of technology and understand its connection with religion. Then I will shift the focus on the slaughterhouse as a unique technological system. Although it is around one hundred years that this technology has gradually spread throughout the country, its deep rooted properties and impacts are still very much alive. In chapter five, I will spread the carpet of *fiqh*, and will explain the role of *fiqh* in Iran and show its modern interpretations. Next the study will focus on the role of *fiqh* in the slaughterhouse and the automatic corpse washer. This illustrates the significant point of intersection of technology, culture and Islam. In

the conclusion (chapter six), I will conclude the principle enquiry of my research and will then propose issues that necessitate further research.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The relationship between technology and religion is a heated debate. Technology has been daring enough to touch upon almost every aspect of life and even death. Some of these affected areas used to be lie within the strict domain of religion. David F Noble (1997) in his book 'Religion of Technology' explores how different forms of sophisticated technology are rooted in religious belief. Chehabi (2007) studies how the sturgeon fish transformed from non-halal to halal in a series of interactions between scientists and religious Ulama. His case study can be described as a notable example of modern forms of religious interaction and decision making. Others such as Hoodfar (2000) have explored how family planning policies that are considered as unlawful among a community of Muslim scholars, became lawful and were therefore implemented in the Islamic Republic of Iran. Halevi (2007) has extensively studied Islamic death rituals and its relationship with social values and culture from a historical and anthropological perspective. While technology has silently entered into each and every aspect human and non-human life, its losses and damages are only seen in retrospect (Herzfeld, 2009). It is already too late when it is found that a technology has not taken into account the core values of a society that include its principles of religion and culture. These technological changes are in many cases permanent and cannot be easily reversed.

This chapter attempts to look through studies and research that have focused on the philosophy of technology, the cultural of technology as well as accepting or rejecting technologies based on religious or cultural reasoning. It therefore firstly provides a general understanding of what is technology, culture and Islam and then moves through various interpretations of the philosophy and culture of technology. Finally the literature paves through issues of ownership, problems and challenges of technology.

Different perspectives and theories have emerged to describe the relationship between technology and societies. Some have stressed on the mysterious and uneasy feeling that technology develops autonomously. This means that technological change is not controllable but rather it is inherently dynamic, self-augmenting and ineluctable (McGinn, 1990). The theory of autonomous technology is mostly concerned with technological change and the ways in which technology shapes and reshapes itself. Another prominent theory of technology and culture is 'technological determinism'. This theory is concerned with the influence of machines or technology on social relations. This term is believed to be coined by an American sociologist named Thorstein Veblen. Some consider Marx to be a technological determinist because of his famous statement 'The Handmill gives you society with the feudal lord, the steam-mill, society with the industrial capitalist' (Marx, 1976).

2.2 Technology, Islam, Culture and Philosophy

2.2.1 What is Technology?

The essential aspect in relation to technology and society is to understand the importance of the preliminary dominant conditions of a society. These initial conditions include values, traditions, social structure and political forces which usually vary over time. It is therefore important to find a definitive account of what technology really means in order to analyze its relationship with the society. The word technology comes from the Greek *technología* (τεχνολογία) — *téchnē* (τέχνη), an ‘art’, ‘skill’ or ‘craft’ and *-logía* (-λογία), the study of something, or the branch of knowledge of a discipline.

Technology is seen as a way of controlling and adapting to the natural environment. Many see the utilization of sophisticated technology in agriculture or transport as a way of forcing nature to be how we want it to be. The word ‘mechanical arts’ was used before technology. The word technology first entered the English language in the seventeenth century (Marx, 2010). At that time, in keeping with its etymology, ‘a *technology* was a branch of learning, or discourse, or treatise concerned with the mechanic arts’. The usage of the word, even through its ancient meaning was erratic in nineteenth-century America (Marx, 2010). It was not until the 1900s that the limited usage of the word in intellectual and academic circles became recurrent. This became visible through the writings of writers such as Thorstein Veblen and Charles Beard who were responding to the German usage of the word in the social sciences. Leo Marx

(2010) states how the word did not gain truly popular currency until the 1930s. Ellul defines technology as ‘the totality of methods rationally arrived at and [aiming at] absolute efficiency (for a given stage of development) in every field of human activity’ (Mitcham, 1994). Martin Heidegger, a well-known philosopher and critic of technology in his book ‘The Question Concerning Technology’ (1954) reminds us of a derealisation of our world through the process of technological advancement.

Heidegger views modern technology parallel to Western metaphysical beliefs and customs. Winner (1986), in his book *The Whale and the Reactor* illustrates how the idea of ‘progress’ has had an immense influence on social thought during the industrial and modern age. Now in the twenty first century it is taken for granted that the sole consistent and trustworthy source for the progress or in other words improvement of human conditions stem from new machines, techniques, and chemicals. Even our contemporary environmental hazards and crises have had little chance in undermining the powerful faith in technology and have aroused debates on how to technologically solve the problem of technology.

Lynn White Jr. believes that when the people of the east look at the occident they are not amazed by their parliamentary democracy and methods of governance but rather western science and technology. ‘Russia, beginning with Peter the Great, Japan after

Meiji Restoration, prove to them (the people of the east) that democracy is a folkway of the West, whereas technology and science are the essence of its power' (White, 1978).

2.2.2 Islam, Culture and Philosophy

When looking at religion, some interpret it as a set of ethical beliefs, instructions, and provisions. This is especially true when the explanation of the structure of this ethics, beliefs and provisions is limited to the current available religious theology. This means that religion is limited to ethics, beliefs, and Fiqhi provisions. Another perspective of religion is to limit it further and to believe that what is available in religious theology is not necessarily related to religion. But rather many of the teachings of the religious theology are not part of religion and we therefore reach a minimal definition of religion. The other perspective of religion that is also held as the definition of religion in this research is that religion is the stream of Allah *-subhanhu wa ta'ala-* supervision in the path of human spiritual growth throughout the history of humans and in every aspect of life. With this perspective, religion is no longer a set of beliefs, provisions and ethics and it does not only cover the personal life of human beings, it includes each and every aspect of life (Mirbagheri, 2012).

Scholars have attempted to define culture in various forms. Each of these definitions are significant to the context in which they are used. However, the definition of culture that is most suitable for this study is 'an historically transmitted pattern of meanings

embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and their attitudes toward life' (Geertz, 1973).

Francis Bacon perceived modern technology as a structured shape of the millennium expectation of Human dominance over nature. He states that humans who are mortal gods have lost both their innocence and their dominance over nature after falling down from the heavens. But these two can be recovered--the former through religion and the latter through arts and science (Noble, 1997).

Heidegger states that not only technology has made significant developments in the twentieth century; the essence of technology has also significantly changed through this period. One of the characteristics of technology that has remained constant from the past up to now is its tool like and means-end use. However technology is a method of understanding and learning and uncovering different aspects of a thing. The differences between past and present technology is its method of revealing the truth. Current technology has not only challenged nature (through humans) it has also challenged humans (through technology). In the past it was nature that determined the limits, boundaries and standards of technology –for example the work of a wind mill depends on the strength of the wind that blows--but current technology sets its own standards – for example we can produce constant energy by regulating the water pressure behind modern dams. Challenging nature has allowed us to reveal new truths and has thus

created a new form of epistemology. Unlike the popular assumption that technology is practical science, Heidegger believes that science is theoretical technology (Heidegger, 2013). Parsania (2014) however believes that technology is the result of a type of encounter and confrontation of human beings with the world, or it can be said that existence, through a specific type of encounter and expression, manifests itself in the form of technology. His statement is based upon transcendent philosophy that points to the gradual events that happen upon the order of Allah. 'Estedraj' is the word used in the Quran to state that Allah does not quickly punish the unrighteous but rather allows them to slowly enjoy life and dive deeper into their sins. Human beings who have turned away from Allah and from His Creation also experience this gradual act while nature silently and gradually covers itself and withholds its true treasures.

2.3 Visiting Technology

2.3.1 Exploring Engineering and Humanities Philosophy of Technology

The paradox of the visible and invisible arguments surrounding humanities and engineering philosophy of technology and how the two schools of thought view the world and where the human being stands in terms of technology continues to be a heated debate for many years. In modern times this debate which has taken a more visible route for understanding the human-technology relationship has clearly taken two distinct sides. One leaning towards a perspective that emphasizes on the neutrality of technology, and the other argues for a more intense understanding that avoids simplistic presuppositions. The engineering philosophy of technology mostly examines the design

and technical structure of technology and perceives technology as an instrument that is value free and neutral. The instrumental view of technology means that technology has been produced –usually through science- in order to satisfy a need, a means to an end.

A community of philosophers, however, that are considered to be part of the humanities philosophy of technology do not analyze the design and the function of technologies, but rather explore the relationship between different types of technologies with ethics, politics, social structures, culture, different circumstances of human beings and metaphysics. Advocates of the humanities philosophy of technology among others include, Heidegger (2013), Lewis Mumford (1934), Langdon Winner (1986), Jacques Ellul (1967), Neil Postman (1992), David F. Noble (1997). For the supporters of the humanities philosophy of technology, technology has the power to determine the economic and social structure of a society and also it may embody specific forms of power and authority (Winner 1980). Therefore in contradiction to the views advocated by engineering philosophy of technology scholars that technology is a neutral object added to the intentions of the users, the school of humanities philosophy of technology questions this argument in favor of a technology that bears the intentions of its creator; the possibilities and limits of its design; and the foreseen and unforeseen results of its implementation (Mitcam, 1994).

Among the examples from a variety of fields of study one example that received positive credit at the time of its implementation but was later critically condemned for

its underlying intentions was the case of the twentieth century renowned New York architect Robert Moses. Moses designed relatively short bridges in order to avoid public buses from entering certain parts of the city. This act actually turned out to be a racist attempt to prevent African Americans –who had to use bus transportation- to enter the so called ‘elite’ districts of New York (Winner, 1980). This example reveals how intentions may have a role in creating technology. Furthermore, the hidden values and intentions of the designer as well as the seen or unforeseen effects of technologies in different societies requires constant questioning and exploration along with awareness raising through time (Mitcham, 1994).

A prominent shared concept that carries a determining position for decision making purposes in both schools of humanities and engineering philosophy of technology is religion. The Spanish-Venezuelan philosopher who quit the church when he was in his thirties for an academic study of philosophy, Garcia Bacca, a strong supporter of engineering philosophy of technology, argues that what theologians expected from religion in the past can now be seen in a much more general way through science and technology. Bacca who had put faith in technology, places the human ability comparable to God's powers where human beings have become creators themselves. For him, the creation of the computer, for example, had turned into a perfect prolongation of human ways of thinking in a way that the existence of such artefacts is so independent that they can even enhance, make more powerful, degrade, or destroy their creators (Mitcham, 1994).

Another example is reflected in Buckminster Fuller's poem in 1963 where he explores how technology is turning into a new religion of man:

I see God in
the instruments and the mechanisms that
work
Reliably,
More reliably than the limited sensory departments of
The human mechanism
But the organized church
Uncomprehending
The mechanical extension of man
Says that such belief is pagan (Fuller, 1971).

As it is already obvious, the dichotomy between engineering and humanities philosophy of technology is rooted deeply in the point where the former does not necessarily involve the cultural, social and other human complexities of technology in its formation and use. This is while the latter, takes a critical stance towards technology and attempts to demonstrate how technologies invisibly permeate layers of social life. For supporters of Humanities philosophy of technology it is not only possible to assume that positive or negative technology is determined by its mode of use. Other important contributions have been made by Lewis Mumford who distinguishes between two types of technology: polytechnics and monotechnics. Poly- or biotechnics is 'broadly life-oriented, not work-centered or power-centered' (1967). This type of technology is in complete harmony with life and human nature. In contrast, monotechnics or

authoritarian technics is 'based upon scientific intelligence and quantified production, directed mainly toward economic expansion, material repletion, and military superiority' (1970). A rather different interpretation that is critical to Mumford's examination of technology is that it does not only look at modern technology as a form of monotechnic, but it rather confirms the invention of the 'megamachine' as the origin of monotechnic. Examples of this megamachine are, the great armies of the past, and work crews who constructed great architectures and structures (such as the Egyptian Pyramids) for the pharaohs at the expense of a visible 'dehumanizing limitation of human endeavours and aspirations' (Mitcham, 1994). It may be stressed that at modern times the 'computer revolution' was fully welcomed by computer enthusiasts who looked forward to an information age that would be capable of creating 'a more democratic egalitarian society' with ease. Moreover, as the '*romantic dream*' of technology became more and more visible to the public, many of its promises, assurances and aspirations have been seriously undermined and criticized (Winner, 1986). This invisible transformation is a replica of what visibly took place in the construction of the Egyptian Pyramids.

2.3.2 The What and the How of Technology

The murky understanding of the essence of technology must first materialize before it is possible to understand the challenges involved in modern forms of technology. One solution therefore, is to study technology from its 'whatness' (Heidegger, 2013). That is

to reject claims that technology is value free and neutral or an instrument that can be used in 'good' or 'bad' ways. Neutral technology results in the innocence of technology and the guilt of its user. In this sense, technology is a type of truth or revealing (Heidegger, 2013). That is, modern forms of technology reveal and challenge nature in order to exert a type of energy that can be independently stored and transmitted. To clarify this point, Heidegger compares traditional technologies such as the windmill or the waterwheel with the modern electric power plants. Both forms of technologies use technology to transform nature's energy into something useful for humans. However the pre-modern forms of technology stay within the boundaries of nature as if they are part of nature or as Heidegger suggests, they are similar to works of art. Modern science, 'is characterized by an objectification of the natural world, the re-presentation of the world in mathematical terms that necessarily leave out of account its earthiness, thus setting up the possibility for producing objects (technology) without true individuality or thinghood' (Mitcham, 1994). Technologies are dependent on the earth they are living in and only transfer the motion. They will be useless if there is no wind or no water. However a coal-fired electric power plant or any other type of modern power plant releases the basic types of physical energies and then stores them in abstract nonsensuous forms. The power plant not only transfers the motion of nature but also transforms, stores and distributes it. Before the Industrial Revolution the tools and energies that human beings utilized remained relatively constant; for example, wind, falling water, fire from wood, and animals were used as sources of energy, while stones and iron were used to prepare tools. Modern technology has however exploited the earth

and stored different forms of energies and transformed them from one to the other. These modes of revealing include opening up, transforming, storing and distributing (Heidegger, 2013). These modern technologies mostly do not fit into nature and the natural landscape. Nuclear reactors contaminate large areas with heat and radiation. Thermal power plants pollute the air and produce large amounts of heat. Large dams flood and destroy villages and jungles.

It is not until about four generations ago that Western Europe and North America arranged a marriage between science and technology, a union of the theoretical and the empirical approaches to the natural environment (White, 1967). The emergence of the widespread practice of the Baconian creed that scientific knowledge means technological power over nature can scarcely be dated before the 1850s, save in the chemical industries, where it is anticipated in the 18th century. Its acceptance as a normal pattern of action may mark the greatest event in human history since the invention of agriculture, and perhaps in nonhuman terrestrial history as well.

There is also a concern on how technology has become so embedded in people's lifestyles that they find it impossible to live without it (Ellul, 1990). In an analogy between medical technology and modern technology, Ellul describes the contemporary illnesses of societies, an outcome of distancing themselves from nature and having to unwillingly choose a way of life that is situated in a dead high speed community which is supposedly healed by the diverging amusements of modern technology, similar to

how medical technology is responsible for curing physical illnesses of a society. In another example, human technology, resembles deep sea diving, where, for their life-saving support, divers require suits and equipment to live in the underwater environment. Technologies have become the equipment for the modern man to amuse himself/herself without having the necessary awareness for thinking about the problems that it has created (Ellul, 1992).

In moral terms, Ellul's statements do not necessarily judge technology based on whether it is good, evil or neutral. It rather illustrates technology as a complex mixture of positive and negative elements, including both good and evil. However it is important to understand that it is rather impossible to dissociate them and thus to achieve what is referred to as a purely 'good' technique. Thus, the use of technical equipment will not determine good or bad results but will in effect, modify the people using it and limit them within their boundaries. Human beings do not and cannot remain unharmed through the totality of the technical phenomenon. Similar to how technology in modern life generates diversions, diversions from the real as explained by Ellul are diversions not just in the sense of amusement a total diversion from human responsibility that is to understand and direct life towards higher and more sophisticated ideals. The 19th century dominant force that had to be carefully controlled and studied was the issue of Capitalism. For many scholars in the twentieth century, technology is one of the most crucial social phenomenon: 'I was certain ... that if Marx were alive in 1940 he would no longer study economics or the capitalist structures but technology' (Ellul, 1981).

2.3.3 The Challenges of Technology

Considering the challenges of technology, religion, science, societies, and culture, a series of questions may be posed. What is the real problem with technology? Is it possible to live without technology? Is it possible to tame technology or is it continuously regenerated and therefore rampant? Is technology serving human beings or are human beings serving technology? Is it possible to become more developed than the countries we are currently imitating? Is it possible to carefully choose the good parts of technology and leave out the bad parts? Is technology essentially western and does it contain and deliver all the bad values of the west with itself? Is technology essentially polluting? Does Islam encourage technological progress? Does employing more sophisticated technologies lead to the formation of more pious human beings? Does technology encourage the development of weapons and therefore lead to social insecurity? Does technology encourage wasteful use and gross rivalry? Does it rejuvenate human lust and envy? Does it transform the human being into the new god?

In order to answer these questions it is crucial to examine the relationship between technology and religion (Stolow, 2013). In the taxonomy of religion and technology, some strictly believe that religion and technology are antagonistic and a religious technology is meaningless. Some say that technology and religion are not related and each can develop without the intervention of the other. There is a third perspective and

that is to consider technology and religion as co-workers and as concepts that have never been separated from each other (Noble, 1997).

It is not reasonable to exclaim that a certain type of technology is bad solely because it has been developed in the West, similar to how Imam Ali (as) explains that:

Sometimes Allah likes a person but not his acts and at sometimes does not like a person but likes his acts (Ar-Radi, 2009).

This is while Allah who is named as the best of creators (أحسن الخالقين) states in the Quran that:

Say, 'I seek refuge in the Lord of daybreak (1) From the evil of that which He created (113 :1, 2)

Technology's aim is to create more in less time and with the least cost. Therefore a better technology is one which is faster, and it does more with the least amount of expenditure. The question that needs to be asked is whether a better human is also faster, does more and costs less? Soroosh (1997) states that contentment is the missing piece of technology, a piece which cannot be brought in since technology is essentially against contentment. This is why technology cannot solve the problems of technology and that sustainable technology is again another form of technology. Technology does not make people more powerful but it rather makes them more dependent. Technology

can never advocate simplicity or a simple life, nevertheless simplicity and contentment is a source of power for human beings (Soroosh, 1997).

2.3.4 The Ownership of Technology

The ownership of technology is also of great concern to philosophers of technology. The hazardous side of technologies as explained by Leo Marx (2010) might incorporate the fact that most technologies have emerged from a corporate capitalist system where the legal system and private property laws hand absolute authority to individual businessmen and as a result ‘vital decisions about their use are made by the individual businessmen who own them or by the corporate managers and government officials who exercise the virtual rights of ownership’.

Leila Green (2002) sees the development of technology as a result of specific choices made by influential power brokers that are only a limited part of every society. She sums them up as the ABC of social power: A = armed forces; B = bureaucracy; C = corporate power.

When institutes of technology for example universities move towards technological change they are as Green states sponsored and supported by the ABC power blocs. This means that technological change and development does not necessarily represent the decision of the society but rather represents the decision of a minority of elites. Therefore green technology, affordable and at the same time strong transport systems,

might not be the first priority of these powers (Leila Green- Technoculture). Noble (1997) states that because of the Christian roots and nature of technology and its primary intention to restore man's dominion over earth, technology was never planned to be universal or that it would include women. Those capable of reaching the highest degree of divine power were the engineers; and that is why astronauts are sent to the moon, while millions of people around the world are malnourished (Noble, 1997).

2.4. Theoretical Framework: Dead Animals, Dead Humans

Significant research has been performed surrounding the issue of death, whether in animals or humans. The meat industry and especially the American meat industry has been studied in vast detail. There are films, documentaries, hidden camera clips and voices recorded by independent undercover reporters showing the devastating effects of industrial animal production worldwide. Animal rights activists constantly detest slaughtering animals for food or even eating animal products that do not involve killing an animal, such as milk. They all point to the complex relationships that exist among the various players of the industrial meat production network including law makers, government officials, international businesses, farmers and ordinary consumers. Food, Inc. (Kenner, 2008) for example describes and criticizes this complex network. Books such as *Animal to Edible* (Noilie, 1994) and *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight* (Pachirat, 2013), from first account experiences, describe the horrifying accounts of slaughterhouse in detail. Temple Grandin (2004),

has extensively studied slaughterhouses and has been able to offer alternative ways of treating animals that are much less brutal and harmful. She has even suggested technological solutions for improving animal treatment during Halal and Kosher slaughter. Lee (2008) has extensively studied the slaughterhouse in the West from various aspects and has linked social and class linked issues with slaughterhouses. Scholars such as Foltz (2006) and Tlili (2012) have studied the relationship between Islam and animals and how animals should be treated according to Islamic values and principles.

Jessica Mitford (1963) in her book *The American Way of Death* has studied how the American society is changing its ways of perceiving death and how modern values have become entrenched in the sociology of death. Halevi (2007) has historically studied Islamic death rites, rituals and issues of washing the dead in Islam. The Iraqi novelist, Antoon (2014) in his novel *The Corpse Washer* brilliantly describes life from the viewpoint of a corpse washer in Iraq and through modern changes brought about through war and devastation in the war torn country. In the book *Death, Mourning and Burial, A Cross Cultural Reader* (Robben, 2004) a group of authors ethnographically examine death from various cultural backgrounds and study how people deal with death and dying. The book also includes research on animal mourning and institutionalized care for dying patients. Ivan Illich (1982) in his book *The Medical Nemesis* explains how people no longer die in their homes but rather forcibly die in hospitals and how this modern event alters social relationships.

This research however, takes a unique standpoint towards death, whether among animals or humans. First and foremost there is no ethnographic research available on Iranian slaughterhouses. This might be due to the secret nature of such sites and the difficulty of getting permission to enter. Therefore research on Iranian slaughterhouses are performed by veterinary physicians and mostly surround issues of animal diseases and antibiotic use. Each and every slaughterhouse across the country employs at least one veterinary physician in charge of ensuring the quality and healthiness of the meat.

The other case study that will be examined in this research is the automatic corpse washer that unique to modern Iran. No scholar has ever attempted to study this topic and the device itself cannot be found anywhere around the world. The uniqueness of this study, while stimulating and refreshing, is bound to natural limitations.

This research attempts to expand the already available literature on animal welfare and Islamic treatment of animals, sociology of death and Islamic jurisprudence. Studies such as those of Hoodfar (2000) and Chehabi (2007) explore modern Islamic jurisprudence and its relationship with modern scientific and technological developments. This is while death remains one of the mysteries of this world and while various religions have tried to explain the afterlife, its complexities and unfamiliar nature persists. When dealing with death, Islam, like other religions prescribes a set of practices and actions. When technology enters this uniquely religious realm, it tries to replace these practices

with its own kind of procedures. This research has therefore taken the unique approach to study this realm of intersection and to analyze its challenges and complexities.

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CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Given the complex nature of qualitative research, it is practically impossible to draw clear border lines between different research methods. For example Charmaz (2014) places more emphasis on views, values, beliefs, feelings, assumptions, and ideologies of individuals than on the methods of research. Case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time through detailed, in-depth data collection involving multiple sources of information (Creswell, 2007). The researcher finally presents the meaning that comes from learning about the issue of the case or about an unusual situation. Gathering information for case studies involves ethnographic field work. Ethnography is a type of research that examines cultures and societies through human experience (Murchison, 2010).

The ethnographer (the researcher performing the ethnography) is a fully involved observer. This means that in order to study social and cultural phenomena the researcher must be involved in the society himself and to study the field while it is happening. Ethnography is a holistic study (Ember et al., 2006) and therefore includes issues of history, culture, politics and so on. Instead of studying a subject under controlled laboratory conditions, ethnography believes that because of the complexity of the issue under study, it must be studied in a complex and uncontrolled way (Brewer, 2000).

Therefore ethnographic research involves collecting data in natural settings through up-close, personal experience. It is not always clear when an observation really begins (Hammersley, 1995). Given the complex nature of the research, ethnographies describe the culture and norms of a certain community of people in a very detailed and complex manner. Therefore ethnographers undergo extensive fieldwork and observe natural settings while focusing on activities that follow a certain pattern. Ethnographies are in general field-based, personalized, multifactorial, inductive, dialogic, holistic and finally require long term commitment and dedication (Creswell, 2007).

The aim of this research is to ethnographically explore the relationship between technology and religion through the two mentioned case studies; the automatic corpse washer and the slaughterhouse. The essential question about technology is: as we ‘make things work,’ what kind of *world* are we making? Or as Heidegger bluntly puts it ‘We shall be questioning technological concerns, and in so doing we should like to prepare a free relationship to it. The relationship will be free if it opens our human existence to the essence of technology’ (Heidegger, 2013).

So what would an ethnography like this look like? I will mainly go through two distinct but interrelated stages of analysis. One is of course what happens on the field and with my encounters with a variety of people. The other is to attempt to link behaviours and interactions with much deeper social issues such as modernity, technological

development and alienation. These social issues will be analysed and compared when they are portrayed upon two contrasting world views- Transcendent Philosophy and Capitalism.

This research takes on the subjectivity role that Glesne and Peshkin (1991) referred to as 'virtuous' because the position of the researcher as a young Muslim citizen in Tehran allows for an insider perspective while keeping bias at a distance. 'The subjectivity that originally I had taken as an affliction, something to bear because it could not be foregone, could, to the contrary, be taken as virtuous' (Glesne, 1991). Therefore subjectivity in research can turn into something that is useful, valuable and inevitable. It can explain who the researcher is and why he/she is making certain emphases. In addition, this research gains strength from the diverse events and accounts that evolve from the data which shape the lives of the people (including the researcher) involved. The philosopher Hilary Putnam (1988) argues that there cannot, even in principle, be such a thing as a God's-eye view, a view that is the one true objective account. Any view is a view from some perspective, and is therefore shaped by the location (social and theoretical) and lens of the observer (Putnam, 1988)

The major focus of this study will be on two cases of socio religious examples of technological and industrial advancements in Iran, both embedded in the technology of

death but at the same time deeply rooted in living and nature; a) the automatic corpse washer; b) the slaughterhouse.

3.2 Interacting with Technology

When confronting the issue of technology, two dimensions must be considered: the question of 'how things work' and 'making things work' (Winner, 1986). Making things work is of little interest to the public who make use of the technology and it is more a question in the domain of scientists, inventors and engineers. How things work, on the other hand, is the primary concern of people using the technologies. The interaction between humans and technology has been understood as straightforward and without any possible or unwanted consequences. It is as simple as picking up a telephone and talking to another person and not using it for some time, or about how we take a plane and fly from Malaysia to Germany and then get off it. 'The proper interpretation of the meaning of technology in the mode of use seems to be nothing more complicated than an occasional, limited, and non-problematic interaction' (Winner, 1986).

The mainstream perspective of social scientists towards technology usually follows a cause and effect procedure. Once a technology has been made available to the public, how does the public cope with that new technology? Winner (1986) humorously exemplifies this approach to a bulldozer which has already rolled over us and we want

to pick ourselves up and carefully measure the tread marks. As technologies become woven into our everyday life, it is no one other than us who in a nonstop fashion demand more technological devices.

The other critical issue that concerns this research is related to technology and technological development and its widespread use and excessive growth particularly in Iran. This is tightly intertwined with the issue of growing capital. Excessive technological developments of the last Shah of Iran through imitated modernization led to a Revolution that was deeply rooted in Islamic traditions (Mottahedeh, 2008) and their fascination with technology. The Iranian society however, after the eight year imposed war, with initial intentions of reviving indigenous traditions in every aspect of life, has partially failed because of the overwhelming influence of mainstream views of development on elite experts (H. Shahini, personal communication, May 12, 2013). The question that should be asked is: why are policy makers obsessed with growth? How many policy makers ever question the need for this type of growth or this much of growth in capital accumulation? Harvey believes that ‘only cranks, misfits and weird utopians think that endless growth, no matter what the environmental, economic, social and political consequences, might be bad ‘ (Harvey, 2010). The issue of growth and of capital accumulation as well as continuous efforts in producing and purchasing new technologies is worth studying especially when we are facing all sorts of different environmental and social catastrophes (Harvey, 2010).

3.3 Limitations of the Study

In a complex work like this, it is difficult to clearly identify specific forces such as religious, political, cultural, technological, and economical that have led to the development of small scale events. The first limitation that rises is the problem of diversity of the phenomena being studied. In this research the technology of the corpse washer as well as the technology of the slaughterhouse cannot be easily linked to modernity and the social implications of technology. That is why the interrelated and intertwined factors that are part and parcel of these phenomena have to be carefully analyzed.

The second limitation mainly falls in the category of history. How have the ways of looking at the dead throughout the years changed? How and in what ways have people distanced themselves from the dead? From when have they followed a strict mode of standardization? Is there continuity between the human-animal relationships as it is constantly moving towards a diversion?

The third limitation is in regards to secrecy. Especially in regards to the slaughterhouses, since meat is a very critical issue in the country and talking about its problems and issues can develop all sorts of security issues. As the researcher/observer I had to build trust with my interlocutors and to ensure them that their names will not be given out. Observing the slaughterhouses was of course another problem. I did not mainly talk about the target of my research and only gave vague statements about

modernity since if I had explained the issues in detail, they would either not understand it or that they would become defensive.

3.4. Conceptual Framework

The underlying task of a research is to overcome the overwhelming fragmentary outlook that dominates a large part of the land of knowledge and science in our time. The categories which govern the way we see, narrate, analyze and act as researchers, are what an inquiry should consciously re-examine, and if necessary, deconstruct (Lal, 2002). Research is not merely a questioning and answering process in an isolated and utilitarian sense; it should be a transformative and purifying search that stems from the roots of life on earth, and grows in the skies beyond it. Even though in qualitative studies conceptual frameworks may not be explicitly articulated and mentioned, they are rather understood as a guide for the researcher to understand his/her path, and to organize the narratives of the research in a meaningful and acceptable manner. Thus conceptual frameworks identify researchers' 'world views' of their research topics (Lacey, 2010) and so delineate their assumptions and preconceptions about the areas being studied (Miles, 1994).

3.4.1 Weaving the Iranian Carpet

This research is grounded in Iran, and after the Islamic Revolution in 1979. The Revolution in Iran was similar to replacing a machine-made monochrome blank mat

with a hand-made colorful Persian carpet with intricate designs and motifs. It created deep and substantive waves of change which reached almost every corner of life in Iran. Now, thirty seven years after the Islamic Revolution, the waves of change are still visibly, and invisibly, animating very complicated intellectual and material challenges and dilemmas in Iran and the world. With millions of knots in their places, the hands of the people continue weaving the unfinished carpet of the Revolution. The metaphor of the carpet portrays the essence of the course of events in Iran since 1979: the Islamic Revolution changed the order of things. The political order was deeply overhauled. A new unique political order governs the country but many things in terms of the economic and cultural order of the society remain unaltered. Like every human society, there is no sphere of life in Iran - politics, economy, culture - which does not embody an abundance of problems and disputes. But the bone of contention in the incomplete Islamic Revolution, is how values and teachings of Islam, can make sense and materialize in the contemporary society which is entirely, and subtly, regulated and controlled by science and technology. Therefore the automatic corps-washer and the industrial slaughterhouse, as the two main cases under investigation in this study, stand at the center of the encounter between the Islamic Iranian Revolutionary order and the dominant scientific and technological order. The main task of this small chapter is to look into the underlying assumptions that nurture this lively encounter and pave the way for situating and understanding the automatic corpse washer and the industrial slaughterhouse in such intellectual and societal contexts.

3.4.2 Transcendent Philosophy

The conceptual ground of this research is inspired by the primary notions which the school of ‘Transcendent Philosophy’ [*Hikmah Muta’aliyah*] is built upon. Transcendent Philosophy, the core of Mulla Sadra’s thoughts and writings in about five centuries ago, is a holistic and creative synthesis of his understandings of the Qur’an and Hadith and the history of about one thousand years of Islamic philosophy and mysticism. Imam Khomeini and many of the other prominent scholars and leaders of the Islamic Revolution are deeply educated within this philosophical tradition. Many of the intellectual foundations of the Revolution can be traced back to Imam Khomeini’s political and cultural interpretations of Transcendent Philosophy. The way in which this philosophy views the world and describes the relationship between man, nature and the Creator is how I intend to analyze the findings of my research.

The underpinning principles of Transcendent Philosophy that are required for this work will be further explained. Mulla Sadra develops his revolutionary philosophy based on a new notion of being [*wujud*]. Primacy of being along with unity, simplicity and gradation of being form a firm foundation for his ontological order. Primacy of being [*asalah al-wujud*] means it is being that constitutes reality, and not quiddity [*mahiyyah*]. Unity of being [*wahdah al-wujud*] is about believing that everything is only one being, one singular reality. Because of the simplicity of being [*basatah al-wujud*] that one being cannot be analyzed into parts or components. This singular simple being is graded

[*tashkik al-wujud*] and becomes multiple in this world by only admitting to degrees of perfection and deficiency (*bi-l-kamal wa-l-naqs*), by priority and posteriority (*al-taqaddum wa-l-ta'akhhur*) and by independence and dependence (*bi-l-ghina wa-l-haja*). Finally, Mulla Sadra argues that all individuals in being are in constant substantial motion [*haraka jawhariyya*] and undergo substantial change and transformation as a result of the self-flow (*fayd*) and penetration of being (*sarayan al-wujud*) which gives every concrete individual entity its share of being.

When it is understood that everything in this world is 'being', Mulla Sadra points to seven attributes that are inherent in being; 'knowledge', 'power', 'will', 'life', 'speech', 'hearing' and 'seeing'. This means that humans, animals, plants and minerals (all that exists in this world) are first of all alive, they have knowledge power and will and have the ability to talk, hear and see. Since being is singular, simple and graded, wherever there is being, these attributes will follow. These seven attributes are separate from being only from a conceptual perspective and are the being itself at the actual reality of it. At different grades of being, the attributes become stronger or weaker. In Mulla Sadra's view, Allah is the only being and everything else exists as lower grades of His being, as the 'signs' [*ayat*] of His being. 'All beings, even the solids, while seemingly inanimate, are in reality alive, aware and glorify the Truth, they gaze upon the majesty and magnificence of Truth; having total awareness about their Creator and Maker (Damad, 2012)'. In chapter nine of the third book of Asfar, Mulla Sadra mentions verses of Qur'an that state everything is alive, conscious, and praises Allah.

Although we might often not see or understand, but according to Mulla Sadra, all individuals in being are alive and have knowledge, power, love and the ability to talk, hear and see, and are substantially moving towards higher grades of being in terms of perfection, priority and independence and will, desire, want or love is present in everything like the being itself.

Mulla Sadra, at different occasions in his writings, uses various words to refer to will as one of the attributes of being: will [*iradah*], affection [*mahabbah*], aspiration [*mayl*], love [*eshgh*] and mercy [*rahmah*]. Mulla Sadra infers that it is the invisible string of love which puts everything in order. Love threads through the ontological view of *Hikmah Muta'aliyah* - the primacy, unity, simplicity and gradation and the substantial motion of being - and is the force that gives the reality the order that it has. In Qur'an Kareem, Allah - *subhanahu wa ta'ala* - orders his Messenger, Muhammad (pbuh), to:

Say, 'To whom belongs whatever is in the heavens and earth?' Say, 'To Allah.'
He has decreed upon Himself mercy. [6:12]

And reveals that:

My mercy encompasses all things. [7:156]

Qur'an's portrayal of being and the place of His knowledge and mercy in the order of being seems to be in harmony with what Mulla Sadra deduces in his philosophy:

Those [angels] who carry the Throne and those around it exalt [Allah] with praise of their Lord and believe in Him and ask forgiveness for those who have believed, [saying], 'Our Lord, You have encompassed all things in mercy and knowledge. [40:7]

Creation is in order with His love and mercy and humans and nature live in this vast and deep Divine order. But human beings do not usually notice knowledge, love, and other intrinsic attributes of being in everything around them, including the natural beings. Mulla Sadra mentions four different reasons for our ignorance and neglect of the attributes of being:

The first barrier is language. The words, terms and expressions mislead us in comprehending the reality and conceals the deeper layers of it. People's culture, is the second obstacle. Their beliefs, habits and intellectual environment obstruct parts of the complete spectrum in which the attributes of the beings around them manifest themselves. The third hindrance is people's misconception and ignorance of the true meanings of knowledge, love, life and other attributes of being and therefore cannot see and percept them. The fourth reason that Mulla Sadra mentions is of a different nature. The first three hurdles between us and the reality put the stress on the humans as the active subjects. But the last stumbling block that keeps us in veil from reality is the

active nature of the individuals of being around us. They conceal and disguise their actual attributes because of the way we regard and treat them:

Soon I shall turn away from My signs those who are unduly arrogant in the earth; [even] though they should see every sign, they will not believe in it. [7:146]

The important consequence of the active and living presence of nature is that our knowledge is fundamentally shaped by the conscious of nature. Mulla Sadra stresses that if we cannot see life in nature, it does not mean that they are dead; it rather means that they have hidden their true nature from us and this is in principle because of mankind's actions. Here, we come across a different order which governs the relationship between humans and non-human beings and is not based on love.

Arrogance [*kibr*] is what sets the bedrock of the new order:

Indeed those who dispute the signs of Allah without any authority that may have come to them—there is [an ambition for] greatness in their breasts, which they will never attain. [40:56]

When nature encounters a human being who is arrogant, it hides its signs of life, knowledge and love. Although this concealment is the result of the encounter between humans and nature, it is in accordance to Allah's tradition of guile and luring and it is solely based on the wisdom and justice that nature is serving with knowledge and awareness. The natural world, with its silent and gradual conduct, actively changes the order of things in a way that the arrogant human being turns into a passive object and thus, paves the way for the reemergence of the Divine order of Love.

Allah has promised in the Quran that if the people of a community believe in Allah and observe *Taqwa* (piety), Allah will in return open up his blessings from the heaven and earth:

And if only the people of the cities had believed and feared Allah, We would have opened upon them blessings from the heaven and the earth; but they denied [the messengers], so We seized them for what they were earning.' [7:96]

There are people who do not live within the common boundaries of arrogant life and are familiar with the real attributes of the world, and understand the anger and wrath of this world, and move towards reducing the pains, removing the barriers, and creating a path for the return of humanity towards awareness, knowledge and love that is hidden and veiled in this world (Parsania, 2014).

The ethnographic explorations of this study makes sense within the ontological ground that we very briefly described. One should understand the conscious Divine order of being and how love or arrogance changes the way it deals with human beings as the tenants of the planet earth, and only then a meaningful contextualization of the observations of this research becomes apparent.

In what follows, I will focus on technology and what it means in the context of Transcendent Philosophy and this research. Mulla Sadra distinguishes four levels of

being. The first level is a type of being which exists 'in itself', 'for itself' and 'by itself' and this level is limited to the existence of Allah. The second level has come to existence 'in itself', 'for itself' but 'by the other' which is called 'substantial existence' [*wujud al-jawhari*], like human beings or trees. The third level, is called 'adjoining existence' [*wujud al-inzimami*], which is 'in itself' but 'for the other' and 'by the other', like the color 'white'. And the fourth level is 'in-the-other existence' [*wujud fi ghairihi*] that exists 'in the other', 'for the other' and 'by the other' which is the 'relational' level of existence.

Lavasani uses these levels of existence to distinguish between what he sees as the technological cover and its true existence. Lavasani states that there is a difference between 'technic' and 'technological tools' (2011). Technical operation are different from technical phenomenon in that 'technical operations are many, traditional, and limited by the diverse contexts in which they occur; the technical phenomenon-or 'la Technique' -is one, and constitutes that uniquely modern form of making and using artifacts that tends to dominate and incorporate into itself all other forms of human activity' (Ellul, 1967). With the technical phenomenon or the comprehensive pursuit of efficiency, 'technique has taken over the totality of human activities, not only those of productive activity' (Ellul, 1967). Technic is one of the examples of the fourth level of existence and this means that it is a relational appearances of the human self (Lavasani, 2011). It does not have an independent or adjoining existence and is nothing but a continuation of the human self. In other words, technic is '*ma'ghul al-thaniyah*' which

is not a mere abstraction and not an independent ‘external being’, but a type of ‘virtual being’ that is nothing but a relation. A relational being that narrates the truth of the real being that is at its origin. It can be said that technic is the ‘formal substance’ [surah] of the technology and the tools are the ‘material substance’ [*maddah*] of it. Human beings confuse their own perfection with the perfection of the technic and believe that the more technological one becomes the more complete he/she is.

3.4.3 Technology in Transcendent Philosophy

Linking technology to the principles of Transcendent Philosophy, Lavasani states that technic is a relational being [*wujud fi ghairih*] that is represented at an existential level of the human self (S. Lavasani, personal communication, June 21, 2014); this means that technological tools are the perfection of that relational being and not the perfection of the ‘truth of humanity’. Technic has been created from the essence of human beings. This essence sways for power and has cut itself from revelation. The humanity that has manifested itself in the form of technology is rooted in aggression and abuse of nature and of human beings. The principle need of human beings is proximity to Allah. Welfare, freedom, justice and the like only become meaningful if they move towards this proximity. This human would therefore show the mercifulness of Allah in this world.

This is how scholars see technology as an extension of human capabilities. For example, for Kapp, technical objects are quite simply projections of human organs. ‘The intrinsic relationship that arises between tools and organs . . . is that in the tool the human continually produces itself... Since the organ whose utility and power is to be increased is the controlling factor, the appropriate form of a tool can be derived only from that organ’ (Kapp, 1877). Developments in technology have also been linked to the extension of the nervous system. ‘Today, after more than a century of electronic technology, we have extended our central nervous system itself in a global embrace, abolishing time and space as far as our planet is concerned’ (McLuhan, 1964). A pen is the extension of the hand, a hammer an extension of the arm and a wheel extension of the feet ‘and the mechanization of a task is done by segmentation of each part of an action in a series of uniform, repeatable and moveable parts’ (McLuhan, 1964).

3.4.4 Technological Determinism

The basic assumption of technological determinism is that technology determines social change. While this term is associated with Karl Marx, many authors have contested the issue and believe that Marx was not a technological determinist (Harvey, 2010). Technological determinists claim that technology develops autonomously. This theory is of course in sharp contradiction to the earlier discussed instrumental view of technology or how Mitcham (1994) states the engineering philosophy of technology and how technologies are no longer value free instruments that can be used in positive or

negative manners. That is, they represent deep social meanings and culture and therefore drive social change. This can however be a two way street. In this view, technology can drive social change and at the same time the society can drive technological development. In this way, transformation in instruments of labour has consequences for social relations and vice versa. That is, as social relations change, so technology must change, and as technology changes, so social relations change. It is best to assume that Marx's theory of technology/productive forces is machinery plus organizational form. If you take the technologies of a capitalist mode of production and try to construct socialism with them, what are you going to get? You are likely to get another version of capitalism, which is what tended to happen in the Soviet Union with the spread of Fordist techniques (Harvey, 2010).

3.4.5 Alienation

A deeper understanding of how creating chaos at an ontological level translates in the personal and social life of human beings is necessary to be explained. The growth of consumerism as a characteristic of modernity has in many ways influenced human relationships. It has created a form of alienation. Animals for example, and nature as their source of livelihood have been made invisible and thus easily manipulated as in the case of the slaughterhouses. Fromm explains this 'marketing character' as a relationship that is focused on 'having' rather than 'being' (Fromm, 1973). 'The less you are, the more you have; the less you express your own life, the greater is your alienated life'

(Marx, 1988). 'The commodity operates as the compensation provided by the system for the thwarting and fragmenting of human life in the process of its manufacture' (Thorpe, 2009). In the same way the example of the radical rise in the consumption of meat and commercialization of animal husbandry as well as the absence of animals in the industrial urban lifestyle shows that it has alienated the new generation of Iranians from animals and from nature.

The meaning of death is going through a retransformation of self-estrangement and alienation of man from himself. While explaining the concept of alienation, Karl Marx uses the word *Entfremdung* (estrangement). He states that alienation refers to types of human relations and their subsequent results which are not controlled by their participants (Marx, 1964). Therefore things that naturally belong together are separated and things that are in harmony with each other become antagonistic. This alienation according to Marx is mainly due to the living of society in different stratified classes, and events such as death and life that for centuries and among different traditions have been in harmony have become alienated. For example, specifically in Iran, cemeteries used to be in close distances both for remembrance, paying respect and frequent visits of family members. They have now been reduced to moving to remote and almost despised areas (*Beheshte-Zahra*, south of Tehran).

Karl Marx explains that ‘The worker can create nothing without *nature*, without the *sensuous external world*. It is the material in which his labor realizes itself...’ (Marx, 1988). Nature’s role is however, changing, ‘In a physical sense man lives only from these natural products, whether in the form of nourishment, heating, clothing, shelter, etc....Nature is man’s *inorganic body*, that is to say, nature in so far as it is not the human body’(Marx, 1988). Nature is becoming more and more distant from the worker and its essence becomes limited to a very processed and mediated form. Therefore workers do not work directly with nature and what they see is an alien and unknown entity. This has led to a very different relationship with nature and among humans themselves. ‘Every self-estrangement of man from himself and nature is manifested in the relationship he sets up between other men and himself and nature.’(Marx, 1988) Or, as Max Horkheimer later stated, echoing Marx, ‘The history of man’s efforts to subjugate nature is also the history of man’s subjugation by man’ (Horkheimer, 2004)

While Marx explores the capitalist mode of production, he talks about how dead labour dominates living labour. This occurs through alienation where instead of the person making use of a tool or of an instrument, the machine makes use of the person (Marx, *Capital a Critique of Political Economy*, 1976). This was, for Marx, an inversion between life and death: the domination of the living by the dead. In the twentieth century the routinization of work under Taylorism and Fordism was accompanied by the cultural glorification of technological power (as in atomic energy and the space program) and in the rise of mass consumerism, both as an engine for economic growth

and as a compensatory mechanism for fulfilling desires and aspirations and maintaining order (Thorpe, 2009). The postwar American dream involved the creation of a massively consumption- oriented and energy-dependent way of life, satisfying desires through the proliferation of ‘labor-saving devices’ and an automobile-dependent, suburban mode of living (Rajan, 1996). Consumer affluence accompanied and compensated for the routinization of work.

However, the concept of alienation might go back much further than its modern use. It may be seen as a mode of experience in which the person experiences himself as an alien. Humans become estranged from themselves, from nature and from their creator. ‘This alienated person is out of touch with himself as he is out of touch with any other person’ (Miri, 2012). Marx finds self-alienation in modern political, social and economic networks. He analysed the coherent totality of the human world in terms of human self-alienation, which he saw as culminating in the proletariat (working class people) (Lowith, 1993).

The metaphorical depiction of alienation in the Sublime Quran demands due attention and contemplation. It has been repeatedly stated in the Quran that this world is only a representation (Ayah), it is passing and it is mortal. A vicegerent would be abeyant towards Allah and humble towards His creation. This means to shift from an anthropocentric conception of the world where the human being is at the dominating

center to a world view where human beings are seen as only a part of creation and not the sole reason for its existence. From the viewpoint of the Quran, forgetting Allah has two bitter results:

They have forgotten Allah, so He has forgotten them [accordingly]. Indeed, the hypocrites - it is they who are the defiantly disobedient (9:67).

First is that Allah has also forgotten the modern man and has left him helpless and desperate and secondly Allah has afflicted the modern man with alienation from himself.

And be not like those who forgot Allah, so He made them forget themselves. Those are the defiantly disobedient (59:20).

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3.4.6 Rationalization

The epistemological consequences of the ontological turmoil that we talked about, is another dimension that I should touch upon before moving on to my ethnographic analysis. Rationalization as Weber (Gerth et al., 1946) asserts is patterns of rationality and processes of rationalization in the spheres of economic life, law, administration, and

religious ethics. In each of these institutional spheres, rationalization has involved the depersonalization of social relationships, the refinement of techniques of calculation, the enhancement of the social importance of specialized knowledge, and the extension of technically rational control over both natural and social processes. The main characteristics of rationality are calculability, efficiency, predictability, non-human technology and control over uncertainties. It is this common pattern that defines what is 'specific and peculiar' about Western rationalism. Weber sees Western rationalism as one of the most important characteristics of Western society and of capitalism (Ritzer, 1993). Rationality consists of a set of social actions governed by reason or reasoning, calculation, plus rational pursuit of one's interests (Ritzer, 1993). Weber believes that 'It is the destiny of our era, with its characteristic rationalization and intellectualisation and, above all, the disenchantment of the world, that precisely the ultimate and most sublime values have withdrawn from the public sphere' (Gerth, 1946).

According to Weber (Kalberg, 1980) there are four types of rationality in a society; 'Practical,' 'theoretical,' 'formal,' and 'substantive'. Weber designates every way of life that views and judges worldly activity in relation to the individual's purely pragmatic and egoistic interests as practical rational. Theoretical rationality involves a conscious mastery of reality through the construction of increasingly precise abstract concepts rather than through action. Substantive Rationality like practical rationality though unlike theoretical rationality directly orders action into patterns. It does so, however, not on the basis of a purely means-end calculation of solutions to routine

problems but in relation to a past, present, or potential value postulate. Buying packaged meat from supermarkets and washing corpses in automatic corpse washers seems to fit into the pragmatic and egoistic character of modernized Iranians.

In Weber's own words 'Something is not of itself 'irrational' but rather becomes so when examined from a specific 'rational' standpoint. Every religious person is 'irrational' for every irreligious person, and every hedonist likewise views every ascetic way of life as 'irrational', even if, measured in terms of its ultimate values, a 'rationalization' has taken place' (Kalberg, 1980).

Formal rationality, unlike other forms of rationality in Weber's terms relates to specific boundaries that have been brought about only with industrialization: 'most significantly, the economic, legal, and scientific spheres, and the bureaucratic form of domination' (Kalberg, 1980). While practical rationality looks at and calculates means-end rational patterns that always tend to be linked to self-interest, 'formal rationality ultimately legitimates a similar means-end rational calculation by reference back to universally applied rules, laws, or regulation' (Kalberg, 1980). The rationality which emerges from this process is something specifically irrational and incomprehensible (Lowith, 1993). '[It is] as if, knowingly and deliberately, we actually wanted to become men who require 'order' and nothing but order, who grow nervous and cowardly if this order falters for a moment, and who become helpless if they are uprooted from their exclusive

adaptation to this order' (Lowith, 1993). The crucial question is therefore 'what have to oppose to this machinery in order to preserve a remnant of humanity from this fragmentation of the soul, from this absolute domination of bureaucratic ideals of life' (Lowith, 1993).

Rationality may have many different meanings, 'it is a historic concept which covers a whole world of different things' (Brubaker, 1984). For example in the following definition of capitalism, sixteen different meanings of rationality are shown (Lowith, 1993): capitalism is defined by the rational (deliberate and systematic) pursuit of profit through the rational (systematic and calculable) organization of formally free labor and through rational (impersonal, purely instrumental) exchange on the market, guided by rational (exact, purely quantitative) accounting procedures, and guaranteed by rational (rule-governed, predictable) legal, and political systems. Ascetic Protestantism is characterized by rational (methodical) self-control, and by the rational (purposeful) devotion to rational (sober, scrupulous) economic action as a rational (psychologically efficacious and logically intelligible) means of relieving the intolerable pressure imposed on individuals by the rational (consistent) doctrine of predestination.

Rationality may represent itself differently based on the context in which it is being used. Whether it is in economics, law, religion or bureaucratic administration patterns of rationality and processes of rationalization may involve depersonalization of social

relationships, refinement of techniques of calculation and the enhancement of social importance of specialized knowledge (Hamilton, 1991). Therefore rationalization according to Weber has created the iron cage of capitalism. Capitalism could become so powerful and dominant because it had its roots in a 'rational way of life' (Lowith, 1993). In economics, rationality understands nothing but rational and impersonal calculation. In bureaucratic administration it diminishes any type of family/friend ethics and thus does not allow any space for love, hatred or any other emotional elements that are able to escape calculation. Modern science which acts as a pillar of rationalism, leads to the 'disenchantment of the world' and thus a world that is bound by calculation. This has destroyed the overall holistic meaning of the world, and has reduced it to a scientific, empirically proven entity. 'This control [over nature] has made possible dramatic improvements in material well-being; it has also made possible the development of increasingly sophisticated techniques for the 'political, social, educational, and propagandistic manipulation, and domination of human beings' (Lowith, 1993). As much as it has moved into economics, administration and law, this general spirit of rationality has become deeply woven into religion and the arts. It has become a de facto definition of modern ways of life.

3.4.7 Commodity Fetishism

When one looks at a commodity or a product, it looks like an extremely obvious and unimportant thing. But when one analyses a commodity and investigates it from

different aspects, one finds how strange this seemingly trivial thing is. As long as one looks at its use value, it is not strange at all. David Harvey (Lowith, 1993) explains that the usefulness of a thing is what makes its use-value. But when a material changes into a commodity it starts showing its other faces. This other face of a commodity does not rise from use-value. 'The fetishism which attaches itself to the products of labour as soon as they are produced as commodities, and is therefore inseparable from the production of commodities' (Marx, *Capital a Critique of Political Economy*, 1976) is what Marx calls commodity fetishism and is nothing but social relationships between men.

Fetishism of a commodity basically circulates around the fact of how things get concealed, how they become mysterious, how we cannot see what is going on. The complex system of production and labor and the outmost complexities in the development of different products such as for example the mobile phone, has hidden many issues that were previously visible.

The money system and exchange value system conceals the complexity of production from us. Marx believes that we must confront what is concealed from us by the market (Harvey, 2010). Lury (1996) states that 'in market societies, commodities not only hide but come to stand in for or replace relationships between people'. Production and consumption become distanced from one another. Marx writes: 'The object that labour

produces, its product, stands opposed to it as something alien, as a power independent of the producer' .

Marketing that basically includes packaging, promoting and advertising is the pillar of commodity fetishism. Marketing manipulates and distorts relationships in ways that people don't understand. It creates pseudo needs that did not exist before. It is an extremely strong force that needs to be studied thoroughly.

3.4.8 Transcendent Philosophy and the Relationship with Nature

As a source of inspiration and a profound example of how transcendent philosophy translates into nature, it was necessary to go back in history to the eighth century and the writings of *Ikhwan al-Safa* who present a unique picture of God- Human- Nature relationship. In the twenty second epistle of the 'Epistles of the Brethren of Purity (*Rasa'il Ikhwan Al-Safa*)' a fictional court is held to sentence human beings for their cruelty towards animals. Within the framework of this court, the philosophical underpinning of the relationship between man, nature and the creator is discussed. Furthermore, the characteristics of the all-encompassing, ideal human being –the true vicegerent of Allah- are illustrated. In the final encounter of humans vs animals, the humans who could not come up with a logical and adequate explanation for their acts of

torture, abuse, misuse, and enslavement of animals they found no way but to submit themselves to the divine power for guidance and assistance:

‘How are we equal?’ ‘How do we stand on a par, when we have among us prophets and their devisees, imams, sages, poets and paragons of goodness and virtue, saints and their seconds, ascetics, pure and righteous figures, persons of piety, insight, understanding, awareness and vision, who are like the angels on high! They quest after the highest goods, yearn after their Lord, turn to Him in all things and ever hearken to Him. They look to Him, contemplate His greatness and splendour, trust Him in all things, beseech Him alone, seek Him alone, and hope in Him alone, since their care is His dread (Safa, 2009).

The animals and the Jinn responded that in this as the one and only truth, you may be acknowledged for having pride. Then they asked humans to explain ‘qualities and lives of these persons, inform us of their insights and ways, their virtues and godly doings, if you know aught of these. Enlighten us about these, if you can’ (Safa, 2009). In response to the latter question, the authors refer to the utmost form of human creation who is ‘a learned, accomplished, worthy, keen, pious, and insightful man. He was Persian by breeding, Arabian by faith, a Hanif by confession, Iraqi in culture, Hebrew in lore, Christian in manner, Damascene in devotion, Greek in science, Indian in discernment, Sufi in intimations, regal in character, masterful in thought, and divine in awareness’ (Safa, 2009).

The richness which embodied the character of the utmost form of human creation will be used as the guiding rigor behind this research. This character is shaped through its

close and intimate relationship with the teachings of the Quran and Hadith. This form of wisdom is beyond textbooks and can only be found through living and acting on the words of the Quran and the teachings of the Hadith.

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CHAPTER 4: QUESTIONING TECHNOLOGY IN IRAN: A CASE STUDY

4.1 Introduction

This chapter explains how previous philosophical discussions are interpreted in the cemetery and the slaughterhouse. It is important to understand social changes in the Iranian fabric in the way they treat death as well as how they perceive nature. This includes issues of development, rationalization, marketing, business, fetishism and alienation. These concepts become meaningful when they are reflected upon the core principles of transcendent philosophy and the fact that everything throughout nature is alive, knowing, powerful, willful, and has the ability to talk, hear and see. This is how the intersection and interrelation philosophy, culture and Islam is determined and understood.

Beheshte-Zahra, Tehran's main cemetery, demonstrates how thousands of men, women, and children have been compelled to accept death: they say *labeyk to Haq* (one of the Islamic versions of announcing the demise of a person is to say that he/she has accepted Allah's invitation). The cemetery has gradually transformed from a small cemetery into a city of the dead with over 1,300,000 buried bodies in an area of 600 hectares. Currently operating within three phases, it is gradually gobbling the surrounding land in order to accommodate more bodies. Finding a certain grave without exact directions (section number, row number and column number) is practically impossible. With the

average death rates of the people of Tehran standing at 49 years, and an average of 130 dead bodies washed per day and sent to three to five levels of burial grounds, hosting bodies on top of one another, it is somewhat reminiscent of factory production (expiry) lines.

Adjacent to this vast complex, lies Tehran's southern line of meat production. Thousands of poultry, cattle and sheep arrive at these areas every day and are slaughtered by night and their meat is then distributed throughout the hungry Tehran market early in the morning. These two areas resemble the context of this research. They are both modern and at the same time Islamic. They follow rational designs and rational methods of management and more importantly they act as finish lines for both humans and a large group of animals. Therefore questions of the role of Islam, the role of technology and their inter relationship emerge.

4.2 Social Practices of Death in Iran

'Come and hold the head, we want to place it on the other stone bed' (R. Shaami, personal communication, May 29, 2012). On a hot Tuesday morning, at 10:15 am, I was facing the purple face of Mr. Faani who had presumably died from heart failure. His face had turned purple because of blood pooling under his skin. Before I got a chance to decide whether or not I would want to do so, I felt the cold flesh, similar to the feel of

touching cold meat and we (me, the main corpse washer, the son of the deceased and his brother) picked up and transferred the body to the stone bed where it was supposed to be washed. Muslims are obliged to wash the dead before burial through a specific sequence, and this was part of the tutorial I had volunteered for to experience the real feel of washing the dead. I was captured between the stone walls of an approximately six meter by ten meter room, filled with the odour of camphor. One side of the wall was a large glass window where the relatives of Mr. Faani were observing the washing process. In the Iranian burial process this is in most cases the last chance for the relatives to meet the deceased. The window was thick enough to prevent the loud crying and screaming of family members that was momentarily intensifying outside the room. The brother and son of Mr Faani had 'illegally' entered the *qassal khaneh* (house of the washers) with the permission of Mr. Shaami (the corpse washer) who believed that this would aid in deep understanding and acceptance of the hardships of death. He was authorized to do so since he was employed at a cemetery that was relatively far from the centres of control; large cities. In *Beheshte-Zahra* for example, that is Tehran's main cemetery, inviting family members into the corpse washing area is practically impossible.

Among the Iranian population, for the Muslim majority, ceremonies that are held to remember the deceased mostly follow similar traditions. The initial announcement for the event of death by close family members, friends and colleagues is usually conducted by hanging a three by one meter rectangular black fabric poster on the front wall of the

house of the deceased facing the main street. These posters which usually express condolences to the ones remaining, are usually ordered and purchased by friends and relatives, They will most commonly read: 'انا لله وان الله راجعون' (Indeed we belong to Allah, and indeed to Him we will return) (2:156) we wish to express our deep condolence for the loss of –name of the person- to the –name- family' and then it would say from (name of family or families). It is sometimes possible to have over ten of these large posters that are gifted by the friends and family hanging from the residence walls.

Other than these posters, smaller paper posters are distributed and pasted in the neighborhood announcing the death of a certain person and at the same time inviting people to attend the mourning ceremonies on the first, third, seventh and fortieth day after the burial funeral. If the deceased is young or that death was sudden, some rent what is called a *hejleh*, (حجله), a chamber with the picture of the deceased and many different colors of light bulbs. This will be positioned usually in front of the residence alley so that passersby will be aware of the event (desiring a *fateheh*, the recitation of the *Suras Hamd* and *Ikhlas* from them). The ceremony for the first, third, seventh and fortieth day after death are usually held at a masjid (mosque). The closest members of the family who stand at the front door of the masjid, greet and thank those who come for the ceremony. The family members dress in black, and some families prefer to stay in black clothing for forty days, three months, or even as long as one year after the death. After the fortieth day the relatives that are closest to the bereaved family, buy new colored clothes and visit those in mourning and offer their gifts to ritually do what is

said as 'take them out of the black'. In this tradition the close relatives and sometimes close friends of the bereaved family come together and show respect and offer new clothes to change the black color and to end the commemoration.

But what happens if a person dies in the capital of Iran, Tehran? If a person dies in Tehran, a city with over eight million permanent residents, the family has to generally go through seven steps before burial:

1- Get the death certificate issued by the relevant authority (whether from the coroner, doctor or hospital); 2- Transfer the body to the cemetery; 3- Complete the necessary paperwork and purchase the grave; 4- Wash the body (this is done by a professional team of corpse washers); 5- Take the corpse from the washing room and transfer it to the place for prayers; 6- Transfer the body to the local cemetery by ambulance; and 7- Bury the body at the cemetery.

The death certificate must be issued by a doctor, hospital or the coroner in cases of an abnormal reason for death. The cemetery ambulance team is then contacted either directly or through the hospital or the coroner. Currently forty Mercedes Benz limousines undertake the transfer of corpses in the city of Tehran. The Tehran cemetery currently has thirty limousines that accommodate only one corpse, while ten can accommodate four corpses at one time. After the body has been taken to the cemetery, it is transferred directly to the cold storage so that the paper work is completed, the grave

is selected, and the permission for washing and burying is granted. After the body is washed, shrouded and prayed upon, it is transferred to its respective grave by ambulances that are located in the cemetery. Loud speakers and panegyrist services are available at the burial site. If the family has decided to bury the corpse in the new developments of the cemetery, it is usually crowded with different groups of people who are burying their loved ones at once. This means that using a speaker for a short goodbye ceremony will not be very useful, since there are already many other speakers that are doing the same job. The body is then buried with a specific set of rituals. What is common among the panegyrist who are usually employed by the cemetery is that after reciting mourning poems, the ceremony is usually concluded with a remembrance of Imam Hossein and the event in Karbala.

The logic behind this custom is to remind the bereaved that whatever hardship that one might be going through and however tragic the death of a loved one might be, it is not in any way comparable to the hardships that took place on the day of *Ashura* and for the grandson of the Messenger of Allah. It is obligatory that corpses are laid down on the right side of the body in a manner that the face of the corpse is facing the *Qiblah*. This is however different when the person is experiencing the last moments of his/her life or what is called in a state of agony (*ehtezar* اضطرار). Close relatives are advised to place his/her body in an area where he/she usually performs his/her daily prayers while the sole of his/her feet are facing the *Qiblah*. After burial, the area is leveled and planted

with greenery, and the tomb stone replaces the temporary sign that showed the name and the burial section of the deceased.

Preparing the dead for burial is seen as the last service to a person. This includes washing, shrouding in white cloth and finally burying. Muslims view death as a passage from this world to the other. According to Islam, the dead body is not pure matter and thus necessitates respect. There are numerous Hadith mentioned in Islam that promote the proper treatment of the dead in return for non-worldly rewards; ‘you will be cleaned from all your sins if you wash a dead person’; or Hadith that states: while washing the body, one must softly and smoothly straighten the fingers and massage the stomach. Other Hadith stress on how the bereaved family has to be treated by the relatives and friends. For example Imam Bagher (as) stated that ‘for the family of the deceased, they should hold three days of mourning ceremony and provide food’. Elsewhere Imam Sadegh (as) stresses on the importance of ‘preparing food for three days and taking it to the bereaved’ (Koleini, 2013).

On the day of a dear one’s passing away, usually the night before burial, close relatives meet at the house of the deceased. They express their condolences and disappointment for the loss. This first meeting is usually small and semi-private since it consists mostly of the very close relatives and friends. A larger number of people usually meet and attend the ceremonies of the day of burial. Since the main cemetery, *Beheshte-Zahra* in

Tehran, is quite far from the city center, it is rather inconvenient for most people to go there directly. This is why for convenience, the family of the deceased usually rent a bus and drive the mourners from the deceased's house to the cemetery. If the body is taken to the cold storage the day before, it will normally be washed in the morning of the next day. The fairly new fully equipped *oroojian* (ascenders) department in Tehran, *Beheshte-Zahra* is one of a kind. The red brick construction follows traditional architecture with arch like entrances and colored stain-glass windows. What is intriguing is that this department has recently started a washing area called *tabarro'i* (تبرعی) which means donation. In this area for the first time in Iran -although the first time in modern methods of washing, since in earlier times this was the case in every part of the country- family members have the opportunity to voluntarily wash their deceased under the supervision of a religious authority. People wait outside in the courtyard for their turn and look at monitors that are neatly arranged to show the circumstances of each corpse.

The cemetery provides one temporary small plate with the name of the deceased and the burial area, row and column number. Most recently *mobashers* or supervisors (مبشر) are assigned to each family for assistance. These *mobashers* who wear formal clothing, guide the bereaved through every step of the burial process. There are currently around one hundred *mobashers* working at *Beheshte-Zahra*. When the monitor shows that the corpse is being moved to the washing area, *ghassal khaneh* (غسال خانه), people who are interested in viewing the process will quickly move to the *ghassal khaneh*.

It is a common practice for cemeteries across the country to have an area where visitors are able to view the washing process from behind a glass window. The viewing of the process of washing that is seen as ‘a reminder’, is repeatedly announced in the speakers of the ritual ablution section of *Beheshte-Zahra* cemetery in Tehran. The Messenger of Allah states that: ‘the highest worship, highest thought and highest piety is the remembrance of death’ (Majlesi, 2002).

Recently this section has been closed off from the public mainly because some intended to film the process of *ghosl* and share it with their friends on different social networks without permission. It is common for families to prevent those closest to the deceased to enter the *ghassal khaneh*, unless they insist on doing so. This is due to the ritual that it is best not to remember your loved one in that form. The corpse is then completely washed according to the Islamic *fiqh* (jurisprudence) while people watch the process from behind the large glass window. Until recently in Tehran, it was not allowed for anyone other than the corpse washing team to enter the washing room. However, presently similar to smaller cities, new regulations grant permission to volunteers to wash their loved ones independently. The corpse washers then shroud the body and place it into a plastic container and slide it through the small door that is the only connection to the outside courtyard. When the family name is announced, the relatives pick up the body, carry it over their head and place it on the ground in the next hall on the designated praying area.

In rare cases where there are only two persons waiting for the washed corpse, they call for help and a group of people who observe the Islamic *vajeb* or obligatory mission not to leave a corpse on the ground rush to help out. Tiles are arranged to show exactly and in what manner the corpse should be placed before prayer. This is the time when most people allow the ones closest to the person to reach their loved one and to bid farewell. A *Rohani* or Muslim cleric, officially hired by the cemetery arrives as the Imam of the prayers and everyone stands behind him to perform the funeral prayers. It is now time for men to pick up the body again and to take it to the local ambulances outside the main hall that carry it to its grave. This walk of almost fifty meters is with the continuous recitation of *La Ilaha Illa Allah* (لااله الا الله) there is no god other than Allah. Based on the Hadith, people will bring down the corpse and place it on the ground three times before reaching the ambulance, and when they want to pick it up again they will say *Ya Hossein* (يا حسين), help us Hossein and remember the third Imam and the grandson of the Messenger of Allah (pbuh).

Hadith states that since the dead is fearful of his/her grave, he/she should not be quickly taken to it, and that is why people carrying the corpse place it on the ground three times. The corpse is then taken into the ambulance along with other corpses, usually four corpses in one ambulance. People then move back towards their cars or the bus that is waiting for them to go to the gravesite. Tehran's main cemetery which is close to forty years old, today resembles a small city, and it is not always easy for people to find exact locations. That is why when leaving the first section of the cemetery, people go together

and follow the ‘*mobasher*’ so that they do not get lost. When the bereaved gather at the grave it is time to call the grave digger. He starts digging and arranging the grave before the corpse arrives. Some families ask for a *maddah* Panegyrist (مَداح) working for the cemetery to recite poetry and to perform lamentation. The condition of the grave depends on the price of the grave.

If a relatively high amount of money is paid, there is a chance to be buried in the older remote areas that are full of pine trees and bushes and are not as crowded. If however people decide to go with the current system and pay less, they will be sent to the newly developing areas where numerous graves are arranged next to each other, and corpses will arrive one after the other to be prepared for burial. Before burial, usually a male religious person from the family or close friends who are also *mahram* (which means that in the case of burying a women, he is either the father, brother, uncle, nephew,... of the bereaved) will enter the one meter and a half deep grave and sleep for a few seconds. This act, according to Hadith, helps reduce the pressure of the grave. However the person entering the grave should take his/her shoes off and should not be wearing anything –for example a hat- on his head.

The body is then lowered into the grave, and the shroud covering the face is opened and placed on the soil, and again those who wish to bid their final farewell will take a last peek at the person lying in the grave. Some families also decide to place a special prayer

book called prayer of light (دعای نور) as well as soil from Karbala (where Imam Hossein was martyred) under the shroud. Some families will even give the corpse washer a piece of carnelian stone and he/she places it under the tongue of the deceased. The other tradition that is mostly forgotten nowadays is to place a long piece of a fresh willow tree branch along with the dead body and based on the Hadith, until the tree branch is still fresh, the person buried in the ground will not be punished. All graves are arranged in a manner where bodies lie on their right facing the *Qiblah* (the direction of the Ka'bah in Mecca). The *talqin*, dictation (تلقین) is then recited. The *talqin* is basically a prayer that guides the dead person on how to respond when the angels arrive on the first night of burial and ask questions about his/her religion, his/her Messenger, his/her Book and his/her Imams.

During the *talqin* it is preferable to shake the body when his/her name is called. The body is then covered with cement blocks and people start pushing the soil back into the grave. After completely covering the grave with soil, rose water is poured onto the soil and flowers are placed on it, and the small plate that was used to guide the mourners towards their proper direction is now inserted into the soil to identify the person lying in the grave. The spectators gradually disperse and the bereaved invite the participants for lunch usually at a restaurant that has been booked earlier. *Beheshte-Zahra* has recently constructed a restaurant to prevent people from going to other restaurants around the city, and to stop money from leaving its walls. This is considered as a good deed and as other worldly rewards for the dead. The other gatherings and events are usually on the

first, third, seventh and fortieth day after burial. These ceremonies are held at a Masjid in the city and a *Rohani* (clergy) will usually talk for about forty five minutes on the issue of death. It is common for close relatives and friends to stay at the deceased's house and not to leave the family alone. They will also help out in providing food and receiving the guests.

What is being explained here are common practices among Iranian Muslims. There are of course special types of ceremonies that are held by different tribes and groups in the country. The Zoroastrians leave their dead for the hungry vultures. The Zoroastrians believe that soil, water and fire are sacred. Therefore burying the dead pollutes the soil, drowning it into the sea pollutes the water, and burning it pollutes the heavenly light. More recent traditions include the ceremony held by the Iranian Arabs at the village of Seyyed Mohammad Tafakh, in the city of Shoosh, south of Iran. They gather around a person who recites a poem and wait until the last verse; they then stomp their feet through a special rhythm and then repeat the last verse after him (Kasir, 2013). Those who are celebrities will have a pre burial ceremony. They will gradually take the coffin from one location to another –similar to how ordinary people take the deceased from the *ghassal khaneh* to the ambulance- and depending on the deceased, huge crowds of people might accompany it. One of the largest of such gatherings took place after the demise of Imam Khomeini on June 3rd, 1989 where official numbers estimated a participation of about ten million and two hundred thousand, one sixth of the Iranian population at that time.

4.3 The Economy of Death

The mega city of Tehran currently accommodates over eight million people, and it ranks as one of the most polluted cities of the world (WHO, 2012). With the ever-expanding network of highways, subways, deep tunnels and, most recently, a huge two-storey highway, the next step might be demolishing the northern border mountains to ‘solve’ the issue of pollution. During winters, at the peak of the pollution crisis every year, and when the death rates of people with respiratory and heart diseases sharply increases, authorities begin quarrelling over whose fault it is while people pray for small drops of rain to fall so that they would also be able to forget their effective contribution in the pollution of the city.

Various cities across the country have moved their cemeteries to the outskirts, mainly because of space limitations and plans to concentrate the burial process and have one main cemetery in each city. The washing of the dead has also become centralised; so, for example, if anyone dies at any corner of the city of Mashhad (the religious capital of Iran and home to over two million seven hundred thousand people), they should be brought to the main (newly constructed) cemetery and be washed – or as they call it, ‘the washing has to be approved’ – and then transferred to other cemeteries. The price of buying a grave in the relatively older cemeteries of Tehran and cemeteries surrounding the sacred shrines of the descendants of the Messenger of Allah and older sections of *Beheshte-Zahra* cemetery have sky-rocketed. This is mainly due to limited space and to attract wealth from the rich who are willing to pay the price and at the

same time aid in the development, maintenance and charity projects of the cemeteries. However, in the new developments of *Beheshte-Zahra*, if anyone claims that they cannot afford to pay for the grave, one level of the newly dug three-level graves are offered for free. **Table 4.1** shows a 2013 report of the approximate prices of a grave in the old cemeteries of Tehran (Mashreghnews, 2013) (each US dollar is estimated as 30,000 Rials):

Table 4.1: Price of a grave in Tehran

| Name of Cemetery | Price of grave |
|---------------------------------------|-----------------------|
| Imam zadeh Saleh (Tajrish) | 46,000 – 166,000 USD |
| Imam zadeh panj tan (Lavizan) | 13,000 – 26,000 USD |
| Imam zadeh Saleh (Farahzad) | Over 33,000 USD |
| Beheshte-Zahra- Old Section | 10,000- 20,000 USD |
| Imam zadeh (Lavasanat and Shemiranat) | 7,000 – 16,000 USD |
| Imam Zadeh Esmail (Chizar) | Over 33,000 USD |
| Ibn-e Babooyeh | 16,000 – 20,000 USD |
| Shah Abdol Azim | Over 16,000 USD |
| Imamzadeh Abdollah (Shahre Rey) | 100,000 - 133,000 USD |

Source: Mashreghnews, 2013.

Under such social and economic pressure, the introduction of an automatic corpse washer might seem natural and inevitable. This machine was, however, not welcomed in Tehran or Isfahan, but started its operation in the relatively small city of Qazvin and also in the religious capital of Iran, Mashhad. The solution to what Dr Meghdari a professor of mechanics, Dr Meghdari (Meghdari, Osgouie, Nasiri, Nemati, and Mortazavi, 2012), with exemplary experience at teaching and researching, observed as disrespect for the dead was the design of a device which handles the whole washing

process automatically. He showed me an animation of the corpse washer, or what he called the '*Paak Shooy*' (purifier of the deceased), and explained how the corpse would be placed on a rail and washed through automatically controlled nozzles, and at the end covered by a white shroud. This process strictly followed the Islamic principles of washing the dead. What the previous 'corpse washers' and now 'operators' only had to do was to place the body on the beginning of the rail and tie the already prepared shroud around the corpse at the end; the same way a production line or an automatic carwash would look. This was how it was all supposed to take place. Nevertheless, what actually happened was quite different from the initial designs.

Article 44 of the Iranian constitution changes 'the role of the government from ownership and direct management of firms towards policy making, guidance and supervision' (Council, 2005). This will privatize many previously government owned firms and institutions including banks, airlines, power plants, insurance companies and etc. During the past few years the implementation of article 44 is continuously mentioned and propagated. Cemeteries are an example of organizations affected by this law.

Mashhad is the religious capital of Iran. It is home to the eighth Shia Imam. Most people have the wish to gain permission to get buried in the area surrounding the shrine itself which is practically impossible because of its price. Mashhad is home to two and a

half million people, and twenty million pilgrims visit the shrine each year both from Iran and from other countries. A rather unsuccessful example of the implementation of article 44 of the constitution has taken place in the Mashhad cemetery. Cemeteries and their respective underlying firms are government owned and under the supervision of the municipality. The Mashhad cemetery (*Beheshte-Reza*) officials decided to shift towards privatization. This is also the birthplace of the automatic corpse washer. When looking at the cemetery structure, one of the first things that catches the eye is the beautifully constructed *ghassal khaneh* (house of corpse washer) which is now called either *sakhtemane oroojian* (transcended department) or *salone tathir* (purification hall). It is all covered with khaki colored stones and neatly arranged offices.

Five meters away, at the managerial office that is still being run by the cemetery, and therefore by the government, cement covered old office stands where there is no sign of its neighbor. I had a letter from the Ministry of Science, Research and Technology explaining my research and asking for cooperation. I was welcomed and the workers responded to all my questions with enthusiasm. They were amazed to see a letter from the ‘controlling’ capital. The burial manager –who is still working for the government– told me that the newly constructed *ghassal khaneh* is currently owned by a private company. The company is making a pure profit of three hundred and fifty million Tomans (115,000 USD) per year out of this business (H. Rezai, personal communication, May 20, 2012). The company used golf buggies to transfer dead bodies from the cold storage to the washing area. The *ghassal khaneh* also installed solar

energy panels for heating the water. I was given permission to walk into this lavishly designed *ghassal khaneh*. The most significant difference between this *ghassal khaneh* and others across the country that I have observed was that it did not have the big glass windows for people to watch the washing process. I was told that this is solely because of security reasons and since the city is close to Afghanistan, the bodies of many drug traffickers are brought and the families are not happy to see them being washed.

The implication of privatizing the *ghassal khaneh* and removing the supervision of the people –through simple observation was unique. I walked past the resting area of the corpse washers and entered a closed area with three dedicated rooms that each included one stone washing bed. In *Beheshte-Zahra* in Tehran, each corpse is washed with the help of four people, and there is also one clergy who supervises the whole process. In Mashhad, corpse washers take turns to wash the bodies individually without any help from their colleagues. When I entered, one of the corpse washers was sleeping on the steel bed that is used for transferring the dead bodies. He woke up upon my arrival. In hope of getting their words heard in Tehran, all four workers started complaining about their terrible working conditions.

While we were talking, a dead body was waiting to be washed, but none of the workers showed any urge for taking care of it. One of the relatively younger employees told me that ‘I only receive four hundred thousand Tomans for my salary (130 USD), that is

minimum wage for an ordinary worker; my friend here receives above one million Tomans (more than 300 USD) because he is a government employee, and I am a private contractor (M. Farbe, personal communication, May 20, 2012)'. He was a young, strong and humorous man in his thirties who said: 'in the beginning of my work I was concerned about how I work, but then I started getting all sorts of diseases, including skin disease, now I don't give a damn anymore'. It was his turn to wash the corpse that was lying there for quite some time. He pushed the steel bed into one of the rooms, took the body out of its bag and placed it onto the stone bed. He was very rough in how he handled the body, pulling it from side to side, obviously with his experience and strength, since it is not that easy to pull a dead body from side to side even if he/she is light.

He did not use any cloth to cover the pelvic area and he had just left it naked. He quickly washed and performed the *ghosl* and then personally shrouded it. It didn't take long for him to finish his duty and to send the body to the family that was waiting outside. 'This company does not treat us well; they are abusing us in every way possible' mentioned one of the other corpse washers. 'This will turn us into thieves. We must steal away from the shroud, from the cedar, from the camphor or from the plastic. How can we make a living?' (S. Sadooghi, personal communication, May 20, 2012). The manager of the deceased department told me that 'the workers are only fooled – meaning that they are willing to continue to work as corpse washers- with the little money that is given as tips to them by the people coming to bury their loved ones' (H.

Rezai, personal communication, May 20, 2012). On top of all the problems with the low salary, ‘since we are only contract workers, they can fire us immediately’.

The other aspect of privatizing the *ghassal khaneh* was providing luxury services for mourners. A sign at the main reception area read:

Dear mourner:

*If you are in a rush, leave the services of your deceased to the luxury company.
The setup of each deceased takes us forty five minutes.
(Heaven Desert of Iranians Deceased Luxury Company)*

The advertisement used the word ‘setup’ in order to express the necessary activities to prepare the deceased. Using the word setup that is mainly used in modern organizations or equipment is the style of language used for rationalization and commercialization of death as a religious activity.

Similar to the case of the private corpse washing area in Mashhad, Jessica Mitford in her book *The American Way of Death* (1963) attacks the funeral industry for becoming indulged with capitalism. She states that expensive services or expensive goods are sold to the bereaved family while they are under severe stress. She continues explaining how luxurious one’s casket can be. It can be solid copper, or coated steel. Some are made with foam rubber and some have high quality mattresses inside. But how much does it

cost in total for an average American to bury his/her loved one? ‘According to the funeral industry’s own figures, the average undertaker’s bill—750 USD in 1961 for casket and ‘services’—is now 4,700 USD, to which must be added the cost of a burial vault, flowers, clothing, clergy and musician’s honorarium, and cemetery charges... when these costs are added to the undertaker’s bill, the total average cost for an adult’s funeral today is 7,800 USD’ (Mitford).

What is happening in the US, is again not very far away from modernizing Iranians. For example the cost of the tombstone may vary from 300,000 Tomans (100 USD) to 12,000,000 Tomans (4,000 USD). The price depends on the quality of the stone used as well as its design. Nano technology stones have also entered the market and have attracted some technology-loving customers. The bereaved hand in the most suitable picture of their loved ones to the stone cutter and with laser cutting technology he carves the exact picture on the stone. This new capability has of course attracted people with various tastes. From pictures of a deceased wearing a t-shirt with a large Adidas logo to dead women with various hair fashions. The cemetery officials regularly tour the grave yard and make recommendations to relatives of those who have gone too far with their designs to change and rearrange their tombstones.

The general manager of *Beheshte-Zahra*, Dr Tavakkoli has in a recent interview stated that through a new system, one level of the three levels of each grave is given for free,

the other two levels have to be purchased by the applicant. Each level costs 350,000 Tomans (approximately 120 USD) and if it is not convenient for the applicant to pay 700,000 Tomans at once, a part of the payment will be arranged to be made through ten installments worth 35,000 Tomans (12 USD) each. He asserted that approximately seventy percent of the people living in Tehran, prefer purchasing through this system. The other costs that include transportation, washing, shrouding, renting sound systems and a panegyrist will cost a total of 198,000 Tomans (65 USD). This means that for the burial of each person (considering the point that he had not previously purchased a grave before) one has to pay 300 USD and will have two empty levels of grave available. He also mentioned that if there are people who cannot afford to pay the 198,000 Tomans for the purchase, they will be sent to the social work department, and if they can prove that they are not capable of paying that amount, the service will be given to them for free (Tebyan, 2014).

4.4 Rationalizing Death in Iran

In most Iranian families, death is a very 'close neighbour'. Modern Iranian culture is entrenched in the meaning of death and martyrdom. One can easily feel this environment by moving through the streets and observing street posts that are named after young martyrs of the eight year imposed war on Iran (1980-1987). Other than this form of representation, each year Iranians not only commemorate the martyrdom of eleven Imams, the daughter of Messenger of Allah (pbuh), and the sister of Imam Reza

(with a shrine in Qom), they honor the martyrdom death of Imam Hossein, the third Imam of Shias and the grandson of the Messenger of Allah (pbuh) who was brutally murdered along with his family and a group of seventy two of his followers against thousands of soldiers in Yazid's army. Iranians mourn the first ten days of Muharram. The stories that are told through these ten days are all indulged in the spirit of a lively death and martyrdom.

In 1979, Iran experienced a political and cultural revolution in the name of Islam that tore apart more than two thousand years of monarchy. One crucial question however is that how have modern ways of living in Iran shaped the way that death is perceived and reacted to? Over ninety percent of Iranians are Muslim and being a Muslim they believe in life after death. They are constantly told through the teaching of religion that this life is nothing but a game. However being a Muslim based on an identification card and being a Muslim through deeds are two very different concepts. While the received teachings talk about piety and the remembrance of death, the dominant rationality and alienation that have been brought about through modernity propagate ignorance and disregard for death. Technologies are usually accompanied by supportive propaganda. Media can artificially transform unnecessary needs into things that you can no longer live without. Technology can be advertised by scientists and technologists, teachers, politicians and policy-makers or, in the case under investigation, by religious authorities. A technology that is strongly entangled with religion, inevitably needs religious backup and support; and this is what Dr Ferdosi, the designer of the Mashhad

version of the fully functional corpse washer, was referring to: ‘all other corpse washing systems failed because of the lack of popular and religious support, and the reason was that they were not culturally accounted for.

Earlier studies regarding the advent of technology show that resistance usually develops when a new technology is either created or imported into a community. The root of this resistance may be related to several different reasons, such as religious limitations, where the new technology does not follow or is in opposition to specific religious requirements; or the resistance can be cultural, where it does not fit, or is not compatible with the cultural practices and beliefs of a community. More importantly, new technologies may become a threat for the job security of a certain group of people by cutting the livelihood and rendering a population jobless. If a certain type of new technology is not presented with persuasion and explanation, it may be resisted simply because people do not understand it. This resistance may be rooted in the nature of the technology itself, as it may create ambivalence, it is unpredictable, and when it destroys the environment, it diverges from its principle goals and, thus, stands out of place with human nature (Ellul, 1990).

But has this revolution had any impact on how technology is treated by Iranian officials? Have Islamic principles entered the realm of differentiating between good and bad technology, or have they taken on a neutral position? In practice, even before the revolution, there was intense opposition to newly emerging, mainly imported

technologies. After a time lapse, not unexpectedly, the same technologies that were labelled as haram (unlawful) received a halal (lawful) status and were seriously propagated and advocated by the Islamic authorities themselves. Cases such as post-mortem technology and autopsy, dissection, loudspeakers, washing machines, organ transplants and many other newly introduced technologies are only a few such examples. The reason why technologies usually suffer from mild resistance and later gain wide acceptance might be better explained through the issue of authority. It is very common for religious scholars to compare themselves with doctors. According to Shia belief, when a person reaches religious maturity (9 years for girls and 15 for boys), they must choose from among one of the living Islamic scholars and follow the provisions of that person. Although the religious treatise *Risaleh Tozihul Masa'el* (رساله توضیح المسائل) explaining the rules of imitation *Taqlid* (تقلید) are mostly similar, they do have some minor differences when dealing with specific issues. Authority can play a very significant and at the same time invisible role.

Doctors gain their authority based on the accumulation and extensive use of science and technology. When a *Faqih* passes a judgment *Hokm* (حکم), it is similar to a doctor's opinion about a health problem. The doctor only guides the patients and has no control over them. The *Marja'* also has a similar stand in regards to his follower (Yazdi, 2002). The powerful authority of science and technology can resemble a moving boat. Some Islamic scholars cannot even imagine resisting this rapidly progressing boat of science and technology and would rather decide to modify their own regulations to show that

they are always in the same boat. But what if science and technology is not at all interested in finding the Divine Truth, or at least it is not its top priority to lead towards a truthful life which is the principal aim of the Islamic religion? The main duty of Islam is to guide people towards Allah (Iqbal, 2007). Blindly following scientific and technological development may not only be deviating from the path of Islam, it has the potential to drown its passengers. Based on the guiding principle of ‘there is no harm and no damage in Islam’ *La zarar wa la zarar fil Islam* (لا ضرر و لا ضرار فى اسلام) and since technologies are not in any way neutral, it is crucial for Islamic scholars to take every aspect of a technology into consideration. Some Islamic scholars believe that while it is not yet proven that a technology is against Islam, it is a good practice to at least prevent such controversial issues from entering the public sphere until they have been fully studied and analysed.

In the past many Muslim scholars opposed the introduction of the modern form of speakers and believed that they should not be used during Islamic ceremonies, since they changed the very nature of close interaction and dialogue with people, calling it the ‘horn of Satan’ (Motahhari, 1998). There is, however, an ancient form of speaker seen in the Imam masjid in Isfahan which would echo the sound of the muezzin (the reciter of the azan) and would thus spread the sound of the azan (call for prayer) to farther distances. Dr Meghdari stated that ‘either technology will become religious or religion will become technological’ (A. Meghdari, personal communication, April 20, 2012). This means that when a new technology comes under question and careful scrutiny by

religious scholars, it is deemed to either fall into the boundaries of religion or that religion has to spread its wings in order to encompass technology.

Many incidents of technological religiosity have been studied and analysed, such as the issue of the starry sturgeon fish and caviar, where it was first announced as non-halal and then later pronounced as halal (Chehabi, 2007). The washing machine was also initially questioned for its capability to wash out the *najes* –which includes human urine, stool, blood, and so on – and to clean clothes according to Islamic principles. What type of water does the washing machine use and how can we make sure that the *najes* has been completely removed and thus made *taher* (clean)? For example, Ayatollah Behjat states that if the washing machine removes the original *najes* and, the water that is connected to the main tap reaches all the clothes and the inside of the washing machine, it will make the clothes *taher*. This is while Ayatollah Fazel believes that if the washing machine expels the water at least three times, then it can be accepted as *taher*; and Ayatollah Vahid has decided to take the safe side and say that in this regard one must take precaution (meaning that it is better not to wash clothes that are *najes* in the washing machine) (Makhtoom, 2012).

This form of techno-religious dialogue or negotiation has taken a new turn when it comes to the corpse washer. The introduction of the corpse washer and the related religious debate had not been open to the public and was rather treated locally. The design team, headed by Dr Ferdosi, visited Ayatollah Alamolhoda, the Friday prayer

Imam of Mashhad, to negotiate the issue which was initially rejected. Dr Ferdosi insisted on the benefits of this technology and asked for several meetings to be held with the religious authorities. He believed that these meetings were necessary for a technology to become culturally acceptable. The design team explained how the machine follows the Islamic methods of washing. After acceptance by the local authorities in Mashhad, the controversial issue was again opposed by people from the capital, Tehran. The final winner of this battle was the technology, which was accepted and religiously approved. It is interesting to note that Ayatollah Makarem Shirazi and Ayatollah Fazel Lankarani (H. Ferdosi, personal communication, June 23, 2012) approved the use of this device and saw it as ‘unproblematic’ under the condition that a Muslim pushes the button (to start the operation of the device), he/she intends proximation to Allah while doing so and the corpse is washed according to the steps that are prescribed in Islam.

The question raised however is, on what basis is a certain type of technology accepted or rejected? Islamic judgments are based on the Quran, Hadith, Consensus and Intellect (Motahhari, 1998). This means that when facing a new issue such as whether the automatic corpse washer is acceptable by Islam or not, the Islamic scholars look into primary texts and also think and discuss in groups to solve the problem. Hojjat ul-Islam Dolati, one of the prominent Islamic scholars in Iran, stated that the current *Fiqh* (Islamic Jurisprudence) is limited to saying and identifying whether something is Halal or Haram (M. Dolati, personal communication, February 3, 2012). In the case under

scrutiny, what is important in terms of *Fiqh* is whether all the necessary requirements of *ghosl* (the Islamic ritual ablution of the body) have been followed. He further stated that if you (as a researcher) prove that this device is destructive in terms of its social impacts, the *Faqih* (Islamic Jurist) will say that its use is Haram based on the principle that ‘there is no harm and no damage in Islam’ *La zarar wa la zerar fil Islam* (لا ضرر لا اسالفي ضرار لا). However the *Faqih* is not capable and does not have the necessary resources to analyse each and every subject. This has to be done through the careful research of others; similar to how sharks have become halal after scientists proved the existence of placoid scales on its skin. *Fiqh* states that fish that have scales on their skin are Halal. If the existence of the scales is proven through science, it is thus Halal. Mottahari (1998) states that the significance of Intellect *Aql* (عقل) becomes obvious when we understand that not everything can be found in the Hadith and the Quran. When wisdom becomes accustomed to Islam, it can decide whether something is Halal or Haram and ‘whatever is judged by Intellect is also judged by Sharia’ *Kol ma hakam behil aql, hakam behishare* (كل ما حكمه العقل، حكمه طائش رع).

Dr Meghdari sees the nature of automation as a response to the need for undertaking jobs that are difficult, dangerous and hazardous, or that people hesitate to endure. ‘Washing the dead is something people do not like to do’ (A. Meghdari, personal communication, April 20, 2012), he explained and this might be the reason why a Muslim community in Canada contacted their research centre and showed interest in importing the automatic corpse washer when it was completely developed. For those

who find managing their garbage and waste difficult, dealing with the dead would seem appalling. How can modern, educated people wash the dead and take part in such a duty that has become something that a much lower social class has to deal with? A job that only very pious people used to take responsibility for, and was seen as a religious duty, has changed into a job usually employing people from lower class communities who forcefully take it on because without it they are unemployed or they earn low wages.

The head of a cemetery in southern Tehran explained that this job has become popular because of its reasonably high pay, and after advertising for an opening position, a number of interested people appeared for the interview. The cemeteries, which are mainly run by the government, tend to pay higher salaries to corpse washers under the rule of 'job difficulty'. Therefore, a job that does not require much education or expertise, receives a high pay. The manager was 'shocked' after seeing a young lady among the applicants, and he personally told her that the job was not suitable for women and that her application was rejected.

Technological infrastructures create certain types of skills and certain technological attitudes in order to maintain the functionality of the technology. Most significantly, people have indulged themselves in a technological culture. For example, cell phones have made friends and foes available and within reach. Many technologies have made daily living needs easily accessible. Food is available almost everywhere, and no matter how lonely people may physically be, social networks make them feel like they are

living among a community of friends. These invisible ways of living patterns are becoming part and parcel of a kind of isolated living which leaves no choice for individuals to change it (Drees, 2009).

In modern cultures that are indulged in technology, death has taken a completely new form. The production of horror movies from Hollywood, Bollywood and all other film making industries, create imageries of death that were never broadcasted before. These movies are widely spread in Iran, and people buy pirated copies even off the streets. The Iranian National TV (IRIB) has been broadcasting numerous box office movies this year for the *Norooz* (Iranian New Year) holidays that has brutal and aggressive scenes of killing and violence with very minimal censorship. Horror movies or series illustrating serial murder cases or TV shows such as CSI: Crime Scene Investigation have depicted death in ways that were not accessible before.

It is questionable, that under normal circumstances how many times is it possible for an ordinary person to actually observe death scenes throughout his/her life? How many times does s/he see it on TV? Other than the programs shown on TV, computer games play a crucial role in this change of image. Killing is a simple and even rewarding act a person may do in a computer game. At a conferences on Mobile and Web Applications in Tehran held at the Ministry of Communication and Information Technology, one of the key speakers who was an employee of Pars Online, a leading Iranian Internet Service provider explained how, after a long day at work, he accompanies a group of

friends and they release their frustration by killing people in the game ‘Counter Strike’ (H. Parsi, personal communication, January 14, 2014). The desire to kill is of course not something any normal person would want to do in a real life setting. Gaming allows the players to create a virtual world where images turn into reality. The Gibson picture seems to be more drastic than how the image of death has changed (Gibson, 2007). Gibson states that in technology mediated cultures, ‘when death is faced ‘in a real life context’ particularly in relation to significant others, all the narratives and images which have shaped and informed an individual consciousness do not necessarily prepare for witnessing death and experiencing grief’ (Gibson, 2007).

When Webber portrays rationalization, he points to a very significant aspect of rationalisation that is innovation. It is what keeps rationalization running. Innovation in *Beheshte-Zahra*, Tehran’s main cemetery, meant the construction of three story graveyards. People are encouraged to donate their organs after death, and all the bureaucratic registration procedures are done at the site of the cemetery. There is even a newly built hall for people to give food after the burial (which is what Iranians usually do as part of the ceremony). Everything that is usually necessary for a complete burial ceremony can be found centralized at the cemetery building. From printing banners to selling flowers and even special traditional cloths (called *Termeh*) that are placed on the body while carrying it to its grave. The Iranian version of the Subway sandwich fast food chain called *Haida* has even opened a branch there. The graves have all been

arranged neatly and in straight lines with the exact same distance from one another and all at the same height.

Efforts to flatten and reshape the whole section for martyrs of the war were stopped after strong oppositions from families and the media. Rationally arranged graves was not something the relatives of the martyrs enjoyed. They preferred the original arrangement that included tall signs on top of each grave with the picture of the martyr as well as some of his belongings that were usually collected from his body. In the Kermanshah province, west of Iran and close to the Iraqi border, one of my interlocutors told me how her illiterate grandmother was not able to find the grave of her martyred son, after the area was reorganized and all graves were standardized at one height and in one shape (M. Rahimi, personal communication, January 10, 2013). The municipality made the decision to reorganize and rearrange the whole area without the consent of the families involved. Rationalisation as Adelpkhah (1999) asserts also means inequality. In the *Beheshte-Zahra* area, graves are arranged in different locations. The most prestigious area is kept for the martyrs of war and as I have mentioned earlier they have kept their traditional structure. The Shrine of Imam Khomeini as well as *Shahid Beheshti* and many other martyrs of the Revolution have occupied another large section of the cemetery.

The *Honarmandan* (artists) section is home to the most famous actors, directors, artists and whoever lies within the category of artists. Other than these specially designated

areas, people of different social classes are buried separately. This is arranged through the cost of each grave. In the family sections of the cemetery each room is designated for one family at very high prices. Other old areas that are currently full of trees and greenery cost much higher than the newly developed areas of the cemetery. It might even cost as much as ten times the amount paid for an ordinary grave. If relatives of a dead person who is buried in the older sections for over thirty years ago are interested to re-purchase the grave, they can do so by paying a smaller amount for that area- five million Tomans (around 1,700 USD) They then place the remaining bones of the deceased into a cotton bag and burry it along with others who join him/her in the newly dug two story grave.

Rationalization of death is built upon the mysteries that surround it. The mysteries of death have created numerous questions and reactions throughout the world and people have perceived it in many different ways. Plato has quoted Socrates as saying that 'true philosophers spend their entire lives preparing for death and dying' (Rockwood, 1970) and Seneca had a famous method to overcome the fear of death with 'continuous thought on death' (Choron, 1973) but centuries before him Epicore had another way of overcoming the fear of death, he stated that 'follow this habit that death is nothing to us... since when we exist death is not with us, and when death arrives, we do not exist (Choron, 1973).

Because of the mysterious nature of death, people around the world, based on their religion or culture have reacted to it in various ways. They have usually decided to bury the dead while some choose to burn it. One of my interlocutors told me how the Chinese community in Malaysia were becoming more interested in burning the dead because of the high cost of burial (M. Kayu, personal communication, October 7, 2013). They preserve corpses by smoking, embalming or pickling. Geertz (1973) states that death and its rituals not only reflect social values, but are an important force in shaping them. Life becomes transparent against the background of death, and fundamental social and cultural issues are revealed (Metcalf, 1991). The way people treat death provides a critical platform for investigating the nature of human life.

Modern Western perspectives towards death –mainly through modernism- have mostly moved towards denial and negligence. The modern man started becoming educated in a manner that he would be busy with working and taking care of his life to make a living, and so the long hours of work; the stagnating wars; the times of depression and diseases; left him with an attitude to fight death and to have a desire to live for ever; a life that he was taking control of similar to how Spinoza suggested that ‘a free man’ must ‘think the least of death’; since ‘his intellect’ in the new era was focused on ‘thinking deeply about life’ and ‘not death’ (Spinoza, 2002). Nietzsche also stated that: ‘... the fact that people will no longer think of death, makes me happy! I am very eager to do something so that the thought of life would be one hundred times more desirable for them’ (Nietzsche, 2002). And with this new thought, that focused on life, the West

had reached the ‘blessings’ of modernity (Sanati, 2010) -whatever Sanati assumed these blessings to be- and would see a ‘very bright future ahead, so that with science and technology, he would overcome the problems of humanity in this world with an ever more increasing pace’(Sanati, 2010). In a collection of translated essays in regards to death, Sanati shows how modernity no longer needs death and it is therefore not necessary nor desirable for the modern western man to return to what was previously propagated, ‘the thought of death’.

Zygmunt Bauman explains how death clearly confronts reason; reason guides a person to an appropriate decision, while death is not something to decide on (Bauman, 1992). Since modern forms of rationalism as Weber (1958) asserts, mainly circulate around means-end reasoning as well as decision making for self-benefit, it cannot under any circumstances choose death. How can the outcome of rationalism (excluding substantial rationalism) lead to death?

Another part of the death ritual in Iran is holding a praying/ remembrance ceremony at a masjid or at home. This is usually on the first, third, seventh and fortieth night after death. It might be limited to only one ceremony and others might choose to have all the ceremonies at the masjid. In a relatively average income area in Tehran, a masjid such as *Masjedol Reza*, costs 850,000 Tomans (300 USD). This includes the speaker, panegyrist, a person to recite the Quran and of course the hall. For this reason most

masjids in Tehran currently have a hall for different events but it is mostly rented for mourning ceremonies and it is part of the self-sufficiency program of masjids. People attending the mourning ceremony no longer need to take their shoes off and women no longer need to wear proper clothing/hijab that would be a necessity if they were to enter the main praying hall of the masjid. Many masjids in Tehran rent one section of the masjid for business. This section is usually rented for catering businesses, since they are profitable and they only need a kitchen and not a dining section. This is why if you visit a masjid at times close to lunch or dinner you will also feel like you are walking through a restaurant.

A website, <http://www.rajeoon.com/> (those who return), offers a complete set of funerary services. It contains information about prominent masjids in Tehran, it sells flowers whether natural or plastic, graves and tombstones, it lists detailed information on coroners and death certificates, ambulance arrangement, filming ceremonies, banners and advertisements, renting plates, preparing fruit and snacks for the ceremony, arranging live animals (mostly sheep), and psychological consultancy. It also provides information on the religious rituals that must be performed after death, Mp3 files of mourning and the recitation of the Quran are also available. Different poems that can be written on the tombstone are suggested and even SMS samples of death announcement are recommended. It has finally arranged a list of private companies that offer services for every single step of the mourning ceremony.

Ariès explains how the West has changed its attitude towards death. He asserts that ‘the attitude towards death changed, but so slowly that contemporaries did not even notice. In our day, in approximately a third of a century, we have witnessed a brutal revolution in traditional ideas and feelings, a revolution so brutal that social observers have not failed to be struck by it. It is really an absolutely unheard-of phenomenon. Death, so omnipresent in the past that it was familiar, would be effaced, would disappear’ (1974).

Not telling the truth to a sick person who was close to dying was done for the sake of the sick. This lie was then changed into its modern form that ‘one must avoid-no longer for the sake of the dying person, but for society's sake, for the sake of those close to the dying person the disturbance and the overly strong and unbearable emotion caused by the ugliness of dying and by the very presence of death in the midst of a happy life, for it is henceforth given that life is always happy or should always seem to be so’ (Ariès, 1974). Hushing-up had begun before any of the rituals of death had changed. This hushing-up is also part of modern Iranian culture. For example one of my interlocutors explained how they had hidden the death of a cousin from a person who was living abroad. ‘He will be very disappointed’ (B. Masghati, personal communication, June 10, 2013) she said. It took more than a month for the cousin to understand the death of his cousin indirectly through Facebook. But of course it was late for him to express any type of condolences after all his ceremonies had already ended. Another one of my interlocutors stated that ‘we did not inform Mr Fasayee about the death of his brother-in-law because he would want to return from his trip earlier than what was previously

planned' (N. Fasayee, personal communication, June 10, 2013). Another cause for this varied attitude towards death is the displacement of the location of death. Most people in Iran currently die at the hospital and not at their homes. My interlocutors expressed their deep disappointment in the ways that doctors had treated their family. 'Our patient was almost dead but the doctor came towards us when we were under severe stress and stated that the condition of your patient is very critical but there is a very low chance that we can heal him through a very difficult open heart surgery' (K. Tabesh, personal communication, November 15, 2012). When the surgery fails to rescue the patient, the family is no longer shocked because they were expecting the failure but what will shock them is their hospital bill. The terminal diseases that people are struggling with might in many cases require hospital care until the last day. The hope to live is granted either artificially through unnecessary ICU and CCU with the doctors and hospital officials giving hope in order to gain profit. This is however not true in all cases. Hospitals directly send dead bodies to the cemetery and the doctors are the ones who issue the death certificate, unless the cause of death is mysterious and therefore it is the duty of the coroner to issue the death certificate. People have started considering hospitals as 'designated spots for dying' Ariès (1974). There are those who go to hospitals not to undergo treatment but to specifically prepare themselves for death.

More traditional Iranian families prefer to take their loved ones home when they are close to their day of death. This is however, not the case for the more modern minded individuals. They prefer death to happen at the hospital. Also the tradition of washing

the dead that was usually done at home, has almost completely vanished from modern Iranian culture. The dead will no longer be at home, but would rather be at the hospital and the cemetery, will not accept those who have been washed outside the cemetery system. The 'washing has to be approved' by the cemetery, because most people do not know how to wash the dead properly.

The centralized system of burying the dead has also created an environment where it is difficult for most people to regularly visit the grave of their loved ones. For example *Beheshte-Zahra* cemetery is located on the road to the sacred city of Qom south of Tehran and it takes a person living in Tehran an average time of at least one hour to reach the cemetery. This is however when the traffic is normal and moving. The newly built and centralized cemetery in Mashhad follows the same story. *Beheshte-Reza* is located south of Mashhad and on the road towards *Fariman*.

Many Iranians visit the graves of their loved ones on Thursdays (because of being the night before Friday and the night that sins are forgiven and prayers are accepted) and especially on the last Thursday of the year. The highway leading to *Beheshte-Zahra* in Tehran will be completely congested on the last Thursday of every year. In villages that currently include almost 30 percent of the Iranian population and smaller cities, cemeteries are at the centre of the city. For example in the city of Iqlid, south of Isfahan and with a population of fifty thousand, the cemeteries can be seen right at the heart of the city or at its entrance. They are usually adjacent to a masjid or an *Imam Zadeh* (the

grave of the decedents of the Prophet) and are conveniently accessible by the people living in that city. Modern cemeteries have been brought outside the city with the rationale that it is more secure, better controlled and is healthier. Similar to how slaughterhouses are kept outside the city, cemeteries have also moved out. 'Keeping the cemeteries inside the city will spread different diseases' (M. Fatemi, personal communication, March 5, 2012). The same justification was given for the automatic corpse washer; 'It is cleaner and will keep away highly contagious diseases' (S. Qazvini, personal communication, November 23, 2012). The transfer of the cemeteries to the outskirts of the city cannot be simply interpreted in terms of hygienic practices and population growth. Societal and cultural changes may share a significant part in detaching death from the normal human life. One interpretation might be that modern Iranians are no longer interested in looking at the face of death everyday while going to work or while going to visit their friends and relatives. Or that the existence of the cemeteries does not coincide with the aesthetic qualities that a modern city must incorporate. Cemeteries and slaughterhouses in many ways share the same characteristics; they should both be kept out of sight.

4.5 The Automatic Corpse Washer

Post-mortem technology has recently witnessed the introduction of a new scanner device which promises to preserve the integrity of the corpse, eliminate the need of open autopsy and diagnose the reason of death through MRI scanning (Beckford, 2009). This device is thus believed to be suitable for religiously oriented families including

Muslims and Jews who would feel uncomfortable with conventional methods of autopsy. This new technology promises maintaining respect towards the dead through quick examination and thus quick burial without opening or cutting the body. Similarly an Automatic Wudu Washer (AWW) has been developed (Auto Wudu Washer, 2010) that promises less water usage and a cleaner ablution. This is while the introduction of the automatic corpse washer in Iran has enjoyed a relatively hostile history of arguments, debates and finally partial acceptance. This technology was stopped at its very beginning stages of design in cities such as Isfahan and Karaj. It was designed independently at Dr Meghdari's university research centre in Tehran, but was not able to reach its construction phase. Around the same time, in the city of Qazvin the automatic corpse washer was ordered, developed locally and operationalized. Another fully operational model was ordered by the cemetery officials of the city of Mashhad that washed over 40 corpses before it was shut down for good.

In Mashhad, a large billboard standing next to the automatic corpse washer guaranteed the blend of Islamic principles with modern technological advancements: 'The aim of using the automatic system of washing the dead: full compliance with *Shariah* principles (approval by grand *Maraje* '); reducing the waiting time of the relatives of the deceased and thus reverence of the visiting clients; compliance with principles of public health and of the environment; and finally, energy consumption optimisation.'

From the outside, the automatic corpse washer looks like a steel rectangular box, something one would see in a manufacturing line of a factory. On the left panel of the device, there are eight green buttons, each accompanied with a green light and of course a red button that stops all other functions at the time of emergency. These buttons each perform a certain function such as a 'wash with water', 'wash with shampoo', '*ghosl* with water', '*ghosl* with cedar', '*ghosl* with camphor' and a button that washes the device. The remaining two buttons were not currently used for any specific function and were there for future improvements of the device. Higher above the red emergency button, a digital panel which acts as a complement to the green and red buttons, shows what functions are being employed. The corpses are pushed (and if the device were to be upgraded, they would automatically enter) into the corpse washer from the bottom of the device. A small door opens up and the corpse is pushed in while in supine position. The head reaches the blue pillow like porous square surface while the rest of the body rests on the cylinders that are paired together leaving an approximately ten centimeter space in between the pairs. From the inside, the device is covered with nozzles that are in charge of spraying water and performing the *ghosl*. There are a total of nine nozzles that automatically spray the water in a cordial manner according to the necessary steps prescribed by Islamic *fiqh*. First, the head and neck must be completely washed; then the right side; and finally the left side of the body. The body is rested on ten pairs of black color cylinders that move up and down through the wash so that the body slightly moves and that water reaches areas such as the underarm and the groin. Although the automatic corpse washer first washes the corpse with detergent and water in order to

remove the *najes* (impurities) from the body, the corpse washers conferred how they were forced to wash the deceased before placing it into the device. Through experience, they had discovered that the washing function was not performed properly, and remnants of *najes* remained on the body even after a full wash. In between the cylinders, there are swirling brushes that move up and down and swirl while washing the body. During the washing function and not the *ghosl*, a large brush moves all over the top side of the body while the nozzles are spraying detergent. The whole process, is very similar to an automatic car wash, the main difference is however, between the car and the corpse. Discussing the pros and cons of the device, the cemetery officials explained that while the traditional method uses five hundred to seven hundred litres of water, this device only uses one tenth of that amount. The traditional method takes an average of fifty five minutes to wash each corpse, while the device preforms the job in approximately twenty minutes with a maximum limit of seven corpses per day. The developers of the corpse washer believe that since the device avoids moving the corpse from one shoulder to the other, it is in compliance with the dignity and munificence of the dead. The cost for developing the automatic corpse washer is approximately one hundred million Tomans (thirty thousand US dollars). The *Beheshte-Reza* cemetery in Mashhad is planning to order improved versions of the device that can automatically cut or burn the clothes prior to the wash and finally wrap the body with a shroud.

4.5.1 The Virtues of Washing the Dead

It is common among religions such as Islam to treat death not as a crisis but as a gift to the believer who will be saved from the hardships of the mortal life. Islam, similar to other religions such as Judaism and Christianity believes in life after death which means that biological death is not the end. Death is likened to sleep in Islam. It has been repeatedly stated in the Quran that the worldly life is an amusement and diversion, while the hereafter is the eternal life (6:32, 29:64, 47:36, 57:20). Imam Ali states that ‘for this world, act in a manner as if you will always remain in it, and for your hereafter act as if you will die tomorrow’ (Noori, 1987). There are numerous instances in the Quran that mention the life after death while challenging non-believers:

They will be received by the angels of mercy with the greetings: Peace be on you! Enter the Garden as a reward for your good deeds.’ (Surah an-Nahl, 16 : 32)

It was said to him (after his death): Enter paradise. He said: ‘Would that my people knew that my Lord had pardoned me and made me of the honoured ones.’ (36:26 - 27)

‘Think not of those who have been slain in the way of Allah as dead. Nay, they are living with their Lord and are being provided with the means of living. They are jubilant because of that which Allah has bestowed upon them of His bounty, and wish that those who have been left behind join them.’ (3: 169 - 170)

‘A dreadful doom encompassed Firawn's folk. They will be exposed to the Fire mornings and evenings and on the Day of Resurrection it will be said: People of Firawn's folk suffer the most awful doom.’ (40:45-46)

And he (i.e. man) presents for Us an example (i.e. attempting to establish the finality of death) and forgets his [own] creation. He says, ‘Who will give life to bones while they are disintegrated?’ Say, ‘He will give them life who produced them the first time; and He is, of all creation, Knowing.’ [It is] He who made for you from the green tree, fire, and then from it you ignite. Is not He who created

the heavens and the earth Able to create the likes of them? Yes, [it is so]; and He is the Knowing Creator. (36:78-81)

And they say, ‘There is not but our worldly life; we die and live (i.e. some people die and others live, replacing them) and nothing destroys us except time.’ And they have of that no knowledge; they are only assuming. And when Our verses are recited to them as clear evidences, their argument is only that they say, ‘Bring [back] our forefathers, if you should be truthful.’ Say, ‘God causes you to live, then causes you to die; then He will assemble you for the Day of Resurrection, about which there is no doubt,’ but most of the people do not know. (45:24-26)

The person who performs the *ghosl* must be a Muslim, mature (at least 15 years for males, 9 years for females) and mentally stable, and must know the regulations of *ghosl* (Shirazi, 2000).

When a person dies, it is the duty of every Muslim to fulfil the necessary actions for the *ghosl* and burial. This duty is terminated, however, if there are already enough people performing the task. This means that if you are alone with another person and that person happens to die, you are obliged to wash and then bury that person, and by not doing so you have committed a sin (haram).

Respecting the dead body is of utter importance in Islamic Law. For example, in a question asked about whether one can take platinum out of the body of the dead from Ayatollah Khamenei, the approval was given under the condition that the dead body is not disrespected (Khamenei, 2005). Other examples of organ transplant and dissection according to *Shari'a* reiterate the importance of respecting the dead in Islam.

There are several Hadith, stressing the importance of treating the dead body with respect. For example, they instruct to soften the fingers (of the dead) with mildness and amenity; softly massage the stomach during the first two periods of *ghosl*; and recite prayers for forgiveness of the dead person while washing them. This will ensure your own forgiveness. Anyone who washes a dead person and moves him from one shoulder to the other will be relieved of their sins as if they are reborn (Sadoogh, 1988). It is also mentioned that one must safe keep the integrity of the dead while washing; the integrity has been stated as not uncovering any problem that the dead body may have had (Shirazi, 2000).

Imam Ali (as) has stated that dead bodies should be washed by the person who is closest to him/her (which means the person who receives inheritance) or a person who is assigned by the guardian of the dead person. This process should start off by cutting the shroud, spreading the carpet and then spreading the all-around shroud on the body and then spraying a bit of *zarireh* (fragrant substance similar to camphor). The loincloth should then be spread with again a bit of *zarireh*. The washer should then prepare two pieces of stick from a fresh and green date tree and the size of each stick should be the same size of the arm bone. Imam Sadegh (as) has stated that a person who shrouds a believer is as if he has guaranteed his cover until the day of judgment, and has accepted its responsibility, and whoever digs a grave for a believer who has left this world is as if he has placed him in a house according to his will until the day of judgment.

In Islam, washing the dead is regarded as a pious deed. Imam Khomeini (1999) states that it is not permitted for a person to receive money for washing the dead, but receiving money for the preliminary duties of the *ghosl* is allowed. This provision strengthens the idea that doing the act of washing the dead as a job is not prescribed by Islam. Qara'ati (2012), in a meeting with the corpse washers and other cemetery officials at *Beheshte-Zahra*, stated that whenever they feel that washing corpses is becoming a routine duty and that it is nothing more than a job, they should change what they are doing.

4.5.2 Standardized Practices

Beheshte-Reza in Mashhad and *Beheshte-Fatemeh* in Qazvin have been success stories for the automatic corpse washer, although their approaches have been different. *Beheshte-Fatemeh* in Qazvin had decided to start a rather democratic system where the bereaved relatives would be able to choose between having a manual *ghosl* or an automatic one. It took almost six months for the authorities to conclude that not even one single person is willing to have their relatives washed automatically. I was told that because of our academic backgrounds and years of study at different universities I must know and understand why the automatic system is better. But it looked like the people actually coming to the cemetery to bury their loved ones are presumably less educated. I asked whether the automatic system had any unaccounted flaws that might have frightened people from using it, and in response Mr Masoomi, the head of the Qazvin project, said that 'it doesn't have any serious issues, but it is a device and it has rotating

cylinders. A skin or hair might get caught under these cylinders and possibly be detached' (H. Masoomi, personal communication, June 23, 2012).

The authorities of *Beheshte-Reza* in Mashhad did not see it necessary for implementing the same democratic system of *Beheshte-Fatemeh* in Qazvin. While the automatic corpse washer was designed and developed by an outside contractor, the corpse washer in *Beheshte-Reza* was ordered by one of the religious authorities of the cemetery. Mr Jazayeri who, according to Dr Ferdosi, was a 'young', 'bright' and 'creative' (H. Ferdosi, personal communication, June 23, 2012) clergy and was in charge of religious matters at the new cemetery of Mashhad, decided to look for ways of automating the washing of the corpse. After finding a suitable designer from the University of Mashhad, they teamed up and worked on developing a system that was not only efficient, but which also carefully took into consideration the social and religious aspects of washing.

However new the automatic corpse washer might seem, it is rooted in a history of standardisation. The spiritual ritual of washing the dead that is presumably rewarding in the afterlife has fallen into efforts of strict routinization and standardization. Corpse washing has thus been reduced to routine labour and one that is neither spiritually rewarding nor economically fulfilling. People being employed at cemeteries to perform the ritual *ghosl* are usually people from lower classes of the society and people who find it difficult to find any other job mainly because of their education and expertise. This

standardisation process has been the key to the gradual acceptance of this system. The cemeteries that I visited had a standardised and almost identical arrangement, comprising a room for administrative purposes where ordinary people are attended to; a small resting room for the personnel to rest during their breaks; the main hall where the bereaved usually wait; the section in front of the main washing area where people are allowed to stand and observe the washing process – behind a thick glass window; and, of course, the main washing room.

The automation of the process of washing the dead is by itself a standard process, and if it were to be implemented nationwide it would have been the same everywhere. This automation and its acceptance can be seen as the subsequent step of pre-standardisation procedures. On 3 July 1955, a document named the Municipal Legislation was passed Municipal Legislation Act (1955). Article 55 describes the development of morgues and cemeteries and the purchasing and maintenance of hearse (cars carrying dead bodies) as part of the duties of the municipality. In a subsequent document called the Health Regulations of Cemeteries (Ministry of Health, 2009) written in October 2009, two square meters has been dedicated to each grave; in chapter 4 article 40, it describes what each morgue has to have; and in article 58 it stresses that the entrance of miscellaneous entities and the relatives of the deceased into the washing and shrouding room is prohibited. This means that while it was a custom for close relatives and pious people to carry out the washing process, it is now, according to the law, forbidden for them to

even enter the room. Everyone has to stand behind the glass window and watch the washers wash the dead bodies.

The standardised practice of washing is partly indebted to the Islamic norms of washing, although the standardisation of that method has passed far beyond the Islamic procedures. There are beds made of stone, one designed for washing with slightly tall edges with exact same sizes as prescribed by the law, brought up to prevent water spill. There are flat stone beds for tying the shroud (usually each flat stone bed is built right next to the washing bed so that the body would be transferred to the bed right after it is washed; depending on the number of simultaneous washings that is needed, the number of stone beds will differ). There are also water hoses, cleaning facilities and a rail-like section with a steel stretcher that is used for the initial arrival of the body and its final delivery.

For a very busy cemetery such as *Beheshte-Zahra*, the intentions of developing such a system lie in the issue of efficiency. *Beheshte-Zahra* currently receives an average of 130 dead bodies each day, and these bodies are washed manually, each taking approximately half an hour to be washed by at least two workers. The washing starts from very early in the morning until the afternoon. Introducing automatic corpse washers would mean fewer people working, less time spent and therefore a more efficient system. *Beheshte-Zahra* has, however, rejected calls for developing an

automatic system, since the managers have found the system ‘unreliable’ and ‘inhumane’.

New unofficial decisions by cemetery and municipality officials in Tehran to allow relatives of the deceased to voluntarily aid the process of washing might seem to have eased the restrictions of unwanted guests in the washing area. Our experience showed that getting into the room with the corpse washers isn’t an easy task. We had to negotiate with many different people to finally get the approval to enter the corpse washing room and to observe and aid in the process. The ghassal (corpse washer) thought that I was a washing trainee, interested in being employed in the future, and took me through every step of the washing process.

The relationship between technology and religion in the case of the automatic corpse washer is worth further study. This technology, which is unique to Iran and has only been used to wash not more than 40 corpses, can be considered as a turning point in the history of technology and religion. When religious authorities in Iran initially rejected different modes of technology, they were mostly concerned about the cultural impacts or the Westernisation that the technology might bring along. The corpse washer, however, is domestically designed, constructed and used. It is in direct relationship with, and even overlaps, certain Islamic principles. It dives deep into issues of death and the relationship between the body and the soul after death which has been previously discussed only in the realm of religion. A group of scientists and technologists have

assumed that this device is more Islamic, since it is not only beneficial for the environment – as it uses less energy – it is also more respectful towards the dead body, as it does not turn the body from one side to the other. This research has elucidated that while the relationship between technology and religion might seem a straightforward antagonism, it is embedded with many unanticipated commonalities. At times, technology can be based upon pure religion, and in other cases religion – and religious authorities – can have technologically oriented mind sets. While the corpse washer has been currently shut down and rendered inoperative, the rebirth of this technology and its contiguous forms can be expected in Iran and other religiously oriented communities.

In Iran the strength and importance of communities are uncovered through death rituals. Relatives, friends and people that might not be very familiar, will come together and help out in all funeral activities and programs and will keep the bereaved company for at least forty days. The communal spirit of Islamic and Iranian culture as well as its crucial emphasis on family relationships glitters on the solid background of death. This is however, very different to practices in the US. ‘In the United States, the individualism, materialism, and commercialism that characterize their national ethic seem to stand in particularly sharp relief in the context of the funerals’ (Mitford, 1963). There are certainly many differences in terms of culture, religion between Iranians and Americans, however the rationalization of death rituals clearly tears these boundaries apart and develops a mentality that tends to sway towards finding a rational meaning for life and most certainly death.

4.6 The Slaughterhouse

In the current fifth grade social studies textbook in Iran, which is grooved with old pictures of farms, machinery and cattle, students study the benefits of industrialized farming and industrialized animal husbandry:

- 1- They produce more crop/product compared with traditional systems.
- 2- They are much quicker than traditional systems.
- 3- They are much easier to use and are better than traditional systems.

Most school children in large cities, hardly have the chance of meeting animals ‘in person’, other than stray cats searching in large garbage cans, black crows scavenging for dead animals, and if they are very lucky sparrows and pigeons that are carefully looking through bits and pieces of leftover food in balconies or on the streets. Similar to how Iranians are mostly unaware of the invisible complexities of genetically modified food (Farsnews, 2016), they learn during their school years that modern technology is to be trusted and respected. It is efficient, reliable, quick, and it is what modern societies cannot live without. Slaughterhouses also employ technologies that are necessary to ensure the daily supply of fresh, clean and hygienic meat. Slaughterhouses or abattoirs or *koshtargah* (area of killing) as they call them in Iran are as spooky as their names imply. Every day, carcasses of mostly sheep, cows and poultry are stamped with the blue signature of the veterinarian office under the Ministry of Health and then stacked

into large refrigerated trucks and sent to distant areas where they are sold. Most recently paper tapes are attached to the hind leg of the sheep carcass that show the date of slaughter and the name and area of the slaughterhouse. Animal slaughter has however, given rise to various responses. Islam allows the slaughter of a specific group of animal species if it is 'properly' done.

Some religions advocate vegetarianism, some such as Jainism even go further and advocate harmlessness and renunciation and therefore abstention from eating root vegetables since a bulb or tuber's ability to sprout is seen as characteristic of a living being, and currently groups of animal rights advocates find it inappropriate to kill animals for food. 'There is never a humane way of killing an animal' (J. Afghani, personal communication, July 2, 2013); this was the response given by one of my interlocutors while discussing the issue of slaughterhouses. It had been a year that she had converted to a strict vegetarian and later to a vegan diet and she felt that her recent chickenpox at the age of fifty might have been due to this rather awkward transition. She believed that it is part of the characteristics of men –who usually undertake the act of slaughter- not to really feel how dreadful slaughtering an animal is. Many animal rights activists share the same belief. Propagating for humane slaughter, Temple Grandin offers technological solutions even for Halal and Kosher meat. This does not necessarily mean that the activists themselves believe in slaughter, for some, it is to contribute to the animal rights movement, and for some it is hoped that the least

practical change will lead to the more humane treatment of animals before they are ‘brutally’ killed (B. Tarahi, personal communication, April 24, 2014).

Slaughterhouses and more generally meat production have environmental consequences. The United Nations (UN) continuously releases reports of malnutrition around the world while most of the land under cultivation is designated for livestock production (Owen, 2005). Industrial animals or animals raised for their meat through industrial means of production, do not solve the global hunger crisis but rather extremely aggravate it (Singer, 2009). This issue is currently not limited to industrialized nations only; industrializing nations such as Iran have followed the exact footsteps of the industrialized nations in terms of their livestock production and industrialized forms of agriculture. Tropical forests in Brazil and elsewhere are being wiped out in order to create grazing land for cattle. The slaughtered and frozen cattle are then sent across the world to countries such as Iran in order to supply low-cost meat and balance the market. Factory farms increasingly pollute water reserves and create what is called ‘dead zones’. The widespread use of antibiotics among animals, approximately eighty percent of all antibiotics used in the world, has resulted in various forms of antibiotic resistance among the very people who consume them.

It takes approximately 700 kg grain to produce 100 kg of beef, 260 kg grain to produce 100 kg of poultry, 1,000 kg water to produce 1 kg of grain. The global meat

consumption has increased by 82% since 1961. Meat production accounts for almost 70% of all agricultural land worldwide, 30% of the planet's land surface, 40% of the world's grain is grown for livestock feed and in poultry production, 88 percent raised using roxarsone that is an arsenical drug. The size of each chicken from 1967 up to present has almost doubled mainly due to the economic benefits of having large breasts and relatively smaller drumsticks (Ollinger, 2000).

Excessive use of pesticides and chemical fertilizers has eroded the soil and has caused extreme pollution. The standards of industrial farming which are abided by in a global scale prescribe the following: Cattle should be fed with low doses of antibiotics every day; corn and soya have replaced a diet that used to be dominated by grass. Twenty percent of all antibiotics used worldwide are for humans while the remaining eighty percent is used on animals (Bowers, 2013). Chickens that have become a popular affordable and convenient part of the global diet are raised in even more devastating conditions. They are kept awake, their beaks are cut off, thousands are kept in very condensed areas with practically no space to move, they are fed with antibiotics and all sorts of medicine which include lead and arsenic (Adams, 2011). Chicken beaks are cut off for two reasons; one is to prevent them from injuring each other because they are kept in extremely crowded farms and they are piled upon each other; and second is to make them eat more food. The beak is designed to pick one grain at a time. With the tip of the beak being cut off, the powdered food that is given to them on a daily basis can be gulped instead of naturally pecked. As part of the life cycle of these industrial

animals, waste products from the slaughterhouses are being fed back to the chicken with hopes of supplying calcium and helping them grow faster. In their short life of five to seven weeks, they walk in their own manures and suffer from burns in their eyes and skin because of the high quantity of ammonium in the air (Aziz, 2010).

4.6.1 Historical Accounts of the Iranian Slaughterhouse

In search for the history of the slaughterhouse in Iran, I came across different news bulletins. The earliest document showing an example of a *ghassabi* (butchery) that I found, was on the first page of 'Iran' (the government's newspaper) on the 11th of April 1921 (this is the government of Ziauddin Tabatabai, the coup-plotter who worked with Reza Khan (the first Shah of the Pahlavi Dynasty), but still during the reign of Ahmad Shah (The final Shah of the Qajar Dynasty)).

On the 25th of May 1921, the Iran newspaper read:

The slaughterhouse that has been transferred illegally and in disagreement with the approval of the parliament Health Care (نظام الصحة) has been moved from Naaz Abad to Farah Abad and it is not under a suitable condition. The Health Department will try to construct a slaughterhouse in the future based on the needs of the city.

And based on the issue that mostly from the influx of various diseases in animals and livestock, city animals would die, the Health Department has taken measures so that in addition to the veterinarian that has been continuously observing the slaughterhouse, the veterinarian school would also help so that in the future such diseases would be prevented from reaching domestic animals (Irannews, 1921).

Slaughterhouses have always been involved with issues of hygiene control. This was one of the principle aims of having centralized slaughterhouses in the first place. It would make hygiene control easier and more effective. This is while in modern slaughter practices, hygiene becomes important only when there is an outbreak of a specific disease. In the slaughterhouses that I visited, the veterinarian officers were not concerned with checking each and every animal upon arrival. In the sheep and cattle slaughterhouse, the test was –as my interlocutors told me- for the animal to be able to walk a slope before reaching the slaughter point. While slaughtering sheep however, the slaughter men aggressively pulled the sheep up the slope and therefore eliminated any chance of minimal hygiene supervision. The most important part of the slaughter process to become certified healthy, was the blue stamp that was stamped on the carcass of the animal at the end of the slaughter line. Currently, in addition to the blue stamp, a paper tape tied onto the meat showing the place of slaughter and another piece of paper hung from one leg to show the date of slaughter and a serial number that can supposedly be tracked. Any butchery that does not purchase meat from slaughterhouses will therefore not have these identification stamps and would be fined in case of official government monitoring.

Another news bulletin from the same year confessed the problems of lack of organization and proper order in slaughterhouses and among slaughter men:

Since the affairs of slaughterhouses and slaughter men has not been organized properly, the City Health Department has designed and prepared a code under

thirty two articles for slaughterhouses and slaughter men and it has been given out for opinions so that it will be implemented after approval (Irannews, 1921).

On September 17, 1935 the 'Animal Health Inspection Law' was passed by the parliament. It states that any type of communicable disease among animals should be reported immediately. Animals as well as corpses of animals that are infected with the disease should be held in separate locations to prevent the spread of the disease. Disinfection of the areas and elimination of ill animals will be observed through the law. Health inspection officers should monitor and investigate these areas every three months. Article seven of this law points to the stamping of healthy carcasses in the slaughterhouse. The same process is being followed up to this day. Article eight of this law states that violators of this law will be sentenced to imprisonment and the payment of fines. Some efforts have also been made to preserve the rights of animals such as the Hunting and Fishing law that was approved on June 6th, 1967:

Article Eleven- section D- Fine or imprisonment is proposed for those who destroy springs and water ways of animals in the protected areas and the animal shelters.

Also the Islamic Punishment Law approved on the 28th November 1991 has stated that

Article 679- Any person who purposely and without any necessity kills a Halal meat animal that belongs to another person or animals that are illegal to hunt according to the government or poisons or injures it will be sentenced to

imprisonment from ninety one days up to six months or the fine of one million and five hundred thousand Rials up to three million Rials.

Article 680- Any person who illegally and without the permission of the law hunts or fishes animals and wild protected animals, will be sentenced to imprisonment from three months to three years or the fine of one million five hundred thousand Rials up to eighteen million Rials.

These animal rights related laws have generally remained unchanged. The fines are superficial and have been largely neglected (Tasnimnews, 2015). Although there have been cases of dog abuse that has created uproar among people and it was thus followed by relatively severe punishment (YJC, 2016).

4.6.2 Fetishizing Meat

‘We would tell my little sister that the chicken that you are eating grows on trees. If we would tell her otherwise she would never accept eating it’. This is what Kashi (E, Kashi, personal communication, March 3, 2012) one of my interlocutors told me about the modern forms of meat consumption. A brief skim through children’s books and cartoons illustrate how animals are shown as happy creatures freely grazing through beautiful lands full of grass. The pictures printed on milk packets or on meat products or

even on butcheries such as the newly opened 'meat land' butchery west of Tehran, always depict happy animals. Cows are happy to be milked, cows are happy to turn into meat, sheep are happy to turn into lamb, poultry are even happier to turn into meat and to lay eggs in an industrialized fashion. It is hard to remember seeing a similar expression on the animal face in reality. The cows were entrenched in their own dung in the dairy farms and slaughterhouses that I visited. There were absolutely no signs of grass anywhere. Cows were excessively milked three times a day and after the milking process it was even difficult for them to walk with their breasts hanging and their veins bulged. Chicken are kept in areas full of stench. They are so close to each other that if they get a chance to walk, they will injure one another. Flies are what are common in any poultry raising farm. Sheep that are grown specifically for meat have the same situation. They rarely have the option of walking outside for inhaling fresh air.

Michael Taussig (1992) explains how 'the fetish, deeply invests in death, the death of the consciousness of the signifying function. The fetish absorbs into itself that which it represents, erasing all traces of the represented. A clean job.' Not only does fetishism hide the origin of the meat which is basically cattle, sheep or poultry, it hides the real producers of products. Because of the complex systems of production, as seen in the slaughterhouse, people can no longer even trace where their product (meat) comes from. It can be from any cow, which has come from any part of the country, or it can be even

imported from countries such as Brazil. If you process the meat, the complexity will upsurge.

Commodities are a combination of what is shown and what is hidden in the process of production and consumption. While commodities show us how they can satisfy our needs 'at the same time, they draw a veil across their own origins; products appear and disappear before consumers' eyes as if by spontaneous generation, and it is an astute shopper indeed who has much idea about what most things are composed of and what kinds of people made them (Leiss, 1986)

The modern human animal relationship and the imbalance that it has developed between man and nature has aided in the construction of the slaughterhouse. Although there have been many efforts to somehow tame this technology and Islamicize it in Iran, it is shown that the reality of the slaughterhouse is strongly dependent on the dominance of technology over nature. Seyyed Hossein Nasr, referring to the Qur'anic verse which states that 'all creation praises God' notes that 'in destroying a species, we are in reality silencing a whole class of God's worshippers' (Nasr, 2007).

4.6.3 Ritual Slaughter and the Slaughterhouse

Ritual slaughter in the Abrahamic faiths, is either referred to as Jewish ritual slaughter (shechita) or to Muslim ritual slaughter (Halal). Although there are some differences between the two methods, their principal aim that is to cut the throat and the main arteries with a razor sharp knife, remains the same.

Muslim ritual slaughter basically means that first, the person performing the slaughter should be a Muslim, second, the tool used for cutting the animal's throat has to be made of sharp iron, unless an iron knife is nowhere to be found. Third, the respiratory tract, esophagus (channel for taking in food) and jugular veins must be severed at the time of slaughter. Fourth, the front part of the animal's body has to face the *Qiblah*. Fifth, the person slaughtering the animal has to recite Allah's name while slaughtering. It can be in the form of *Besmillah* بِسْمِ اللَّهِ (In the name of Allah), *Sobhan Allah* سُبْحَانَ اللَّهِ (Praise to Allah), *La elaha illa Allah* لَا إِلَهَ إِلَّا اللَّهُ (There is no God but Allah). And finally sixth, after cutting the animal's throat, it has to make some type of movement to show that it was alive at the time of slaughter.

Jewish ritual slaughter is defined as cutting the throat down to the area close to the spine. The animal is not stunned under any condition and the cutting will cause quick exsanguinations. Similar to how slaughtermen have to be trained in the teachings of Islam, Jewish ritual slaughter, shechita must be performed by a trained shochet (an

approved ritual slaughterman). The shochet uses a chalaf, a knife with a straight blade about eighteen inches long with a squared-off, unpointed end. Similar to Halal slaughter both carotid arteries and the windpipe must be severed in a single swift continuous slicing stroke without any downward pressure and without tearing or gouging the tissues within a prescribed area of the throat below the larynx. Failure to fulfill any of these requirements makes the flesh treifah (literally, torn) and unfit for observant Jews to consume as food, the same mistake would mean that it is Haram and not fit for Muslims to consume. In Shechita consciousness of the animals lasts for about twenty seconds but without any obvious pain response. Jewish and Muslim methods of slaughter are usually compared to the pain of an accidental cut of one's hand with a sharp knife. Through experience, the cut does not become painful at the beginning and if not noticed later through bleeding and pain it is understood. There are those who believe that animals turn unconscious within three to five seconds after the blood supply is cut off. Temple Grandin has designed what she calls kosher box that holds the cattle in an upright position prior to slaughter. She suggests a set of recommendations to shorten the time between ritual cut and loss of consciousness, some of them include (Grandin, 2014):

1. Deep cuts
2. Rapid swift knife stroke with a minimum of sawing motions.
3. Keep cattle calm and reduce use of the electric prod. Calm cattle bleed out faster.

4. Install non-slip flooring in the box and lead up chute. Cattle panic when they slip.
5. The percentage of cattle vocalizing (bellow or moo) should be 5% or less. Vocalizing cattle are stressed.

In Western methods of slaughter, methods of electricity (1863) and carbon dioxide gas (1866) were popular in the 19th century. There was also a new invention that used air pressure to kill the animal. Killing with air pressure preserved all the blood inside the animal's body and was believed that it enhanced the quality of the meat and that the meat could be kept for a longer period of time. In 1904 a committee made four important recommendations to the humanitarian project. Animals should be stunned or made unconscious prior to drawing blood, employees of the slaughterhouses should be licensed and inspection should become compulsory at all slaughterhouses. Private slaughterhouses should be shut down and replaced with public slaughterhouses (Lee, 2008). This humanitarian project did not recognize Jewish ritual slaughter as a slaughtering method that is humane. It stated that the Jewish method was not quick enough, it did not free the animal from unnecessary pain and there was no immediate loss of consciousness. Therefore they recommended that the Jewish system of slaughter should not be permitted at any slaughterhouse that is under government control. This project however, did not succeed and Jewish ritual slaughter continued to operate under

its principles. Similarly in Iran, but twenty five years later, a law called ‘taxes on slaughter’ was officially passed (Majlis, 1929)

Taxes on slaughter, Approved on February 7th 1929

Article one- From the date of the approval of this law, the Ministry of Finance is allowed to collect two Gheran from the slaughter of each goat, two Gheran from sheep, two Gheran and ten Shahi from lamb, three Gheran from cow and three Gheran and ten Shahi from calf, and five Gherans from buffalo only in cities and villages.

Article two- From the beginning of the year 1308 (1929) and up to three years The Ministry of Finance with the attention of the Interior Ministry is obliged to consider receiving funds from the budgets of the country for the necessary aids to municipalities of cities and villages that do not have a slaughterhouse in order to construct and maintain the slaughterhouse.

Article three- After the implementation of this law, fees for the rental of the slaughterhouse and other taxes will not be taken from the slaughter under any name or body and the Ministry of Finance is obliged to provide the same amount from the earnings of the month of Azar (November- December) that the municipalities would receive from slaughters for the maintenance and rental and ordering the slaughterhouse and the issues of villages from the slaughters in the cities and the villages and also the Red Lion and Sun Institute in Tabriz and Mashhad to use in charity and health issues, and to pay them every year so that they would use it for the identified purposes.

Article four- The Interior Ministry with the help of municipalities of the cities and villages to identify slaughterhouses based on health issues so that slaughters will not take place outside their boundaries, and in areas where a slaughterhouses exist and a person slaughters an animal outside the slaughterhouse he will be fined between five Gheran to one Toman.

Amendment- The villages of the country will be identified by the Interior Ministry and will announce it after the approval of the cabinet.

Article five- Sacrifices for Nazr (vows made towards Allah) and Aqeeqah (slaughter of an animal for a newborn) or the forced slaughter that is done to prevent the death of an animal as a result of illness or an accident is exempted from the regulations of article one and four.

This law that includes five articles was approved by the National Assembly on February 7, 1929.

Head of the National Assembly- Dadgar

During the approval of the above law, a discussion took place between one of the members of the parliament and the Minister of Justice. The member of the parliament asks, if a person slaughters an animal in his own house, what problem would it have? The minister of justice replied, ...'the person can send someone to buy an already slaughtered animal and why does this person want to slaughter the animal with his own hands and to turn his house into a slaughterhouse? What harm would it have if this person pays two Gheran (the currency used at that time) to the government? Allow everything to be done in its own place, a person's house, a person's room, a person's life is not an area to slaughter sheep. This has to be done by a butcher at the butchery and not at any other place or through any other person, you should assume that when I want to cook something myself, I must also inhale its smoke (meaning that I have to pay the price for it)' (Majlis, 1935).

At that time it was not the concern of the National Assembly to regulate anything in favor of the animals. The officials were rather searching for ways of regulating and organizing slaughter practices in order to prevent diseases and at the same time for the government to tax each slaughter.

On September 8, 1935 in the discussions held at the Iranian Parliament that was at that time called the National Legislative Assembly and later changed to the Islamic Legislative Assembly after the revolution in 1979, the head of the agriculture

department explains how they will have ‘...a number of expert veterinarians for the slaughterhouses all over the country. We have divided the country into different sections and in each section one veterinarian will be identified and for each of the slaughterhouses that we have, we will assign one person who has been trained in the Karaj and Hesarak school with the duty to always be in the slaughterhouse and to examine the animals before and after slaughter and then stamps their meat...since the slaughterhouse is under the municipality and the agriculture department monitors its actions in terms of hygiene and health, no product that is unhealthy will be used whether for domestic consumption or export and when it is healthy they will stamp it (approve it) for domestic use as well as for export...’ (Majlis, 1935).

These were the pioneering years of the slaughterhouse technology in Iran. The government of that time under the rule of the Pahlavi dynasty, for its own specific reasons (mainly issues of public health and regulated taxation for each slaughter) promoted the construction of the slaughterhouses.

In America, the design of modern buildings made it possible for office workers to view parts of the slaughterhouse. They were able to see herds of animals being driven to their death. From the area where the people were viewing the slaughterhouse, there was no sign of smell or sound or irritation of the animals. It was clean, sanitized and it gave the impression and illusion of power over nature and symbolic control over its resources

(Lee, 2008). The only area that was not open for others to view was the slaughter area itself. 'Instead, viewers encountered a pure spectacle of commerce, one that tamed (animal) nature through technological innovation' (Lee, 2008). The slaughterhouse only became modern when 'it was reimagined as a productive place where meat was made'. By the twentieth century this shift happened when the site was no longer considered as unclean and instead 'the increasingly mechanized institution responded to functionalist priorities that stressed technique over ritual' (Lee, 2008). The slaughterhouses were no longer easily seen and the public 'expected government agencies to monitor the production line, ensuring that its meat supply was safe, affordable and plentiful' (Lee, 2008). As long as these conditions were met, just as veterinarian Leclainche had concluded, 'busy consumers had little interest in the production system itself' (Lee, 2008).

It was now time for the machines to decide what is best for humans. Technological development of the slaughterhouse gradually asked for homogeneous animals to be fed into the system. These animals were the exact size, color, breed, class and age so that the whole process would be uniform. The same method of standardization happened for the output of this technological system. The products were the same size, shape, weight and quantity. It is however important to point out that the output was not necessarily based on taste or quality, it was based on quantity and the surface of the product.

4.6.4 Muslims, Animals and Islam

In the Islamic faith all animals are believers and they continuously laud Allah; similar to what is mentioned in Transcendent Philosophy, six of Quran's 114 suras are named after animals: the Cow (sura 2), the Cattle (sura 6), the Bee (sura 16), the Ant (sura 28), the Spider (sura 29) and the Elephant (sura 105). The names of animals mentioned in the Quran include camels, cattle, horses, mules, donkeys, sheep, monkeys, dogs, pigs, snakes, worms, ants, bees, spiders, mosquitoes and flies (27:16) and (27: 18). Nevertheless the most striking verse in the Quran is:

And there is no creature on [or within] the earth or bird that flies with its wings except [that they are] communities like you. We have not neglected in the Register a thing. Then unto their Lord they will be gathered. (6:38)

This verse is first of all addressing human beings (Tabatabaei, 2012), when it says that animals are communities like you, it is referring to the point that they are all gathered around one objective and that is to return towards Allah. Similar to human beings, animals enjoy social and personal beliefs and opinions. These beliefs lead them towards benefiting from life and avoiding harms. Allah in the Quran has asked human beings to carefully analyze the activities of animals and to learn from them. Similar to human beings, animal societies have good, bad, cruelty and justice (Tabatabaei, 2012). Why are the same species of animals different from one another? In terms of anger, softness, love, kindness, tameness and brutality goats or cows or any other animal species act differently. These differences prove that animals also have judgments, they can identify

good from bad and can therefore discern justice from cruelty (Tabatabaei, 2012). Based on the Quran and Hadith, not only will animals be held responsible for their actions and assembled on the day of Judgment, the skies and the earth, the sun, moon and stars, the jinn and stones and idols and other objects that have been worshiped instead of God will be assembled on the day of Judgment.

When it is mentioned that animals will be assembled and questioned for their actions, it does not mean that they, like human beings will have to go through the same stages in order to reach perfection. The same way that humans are judged based on their capacity and capability, animals will also be judged based on their competence. Animal actions show that they possess the power of will and that they make decisions, however, this 'will' might be weaker than that of humans (Tabatabaei, 2012).

One can even point out that the stories that are told about animals in the Quran show that intellectually they have nothing less than a moderately intelligent human being. For example the story of the ant and Solomon, where the ant states that the humans are careless and in some interpretations, they are believed to be negligent, and will not understand that the ants are moving under their feet and they will crush them.

Until, when they came upon the valley of the ants, an ant said, 'O ants, enter your dwellings that you not be crushed by Solomon and his soldiers while they perceive not.' (27:18)

Or the story of the Hoopoe where the animal makes religio-philosophical interpretations on how a group of people have been deceived by Satan and how they have forgotten the true creator:

But the hoopoe stayed not long and said, ‘I have encompassed [in knowledge] that which you have not encompassed, and I have come to you from Sheba with certain news. (27:22) Indeed, I found [there] a woman ruling them, and she has been given of all things, and she has a great throne. (27:23) I found her and her people prostrating to the sun instead of Allah, and Satan has made their deeds pleasing to them and averted them from [His] way, so they are not guided (27:24)

The right to ownership of animals has been passed to human beings:

Do they not see that We have created for them from what Our hands have made, grazing livestock, and [then] they are their owners? (36:71)

In return, animals have several rights in respect to humans:

a) Humans and animals possess equal right for using nature:

And it is He who sends the winds as good tidings before His mercy, and We send down from the sky pure water (25:48) That We may bring to life thereby a dead land and give it as drink to those We created of numerous livestock and men (25:49).

b) Humans and animals have similar rights in using good and fresh food:

Have they not seen that We drive the water [in clouds] to barren land and bring forth thereby crops from which their livestock eat and [they] themselves? Then do they not see? (32:27)

c) Since animals understand and are conscious, they have the right to live similar to humans

And there is no creature on [or within] the earth or bird that flies with its wings except [that they are] communities like you. We have not neglected in the Register a thing. Then unto their Lord they will be gathered. (6:38)

Imam Ali (as) in the 25th letter of the *Nahjul Balagha* illustrates the necessary requirements of a person who will be in charge of handling animals. ‘Do not entrust it to anyone except he who is a well-wisher, God-fearing, trustworthy and watchful, and who is not harsh on Muslims' property, nor makes them run too much, nor tires them, nor labours them’ (Imam Ali (as), 2010). The female camel should not be separated from its child, should not be used for riding and should not be fully milked since the child would be affected. Camels should be given resting time and those with their hoofs rubbed off should be driven with ease. When camels pass a water spring they should be kept there for drinking they should be allowed to rest from now and then, and be given time near water and grass (Imam Ali (as), 2010).

In another Hadith Imam Ali (as) states that Allah will curse whoever curses an animal. Swearing, cursing and slapping the face of an animal is prohibited. The Messenger of Allah (saw) has stated that whoever kills a sparrow without any reason, the sparrow will complain in the afterlife that my God! Your servant (the human being) killed me without reaching any benefits (Majlesi, 2007). Imam Kazem (the seventh Imam of Shias) has stated that if ants do not harm you, do not kill them (Amoli, 2010). Imam Sadegh (the sixth Imam of Shias) stated that a woman who had tied a cat and kept it that

way until it died from thirst, deserves punishment from Allah because of her misconduct (Sadoogh, 2011). Sheikh Toosi, a prominent Muslim scholar of the tenth century has mentioned that the reason for the obligation to pay alimony to animals is ‘because animals have respect and dignity’. Also Allameh Helli another prominent scholar of the thirteenth century states that ‘this is because animals naturally and inherently have dignity and respect’ (Helli, 1999). Shahid Sani a leading Shia scholar of the sixteenth century has stated that it is indispensable for an owner of an animal to provide a proper and suitable location for the animal such as a barn and stable, even if he has not used the animal or that the animal is dying (Thani, 2010). It has been stated that you should not stand for a long time on an animal’s back, unless it is for Allah (Majlesi, 2007). Or that you should not turn the animal’s back into your chair or your *minbar* (pulpit) (Sadoogh, 2004). Imam Sadegh in response to a question about a person who excessively strains an animal to increase its speed in order to quickly reach his destination stated that the Salat (obligatory prayers) of such a person is not accepted (Sadoogh, 2004). Also his Hajj is not accepted (Majlesi, 2007). In another Hadith it is mentioned that Muslims are obliged (*wajib*) to clean the nose of livestock if it is blocked and to allow the animal to breath freely.

Shahid Avval a prominent scholar of the fourteenth century has stated that paralyzing an animal that is going to be slaughtered is Makrooh (detestable). Imam Sajjad (the fourth Imam of Shias) on his way to Hajj was riding a camel that moved slowly, he raised his stick and showed it to the animal and said Oh! If I was not afraid of punishment I would

hit you. Then he brought down his stick and took the stick away from the animal's eyes. The Messenger of Allah (saw) of Islam has stated that Do not slap the face of beasts and whatever that has a spirit; because they praise Allah. The Messenger of Allah (saw) ordered that for slaughter, sharpen the knife properly and be far from the eyes of other animals (Ata, 1971). In Al Kafi (6:230) the Messenger of Allah (saw) asks 'do you wish to slaughter this animal twice, once by sharpening your blade in front of it and another time by cutting its throat?'

Muslims in the past among other cultures were renowned for the respectful treatment of animals. The French Essayist Michel de Montaigne noted that 'The Turks have alms and hospitals for animals' and these institutions were funded through religious endowments (waqfs) and would have appeared to most Europeans of the time as a frivolous waste of public resources (Foltz, 2006). The only aspect of *dhabh* (ذبح) mentioned in the Quran is the saying of Allah's name at the time of sacrifice; the remainder comes from hadith and the Islamic legal tradition. Thus the Quran does not specifically require Muslims to sacrifice animals for food or for any other reason, it only permits them to do so. And even then the Quran reminds Muslims that if they do sacrifice animals, 'neither their flesh nor their blood reaches Allah; it is only your righteousness that reaches Him' (22:37) (Foltz, 2006).

Abu bakr Mohammad Zakariyaye Razi (the philosophical way, *Sirat al-Falsafiya*) accepts the killing of wild animals when they pose danger to human life but finds it difficult to justify the slaughter of domestic creatures. In the end, however, he rationalizes both cases by claiming that by killing an animal one is liberating its soul and thus allowing it to transmigrate into a superior body bringing it closer to salvation (Foltz, 2006). Research on animals and Islam would undoubtedly be incomplete if ‘The Case of the Animals versus Man before the King of the Jinn’ from the Epistles of the Brethren of Purity (2009) by *Ikhwan al-Safa* written in the tenth century is not mentioned. In this remarkable representation of human animal relationship, animals complain of severe ill treatment from human beings. In this court humans claim that the animals (whom they perceive as their slaves) have escaped and some are disobeying our orders:

‘these cattle, beasts of prey, and wild creatures — all animals in fact — are our slaves. We are their masters. Some have rebelled and escaped. Others obey grudgingly and scorn our service’ (Safa, 2009)

The representative from the animals in response counts the torturous accounts of human treatment:

‘Humans encroached on our ancestral lands. They captured sheep, cows, horses, mules, and asses from among us and enslaved them, subjecting them to the exhausting toil and drudgery of hauling, ploughing, drawing water, turning mills, and being ridden. They forced us to these tasks with beatings, bludgeonings, and every kind of duress, torture, and chastisement throughout our lives. Some of us fled to deserts, wastes, or mountain-tops, but the Adamites pursued us, hunting us with every kind of wile and device. Whoever fell into their hands was yoked, haltered, caged, and fettered. They slaughtered and flayed him, ripped open his belly, cut off his limbs and broke his bones, tore out his sinews, plucked his feathers or sheared his hair or fleece, and set him on the

fire to cook, or to roast on a spit, or put him to even harsher tortures, torments ultimately beyond description. Even so, the sons of Adam are not through with us. Now they claim this is their inviolable right, that they are our masters and we their slaves. They treat any of us who escapes as a fugitive, rebel, and shirker — all with no proof or reason beyond main force' (Safa, 2009).

When humans explain why they are higher than the animals they state verses of the Quran as their justification:

Praised be God who formed man from water and formed his mate from him. He broadcast their seed, men and women, bore them over land and sea, favoured them with dominion, and sustained them with all manner of delights, saying, Cattle did He create for you, whence you have warmth and many uses. You eat of them and find them fair when you bring them home to rest or drive them out to pasture. They carry your heavy burdens for you to lands you might reach only with great trouble to your souls. He also said, You are borne upon them and on ships and, Of the cattle some are for burden and some for meat. And again, horses, mules, and asses for riding and for splendour, and much that you know not and Praised be God who said: that ye may be seated on their backs and consider your Lord's favour as you ride (Safa, 2009).

And the mule (the representative of animals) illustrates how transcendent philosophy views the world, a view that is far away from anthropomorphism. Humans, animals and the whole of nature are there for a purpose:

These verses point only to the kindness and blessings God bestowed on mankind. God said He subjected them to you just as He subjected the sun and moon the wind and clouds. Are we to think, Majesty, that these heavenly bodies too are their slaves and chattels, and men their masters? Hardly! God made all His creatures in heaven and earth. He set some in service to others, for their good or to preclude some evil. He subjected animals to man only to help humans and keep them from harm, not, as they deludedly suppose and slanderously claim, to make them our masters and us their slaves (Safa, 2009).

The writings of *Ikhwan al-Safa* point to the foundations of Transcendent Philosophy. It rejects claims that nature is nothing but dead matter. Nature is part of existence and it therefore has knowledge, power, will, life, speech, hearing and seeing. What would this change of worldview mean in modern relationships with nature? How is it different with current practices?

4.6.5 Modern Muslim-Animal Relationship

To many non-Muslims *Eid Alqurban* (Al-Adha) –a wide scale sacrificing ritual of thousands of domestic animals every year- is representative of how Muslims and Islam views animals. It is also known that Muslims are not interested in dogs and pigs and when it comes to Iran, a police initiative to illegalize having dogs as pets is usually highlighted. Similar to the laws and morals of any society, Islamic norms are often flouted, distorted or simply ignored (Foltz, 2006). It is even more confusing when local traditions and local behaviors are seen as Islamic while not having any type of relationship with the teachings of the Quran or the Hadith. This is for example the case of sacrificing animals in Iran. It is very common to sacrifice an animal –usually a sheep- for a significant event. For example a pilgrim who has just arrived from Hajj or from Karbala (the city of the shrine of the grandson of the Messenger of Allah (saw), Imam Hossein) or for the achievement of a sports person at a tournament or for a marriage or even for the opening of a highway or This is not related however, to any of the teaching of Islam (Khorasannews, 2009).

The definition of animals has changed (Tlili, 2012). The two words *hayavan* and *dhabba* used to include humans as well as angels and *jinn*s. Modern dictionaries do not include humans into the animal world. This is while medieval literature does consider human beings in the same group of animals. Humans are allowed to kill animals because Allah has allowed humans to do so and not because humans are ranked higher compared to animals and therefore permitted to kill in the hierarchy of creation. Humans are named as vicegerents of Allah on earth. Humans are held accountable for what they do on earth and how they treat creation.

One important example of a social change in modernization took place with the importing of the industrial slaughterhouse system which has even influenced Muslim countries such as Indonesia and Egypt. Animal abuse cases in Indonesian and Egyptian slaughterhouses that leaked video tapings have revealed, developed an excuse for Australia to stop exporting live animals to these countries at least for a temporary period (BBC, 2011). The changing diet of Indonesians that has made them consume far more beef than ever before through Australia's huge export of livestock to Indonesia prevented Australian officials from permanently suspending exports to the country while the temporary suspension was mostly aimed at cooling down the tension that was created by animal rights groups (BBC, 2011).

Virtually all of the world's 1.2 billion Muslims eat meat, in most cases as often as they can possibly afford to. Distributing meat is also one of the most commonly practiced forms of charity, and a hungry guest is as likely as to feel cheated and insulted if meat is not offered. Muslims like most people, take the practice of meat-eating to be a given, a fact of nature that need not to be questioned (Foltz, 2006). The Iranian diet has shifted from *aash* (pottage) that is usually meatless and *aab goosht* (broth) that usually contains a small piece of meat, a small piece of animal fat (usually lamb) and a piece of bone added with chickpeas and beans and most importantly a lot of water to foods that are loaded with meat. In the past Iranians cooked traditional stews and added a small amount of meat as seasoning.

Modern dishes however, stack the stew with meat and therefore create stews that are almost identical since meat is the main ingredient. These significant changes in the ordinary Iranian diet have developed various responses. Those who afford paying for lamb meat purchase it regularly and consume it regularly, those who cannot afford paying for lamb meat have moved towards beef and chicken. However, Iranian TV channels advocate cooking foreign food such as spaghettis and pizzas and these types of food is increasingly popular among children with working mothers. It is easy to make and the child loves it!

4.6.6 Slaughterhouse Industry and the Iranian Capital

Philosophers, sociologists, historians and ethicists have analyzed the modern meat industry from a range of different perspectives. Philosophers have explored meat eating practices and whether humans are meat eaters or vegetarians. Sociologists have studied how the meat industry abuses workers. For example in the United States most people working at the meat industry are Hispanic and receive very low wages and have very limited rights. When I visited one of the poultry slaughterhouses south of Tehran that was presumably the most advanced and high tech poultry slaughterhouse in the country, every single worker was from Afghanistan (who are usually illegal immigrants). Food nutritionists and activists have examined how meat eating has effected nature in many different ways. From excessive cattle raising, to destroying the Amazon rain forests for soya plantations and to the export of soya to china for pig feed.

Temple Grandin has investigated the attitude of cows and has introduced very practical measures to develop what she calls 'humane slaughter'. I am, however, analyzing the slaughterhouse from a very different perspective. I am looking at the slaughterhouse from a philosophy of technology perspective. How has this technology affected human beings and how has it changed the modern perspective towards nature? How has religion –in this case Islam- handled this ever growing practice of excessive farming and disproportionate slaughter? What roles do alienation and rationalism play in this change of practice/perception?

The slaughterhouse whether it is seen as an institution, as an industry or as a unique technological system, it is arguably right at the heart of modernism. It has been created mainly for better centralized control over slaughter practices; it has established an environment where health officers can monitor the quality of the meat more conveniently and when it was being propagated as the sole location for slaughter, around ninety years ago in Iran, it was part and parcel of a more exact taxation system where the government benefited from the taxes through each and every slaughter. On other rather more popular accounts, the slaughterhouse has been associated with population growth and the need for better and faster systems that would make meat available at the least amount of time and the least cost. This is of course entangled with the point that the Iranian stomach was moving from desire for minimal amounts of meat and mostly vegetables and legumes to a diet indulged with meat.

When looking at the slaughterhouse as a technology that has changed how people perceive nature, one can understand that the human animal relationship has changed radically through the introduction of the modern meat industry. Animals that are consumed for food, in Iran mainly cattle, sheep and poultry are no longer perceived as animals. They were for some time perceived as meat - as products that are neatly packaged and arranged in supermarket refrigerators and cannot be tracked to their origins, a spectacular example of commodity fetishism. In the last decade and in most recent efforts shops selling meat are no longer called butcheries or meat shops, they are named 'Protein Shops'. This is an example of how a subtle form of alienation could be

further distancing humans from animals. By identifying animals as proteins, animals are transformed into biological molecules or macromolecules. Traditionally animals were a part of the life of ordinary people. They would provide milk, fertilizer, wool and would help farmers in their farming. Animals would be slaughtered mostly when they were too old to work or as Jalal Al Ahmad (1989) explains they were slaughtered when they fell down and broke a leg and could no longer walk. The modern animal however is created to be killed, poultry are kept in dim light conditions to eat as much food as they can consume, walk the least, grow faster and therefore die quicker (faster profit).

Slaughterhouses, similar to other rational industrial systems work on the basis of efficiency, productivity, reduced cost and most importantly speed. For example the slaughterhouse follows exactly the same production process adopted by Henry Ford's 1908 Model-T motor vehicle (Lee, 2008):

Though slaughterhouses produced meat instead of motorcars they too took raw materials and worked them into identical products according to a serialized logic, assigning one worker an isolated aspect of a complicated process. The individual worker only performed a single task, making the final product the result of an anonymous collective. In this way the system dispensed with a traditional culture of craftsmanship, including its training, ethics and values. By its twentieth century incarnation, the slaughterhouse system was completely modern, a gigantic machine without narrative or history, perpetually regurgitating a product issued inside a moral vacuum. Yet the production of meat was fundamentally different from the manufacture of cars and other commonplace household goods, including dietary staples such as canned peaches or sliced bread because the process started with something highly complex and reduced it to something simple. The slaughterhouse did not assemble a new machine along a rapidly moving line but disassembled a pre-existing animal, part by bloody part, until it remembered as a carcass without

life, skin or entrails. Livestock animals entered the slaughterhouse as whole cows, pigs and chickens, they came out as cutlets.

Meat has therefore become a product that is consumed for utility. Humans not only enjoy having different types of meat on each and every dish, they believe that they are developing a strong and healthy body at the same time. Slaughterhouses in Iran have gradually moved out of the city. It was common for people to witness slaughter either at homes or on the streets and butcheries. Now the modern human can no longer tolerate the brutal scenes anticipated with open slaughter (A, Talai, personal communication, November 5, 2012). Slaughterhouses have not only moved outside the city, they do not have any signpost or any trace that can be identified by people passing by. The strong stench of their waste product, however, is easily traceable. It was a very difficult process to find the slaughterhouses even with exact directions. I used the strategy of chasing meat trucks from far distances to find the hidden slaughterhouses. Historically and before coming to Iran, the slaughterhouse was initially rejected in France and Mexico (Lee, 2008). These unique technological systems are tied with the politics and economics of meat. Modern abattoirs in the West worked hand in hand with capitalism and private ownership.

In France, the location of the first slaughterhouse was in one of the poorest areas of the city where most factories and industrial warehouses were. This area was home to the highest rate of crime, highest amount of pollution and home to a large number of

immigrants and unskilled day laborers (Lee, 2008). This was of course very different with the 'other Paris of new grand boulevards and gilded facades, where the fashionable Parisian bourgeoisie passed their days and nights' (Lee, 2008).

Similarly, slaughterhouses in Tehran were located south of the city and where economically lower class people lived. They have now moved even more towards the south and close to cities such as Varamin and Shahriar. When entering Tehran from the south and from cities such as Esfahan and Qom, the industrialized south, home to slaughterhouses and recycling centers are easily felt. These centers are also neighboring Tehran's huge cemetery. The south is generally much more polluted than the north, which is closer to the Alborz mountain chains and home to the most lavish types of living and huge shopping centers popping up on each and every corner. This separation and alienation has easily created an environment where killing animals is separated from consumption. Residents of Tehran rarely undergo the trouble of witnessing the death of an animal to be able to eat its flesh. In modern gatherings and family dinners they cannot estimate how at least five sheep are slaughtered to prepare the meaty meal. A very simple calculation shows that a meal containing lamb leg muscles includes more than one sheep if the number of muscles increases to five then a meal packed with sheep muscle can only be prepared with the massacre of a group of sheep.

Inspection is an important stage of the process of meat production. In Iran it is not only important for meat to be healthy and disease free it should also be religiously acceptable (Halal) and should follow strict religious regulations. Meat inspection has been the duty of priests and religious officials in Egypt and Rome but in the West it later became the duty of market overseers and the police. In Iran health inspection officers are from the veterinarian department and religious inspection takes place through trained religious experts who are mostly clergies and work under the representative of the Supreme Leader at the veterinarian department. Mr Liaghati, the representative of the Leader in the veterinarian department has stated that currently five hundred Islamic *Zebh* (slaughter) supervisors who are mostly clergies are working at six hundred and ten slaughter houses across the country. This naturally means that one hundred and ten of the slaughterhouses in the country are left without supervision. My own observation showed that Halal supervision was limited to the supervisors either being absent at the time of slaughter or reading newspapers behind their closed office doors.

Meat consumption and production in Iran, similar to other parts of the world is constantly increasing. When eating Iranian food outside, excluding fast food, you will be mostly forced to choose between different types of Kebab that is one hundred percent meat with rice. The deputy head of the cattle production of the Agricultural Jihad Ministry stated that the per capita consumption of red meat in Iran is 14.6 kilograms per person in one year and this is while the desirable per capita consumption of red meat is

17 kilograms for each person per year and statistics show that we do not have a very long way to reach the desired limit. Amir Kashani Assistant Deputy of meat Production from the Ministry of Agricultural Jihad, stated that ‘we have in the past year produced 960 thousand tons of red meat and this amount will increase to more than one million tons in the following year’. He asserted that based on the announcement made by FAO, Iran is the eighteenth largest producer of red meat in the world and in terms of red meat production, it is the first in the middle east. In the ‘who is more developed’ competition among modern states instead of questioning how much meat do Iranians need, the issue gets lost in fulfilling the graphs of world standard statistics. The head of the Supreme Leader’s representative office in the veterinary department stated that Iranians currently consume one million tons of red meat per year and from this amount two hundred thousand tons is imported. Nomads share four hundred thousand tons of meat production in the country.

In order to produce such large amounts of meat efficiently and with the least amount of cost, Iran asked for technological solutions and the answer was the slaughterhouse. The country imported slaughterhouse technology from the West. My interlocutors pointed out that while we are currently developing our own slaughterhouse technology, the system follows the same model that was initially imported from countries such as Holland. Minimal adjustments have been made in order to make it religiously suitable and therefore Halal (A, Daami, personal communication, October 12, 2013). The

methods of slaughter in the west remained resistant to full mechanization. This process was divided into various sections that included immobilization, stunning, suspending, and bleeding. A set of stunning technologies (bullets, pistols, bolts) that were considered 'humane' became available to enable 'the puniest man to kill large bulls with perfect ease', precluding struggle or sound (Lee, 2008).

An important point that is emphasized in Islamic teachings is that the animal should be dead prior to the skinning stage. The speed of the slaughterhouse does not allow one to really understand whether the animal is fully dead or not. Most obvious is the case of sheep slaughter. They are lined one after the other and a professional butcher quickly slits their throat within seconds and they are then hanged from the rails. The next step is for them to skin the animals. Now do the workers of the slaughterhouse examine whether the animal is dead or not? There are counter arguments to this theory and workers of the meat industry state that it is easier and faster to skin an animal when it is dead than when it is still alive, and if the cutting is done while the animal is still alive it might cause bruising and therefore the loss of meat.

Recent efforts, such as those of Temple Grandin, aimed at improving the conditions of animals in modern slaughterhouses sought to create a more humane environment for the animals. The workers would be trained properly and each will undertake a specific duty which would make the training easier and more effective. They also thought that the

newly engineered slaughterhouses would create pathways for animals to calmly walk to their slaughter area and not feel any type of stress. Unfortunately the complexity of the modern meat industry has overwhelmed good faith for creating a humane slaughterhouse and the lack of proper supervision, lack of interest for spending on animal well-being in addition to old and outdated slaughter regulations has created chaos. This disorder has mainly benefited those with capital in the meat industry at the cost of animal suffering.

The slaughterhouse is an example of how rationality and alienation along with many other aspects work hand in hand in changing a society's worldview. This society has a strong history of Islam and it is the only country to experience an Islamic Revolution. However, the way in which the people of this society view the world –as explicated in my case study- shows that modern values have replaced the strongly held Islamic values. It appears that within the influence of commodity fetishism as a neutralizing agent, modern values and figures as forms of inspiration, the human-animal or more generally the human-nature relationship have moved out of shape and have become unbalanced.

4.7 Iranian Revolution and Technological Change

As the discussions in the previous sections show, the Iranian revolution has had a significant impact on the life of Iranians. The main purpose of the Revolution was to

revitalize Islamic values in each and every aspect of life. This includes the ways in which the country is managed and the technologies that are created or enter the country from abroad. In the case of the slaughterhouse, it was mentioned that although minor changes took place in order to transform the non-Islamic technology into an Islamic one, the principles of this technology were not properly examined. The slaughterhouse was bought from abroad, the killing area was arranged in order to face the Qiblah (the direction of Mecca) and the slaughter men recited the name of Allah prior to slaughter and followed the instructions of slaughter in Islam using a sharp knife. The issue of slaughter is not only limited to the method of slaughter but rather embeds deep social understandings of the human- animal relationship. According to Transcendent philosophy, everything in this world, including animals are knowledgeable. This is in sharp contrast to the modern worldview that sees nature as pure matter and something that can be abused in any way possible (Nasr, 2007). The whole world acts under the supervision of Allah and humans play only a small part of existence. They should understand their limits and the boundaries which they cannot breach. Therefore treating animals like industrial products is something that cannot be tolerated in a truly Islamic technology.

The automatic corpse washer follows a similar pattern. After alienating humans from their death and trying to forget death through various forms of alienation, devices can replace what humans are naturally born to do. The act of washing the dead is then limited to a simple wash, without any meaning or any philosophical significance. It is

limited to removing the dirt from the dead body and a device can do a better job especially if it uses higher quality detergent. Humans no longer even need to witness the final steps of life and to remind themselves of the afterlife. Iranian professors who have mostly studied in the West or have studied Western science and technology and believe in the innocence of technology cannot distinguish between a corpse washer and an automatic corpse washer. They cannot feel the difference of washing the dead with their bare hands or through pressing a button. It is similar to a joke that is common among religious Iranians that says, 'instead of actually performing our prayers, can't we just take its pill?'

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CHAPTER 5: The Intersection of Islam, Culture and Philosophy

5.1 Introduction

This chapter explores modern religious negotiations. The word negotiation refers to how technocrats and religious officials negotiate their terms with one another in order to reach a common understanding which will end with a fatwa. This is where everything that has been discussed so far comes together and a technology becomes religiously acceptable or religiously rejected. Therefore issues of Islam, technology and culture blend together and create a homogeneous structure. For example, the slaughterhouse and the automatic corpse washer have gone through various stages of *Fiqhi* discussions and scrutiny in order to be religiously acceptable.

These discussions involve issues of culture because the people making the decisions come from a similar cultural background. Philosophical presuppositions of technology is taken into account and furthermore, Islamic principles are blended into the final outcome. In this section, the backbone of the search, the ethos of modernity is under scrutiny. That is rationalization, alienation and specialization are in direct relationship with their religious interpretation. The religious negotiations in this study took place mostly between the religious elite, who are called the *Ulama* or *Maraje'*, and graduates of engineering and medicine schools who have been educated in the West or have undergone Western forms of education in Iran. These negotiations led to invisible

power struggles between believers of an Islamic way of life and advocates of modernism.

There are of course those who believe in a blend between the past and the present and creating a modern version of Islam. During the years after the Revolution and during the eight years imposed war, these differences of opinion were mainly silenced under the veil of defending the country since most of the country's resources were constantly being poured into the war. However, changes took place after the ceasefire in 1988, and the demise of Imam Khomeini in 1989. Ayatollah Khamenei was voted in as the Supreme Leader of Iran through a Council of Experts and Hashemi Rafsanjani was elected as President. During the period labelled as 'Construction' (*sazandegi*) and under the Presidency of Hashemi Rafsanjani, a certain form of political and economic liberalisation was carried out which signalled the rebirth of Westernization –first wave of modernization took place under the rule of Reza Shah and the Pahlavi dynasty from 1925 to 1979- under the mask of development. The onset of the Revolution was most certainly a break in the process of modernization.

During this period, ordinary people (and not necessarily the elite) cherished a simple and modest lifestyle. Advertisements were banned throughout the country; people chose to wear modest clothing (although at that time it was not yet part of the constitution to wear the hijab); and in general, people resisted foreign influence and interference

whether it was in the form of politics, culture or religion. After the war, rather than moving towards moderation, the revolutionary class began professionalising: 'they secured the transition from the age of 'revolutionary passion' to that of 'revolutionary reason', to use the actual terms employed today in Iran' (Adelkhah, 1999).

Rationalization of social life evolved quickly over a period of twenty years, and this was the beginning of the reshaping of the Revolution. 'The organisation of the clergy, theological instruction, and collection of religious taxes have become particularly institutionalised, the believer's relationship with his faith is all the more transformed because the faith is now transmitted through modern means of communication' (Adelkhah, 1999). Religious practices such as endowments, pilgrimage and the like are thus blending into modern socio-political trends.

Other signs of rationalization among the Iranian community, was rationalizing and bureaucratising more and more features of daily life; modernizing religious interaction; the push for the extensive development of private companies; Tehran and other large cities pioneering the birth of urban culture; social activism among men and women and at the same time respecting state regulations as never before. Respecting these regulations became religiously meaningful. Some *Ulama* decried that under the Islamic Republic not abiding by the law even if it is passing a red light, it is equal to committing a sin.

After the establishment of the Islamic Republic and as Islamic principles entered the realm of the society and of government, Iranians have struggled to learn how to unravel the complexities of social life through a coherent and integrated religious system. The Islamic Republic is a novel term that was introduced by Imam Khomeini and other leading Revolutionary scholars. The Constitution was however, mostly taken from the French Constitution (Seyyedani, 2015). Even when there were calls for democracy, Ayatollah Khamenei coined the term Islamic Democracy, therefore giving it Islamic legitimation. More fundamentally, it would be very difficult to define Islamism precisely and distinguish what is 'pre-Islamic' or 'post-Islamic'. 'Islamism, as a political and social phenomenon, has never been something rigid, at least not in the context of Iranian society... it has, in particular, inspired numerous ideological debates and has never given rise to a special mode of production, nor even to a specific, original form of political economy comparable to what Soviet Socialism possibly was... it has always remained in gear with the dynamics of social change, including those of globalisation ... That is why it puts on such a different appearance from one country or historical situation to another' (Adelkhah, 1999).

The significance of *fiqh* in the social sphere has been fundamentally revolutionized after the Revolution. Prior to the Revolution and for many centuries, the Shahs from over ten dynasties ruled the country, and the *Ulama* were usually kept in the margins of mainstream social and political decision making processes (Abrahamian, 2008). Even though the *Ulama* were popular among the people, they were limited when it came to

the ruling of the country. One of the significant examples of the widespread acceptance of the *Ulama* among the general population is Ayatollah Mirza Shirazi's Fatwa on banning the use of Tobacco in 1891 in Iran. This revolt was against an 1890 tobacco concession granted by the Shah to Britain. This Fatwa was so influential that it even led to the breaking of Nasereddin Shah's own water pipe by his wife. The uprising finally resulted in the cancellation of the concession. This example itself demonstrates how Ayatollah Mirza Shirazi's fatwa was influential in the tobacco case, but the *Faqih* did not have the authority to design and implement an all-encompassing administrative and social regulations for the country based on Islamic principles. Therefore the social circumstances in Iran prior to the Revolution especially throughout the modernizing period and because of the strong influence of Western powers in governing the country was the root cause of developing a type of *fiqh* that is strong and influential in managing personal affairs but restricted and therefore immature in fundamental and practical organization of the society.

The need for a faster growing maturity in the latter issues was even more apparent after the Revolution and the establishment of the Islamic Republic. Three decades after the Revolution, *Hujjatul Islam* Rashad, who is the head of the Islamic Thought and Culture Institute in Qom, observes the current main challenges of *fiqh* and *Ulama* as the absence of progressive and proactive discourses in worldviews, ethics, education as well as social and political *fiqh*:

It has been a long time since the scope of *Ijtihad*, from comprehensive *fiqh* that is equal to theoretical *fiqh* (that is equal to beliefs and religious worldview) and practical *fiqh* (that is equal to provisions, ethics and religious education) and reduced to the branch of provisions. And *Ijtihad* and *fiqh* in the area of provision has itself been limited to personal and liturgical obligations. There is no progressive and proactive discourse in the area of religious worldview (beliefs), religious character (ethics), religious education (*tarbiat*), and also social and political *fiqh* despite what is necessary and expected (Rashad, 2013).

Earlier, in the last year of his life, Imam Khomeini cautioned the *talabehs* and *ostads* of the *Hawzah* in an important message. He pointed to his discontent with the current methods of *Ijtihad* and stressed that it is crucial for *Ulama* and thus *fiqh* to introduce the capacity of the intellectual traditions of Islam. In an Islamic government *Ijtihad* has to be active and constantly updated. This necessitates a correct understanding of the society and of the government ‘It is here that the colloquial *Ijtihad* in the *Hawzahs* is not enough... if a person is knowledgeable in the sciences of the *Hawzah* but is not able to identify the interests of the society or that he is not able to distinguish righteous and helpful people from unrighteous and in general lacks proper insight and decision making skills in social and political issues, he is not a *Mujtahid* in administrative and social matters and cannot guide the society’ (Khomeini, 1988). This type of *Fiqh* moves beyond personal provisions and a book on religious treaties, it encompasses every single aspect of human life whether in the form of beliefs or actions.

Therefore the complexities of modern life from his perspective necessitate a much more comprehensive form of *fiqh*. Scholars such as Ayatollah Araki have initiated courses

and discussions on the *fiqh* of culture and the *fiqh* of technology. These courses themselves point to the lack of comprehensiveness of the current available *fiqh*. This means that although there might not be any space to oppose or even discuss various aspects attaining to the slaughterhouse or the corpse washer, if the size of the underlying compass is enhanced to the extent where it covers all aspects of human life and most importantly the environment, then it would be possible to talk of a Fiqh that has been able to respond to the needs of an ever changing society.

As modernization kept its pace, new forms of religious gatherings and ceremonies, new forms of religious education and certificating religious studies, began to take shape after the Revolution. Many previously traditional forms of *Hawzah* classes that were held in masjids, have now moved into classrooms that use power points and enforce strict grading systems, and even multiple choice questions. However, similar to masjids, it is a custom in most institutions across Qom to use indoor carpets to fill in the whole area so that visitors and employees take off their shoes before entering the office. The birth of the terms *Hujjatul Islam* Dr, which basically means the ‘proof of Islam’ followed by the modern term ‘Dr’, and the use of the word *Karshenase Mazhabi* (religious expert) in TV interviews and discussions for Islamic scholars are other signs of this process. There have also been initiatives to change the traditional structure of *Hawzahs* and to create various specializations.

Similar to the study of modern medicine where *talabehs* study general medicine courses for a period of seven years and then choose an area of specialization, some religious scholars such as Hashemi Rafsanjani suggested that if these *Hawzahs* (religious schools) plan to be progressive and up to date for responding to the necessities of modern life, they must move towards 'specialization'. Thus *Hawzahs* were created in the city of Qom, specialized only for students who have already gone through a modern education system and who possess engineering or medical degrees and plan to continue in religious studies. Computer and visual representations of religious activities such as the *Tawaf* of the Ka'ba or developing Haj ritual workshops for first time Haj pilgrims and even mimicking the Ka'ba for people to rotate around it in a large area such as sports stadiums are other such changes in modern terms.

Therefore changes in modernization and rationalization of the society in general will lead to changes in the rationalization and modernization of religion. This modernization however, whether in the form of new technologies that in some way intersect with religion or modern systems of medical checkup, must fulfill several requirements prior to religious approval. This process follows certain complex steps and phases that are rooted in *fiqh* (Islamic jurisprudence). To identify how modern social issues are analyzed and examined by religious scholars especially the *Marja'* it is necessary to define *fiqh* and then explore the limitations of this form of analysis. What follows is the result of hours of extensive reading and in depth discussions with leading *Mujtahids* and religious scholars from Qom.

5.2 The Fiqh of Technology

Fiqh is the obligatory and non-obligatory laws of Islam that have been appointed by Allah for human beings. In Shia history, *fiqh* has undergone several stages of transformation. The period when the Messenger of Allah, Mohammad (sa) lived (609-632 AD) can be named as the period of legislating provisions. After he departed and during the lives of the twelve Shia Imams up to the twelfth Imam and before the disappearance of the last Imam (632- 941 AD), the Imams themselves acted as the *Faqih* and were in charge of carefully explaining the laws that were first introduced by the Messenger. This period may be referred to as the period of illuminating the principles of the legislations. The peak of this period occurred during the lifetime of the fifth Imam (Imam Muhammad al-Baqir) and sixth Imam (Imam Ja'far al-Sadiq) from 712-765 AD.

Because of the political situation and the temporary ease of government pressure, the fifth and sixth Imams were able to hold classes and regular intellectual discussions in masjids and their homes to explain various aspects of Islam. The next period where none of the Imam's were physically present (765 AD up to present) is the period where *Fiqh* became most prominent. That is, scholars became responsible for extracting provisions from the Quran and the Hadith by analyzing and adapting them to the most recent aspects of the society. The principles of *Fiqh* (Islamic Jurisprudence) are discovered and interpreted using the Quran, Hadith, *Aql* (intellect) and *Ijma'*

(consensus). However, Ayatollah Javadi Amoli states that the sources of interpretation are the Quran, Hadith and *Aql. Ijma'* can be considered part of *Aql* (Amoli, 2014). The *Faqih* (Islamic Jurist) has to therefore be an expert in the interpretation of the Quran and the Hadith. He has to be aware of current world affairs in order to be intellectually capable of critiquing new and undecided issues and finally he has to work closely with other scholars and jurists in order to reach *Ijma'* (consensus) on matters of debate.

There are five different types of actions in Islam. First, actions that each and every Muslim is obliged to do and will be held accountable in the afterlife if he/she does not perform it such as the daily prayers, fasting. These actions are called *Wajib* (obligatory). Second, actions that each and every Muslim must not do and will be held accountable for if he/she does perform such acts such as killing an innocent person, dishonesty, cursing, these actions are called Haram (unlawful). There are actions that are recommended (*Mustahab*) and actions that are detestable (*Makrooh*) but in both cases the person performing or not performing these acts will not be held accountable in the afterlife although repeating detestable actions will lead to performing a Haram. The fifth and final type of action is called *Mubah* (allowed). These actions are permissible and they will neither attract otherworldly rewards nor gather punishments. Actions such as washing the corpse and performing its rituals fall under the *Wajib* (obligatory) category but if a group of people are already performing it, it is no longer *Wajib* for other. Voluntarily performing the *ghosl* is what is considered as *Mustahab* (recommended). Giving water to animals prior to slaughter, not allowing them to see each other and

being kind and gentle towards them is also *Mustahab*. Torturing and mistreating animals is Haram (unlawful).

The scientist/technologist (veterinarian and health expert in the case of the slaughterhouse and the mechanical/electrical engineer in the case of the automatic corpse washer) have worked closely with the Islamic jurist and have debated various aspects of each technology. In order to understand this complex relationship and interaction it is necessary to explain the stages involved for a *talabeh* to become a *Marja'*. The *Hawzah* (religious school) similar to other institutions of knowledge has a specific set of instructions for ranking its members. Wearing the *Ammameh* (turban) and the *Aba* (cloak) as the official dress of the *talabeh* follows a specific guideline and it is illegal for non-*talabeh* to do so. The black *ammameh* is reserved for the descendants of the Messenger while other non-descendants wear a plain white turban.

There are different academic levels (سطح) of study and the highest level, similar to becoming a professor in western modes of education, is to become a *Marja'* (source of emulation). The *Marja'* has to be an expert of Arabic language and literature, interpretation of the Quran, theology, Science of Principles, *fiqh*, Logic, and Philosophy. Becoming a *Marja'* does not only depend on expertise in understanding Islamic principles and the capability of extracting Islamic rulings from the Quran and the Hadith; a *Marja'* is a just and pious person who also lives a simple life (Khamenei,

1992). One step before becoming a *Marja'* is to be a *Mujtahid*. A person becomes a *Mujtahid* when he first of all believes that he has reached the point of Ijtihad (discretion) and that secondly his *ostad* (teacher) grants him this permission. *Mujtahids* can individually extract the Ahkam (provisions) from the Hadith and the Quran and therefore do not need to imitate others. What demarcates a *Mujtahid* from a *Marja'* is their followers. A *Mujtahid* without any followers will not be called a *Marja'*.

The official body that has currently (1994 AD) suggested six *Maraje'* (plural form of *Marja'*) is the Jame'eye Modarresin of the Qom *Hawzah* (Society of Qom *Hawzah* Ostads). This institution, which is currently the only official body, certifies that a certain *Mujtahid* become a *Marja'* and lay people can follow and imitate his fatwas. This is while they will not oppose others who have individually announced that they have become a *Marja'*. These *Maraje'* might also have a large number of followers. There are a number of *Mujtahids* who are not interested in officially becoming a *Marja'*. They have officially completed the necessary levels of study and are convinced that they no longer need to emulate others but have not shown interest in becoming a *Marja'*. This at times occurs because of their social obligations. The six *Maraje'* approved by the Jame'eye Modarresin are Ayatollah Khamenei (the current leader of Iran), Ayatollah Vahid Khorasani, Ayatollah Shobeiri Zanjani, Ayatollah Makarem Shirazi, Ayatollah Safi Golpayegani, and Ayatollah Sistani (who lives in Najaf, Iraq).

One of the first courses that a *Mujtahid* usually takes responsibility for teaching (usually between the age of thirty to forty) are *خارج فقه* *Kharej-e Fiqh* (outside *fiqh*) and *اصول* (principles). While these courses do not follow a specific text book the participants discuss and analyze the different aspects of a fatwa in depth. At the final the *Mujtahid* or the *Marja'* states his own opinion at the end of each discussion. The complete set of opinions of a *Marja'* is documented in a book called the *رساله عمليه* *Resaleh Elmiyeh* (religious treaties). Although these books might look very similar to each other and even more similar to religious treaties written hundreds of years ago, there are certain aspects that slightly differ from one book to another. The basic treaties remain quite similar and what usually distinguishes the thought of one *Marja'* from the other is the *افستولات* *Estefta'at* (questions) that includes questions related to current affairs such as issues of artificial insemination, organ donation and music.

Among the *talabehs* attending the *خارج فقه* *Khareje Fiqh* (outside *Fiqh*) classes, 'some will naturally be stronger and more intelligent than others' (H, Baadiyeh, personal communication, March 29, 2014). The number of these selected *talabehs* is usually decided by the *ostad* and his/her line of thought. For example the *talabehs* of Ayatollah Khomeini's school of thought are different from the *talabehs* of Ayatollah Khomeini's school of thought. The *talabehs* sit together and with their *ostads* in long hours of debates and dialogues and work intensively on the thoughts and opinions presented by their *ostads*.

The next step for a *Marja'* is to start an office. One person is appointed to handle issues of funds (mostly religious endowments coming from *Zakat* and *Khoms*), and another is responsible for speeches and other activities pertaining to religious and social affairs related to their followers. Also various councils are formed in order to address various issues. For example the council for worshipping and prayers in Haj, the *Maraje'* (plural form of *Marja'*) mostly have a council for Haj, since Haj is a very critical issue and its regulations have to be frequently updated. In order to keep the religious treaties up to date (for example Ayatollah Makarem Shirazi has a meeting every day from seven to eight am).

The heads of the councils who are chosen from among the top *talabeh* (students) come forward with a number of different questions that have been asked or sent to the office either in person, through the telephone, mail/email or the *Marja'*'s official website. They sit together and discuss each new issue in detail. After discussing among themselves they hold a meeting with Ayatollah Makarem at his office and have arguments regarding Ayatollah Makarem's previous fatwas and his method of extracting fatwas and the response to a particular question is so on and so forth. Ayatollah Makarem will either approve or disprove the fatwa extracted by his *talabehs*. If these questions involve for example an issue that is related to medicine, they will ask medical doctors to participate in their councils and discussion groups and to provide an expert opinion. All

of the offices of the *Maraje'* (plural form of *Marja'*) include a medicine council which consist of subgroups with medical doctors discussing different issues in each group. Doctors who have gained a reputation in their profession and are trusted by the *Marja'* usually attend such sessions. In some rare cases medical doctors outside the usual circles are asked for assistance in order to gain details from other sources. The choice of experts participating in such meetings does not follow a systematic method but is mostly based on relationships and trust and therefore it might be different for one *Marja'* to another. For example, Ayatollah Khamenei's office is quite dynamic and involves discussions that include a large number of participants. He arranges the meetings in this manner so that more diverse discussions will take place and that opposing and contradicting views will be heard and therefore a more reliable decision will be made.

For controversial issues, the initial discussions usually last for one to six months. For example in the critical case of artificial insemination the consensus was reached after a long period of time. There are cases where this method of questioning and analyzing is abused. For example in the case of vasectomy while the *Marja'* has stated that vasectomy is permissible only when there is no bleeding, medical practitioners take the permissible part and no longer care whether in practice bleeding occurs or not (H, Qomi, personal communication, November 15, 2013). If in unfortunate cases a group of doctors approach a *Marja'* with a vested interest, they may be able to acquire religious approval in a general sense while there is practically no assurance for its honest

application. These cases are usually opposed to when they become public and other *Marja'* disprove it. The automatic corpse washer followed a similar pattern. One of the issues that was largely debated before approving the device was what is called *Mobasherat* (stewardship). It is obligatory that a human being washes the dead body. The question raised was whether pressing the button can be considered as *mobasherat*. The designer told me with a frustrated tone how he finally proposed that if during the automatic process of washing, a corpse washer rubs a stroke of his sponge on the dead body and the rest is taken care of by the device may be considered as *mobasherat*, the religious officials agreed.

It is possible that in certain cases, during group discussions, the *Marja'* opposes the opinions of his *talabeh* and comes to a completely different decision. He will call the final shot, basically because according to hadith he is the one held responsible in the afterlife. A Hadith from Imam Sadegh (as) has stated that *لما نحن في لقاء الرسول و نزلتكم أن* *نمنا نفرعوا* we state the principles but it is up to you to understand and adapt the branches'. Therefore each *Marja'* has to individually reach a certain point of decision. Given the vast diversity of the concepts involved in this decision making process, the *Marja'* faces extreme pressure to 'make the right decision'. Cases that involve new technologies or scientific advancements make it even more difficult since the *Marja'* might not be able to understand all the underlying issues related to it. In trans-disciplinary cases such as the slaughterhouse, the complexity lies in the fact that the current available *fiqh* lacks tremendously when it faces issues of the environment.

The automatic corpse washer turns into a complex matter of debate because while on the surface it seems like a very ‘Islamic friendly’ device, it brings in questions of relationships between human beings and more importantly in regards to their relationships towards death. Further representations of the negotiations between the technocrats and the *Marja*’ were manifested in questions such as why have the *Maraje*’ mostly voted in favor of the emerging technologies? Is it because they are surrounded by technocrats, whether engineers or graduates of the natural sciences or technocrats who reside right at the heart of the *Hawzah*? Is it because the *Maraje*’ themselves have been influenced by modernity and see it as unavoidable path forward? Or is it that similar to most other Iranians, they have also become so tied up with technology that they would be labeled backward and an enemy of development and progress if they criticize technology and have to tolerate the cliché that states: ‘Are you asking us to ride a donkey from now on to work?’ While the book of *fiqh* comes to be known as the de facto source of instructional referral, living a truly Islamic life might need much more than this.

That is why scholars such as Ayatollah Javadi Amoli have recently moved towards writing an extremely popular book called *Mafatih al-Hayat* (the keys of life) that act as another version of the *Mafatih al-Janan* (the keys to the heavens) that is a vast collection of supplications, prayers, *Ziarat*, special activities during the year, months and days. This new version of the *Mafatih* has reached almost two hundred re-publications and over one million copies have been sold. Among the various categories

and discussions, a section on slaughtering animals scorns current practices of animal abuse that take place on a daily basis in slaughterhouses across the country (Amoli, 2012).

5.3 Islam and the Slaughterhouse

The issue of animal slaughter looks straightforward in Islamic law. Excluding sea animals from the equation, Muslim sects agree on the basic principles of slaughter. Therefore what is considered Halal in any part of the world will be Halal for all Muslims around the world. There are six main principles for a Halal slaughter:

1- The person slaughtering the animal has to be a Muslim; 2- The tool used for cutting the animal's throat has to be made of sharp iron, unless it is not found; 3- The respiratory tract, esophagus (channel for taking in food) and jugular veins must be severed at the time of slaughter; 4- The front of the animal's body has to face the *Qiblah* (whether lying on the right or the left does not matter); 5- The person slaughtering the animal has to recite Allah's name prior to slaughter. It can be in the form of *بِسْمِ اللَّهِ* *Bismillah* (In the name of Allah), *سُبْحَانَ اللَّهِ* *Sobhan Allah* (Praise to Allah), *لَا إِلَهَ إِلَّا اللَّهُ* *La Elaha ella Allah* (There is no God but Allah); 6- After cutting the animal's throat, it has to move to show that it was alive at the time of slaughter.

There are several other issues that are currently considered as *Mostahab* (desirable) and *Makrooh* (detestable) but will not necessarily deteriorate the Halal criteria of meat. The desirable actions include: 1- Give water to the animal before slaughtering it; 2- The person who is slaughtering the animal should face the *Qiblah*; 3- Act in a way that the least amount of harm would reach the animal (for example cut the animal's throat quickly); 4- For sheep, at the time of slaughter leave one leg, usually the hind leg free, completely tie the legs of cattle but leave the tail free, tie the front legs of the camel and leave the back legs free and for poultry, leave them free so that they will flap their wings after slaughter; 5- It is considered as desirable caution *Ehtiate Mostahab* (إحاطة بمبتحىب) not to cut the animal's head completely at once and before its spirit has left the body; 6- Not to show the knife to the animal; 7- Walk the animal softly and smoothly to the slaughter area.

The undesirable and detestable (*كروه*) acts of slaughter include: 1- Inserting the knife from behind the throat and cutting it from the back towards the front; 2- Killing the animal in an area where other animals are watching; 3- Killing the animal at night or before noon on Fridays, although it is permissible if it is necessary and inevitable; 4- Slaughtering an animal that you have raised yourself; 5- Skinning the animal before it is completely dead.

There are no animal rights laws in Iran. Even though a draft was prepared and delivered to the parliament in 2013, so far there is no sign of interest among any of the parliament members to proceed with this draft and to transform it into a law. With the current absence of an official law, it is quite difficult to raise and critique animal abuse issues especially in slaughterhouses. The producers of the animal rights draft have claimed that the document is mainly based on the Quran and Hadith and includes sound statements in regards to animal abuse and treatment. The draft is however, currently not available to the public.

For the existing *fiqh* what happens at the time of slaughter is the determining factor for whether the animal is Halal (permissible) or Haram (forbidden). After hearing about the drastic circumstances of the slaughterhouses, Hojjatul Islam Hosseini explained that torturing animals is Haram, but this does not make the meat Haram (K, Hosseini, personal communication, January 21, 2014). The Halal or Haram circumstances of meat depends upon the points mentioned above and not on anything before or after that. This is followed from the fatwa that if one finds an animal that has been severely injured for some reason such as an attacking wolf, but is still alive, it is permissible to slaughter it and the meat will therefore be Halal. Mr Hosseini looked forward to raising the question of ‘organized torture’ of animals in slaughterhouses on a daily basis in *Hawzah* discussion circles. The slaughterhouse may then be studied as one organized body or as a unique system that is intertwined with the meat production and distribution system. When Islam becomes the guiding rigor behind policy making, the treatment of animals

must follow a certain set of guidelines prescribed by religion, and the institutions that have systematically shaped the meat production system in the country, as an example, must also be in line with the same guidelines. When *fiqh* turns into an organized system that looks into every aspect of the issue of meat production and not only to the specific moment of slaughter, it will lead to a transformation in how animals are raised all over the country.

Articles in the *Hawzah* website '*hawzah.net*' that are sponsored by the main *Hawzah* in Qom have in an apologetic manner explained how Islam is compatible with a completely mechanized system of slaughter and how it is no longer needed to recite the name of Allah before each slaughter and reciting it once at the beginning of the process of slaughter and when pressing the button is sufficient. Another article written in the website explains how modern stunning practices of cattle is *Mustahab* (desirable) according to Islam, since it infers less pain to the animal.

Based on the data collected it seems that currently in religious debates, slaughterhouses are seen as standalone systems, and the method of slaughter is only of concern. What happens prior or after slaughter and how this system affects other systems within society and the environment is ignored. When viewing meat production as a complete system and not as a sum of smaller parts- Islamic *fiqh*, as a social fabric represents a much larger picture and therefore the effects of mass meat production that are registered

on the environment may be analyzed. However, similar to other technologies, the slaughterhouse is imported into the country as a packaged technological system and it makes it a daunting and inexperienced and practically impossible challenge for advocates of Islamic practices to reach a concrete and all-encompassing Islamic slaughter system. Instead of the current general approach that looks at making Islam compatible with the existing technological systems, the focus may move towards making these systems compatible with Islam.

5.4 Islam and the Automatic Corpse Washer

While the slaughterhouse was one of the pioneering technological systems at the beginning of the modernizing era in Iran, one of the most recent innovations of Iranian scientists in 2012 that received vast media attention was the automatic corpse washer. This device illustrates a unique example of religious interaction between the technologist (mechanical engineer) and the Ulama. The designer of the device who is a PhD graduate in mechatronics from Japan, emphasized on the importance of religious approval before the birth of any such projects. He believed that the device should not only be religiously approved, 'it should more importantly be accepted by the public' (M, Ferdowsi, personal communication, October 15, 2013) That is why he not only asked reporters to advertise the birth of this invention, he placed verses of the Quran around the device to give it 'a natural religious touch that is more acceptable by lay people'.

The process of attaining religious certification for the automatic corpse washer followed an uneasy path. It was approved and disapproved in several occasions. Extensive meetings were held between the design team and religious representatives. Since the device was born in Mashhad, the representatives involved in religious certification came from the office of the Friday Prayer Imam, Ayatollah Alamul Hoda. At first the idea of having a device to wash the dead, was completely unacceptable and irrational, 'they asked me why would we even want –and need- such a device', explained Dr Ferdowsi, the chief designer of the automatic corpse washer.

The explanations that he gave however, significantly changed the opinions of the religious authorities. While the development of the device was first proposed by the local *talabeh* in charge of the religious section of Mashhad's relatively new but currently main cemetery, it was up to the design team to follow up the issue. The designer explained how efficient and environmentally friendly this device is. How it can quickly and cleanly do its job and on top of all these significant benefits, it is in complete harmony with the principles of Islam. Weighing all the benefits of this new device will most certainly tempt any human being. Even if religious authorities do not find any obvious benefits in implementing such a system, they will be appraised for approving a modern system that will eradicate the problems of the traditional corpse washing system all at once. One of the main problems being the lack of interest of

people to wash the dead mainly because death in the modern world, is something to keep away from (A, Atraki, personal communication, April 20, 2014). It is a job performed by the lower class. It is similar to garbage collection, all you need to do (in the case that you are a very caretaking citizen) is to separate dry garbage from wet garbage and leave it out at nine pm and whatever happens next is not related to us (M, Kalashi, personal communication, February 1, 2014). But why was corpse washing such a big issue? It was certainly not the same going back one hundred years. Small local cemeteries or even houses were the areas where corpse washing took place.

Usually the brother or eldest son of a deceased person in the case where the dead person was male, were responsible to undertake the task of corpse washing. Another tradition was to ask the most pious person in the family or friends who were also close to the deceased to perform the rituals. This does not mean that the corpse washer, as a full time occupation, did not exist, it means that the corpse washer was usually not the only individual responsible for washing the dead. He always had help. The help mainly came from close relatives or pious people close to the deceased. Since washing the dead was seen as a meritorious act performed by pious people who are considered to be closest to Allah. Even looking at the definition of the *Ghassal* (dead washer) in the Historical atlas of Islam (Brice, 1981) stresses the significance of such a position. Unlike any other washer, the Ghassal is performing a meritorious work, something that is followed by otherworldly rewards:

Ghassal: lit. ‘a washer of clothes and also of dead’, is nearly synonymous with the word *kassar* (al-Khatib, cf. *Tarikh Baghdad*, vi, 127). In classical Arabic there are a number of terms for corpse-washer such as *ghassal al-mawta*, *ghasil al-mawta* and simple *ghasil*. The modern Arabic term for a washer of clothes is *ghassal*, but the corpse washer (*ghasil*) in Syria is also called *mughassil*.

It follows by saying:

The special position of the corpse-washer (*ghasil*) has been higher than that of the washer of clothes (*ghassal*). This difference has been influenced by Arab and Islamic traditions. A number of statements attributed to the Prophet Mohammad describe corpse-washing as a meritorious work which delivers the *ghasil* from sin. In contrast with this favourable position of corpse-washer, the washer of clothes had a low status due to the servile nature of his work.

In the book *Man Laa Yahzarol Faqih* (a person who does not have an Islamic Jurist by his side) which is part of the *Kitab al-Arba'ah* (four books) that act as the pillars of Shia thought, a Hadith from the Prophet explains the critical aspects pertaining to *ghosl*, and what cleans the *ghassal* (the washer) from his sins. The movements have to be soft and smooth. The fingers should be softly straightened, the stomach smoothly rubbed and washed. The water should reach the whole body and no spot should be left untouched, and all of this should be accompanied with reciting the prayer ‘oh Allah, forgive him, forgive him’:

while performing the *ghosl* he recites: ((*اللهم اغفر له اغفر له*)) (Oh Allah, forgive him, forgive him) so whoever acts in this manner, Allah will forgive him (Sadoogh, 2004).

In the Hadith the Messenger of Allah explicitly states how one should perform the *ghosl* and treat the body. Why would it be important to softly straighten the fingers or to softly rub on the stomach? One of the interlocutors who happened to have voluntarily washed his dead grandmother's body commented, 'what difference does it make whether a device washes the body or a person washes it?' The person is already dead so it is only important for someone or something to perform the rituals. I asked him why it was important for him to wash his grandmother. While he almost burst in tears he told me that it was his way of saying goodbye. 'I felt like not only was it my duty and my way of making up for all that she had done for me, it was a way for me to come closer to death and to accept its hardship' (S, Qobadi, personal communication, April 10, 2014).

Various Hadith, encourage people to perform the *ghosl* for the dead since it is highly rewarded in the afterlife. Imam Mohammad Bagher (the fifth Imam) has stated that in a part of a prayer, Prophet Moses asked God: what is the reward for a person who washes the dead? God answered: I will wash away his sins and make him clean similar to the day that he was born from his mother (Sadoogh, 2004). In another Hadith he states that whoever washes a believer who is dead and observes its integrity God will forgive his sins, they asked, how can he keep the dead body's integrity? He stated: He does not tell others what he has individually seen from the body and organs of the dead while washing (Sadoogh, 2004).

Against this backdrop, the corpse washer had different versions across the country but the designer of one of the more successful devices told me how he had to persuade the religious authorities into believing what he was doing was actually Islamic. In order to understand this discussion I will first explain a bit on the general standards of *ghosl* according to Islamic law. Imam Khomeini states:

It is obligatory to *ghosl* (the Islamic ritual ablution of the body) a dead body three times: first with water mixed with cedar, second water mixed with camphor and third with pure water. The amount of cedar and camphor should not exceed water and it should also not be so small that they would assume that cedar and camphor is mixed with water (Khomeini, 2003). Ayatollah Khamenei states that the person who performs the *ghosl* (the Islamic ritual ablution of the body), has to be a twelve Imami Muslim and religiously mature and sober and should be familiar with the issues of *ghosl*. Ayatollah Makarem Shirazi states that performing the *ghosl* and shrouding and burying a dead Muslim is a ‘sufficient obligation’. This means that if a number of people perform the *ghosl*, it is not obligatory for others to do so and if no one performs the *ghosl*, all have committed a sin. He continues by saying that in this fatwa there are no differences of opinion among different sects of Islam (Shirazi, 2000). The difference between sufficient obligation (واجب کفای) and concrete obligation (واجب عینی) is that in concrete obligation, every single Muslim is obliged to perform a certain act such as prayers (نماز) and fasting (روزه). In sufficient obligation only a certain number of people –that is enough in order to perform a certain duty- are obliged to perform a certain act. However

if one understands that enough people are not performing that task, he/she is obliged to do so.

In Imam Khomeini's religious treatises (سراة هت وضرى ح المرطال), he states that it is not permissible to accept wages for performing the *ghosl* for a dead person, but accepting wages for the preparatory actions of the *ghosl* is not Haram (forbidden) (Khomeini, 2003). This is in contrast to what is happening in practice. The cemeteries officially charge for the *ghosl* of a corpse. The reason for this fatwa as Eqlidi (M, Eqlidi, personal communication, December 4, 2013) believes is that corpse washing should not turn into an employment. Washing the corpse is a ritual that is highly rewarded in the afterlife and if it is reduced to a simple routine job, it will no longer incorporate its significant values.

Disrespecting the dead is strictly prohibited in Islam. Dr Meghdari told me how his version of the corpse washer will act more respectful towards the dead body since it inflicts less movement. This was where his idea of the automatic corpse washer first came to mind. He saw corpse washers who were performing the wash manually on one of his acquaintances, throw the dead body from side to side and he thought that this needs to be changed. Religious discussions on cases such as dissection for educational purposes and students of medicine stress on the issue of respect. It is only allowed if the following conditions are met: first: if it is necessary to perform dissection in order to

progress in knowledge and save the lives of others, second: the dead body is not disrespected. In an *Estifta'* (religious question) from Ayatollah Khamenei a person asked whether it is allowed to take out a piece of platinum from the body of a dead person because of its worth and rarity and his office answered that 'based on the assumptions of the question, under the condition that it is not considered as disrespectful towards the dead person, it is allowed'. In another similar case he allowed the separation of the organs of a dead body to save another life unless taking them away from the body is considered as mutilation or that it is commonly known as desecration of the dead person.

Desecration or disrespect towards the dead is not explicitly defined, but is rather taken as common understanding. In Fiqh, the meaning of common understanding (عرف) is not specific to a certain community or any type of dominant thought in the society. This means that it does not change over time. Common understanding is generally divided in two sections; first common understanding among knowledgeable people, second common understanding based on the Sharia. The method of identifying common understanding among the knowledgeable people is to understand the behavioral patterns and general perspective that is based on rationality. To understand the common understanding based on the Sharia is to understand the behavioral patterns and perspectives of people, rooted from their religion. Therefore although it is up to each person to identify common understanding, it is at the same time, not a very easy task.

However if there is no consensus in various cases on what is to be attributed as common understanding and the *Faqih* has not given any type of ruling, it is up to each person to choose. But in general based on the definition of the word *Orf* (common understanding) any regulation that has been understood as a tradition among everyone or a group of people can be called common understanding. Therefore there must be something in common among at least a large number of people in one city or in different neighborhoods so that it can be called *Orf* (common understanding). The crucial point for this research is that disrespect towards the dead is something that has been accounted for and that according to Islamic law it is forbidden.

Another issue that has been largely neglected in death rituals is the time of burial. It is crucial to prepare the dead for burial as soon as possible, an issue that rarely occurs in a large cemetery such as *Beheshte-Zahra* in Tehran. It at least takes one day for a dead body to go through the paper work, especially if the body has to undergo autopsy and to identify the cause of death. The Prophet (saw) has stated that: respecting the dignity of the dead is to prepare him/her as quickly as possible and to take it to the grave and to end his/her affairs. In another Hadith he states that lest that I would find any of you who has a person who has died at night and he waits until the next morning to equip and then burry him/her or that a person has passed away in the day and he waits until night and does not do anything for the dead. Do not wait for the sunrise and sunset for your

dead but rather act hastily and quickly take them to their resting places so that the almighty Allah will bless mercy on you (Sadoogh, 2004).

This is while in ordinary cases, other than the usual one day paperwork, the dead bodies are kept in cold storage until the relatives of the deceased reach Tehran from abroad or from other cities. For cases where the deceased is a public figure, the body is kept until the necessary requirements of a ‘proper’ burial ceremony is met. This process might take several days. In another stimulating Hadith, a corpse washer asks questions from Imam Sadegh about how he should perform his duty. This Hadith is significant in two aspects. First it goes through a brief tutorial of how to perform the *ghosl*. Second it shows that at the time of the sixth Imam that is roughly one thousand and three hundred years ago there were people who worked as corpse washers. The Hadith does not show however, whether the corpse washer receives a salary for his job. ‘I told Imam Sadegh that my job is corpse washing. Imam Sadegh stated that: are you well trained and do you have enough information? I answered: in any case this is my job. Imam Sadegh stated that: when you are washing the corpse show tolerance towards the dead. Do not press his stomach. Do not place camphor in his ears, do not twist his turban similar to the Bedouins. I asked: so how should I twist it? Imam Sadegh stated that: spread the middle of the turban on his head and then, bring both sides of the turban on to the back of his head and tie it tightly and hang the extra part on his chest ‘ (Koleini, 2013).

This Hadith, stresses on the importance of respect towards the dead body and that the dead body should be treated with tolerance. The historical account of corpse washing illustrates how at first washing was done by family members whether inside the house or at the cemetery and it then became illegal mostly for hygiene purposes. At present times and in most recent efforts, cemetery officials of *Beheshte-Zahra* are returning to traditional ritual practices. They reinitiated plans of allowing family members to wash their loved ones in a specially designated area inside the cemetery. The designer of the automatic corpse washer stated that in the final versions, the device would be installed on the back of a truck to be transferred to the house of the deceased so that the *ghosl* would be performed on the spot. This in his opinion is efficient in cases such as earthquakes where large numbers of casualties take place at once.

5.5 Modern Muslims

The analysis of the data reveals that similar to the slaughterhouse that followed Henry Ford's model, centralization, rationalization and population growth have created burial systems that resemble an industrialized complex rather than an institution that stresses on rebinding human relationships and humanizing what has turned inhuman. The discussed case studies are examples of a more general and holistic approach towards life. From the viewpoint of a vicegerent of Allah the whole world is a sign of Allah and the sole purpose of creation is to worship him. This is mentioned several times in the

Quran that this world is only a representation (ayah), it is passing and it is mortal. A vicegerent would be abeyant towards Allah and humble towards His creation. This is how five hundred years ago *Ikhwan ul-Safa* (2009) portray creation in their exemplary court of animals before the king of jinn. They criticize human beings for their inappropriate acts and for the agony that they have created. The arrogance that humans are from a superior blend has developed extreme chaos in the world of nature. If humans decide to be brought back from being gods to being vicegerents of Allah, then instead of alienation from nature and from the true value of human beings, humans will return to nature and will act as an important part of it.

Ibn Khaldun (1967) explains that the nature of cities creates city people. Compared to beduins, these people have more sophisticated and lavish lifestyles and this lifestyle has led to bad deeds and most importantly distance from Allah and from his creation. When cities become too large to handle they turn into breeding ground for values that act against Islam. The rationality that is embedded within transcendent philosophy is very different from the dominant form of rationality. It means that the purpose of using one's rationale would be to become closer to Allah and to worship Him. This is the ultimate aim of creation *ella leya'bodoon* الاله يعبدون and this is what all of creation is constantly doing. As explained by Mulla Sadra this path is closest to the path advocated by the messengers and the imams. This holistic structure is dependent upon all its parts and

whichever section that is hurt, changed or damaged, will subsequently affect all the other parts (Parsania, 2014).

In accordance to the words of the Quran and the stories of Pharaoh, capitalism has distanced its believers from Allah and has created a rationality that is based on calculation, numbers and strict profit. This has created a lifestyle of Pharaoh that has not only captured those of wealthier social classes but even the simplest people would at least yearn for such a lifestyle. It furthermore alienates humans from nature and from themselves. This holistic viewpoint ultimately leads to the creation of the inhumane slaughterhouse and that of the automatic corpse washer.

Capitalism and Transcendent Philosophy lead to two very different lifestyles. In a society where transcendent philosophy becomes the guiding force behind important decision making, slaughterhouses or automatic corpse washers are not welcomed. Nature is no longer viewed as dead matter or something that can be abused and exploited. Death is itself another birth and connecting with it becomes meritorious and beneficial. A lifestyle guided by capitalism however, builds monuments and huge skyscrapers that advocate human eternity and God like qualities. Nature's limits are no longer seen as virtuous but rather unimportant and meaningless. Remembering death turns unfashionable since it is against sole material development. A prominent example

of the mismatch created by the overwhelming influence of modernism is one of the informants who inspired the model of Dubai's *Burj al-Khalifah* in this research also happened to be a graduate of the *Hawzah* and the University and part of the Iranian religious elite. She explained how the twelfth missing Shia Imam who is expected to rise in the future, will appear in a city such as Dubai where true Islam is blossoming through practice and not through words. These are part of the challenges faced by the Iranian Islamic community at large that need to be addressed in long term discussions with the *Maraje'*.

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CHAPTER 6: CONCLUSION

The sole goal of the Islamic Revolution in Iran was to introduce Islam in theory and practice as a meaningful political and social system. Four decades later, Islamic ideals have not necessarily led to Islamic ways of governance. This complex decision making system in the Islamic Republic involves representatives from the *Hawzah* and the university: the *Maraje'* (Ulama) and their *talabeh* (students) and trusted circles; the technocrats whether in the form of engineers or graduates of natural sciences; businessmen who embark on a constant quest for profit; whether they find it in the meat production business or among corpse washers; and ultimately lay people who are the final users of such technological systems. This complexity brings together Islam, culture and philosophy. When Iran, as an Islamic country is forcibly driven into the modern world, technological changes critically challenge its core Islamic and cultural existence. This is while the spirit of the Revolution which has enlivened Islamic values, creates opportunities for scholars, decision makers and even ordinary people to look into what an Islamic society truly means.

After the Revolution and in few subsequent years a large population of Iranians held onto Islamic values following the Hadith and the Quran. However with the shift of policy making towards western forms of development, these ideals have gradually faded. The country is currently facing various visible threats from abroad and from within. Nevertheless a significant invisible threat that is least noticed is the change in

the values of the society. Many of the points mentioned by philosophers of technology and criticisms made by anti-capitalism elites are commendable and insightful. However, the comparison between the current situation and the principles of Islam show that with a change in the worldview and through strengthening the pillars of Transcendent Philosophy in the everyday life of a society, the Islamic values that are currently lacking may be reintegrated into the heart of the society.

In particular this study shows how, in the case of death, alienation has torn apart human-animal, human- nature as well as human- human relationships. How presumably 'bothering' realities of life have become invisible and hidden from the everyday eyes of ordinary people. Some life enriching experiences that used to be very natural and part of a daily routine have been labeled as old fashioned experiences of the elderly. For example the majority of people from all sectors of life stand and watch how animals are removed from real life settings to closed condensed cages that professionals have set for them. The animal experiences shape a stylish image that invites to enjoy animal habitat only in the zoo. They no longer tolerate witnessing death and its aftermath among relatives and friends. That is where standardization, alienation and rationality take charge and work invisibly in order to create safe areas away from human scrutiny. Ordinary Iranians can no longer observe the process of death whether among animals or humans, it is handed over to professionals.

This search only provides a glimpse of two modern processes that are involved with the issue of death. More research needs to show how other aspects of human life and technology have diverged from their initial Islamic shell. Transcendent Philosophy, however, provides practical solutions to the convoluted situation created by modern alienation and rationalization. It sees the whole of creation as interrelated and interconnected. Everything throughout this world is understanding to the extent of its grade of being. All of creation, even stones and soil, praise their sole Creator, and even though they have hidden their true nature from human beings, they naturally encompass love, life, will and desire. Undoubtedly, humans are part of this vast picture of existence. They are vicegerents of Allah on the earth and should therefore act as true believers.

O you who have believed, believe in Allah and His Messenger and the Book that He sent down upon His Messenger and the Scripture which He sent down before. And whoever disbelieves in Allah, His angels, His books, His messengers, and the Last Day has certainly gone far astray. (4:136)

The current available Shia *fiqh* is limited because it is focused mainly on the personal lifestyle of each individual, and on issues such as cleanliness (from *Najes*), uncleanliness (*Najes*), *ghosl*, death rituals, slaughtering animals, prayers, fasting, haj, marriage, separation, endowments and different forms of economic deals. Other topics are usually added to the religious treaties when a question is asked from a *Marja'* such as issues of music, artificial insemination and even purchasing lottery tickets. While *fiqh* has attempted to regain its position as the leading rigor behind every aspect of human

life, especially after the Islamic Revolution in Iran, scholars such as Hujjatul Islam Rashad (Rashad, 2013), the head of the *Hawzahs* in Tehran, show concern about the significant lack of rigor regarding social issues of technological development in the current form of *fiqh*: ‘For Islam to be *khatam* (the final) and eternal, it is necessary that its practical provisions are adaptable with the developments of human life; now shouldn’t our *fiqh* attempt to conquer unopened horizons such as the *fiqh* of technology, development, globalization, communication, banking, modern financial tools and hundreds and thousands of other subjects?’ (Rashad, 2013). Not only is the current Shia *fiqh* lacking in its capabilities to answer such concerns, the political will to change the movement is missing among policy makers.

The current paradox that has dominated the Iranian society has at some points restrained Islamic values and teachings with the excuse that they are not practical or that they are not sufficiently developed to be used in real settings. For example, as in the case of usury which is a serious sin and the Quran clearly states that:

O you who have believed, do not consume usury, doubled and multiplied, but fear Allah that you may be successful (3:130)

The Iranian banking system is based on usury, and most leading *Maraje*’ (Amoli, 2012) in the country have called for its removal. A plan sent to the parliament called ‘Islamic Banking Plan’ that makes significant corrections to the current banking system, has remained unattended for over three years. An Islamic slaughterhouse would also follow

the same pattern. It will decrease the speed of slaughter, and therefore raise the price of meat, and as a result lead to dissatisfaction with the government. Even the most uncommon criticisms of the slaughterhouses, such as those of Dr Ahmadreza Dorosti, a nutritionist professor from the University of Tehran, were quickly silenced in the media (*Hawzah*, 2015). Dr Dorosti claimed that because of the drastic situations in poultry farms and slaughterhouses, twenty percent of the poultry consumed in Tehran die prior to their slaughter, making them Haram (forbidden) to consume. After receiving serious criticisms from key officials, it only took several days for him to deny his initial statement, and reiterate that what he said was not properly publicized. Slaughterhouses are strictly closed to the public, and filming or documenting is carefully avoided. Similarly, in the case of the automatic corpse washer, a fatwa that has only investigated the technical aspects of performing the *ghosl*, led to the approved use of the device. Cemeteries looking for excitement, have generously welcomed the idea of decreasing their workload and their costs without carefully analyzing its side effects.

One of my interlocutors insisted that even if he was absolutely sure that the *Marja'* is making a mistake, he would still follow his provision and he would be receiving rewards for following him. This was similar to how I explained that the most common example given in regards to religious treaties is that of a doctor. A doctor prescribes a certain number of medications, and the patient carefully follows the prescriptions without questioning the credibility of the doctor. It is the exact same when it comes to religion. Doctors rarely allow their patients to question their prescriptions, and this is

sometimes true for less informed people when they question the recommendations of a *Marja'*? A scan through recent publications of books and articles written by graduates of the *Hawzah* –excluding the book ‘Islam and Nature’ written by Ayatollah Javadi Amoli- illustrates that alienation, and mainly alienation from nature does not depend on whether you are religious or not, whether you have studied Islamic courses, or that you have studied engineering; it transgresses these boundaries. As a sign of trust, modern centers of religion are currently enjoying the latest most sophisticated technologies themselves. There are also cases where technologies are restricted, such as the ban of smart phones among students of the seminaries (Booshehri, 2015) and they are advocating scanning through physical books and articles rather than ebooks and PDF files.

During the final session of my monthly presentation on technology and religion to a group of university professors, and after listening to their animated discussion on the latest models of mobile phones and computer processors that have increased their speed by eight percent, we discussed how we need to be conscious about not finding ourselves entangled in a modern form of *Jahiliya* (ignorance). While we talk about the age of communication and of information technology, the hidden facts that are embracing the food that we eat; the clothes that we wear; the gadgets that we use; have been largely neglected. None of us knows where the meat that we are eating comes from. None of us knows the process of the development of the gadgets that we use every day. None of us is aware of how many suicides happen in IPAD factories in China. None of us knows:

how five hundred people may faint in sports apparel factories in Cambodia; how plant based fat mainly from palm trees, has replaced the dairy fat in our milk; how complex the production of wheat is, and where the bread that is eaten every day for breakfast actually comes from; and none of us knows that e-waste is piling up in the rivers of Kenya.

Allah - *subhanhu wa ta'ala* - is the only being and His knowledge and mercy encompasses all creation. Our being and our short life on earth, is a journey towards Him and His mercy. We humans are travelers and our life is about appreciating the endless manifestations of His mercy. Things start falling apart when we stop being travelers, do not see the abundance of His knowledge and mercy and let the illusion of arrogance and independence capture our souls. The only way out of the current crisis that has appeared on the face of our planet, and within the hearts of human beings, is to take refuge in His mercy by humbly and honestly admitting that all creatures are travelers into His infinite and eternal being.

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2. Hamidreza Mohammadi Doostdar, Mohd Hazim Shah, Mohammad Hossein Sattari, Ahmadreza Mohammadi Doostdar & Mohd Zufri Mamat. (2017). A Clean Kill: Tracking the Socio-Technological Aspects of Slaughtering Animals in Iran. *Anthrozoös*.

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APPENDIX

Appendix A - Animal Health Inspection Law

Animal Health Inspection Law- approved on September 17, 1935

Article one- In the case of the outburst of a communicable disease among animals, owners and caretakers of the animals are obliged to inform their local health inspection officers and if they do not exist they should inform the government or the local security or the police.

Amendment- The details of communicable diseases and their signs will be announced to the public from the Department of Agriculture.

Article two- All government employees are obliged to inform the closest health inspection officer once they hear of the existence or detection of a communicable disease.

Article three- Any animal that is infected or is suspect of being infected with one of the communicable diseases should be immediately separated from other animals and to be held at a separate location. Slaughtering and opening up the corpse or transport or sale and use of the meat and skin and intestine and wool of an animal infected with communicable disease is illegal.

Article four- At the time of the detection of the communicable animal disease the head of the health inspection of animals has the right to implement the following regulations in the location that is threatened by the disease. Separating healthy from sick animals. Preventing the entrance or crossing of healthy animals in infected areas. Insemination of animals that are capable of accepting the disease. Killing and burying of ill animals. Disinfecting barns and stables and all tools that might cause the transfer the disease.

Article five- Preparing medicine and liquids that must be inseminated and the costs of disinfecting is the duty of the department of agriculture and is for free.

Article Six- Health inspection officers have to inspect the barns raising animals and factories that specifically produce animal products at least every three months.

Article Seven- 1- The meat of animals that are identified as healthy in the slaughterhouse will be stamped with a special stamp and the health inspector of each slaughterhouse is obliged to destroy unhealthy meat or to make it into a type that cannot be possibly consumed.

2- The Health Inspection Department of animal products is obliged to inspect institutions and factories that produce animal products at all times.

3- The mentioned institutions are obliged to arrange their products properly according to what is ordered by the Department of Agriculture and to package them for export and the wrapping of each package of the mentioned products will be graded and stamped by the health inspection officers.

4- The Department of Agriculture has to issue a free health approval certificate for each product that is graded and stamped based on the sample that is produced by the regulations.

Article Eight- Violators of the regulations of this law are sentenced to imprisonment from one to eight days or the fine of ten to five hundred Rials.

Amendment- Violators of the first article of this law are considered as violators of health instructions and will be sentenced to punishment.

Article Nine- The date of implementation of this law will be identified by the Department of Agriculture of each area.

This law that included nine articles was approved by the National Assembly on the seventeenth of September 1935.

Appendix B- Hunting and Fishing Law

The Hunting and Fishing law was approved on June 6th, 1967 and contains many regulations in regards to animal rights such as:

Article Eleven- section D- Fine or imprisonment is proposed for those who destroy springs and water ways of animals in the protected areas and the animal shelters.

Also the Islamic Punishment Law approved on the 28th of November 1991 has stated that

Article 679- Any person who purposely and without any necessity kills a Halal meat animal that belongs to another person or animals that are illegal to hunt according to the government or poisons or injures it will be sentenced to imprisonment from ninety one days up to six months or the fine of one million and five hundred thousand Rials up to three million Rials.

Article 680- Any person who illegally and without the permission of the law hunts or fishes animals and wild protected animals, will be sentenced to imprisonment from three months to three years or the fine of one million five hundred thousand Rials up to eighteen million Rials.

Appendix C- Verbatim Text 1

Informant 1: Dr. Ali Meghdari

Date: 12 May 2013

Time: 11:00 am to 1:00 pm

Venue: Sharif University of Technology, Centre of Excellence in Design, Robotics and Automation

The invention of the Pak Shooy (pure cleaner). Two years ago when there was no talk about the automation of the washing of the corpses. It took six to seven months to accept it. When they first created the washing machine, they were not concerned about its religious issues. They said that there exists something like a washing machine, now come and argue whether it is viable according to Islamic principles or are there any problems with it that can be fixed and tweaked. This was first explored as a research project, the development of robotics and automation is to undertake difficult, onerous, toxic, dangerous and obscene and indecent activities that humans refrain from doing. (Segment 1)

During my visit to the ghassal khaneh, I saw the path, the movements of the people, which some were obscene. Since when a job becomes routine, the dead might be loved for you but not for the person who is performing this activity as part of his job and to earn salary. I had also done research that this job is unhealthy and proper clothing, masks and gloves have to be used. Since the dead body carries many different diseases and microbes, it should be handled with extreme care and this is one of the reasons why the Islamic ritual of washing the dead has been recommended. (Segment 2)

And also a person who touches the dead body also has to perform qosl since the dead body is very dirty. It passed my mind that such a thing can become one hundred percent automated from the very beginning till the very end. In the first few days, I keyed in my ideas and thoughts within the few days and I also searched religious practices and religious principles related to the issue of washing the dead and how it should be performed. In the beginning they did not take the issue seriously. They would joke about it. They found out that I am very serious. They had even sent it to one of the religious scholars and the person had not responded. (Segment 3)

This project is mechanical and why do you care about its religious aspect. If this project is implemented and it is against the rituals of Islam, it is worth nothing and it is not functional. We will then use it among the Jews or the Christians. Any way it is a device, do we need the Chinese to build it first and then we import it? It was accepted as a research project and a small budget was allocated since it was not accepted as a design and construction project but rather as only design. We then have to look for potential customers for example the cemeteries to order and we then construct it for them. We then found out that people in Mashhad had mechanized the washing section and not the

whole part. They had also received fatwa from different religious scholars across the country and it looks like the fatwa had stated that it does not have any problems under the condition that the operator has to be a Muslim. It was interesting for us that after doing much research into fiqh, many of the activities that have been recommended by Islam because of the vast number of people being washed per day in places such as Beheshte-Zahra and since it has become routine, they do not perform it in the proper Islamic way. They do not perform many of the mostahabbats, but here since it is an automated system you can bring in the mostahabbats into your design. (Segment 4)

I have our system here and its animation, it has three stages. One is washing with water, the other cedar and camphor. Tanks have been designed for each step and then it will go through the drying phase which is not performed in the traditional method but here we can automate and dry the body after washing takes place. In between placing the cottons on the body has to be done by hand. This means that the system is semi-automatic. From the dryer it moves on rollers and we have designed it in a manner so that there would be no need for the personnel to pick the body up because of its heaviness. From the beginning of the line until the end, no one needs to pick up anything. The body will move onto the cloth and the tying of the cloth has to be done by hand because we have different tastes for how to have a cloth but since it has a variety we have made it in a way so that people would do it as they decide. (Segment 5)

This will not reduce the number of personnel, we also had a social aim in mind. When we are automating the process of washing the dead, when they want to curse someone they call him a dead washer. Therefore we thought that we should not only beautify the automation system but we must also beautify the name and the culture. Before Islam, the Zoroastrians would also wash their dead. They would call these people Pak Shooy (pure cleaner). (Segment 6)

The process of introducing a new machine takes time. I remember many of the pious Iranians after the revolution, refrained from using the washing machine saying that the water is not (kor), after the revolution either the machines were modified or our clerics were modified. However the truth is that the machines were modified at that time, but now with the new models of washing machines that are coming into Iran from brands such as Samsung that only use one gallon of water with five kilograms of clothes, how can this water be kor. This means that we have also been modified to an extent. (Segment 7)

When technology becomes related to a religion, people will accept it with much more difficulty. It takes time, there has to be an increase in population, there has to be more pressure. It was interesting for us that from Canada people became interested in our project. And they contacted us from the Islamic community there. Since they have many Muslim migrants that are mostly educated and no one is willing to do something like this and their dead are left on their hands. They must find a solution for this. Therefore

they thought that in big cities of Canada, if they had one of these devices it would be very beneficial. They had asked us for the price. (Segment 8)

Some people just started developing this system without proper design. We even saw things very carefully like for example how would water reach the back of the body. Water is sprayed from everywhere and when the body is moving on the rails, in sections the body comes up and in other sections it goes down so that water would reach the whole body. The movement is like a sine function. We have seen many parameters in this design. A jack will bring it up and down. We took the students for a field trip to the ghassal khaneh in Beheshte-Zahra. We told them let us see how many of you are real men and can come into this section. Taking people there is not something everyone is capable of doing, especially the students of today. (Segment 9)

This system is good for big cities. Since people would see that it is clean and that the machine is paying more respect. For the first time that the bread making system was developed, people did not like it and still don't like it and prefer the traditional method. If someone that is committed to what he is doing washes the dead body and preforms it properly it is much better, but what we see in the real world is that this does not happen. (Segment 10)

When the population rises, the things that you like will not happen and it is much better if you leave this duty to a machine that you at least know preforms the minimal necessities. This will happen gradually in big cities. I was in a conference in Washington DC, many people laughed at it and then they started saying how interesting this is and they said that they can have another session next year for unique applications of robotics and display this system. Even one person suggested that if they do the same process in cremation and an automated system in cremation it would be very good. We told him that you do that and we will put that as part of the conference. Many people are after new applications. If we finish this phase which is almost finished and if there is a sponsor we can finish it in 5-6 months and it does not need that much budget. It depends on how much you want to make it fancy. In large scale I do not see that it will be more expensive that 10-15 million Tomans. This will simplify the job in big cities especially in western countries. Since they have serious problems, and their Muslim migrants are educated and above bachelor's degree. It would be good if they have one in Toronto and one Vancouver. (Segment 11)

Appendix D- Verbatim Text 2

Informant 2: Dr. Ferdowsi

Date: 1 July 2013

Time: 2:00 pm to 3:00 pm

Venue: Department of Electrical Engineering, Ferdowsi University, Mashhad

My area of research is mechatronic. When I was the head of the relationship between the university and industry, a clergy approached me who was in charge of the religious section of the Beheshte-Reza (Imam Reza's paradise) cemetery approached me and asked for advice and only consultation in regards to the mechanized washing of the dead. We followed this up so that people who are interested can do this, no one was interested and thus I started doing it and I started this project and tried to link the relationship between religious issues and technology. I thus became a consultant to the municipality of Mashhad. This project was supposed to be implemented from an outside agency. I told them that you need to bring in several projects and to select which one is better. When the general steps were taken they had given a very high price and I told them that the price is too high and I told them that if the intellectual property is given to Beheshte-Reza the price is ok but other than that it is too much. This agreement was not reached and then the municipality told me that the university has to do it. I started looking for people to start the project. Then Dr Sayedi from the electronics department accepted and reached an agreement and then he went to sabbatical and told me to start doing it. This was when I (Akbari) started taking the whole project. (Segment 1)

The clergy who approached me first was a young innovative clergy who was in favor of technology. His thought was to develop a mechanism for mechanized washing. He also said that Qazvin had also started this project and that Esfahan had opened up discussions regarding a similar project but since they had badly opened up the issue, it had been opposed to right at the very beginning. I told them when I was also a consultant and the head of the project that this project more than anything else has to be very carefully studied and socially analyzed so that it would not face opposition from the people and the clergies. In technological terms it is completely feasible and practical. (Segment 2)

It is very easy, it can even be easier you can take the two legs of the deceased and just plunge the whole body in different waters and that is it. Anything can be done, but this is not practical. The first thing that has to be taken into account is the human dignity of the dead person. The family of the deceased have to feel satisfied with the washing

process. Religious issues need to be considered. I have several times in the meetings said and even fought with them. They wanted to just have an implemented system. They said that our ears of full of these tell us when our device will be ready and I told them that this is never going to happen. (Segment 3)

I told them that this is very important and this can't be done without taking into account the social aspects. We went to several of the clergies and explained this to them, they were not persuaded so we explained again, we fixed some of the ahkams in the feqh and again asked them. After the device was built, we had asked the Friday prayers imam of Mashhad, and we had also previously brought the issue up and we had asked for his opinions and we again asked for the modified version of his opinion. Then we started communicating with his office and then Mr Shahcheraghi came and he approved our work and brought a representative from the office of the Friday prayers Imam and I explained the device to them. (Segment 4)

It took 6 months to develop the device from design to development. Everything had been solved and when it came into the media then some of the clergies who were for various reasons against the development of such a project started annoying the process. Although they were not prominent clergies but low level clergies. So this issue had reached the leader and the leader had asked his representative in Mashhad that was the Friday prayers Imam and had asked what this device is and that it is suspicious and doubtful. So they held another meeting and we attended the meeting and the clergy from Beheshte-Reza was also there but it was not the same guy, they severely criticized me and said that the ahkam are not correct and that this device is not following the correct ahkams. (Segment 5)

It was turning into a fight when I started talking and I started explaining and took the computer (laptop) to them because I was familiar with the conditions of the ulema and the religious issues so from the discussion that this is terrible and that you have to scrap it out they reached the point that this device is very good for washing only and not for qosl. The rest do not dare to talk but we were courageous and started explaining again and at the end we found out that taking part in the washing (mobasherat) does not take place with pressing the button the reciting Bismillah and there must be a hand working there. Meaning that a hand has to act while washing. So we asked the ayatollah whether at the time of washing, if the qassal (corpse washer) touches the body is that enough and can this issue be resolved? So he didn't know what to say and said that this cannot happen because they will become wet. I told the ayatollah that don't worry about them becoming wet, I will accept this responsibility. (Segment 6)

When the device is washing there is no need for the human to pour the water him/herself. The device is pouring the water from the nozzle. So when everything is taking place and the device is going up and down and the whole washing process is happening, the qassal touches the body a bit and says Allahoma Salle Ala Mohammad

Va Aale Mohammad. Can we call this mobasherat, and he said yes. So this was what happened. What I mean is that resistance in front of a series of traditions, and that is not traditions but rather the relationship between the clergies and ordinary people is being affected by the acts of the middlemen clergies and they must prevent this harm. (Segment 7)

This is done by the middlemen since ayatollah Aamol Hoda himself had in the beginning when he had accepted this project and Mr Shahcheraghi had told him that we will allow people who are interested in using this device to choose whether they want the device or the traditional method and ayatollah Alamol Hoda had said that when the device has started operating there is no choice in between and we can't have people saying we like it or we don't like it. His thought was very strict and had said that you have placed it there and you will decide. But since a clergy in the haram and had told the leader that there are certain suspicions and they had to ask their representative to look the issue up and when the representative is told that there are certain suspicions they will be frightened. They harm this path. People like us who are from trans-disciplinary backgrounds and have both technical information and religious information and know that this device does not create the problems that they talk about and will most certainly solve the issues that they are looking for. (Segment 8)

From the social aspect the people should not feel that their dead person is being disrespected. It is the worst event if they feel that their loved one is being washed in a device similar to a car wash. And when they haven't seen what the qassals do with the body and how they severely disrespect the body. This device will be like a moving bed and the body will not move at all. Although the process might be different. Everything has been carefully studies so that the device would not harm the body and will at the same time be capable of washing it. This device completely works with an alive body. The armpits will not be completely washed. It is (not similarly) like the surrounding area of the tires. They have to be washed in the beginning from any najes but water will reach it. While washing there might be people needed to help wash it properly but for the qosl there is no problem at all since water will reach everywhere. We have two separate nozzles for the armpits. (Segment 9)

The qassals that I have seen both in Mashhad and Tehran, they treat the dead body exactly similar to the dead meat. They throw the dead body and they create a very bad situation for the people who see it. It is very normal for them. They place a sprayer in the mouth. They just throw the dead and they do not feel anything. But this device is different because it will not have any movements and it is in a closed area and there are verses of the Quran and Hadith written all around it. They are not working with it anymore because they did not follow up the issue and did not start a new project with us. We have even given our proposal. We have given opinions on how it can be improved. But the municipality because of financial or social issues faced problems. Or

the companies might be against this issue because they didn't want to lose their business. They started creating many problems for the device. Or for example the people who had sent you to me, they will have more job to do and they would love it if the device is not there because it will create problems for him. These are reasons that are not mechanical and non-technical and even nonsocial. (Segment 10)

About making a choice, I do not see it proper to make a choice. If something is correct according to the religion, the policy makers have to decide because of health issues, speed and other issues that this device is better than the traditional method and that it has to be implemented. So when someone gives the dead to Beheshte-Reza he has given them every right and cannot give any more opinions. They cannot even wash in their houses because this is a health issue for the city. The decision makers have to decide themselves and it will make it more difficult and create more problems. It might create many problems if we want to hear all different opinions. First of all the religious issues have to be resolved and after that the technical aspect and its maintenance has to be regularly monitored and it has to progress. I have said several times that this is an ordinary Samand and the LX version will come later on. I think that it has been successful and since it has operated and washed around 40 people and it has gone through the media and I have patented it but it is not progressing because no one follows it up and this patent belongs to the university. I think that this taboo has broken and this was a serious step for the mechanization of washing. (Segment 11)

So I think that the horn of the cow has been broken, so other people can follow this up and others from different cities will look for it. And this breaking of the taboo is important for us and the relationship between religion and technology has been bridged. It is similar to the slaughter house where in the beginning many were against it and even termed it haram and now you can see that it has become something very normal. So it might take six months to one year or two years for this thing to happen. (Segment 12)

People from across the country would say that we also had this opinion and since it is religiously correct we also want to start another project like what Dr Meghdari has initiated. So the whole automatic slaughter resistance has been broken. So I think that here this resistance has been broken and sooner or later this will happen. There are difference in opinion and people will have different styles. I have explained for 60 people who had come for. The main problem was not how the qassal treated the dead body. There are several needs for this device. Lower consumption of water, better hygiene, several bodies can be washed in parallel. For example if an earthquake occurs. This device can move on a trailer and take it to a place where someone has died. And it would not want 60-70 people to come all the way and this device would go there. (Segment 13)

This device would go there and decrease the cost and the traffic anywhere around the city and would deliver it for them to bury it wherever they want. The deputy mayor had

said that if these qassals would go on strike what would be do. There are also things that can be bad. For example people would use it to pressure their workers or to pressure the amount of time of washing. This device was not only developed to treat the dead better. Even Turkey became interested in the project and wanted to discuss this issue with us. (Segment 14)

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