Do the Japanese Dream of a Robotic Future? Expressing Posthumanism in Japanese Media

by

Irina Novak
B.A., Far Eastern National University, 2007

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

in the Department of Pacific and Asian Studies

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University of Victoria

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Supervisory Committee

Dr. Timothy Iles, (Department of Pacific and Asian Studies)
Supervisor

Dr. Cody Poulton, (Department of Pacific and Asian Studies)
Departmental Member
ABSTRACT

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Technology in Japan has reached ubiquitous status and its development is one of the main priorities of state policy, which includes a wide range of programs aimed at increasing the involvement of IT in everyday life as an improvement of both society and humanity itself.

On the other hand, there seems to be resistance among citizens of western countries to accept refrigerators able to tell you that you are almost out of eggs, or cars that remind you to fasten the safety belt or check your breath for the presence of alcohol before you can drive. There seems to be resistance for us to talk to machines as if they were alive. The question thus emerges: why are the Japanese so conscious about technologies? What is there in Japanese spirituality, tradition, history, or ideology that facilitates the acceptance of Information Technologies and Artificial Intelligence as not only an integral part of daily life, but in fact as forms of actual consciousness?

This thesis will deal with two aspects of contemporary life of Japanese – technologies and Shinto as a part of daily routine. These two aspects lead us to the concept of posthumanism as well as a religious concept of Shinto as a way of life in Japan. The questions arising from this approach are why and how information technologies are related to Shinto. Why is this relation almost inevitable? To answer these questions, this thesis will analyze the personification of technology in both Japanese animated film and in consumer products.

# TABLE OF CONTENTS

Supervisory Committee .............................................................................................................. ii

Abstract........................................................................................................................................ iii

Table of Contents........................................................................................................................... iv

Acknowledgments .......................................................................................................................... vi

Dedication......................................................................................................................................... vii

Introduction..................................................................................................................................... 1

## Chapter I: Intersections of Shinto and Technology in Japan.................................................. 16

Introduction.................................................................................................................................... 16

The problem of religiousness in Japan ......................................................................................... 17

Basic concepts of Shinto .............................................................................................................. 19

Institutional Shinto ....................................................................................................................... 21

A brief history of modern Shinto.................................................................................................... 23
  Shinto and the Meiji Restoration................................................................................................. 24
  Shrine Shinto and State Shinto .................................................................................................. 27
  The principle of separation of religion and the state ............................................................... 30
  Shinto and capitalism ................................................................................................................. 32

Shinto and new economic strategy ............................................................................................. 34
  Post-War development .............................................................................................................. 34
  Nixon shock and oil crisis......................................................................................................... 36
  The adaption of technology ..................................................................................................... 37
  New IT based economy and society .......................................................................................... 38

Conclusion: Shinto and Information Technology ......................................................................... 40

Introduction.................................................................................................................................... 44

Discussion of Ghost in the Shell..................................................................................................... 46
  The Plot......................................................................................................................................... 48
  Technology and identity in the posthumanist framework ....................................................... 53
  Shinto and Posthumanism ......................................................................................................... 58
  The Problem of Consciousness in the Posthumanist discourse ........................................... 62
  The ending and its solutions ....................................................................................................... 65

The Posthuman Environment in Japan ....................................................................................... 70

Conclusion....................................................................................................................................... 74

## CHAPTER III: Representation of Technologies in Television Commercials in Japan ............ 77

Introduction.................................................................................................................................... 77

TV commercials as a source for cultural studies ......................................................................... 81

Why Does an Android Need Sunscreen? ...................................................................................... 84
ACKNOWLEDGMENTS

It is my pleasure to thank those who contributed into my work and made this thesis possible. First and foremost, I owe my deepest gratitude to my supervisor Dr. Timothy Iles for his guidance, encouragement and incredible support not only in academic matters but also in times of homesick and melancholy. Thank you for your patience and understanding.

I am also thankful to the Department of Pacific and Asian Studies for the friendly atmosphere, extraordinary teaching and administrative stuff, and moral and financial support that made my life in graduate school a lot easier and more enjoyable.

In addition, it is an honour for me to thank the Centre for Studies in Religion in Society at the University of Victoria for providing me with a quite and productive studying environment as well as an opportunity to be a part of daily morning coffee discussions where we were exchanging opinions on diverse subject matters.

This thesis would also not have been possible without help of my family. I am deeply grateful to my father Aleksei Novak for moral and financial support and to my sisters Maria and Polina Novak who was always there for me to share every moment of my joy and sorrow.

I also would like to say a special thank you to my friends who participated in the editing process, Victoria Barahona-Salinas and Greg Wood for their kind contribution to my work.

Lastly, I would like to thank my true friend Natasha Ignatova for her support, both spiritual and nutritional, and my roommate Marek Butowski for sharing in many experiences I have over the last two years in Canada.
DEDICATION

This thesis is dedicated to the loving memory of my mother who made many sacrifices for me and my sisters and who inspired my passion for learning and the determination to follow my dreams.
INTRODUCTION

Information Technology has become an essential part of our everyday life: waking up, we immediately run to check our e-mail accounts, pay bills on-line or do shopping. On the way to work or school we write text messages on cell phones; getting to work we again spend most of the working day dealing with computers and other means of communication. That's the way of life of the "ordinary westerner." But if we compare it to the day of the "ordinary Japanese," we will see a life filled with a much broader spectrum of activities involving information technology. Take for instance a 21 year old student of Tokyo University or a middle aged salary-man sitting in neighboring seats on the train going to one of Tokyo's central wards. They are both holding their cell phones while they sink deep into the virtual world of communication and cyberspace. We can only imagine what they can be doing at the moment, because the functions of mobile phones in Japan vary from Internet and TV-program browsing to the scanning of barcodes of many products—using the phone's built-in camera and decoding all the product's information—not to mention using a cell phone as debit or credit card by swiping it through most checkout lines to buy anything from ice cream to airline tickets.

There seems to be a difference in the perception of technologies in what we will call the Western and Japanese systems of values and this difference is rooted in the essentials of both cultures – the system of beliefs or religions, as traditions still affect our daily life in much broader ways than we readily imagine. The transformation of the ancient system of beliefs known as Shinto into a religion that can easily exist in the present time and be a part of everyday life is a phenomenon that distinguishes Japan from the Western world with its system of values rooted in Christianity and the Greco-Roman
philosophical traditions. Shinto colors many aspects of everyday life: “the nature of kami is interdependent and intimately connected with the world, including human beings” (Kasulis 2004: 20). Shinto is a link between humans and non humans; by the term “non humans” we typically mean trees, stones or mountains and their spirits, but also, in conditions of informatization, we can incorporate the notion that those “non human beings” could be computers or other kinds of IT products that are not associated with live substances in the Western world. We can assume that if kami nature is placed into machines then machines become kami themselves and are organically blended with the Shinto world. Here is a root that leads us to the idea of posthuman society, the society of technologically “upgraded” humans or cyborgs, as well as to the idea of the acceptance of Artificial Intelligence as an equal member of this posthuman world.

When Daniel Dinello in his book Technophobia! speaks about fears concerning “Posthuman evolution – the development of human/machine fusion” (Dinello 2006: 4) putting emphasis on the representation of technologies in European and American science fiction, he misses the fact that Asian countries and especially Japan have a rich history of cinema and literature about IT, cyberspace\(^2\), cyborgs\(^3\) and other aspects of posthuman development. If we speak about posthumanism as a global movement, then we should enclose a wider range of materials to analyze this term and its implications, not

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\(^2\) The term cyberspace refers to an information space in which data is configured in such way as to give the operator the illusion of control, movement and access to information, in which he/she can be linked together with a large number of users via a puppet-like simulations which operates in a feedback loop to the operator (Featherstone and Burrows, 1995: 2).

\(^3\) The term cyborg refers to cybernetic organism, a self-regulating human-machine system. It is in effect a human-machine hybrid in which the machine parts become replacements, which are integrated or act as supplements to the organism to enhance the body’s power potential (Featherstone and Burrows, 1995: 2).
concentrating only on western representations of posthuman life, but also on finding the links to personification of IT in different systems of thought and beliefs. From this perspective Japan is a good example of the coexistence of a traditional system of values and modern aspects of life, technologies and religion, human and nonhuman forms of life and lifeless substances.

The idea of an interrelationship between information technologies and the set of beliefs in Japan known as Shinto has been discussed by several scholars such as Robert Geraci, Jennifer Robertson, Christopher King and others. Christopher King considers that "an important feature of technology within Japanese society and culture in the postwar period has been its representation as an adjunct to human life, rather than as a source of alienation, as in the western tradition" (2002) and Robertson agrees with him on that point: "[...]robots, humanoid and otherwise, are 'living' things within the Shinto universe, and in that sense, are very much a part of the natural world. By the same token, the creation of humanoids - or artificial life - is not at all imagined as a matter of 'playing God'" (2007). Geraci argues that, "Buddhism and Shinto afford sanctity to robots: robots are blessed, take part in cosmic salvation history, and they are accordingly welcome in Japanese society. The sacred significance of the natural world in Shinto and the positive outlook on human life provided by Buddhism help explain the Japanese acceptance of robots in their midst and - especially - their quest to engineer humanoid machines" (2006: 235).
We can see relationships between Shinto rituals and modern technologies in everyday life in the acts of blessing software programs\(^4\) or new lines of computers\(^5\) by Shintoist priests. These events are not interpreted by the Japanese as something necessarily unusual or comic, but as, for example, a natural ritual of the first shrine visit: when a newborn is brought to the Shinto shrine to be presented to the \textit{kami}.

Shinto and industrialization seem to coexist harmoniously in contemporary Japan. Geraci considers that to be a result of a unique attitude toward technology in Japan facilitated by Shinto. Geraci argues:

In the modern world, even if industrialization has polluted it, the natural world remains worthy of reverence and the human being remains a part of that world. Although modern Japanese may not label themselves as “Shintoist” the religion appears in their closeness to nature. Shinto faith allowed the Japanese to integrate the earliest robots into their society. Robots fit into the natural world as easily as any other object (Geraci 2006:236).

Kasulis also takes this point when speaking about the perception of Shinto by the Japanese. He points out that the word "‘religion’ (shūkyō) is a neologism of the late nineteenth century devised specifically to translate the Western concept. This means that until a little over a century ago, it was literally impossible for a Japanese to say she or he was affiliated with a religion” (Kasulis 2004: 29). Shinto is more concerned with spiritual paths, purity, and the way of everyday life than with rituals and religious dogmas as essential attributes of the life of a pious person. Although according to numerous census surveys most of the Japanese do not identify themselves as “religious”, it doesn’t mean

\(^4\) For more information see “Japanese businessman attend a Shinto purification ceremony at the Kanda Myojin Shrine in Tokyo aimed at fending off viruses and software glitches in their computers”. Available online at http://finkarticles.com/p/articles/mi_m0131/is_9/126/ai_n17206666

\(^5\) For more information see “Tokyo Shrine Blesses Computers from BsoDs”. Available online at http://gizmodo.com/5047913/tokyo-shrine-blesses-computers-from-bsods
that they do not affiliate themselves with Shinto. On the contrary, Shinto accompanies everyday habits in a way that might not be seen or considered as religious activities, but be in fact the demonstration of nothing but preconceived previous spiritual experience. Shinto still affects the life of the Japanese in more ways, both socially and scientifically, than may be imagined.

In my project I will apply posthumanist theory as well as the concept of Shinto to understand the relationships between the formation of posthumanist society in contemporary Japan and the influence of traditional views of community and perceptions of kami-nature.

First of all I will define the terms “posthumanism” and “posthuman society”. Posthumanism is often used as synonym for the ideology of “transhumanism”, the idea of transformation of humans by means of artificial intelligence, biotechnologies and other high-tech alterations to the human’s bodies in order to step over to the next stage of human development.

According to Nick Bostrom, the author of A History of Transhumanist Thought, the first mention of the “superhuman” appeared in myths of ancient Greece; such myths were developed in the Enlightenment, when rational humanism based on “using science to achieve mastery over nature in order to improve the living condition of human beings” (Bostrom 2005:2) began to proliferate. In the 20th and 21st centuries the concept of transhuman came to the foreground as modern technologies have reached a high level and what seemed to be impossible only a couple of decades ago now is a part of everyday life. In this age of high-tech inventions, the problem of posthuman is getting a new lease on life in the work of such scholars as Ihab Hassan, Neil Badmington, N. Katherine
Hayles, Daniel Dinello, and others. Their methodology varies from analysis of history of thought, psychological experiments on Artificial Intelligence to the representation of technologies in science fiction, films and other spheres of life in contemporary society.

Similar to other authors who worked on the problem of posthuman society such as Neil Badminton, Daniel Dinello or Sharalyn Orbaugh, I will concentrate on analysis of representation of technologies and cyberspace in films and media, but in my attempt to understand the phenomenon of IT in Japan I will go further and also explore the personification of IT and AI in consumer products and trace interrelations between IT and Shinto at the present time. From this angle we will obtain a more truthful picture of the ideas of posthumanism in contemporary Japan and then can speak about tendencies in general. I will apply both the theory of posthumanism and Shinto worldview to the analysis of Japanese films and consumer products that deal with IT.

While at present many scholars work on the issue of posthuman development and the problems it involves, most of these scholars place emphasis on the evolution of this concept in Western society, overlooking a large part of the contemporary world: Asia and Japan, in particular. This constitutes a gap in porthumanism theory, because when we think about countries that are the most advanced in terms of information technologies, then Japan is probably one of the first that comes to mind. In terms of representations of IT in Japanese film, this is prevalent. My work will centre on the animated film, Ghost in the Shell. It was Shirow Masamune who created Ghost in the Shell in 1989 and Oshii Mamoru who introduced it to the world in the form of an animated cyberpunk film that became an icon for the films of this genre and the basis for the Matrix trilogy by the Wachowski brothers, a work often mentioned in the works of posthumanists.
In my thesis I will explore aspects of posthumanist society in Japan through the prism of representation of IT and AI in Japanese animated cinema and focus on works of such directors as Oshii Mamoru, Kon Satoshi, Hiroyuki Kitakubo, and other directors who deal with problems of posthumans and cyberspace. I will concentrate on the personification of IT and the attitude towards Artificial Intelligence shown in films primarily in the genre of science fiction, because it is here that we find the most clear engagement with this set of issues. The criteria of choosing the films which will form the body of my thesis will be the presence of representations of IT in forms of robots, cyborgs and cyberspace and Artificial Intelligence as a main part of the plot of the movie. By applying the techniques of textual analysis, principally close reading, semiotic visual analysis, and a narratological/structural examination of the components of film (plot, character, setting, sound, and visual information), I will determine the attitude toward IT in each work and divide the films into categories based on their implicit attitude toward technology. As in general technology is principally a positive thing in most of Japanese animation, my task of categorization will enable me to move my analysis to my second main focus, the function of Shinto and traditional ideologies toward community in the acceptance of IT in Japan. My analysis of the function of Shinto will proceed from different sources, such as traditional folktales and myths of Japan to the works of contemporary scholars researching this ancient animism.

The questions I will address in this part will be: what place does Shinto have in the life of Japanese people; to what extent does Shinto still affect the way of life of contemporary Japanese; what ideas of Shinto can find resonance in the philosophy of posthumanism; how do ideas of Shinto consent or dissent with posthuman theory; how do
these ideas differ from western philosophy or religion, for example, Christianity? In this regard we will be able to compare attitudes towards machines in Japan and the Western world, drawing on the work of, for example, Robert Geraci and his article “Spiritual Robots: Religion and our scientific view of the natural world”, in which he compares different types of consciousness about robots and artificial intelligence in different systems of beliefs such as Christianity in the West and Shinto in Japan.

Building on my analysis of animated film, I will also explore representations/manifestations of IT in Japanese consumer products. From this perspective I’m interested in the promotion of consumer production in the Japanese market, particularly the characteristics which make IT products attractive to Japanese consumers, and which characteristics create a perception of value or importance. I also will dissect TV commercials that feature different types of technology including robots.

To answer these questions I will conduct close readings and semiotic analyses of advertising media: television/print commercials, IT company/product slogans, and so on. This analysis will be thematic, and will explore commonalities in style, content, and also appeals to traditional views of Shinto, community, and the resulting transcendent view of consciousness. Here, too, I will apply the techniques of semiotic and narratological/structural analysis in order to discuss the internal components of media advertising and product packaging, and to demonstrate the effects of these on meaning-production. From here, I will demonstrate the reliance on traditional attitudes toward non-

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6 By the transcendent consciousness here I imply the idea of existence of consciousness beyond human mind. I argue that in the posthumanist framework Shinto accepts the presence of consciousness in different kinds of technology including robots and other form of artificial intelligence.
human consciousness as a tool to facilitate the acceptance of technology on the part of Japanese consumers.

Geraci argues the sufficient influence of Shinto on the development of robotics in Japan to facilitate the creation of humanoid robots as distinct from a ‘Western’ infatuation with Artificial Intelligence. “[…] Shinto appreciation for being human makes humanoid robots more appealing than the often-negative response to the human condition in Western traditions. The Japanese enjoy the presence of robots in their midst thanks in part to the Shinto perspective that the world is full of kami, sacred entities. The sacred nature of the world includes robots, whose own sanctity makes them natural partners to human beings” (Geraci 2006: 230). Further, “the sanctity afforded industrial robots by Shinto made them less threatening and more awe-inspiring than in the West” (Geraci 2006: 236). We can see confirmation of these arguments in the attitude towards humanoid robots in many Japanese science fiction films, such as Hinokio or Roujin-Z as well as in the popularity of products of robotics among Japanese consumer goods. For example, there is a tremendous variety of robots involved in different consumer spheres, from the service industry and elderly care to entertainment and even sex. “Already in Japan there is a market for ‘intelligent’, autonomous humanoid robots that can: operate power shovels and forklifts (Enryuu), patrol premises and extinguish fires (ReBorg-Q, Guardrobo D1), replace human service sector employees (Actroid, Asimo), babysit and tutor children (PaPeRo, Wakamaru), housesit (Nuno), nurse the infirm and elderly (Riman), provide companionship and entertainment (ifbot, Pino, Posy, Robovie), and even provide sex (Kaori)” (Robertson 2007: 373).
Robots in Japan are more and more endowed with human characteristics: “Shinto priests no longer receive invitations to a robot’s first day of work, but a robot at the Central Cemetery in Yokohama, Japan does its own consecrating. Shaped like a human, the machine is lowered into the prayer hall every morning to chant Buddhist prayers on behalf of human beings” (Geraci 2006: 237). Moreover,

In 1970, [Masahiro] Mori founded the Jizai Kenkyujo (Mukta Research Institute), a group dedicated to using Buddhist principles as the spur for creativity in the robotics industry. Group members chant Buddhist scriptures and meditate to find new ways of designing and building robots (Geraci 2006: 237).

Religion and the development of information technologies go hand in hand as technologies in Japan are associated with natural components of this world, something that is interrelated to everyday life and to spiritual life as well. In Japanese religion and philosophy, the body cannot be separated from the mind; therefore, the body is not to be discarded in favor of mental salvation common in the West. In Japanese thought, the mind and body are in an internal relationship, which means that one cannot be what it is without the other (Kasulis 1993: 299-320, 305). To think of the mind without the body cannot be done; the mind is inherently connected to the body. Owing to this, the Japanese do not recognize the mind/body problem at all (Geraci 2006: 239).

Another integral part of the philosophy of Shinto is the relation between the spiritual and material, where the “material never exist[s] without some relation to the spiritual” (Kasulis 2004). The link between the spiritual world of kami and the material world of humans is able to manifest itself in different ways. In this regard the notion of Internet and cyberspace can function as a mediator or link between these two worlds, a link that is neither seen nor felt, but which connects everyone with everything. One of the latest initiatives of the Japanese government, “Ubiquitous Japan” (u-Japan), a system
allowing everyone and everything to be connected anytime and anywhere by Internet technology through little tags or cell phones, is the near future of Japanese reality — a cybersociety, which will control all the spheres of everyday life. *U-Japan* is what Japan becomes in 2010 when information and communication technologies will be applied everywhere in an attempt to solve a wide spectrum of problems of the Japanese society. This project is based on four main principles: universality (connectedness of anything and anyone), accessibility (can be used by people regardless of their age and social status), orientation on the user (is based on needs of users), and uniqueness. Among those four principles “universality” is the most determinant. *Ubiquitous networks* are characterized by the realization of programs “person-to-person”, “person-to-goods” and “goods-to-goods.” These programs allow citizens to connect easily to a network at anytime anywhere by means of inexpensive devices and tags. As a result the information and communication technologies will more fully penetrate all aspects daily life.

In my thesis I will demonstrate the hypothesis that this new cyberspace is only a transformation of the philosophy of Shinto to correspond to the conditions of a highly developed, capitalized society in the era of information technologies, a new Japanese interpretation of the old relationship between the spiritual and material world and a new form of community that is so essential to the Japanese nation. Shinto maintains that the material world is full of bits of kami and, moreover, that the world and kami are so interdependent as to be incomplete without each other. Because of the omnipresence of the kami every item in the world is internally related to kami and is already spiritualized. Shinto promotes the idea of the interpenetration of nature, humanity and spirits and defines the notion of community in Japan.
The idea of community underlies the life of society in Japan. The idea of communal and separate has a special interpretation in the Japanese context. "Separativeness and communal solidarity, although seemingly opposed, actually work together. [...] For the Japanese, in being individual one is intrinsically communal: the whole is in every part" (Kasulis 2004:54). Kasulis describes this relationship using the example of traditional Japanese family meals where every member of the family is served with his or her own portion of rice compared to the shared plate style family dinner that is common for China. "Unlike the Western notion of society as a contractual connection established among individuals, in Japan people find their solidarity by recognizing the internal relations binding them with others" (Kasulis 2004:54). Here again we see the idea of interconnectedness and interdependence of everything including the relationship within a family or a social group. For many Japanese, it is possible that one may feel most connected to all other Japanese while participating in the most local of Shrine events. Japanese social identity is closely related to Shinto and the community.

In terms of globalization and the blurring the borders between nations and cultures, the problem of restoration and preservation of traditions and cultural identity has emerged in different societies. Perhaps the creation of u-Japan is a kind of response to the necessity of conservation of community where people are able to feel at home, where they will be always connected to something or somebody.

In many of the films which will form the basis of this study, there is a trend that, I will argue, grows from Japanese attitudes towards technologies as an integral part of modern society and artificial intelligence as a substitution for or something equal to the human mind, sometimes even better and more powerful than an ‘ordinary’ human as a
recreated nature often gains more value in the Japanese culture. The appreciation of an artificially recreated nature is one of the defining characteristics of the Japanese aesthetic view of the world. Desire for perfection is a driving force underlying much of Japanese culture; it influences everything from the presentation of food on the plate to pieces of art.

This trend reflects posthumanist ideas of the enhancement of human abilities by means of different alterations to their bodies. Here we can speak about the transition to a posthumanist society in the world of Japanese cinema and animation; in particular the latter has been always very quick to respond to movements in social life and can be a mirror of society itself. According to the authors of Robot Ghost and Wired Dreams, the genre of anime gained popularity in Japan after World War II and since that time has strongly influenced global popular culture through the most modern means of communication technologies like television, computer games, game consoles and arcade games. In Japan visual forms of narrative have excelled the prose genre that is more commonly seen in US and Europe. Bolton and his companions consider that high economic growth in Japan in the 1970s and the decline in the United States’ economy has led to “ambivalent fascination with Japanese attitudes toward development – the synthesis of robotic industrialization, neofeudal corporate culture, and the enthusiastic acceptance of new communications and simulation technologies in everyday life. Japanese anime uses fantastic context and innovative visual grammar to provocatively address the issues of nationalism, gender identity, mechanical bodies and language” (Bolton, Csicsery-Ronay, Tatsumi 2007).
This project will demonstrate that there is a relationship between the development of information technologies and the traditional background of Shinto in the formation of Japanese animation and posthumanist society. In my first chapter I will explore the intersections of these two concepts and the reasons underlying the Japanese ‘affection’ for technology. I commence from the assumption that there are certain traditional roots that allow Japan to become one of the world leaders in technological progress since World War II and these roots lead us to the set of beliefs known as Shinto.

In my second chapter I will explore posthumanist ideas expressed in the work of Japanese director Oshii Mamoru *Ghost in the Shell*. I will build my discussion of the film using the works of Susan Napier and Sharalyn Orbaugh as well as the concepts of Shinto. I will also show how the latest government's initiatives fit into posthuman subjectivity creating a new sense of community in Japan based on ubiquitous penetration of information technology. Based on this analysis I will determine the attitude toward technology and posthumanism in Japan and will move to the last chapter of my work, the discussion of images of technology in the Japanese media.

In the third chapter I will concentrate on semiotic analysis of TV commercials in order to define a perception of technology in general and robots and other forms of artificial intelligence in particular. I will also discuss Japanese robotics and its impact on economic and social problems of contemporary Japan and the solutions that the robots can provide. In my conclusion, I will talk about place of religion and technology in the lives of the Japanese. I will demonstrate how a unique combination of traditional spirituality provided by Shinto and Japanese popular culture forms positive attitude to living machines and technology in general and suggests a re-evaluation of the notion of
'machine consciousness' as one of the key concepts of the posthumanist theory. Japan might be the first country to step to posthuman actuality and its experience is valuable for the further development of the posthumanism theory.

As being one of the most developed countries in the world, Japan is involved in international processes as an economic, political and cultural partner. Japan affects the development of other countries around the world. Among these countries are the most influential and powerful current world leaders: Russia, India, China, and the USA. That is why the experience of Japan in building a strong and competitive economy is also useful for other countries, but blind copying of the policies of Japan will not guarantee their successful adoption into nations with other backgrounds. A country's national features play a very important role in economic development and cannot be omitted or separated from other factors.

That is why understanding the roots of the success of IT in Japan is important not only from a scientific point of view, but also in a practical way in terms of adapting its experiences into the contexts of less developed countries.

I also want to point out that there is no single, preset relationship between Shinto and technology. This particular project deals with cultural factors influential in the development of the information sector, but does not concern itself explicitly with political or other issues. Nevertheless, this study will help determine the historical, philosophical, and spiritual aspects of the transformation of Japan into a highly technological country in the post-World War Two.
CHAPTER I: Intersections of Shinto and Technology in Japan

Introduction

In this chapter I will provide a brief description of the outlines of Shinto, and will place these in a context both historical and contemporary. I will seek to demonstrate how Shinto evolved in the Tokugawa era, through the influence of Motoori Norinaga and other Japanese scholars, into a force of national ideological unification in the Meiji period, and how this force was exploited during Japan's period as a colonial power. I will continue my discussion to consider how Shinto has remained relevant in a consumer-capitalist Japan. I will then suggest some links or correlations between the status of Shinto in contemporary Japan and that of information technologies (IT) and technology in general. I will discuss the theoretical intersections of Shinto and information technologies in modern Japan as well as give some basic historical conditions of developing information technology since the Meiji restoration, with an emphasis on the post-war development and new economic policy taken since the Nixon\(^7\) and Oil shocks of the beginning of 1970s traced until the present time. Though I am not arguing here that there is single relationship between development of information technologies in Japan and Shinto philosophy, I do believe that there are special conditions that made it easier for the new economic strategy based on science and technological advance to grow successfully on Japanese ground. The notion of community arisen from Shinto combined with an emphasis that was made by the Japanese government on technological progress

\(^7\) So-called "Nixon Shock" occurred on August 15, 1971, when U.S. president Richard Nixon unilaterally announced that the government would impose a 10 percent import surcharge and discontinue gold convertibility in view of the deteriorating U.S. balance of payments (Kuroda 2004:4).
and formed a unique model of high-tech development in modern Japan. I also will look at the factors that made it possible for Japan to build an economy based on scientific progress. This discussion will set the stage for an analysis of the overlapping influences of Shinto and IT as two aspects of modern Japan, which will be elaborated in other chapters.

The problem of religiousness in Japan

I would like to begin this discussion with setting a problem of religiousness in Japan and how it is different from Western understanding of religion. The Oxford English Dictionary defines religion as an "action or conduct indicating a belief in, reverence for, and desire to please a divine ruling power; the exercise or practice of rites or observances implying this; a particular system of faith and worship" (1971). Religion also can be defined as an institution to express belief in a divine power or a set of beliefs concerning the cause, nature and purpose of the universe which often contains a moral code governing the conduct of human affairs. The term 'religion' in Japan is contradictory. In the Japanese context it refers to something that can determine national mentality and traditional spirituality, a way of everyday conduct. According to the latest surveys the current situation in the religious sphere of Japan is complex. Traditional Buddhism represents 55 percent of the population, compared with 80 percent in 1900. New religions that are sects of or schisms, from Buddhism and Shintoism have grown since 1945 with the biggest - Soka Gakkai (Value Creation). State Shinto was once a national cult that all citizens belonged to, but today most attending Shinto shrines are Buddhists, and there are

more Christians (3.6 percent of the population) than Shintoists. Half of Japanese homes have a Bible. Government religious statistics, based on family heritage, claim 85 percent of the population is religious, but polls show two-thirds profess no religion (McQuaid 2001). Looking at these statistics one can hardly understand the real situation with religiosity in Japan. The matter is that most of the Japanese today state that they have three religions in their lives: Shinto, Buddhism and Christianity. And the term “religion” in this sense means the rituals and everyday activities that are associated with a certain belief system. Shinto pertains to the miracle of birth and bringing a newborn to the local shrine as well as to different festivals or matsuri and traditional cultural events; Christianity is more related to the globalization movement and consumerist economy and is usually associated with Christmas and wedding ceremonies. Buddhism on the other hand deals with funerals and the process of pacification and reincarnation. Ian Reader in his book Religion in Contemporary Japan calls this the “Born Shinto, die Buddhist” principle which implies that Shinto is associated with birth hence with joy and brightness while Buddhism is concerned with death thus it is dark and sombre. Shinto is something that defines the Japanese, discloses the nature of the Japanese nation. As Ian Reader argues:

[r]eligion has always had an intensely social nature in Japan, providing, and being used to provide, a sense of social cohesion, continuity, community and identity on many levels at once, from local and familial to regional and national. In national terms Shinto in particular has long had close ties to the concepts of Japanese national unity and identity: the very creation of early writing such as the Kojiki, for instance, with their legitimations of Imperial rule and assertions of Japanese descent from kami, testifies to this (1991: 55).

Historically and traditionally Shinto has always been connected with rituals of fertility in the local agricultural communities bringing together households and kami to
venerate nature and ancestors. Reader says that in the lives of the ordinary Japanese Shinto has been dealing more with issues of social identity and belonging in terms of local communities and households, than it has with political issues. “The shrine often served (and still does in some places) as a community centre, the setting for meetings and recreational activities as well as various religious events. In such terms, the local shrine stood as a regional and territorial entity, a focus of the community of identity and belongings” (Reader 1991:60).

**Basic concepts of Shinto**

The word “shinto” is translated as “the way of Gods” or “the way of kami”. Kami is a term in Japanese for everything that surrounds us and has a soul or divine origin. Kami is a key concept of Shinto though it is hard to define it. Everything can be kami: the sky, the sea, the heaven, mountains, rivers, trees, animals, fishes, reptiles and the process of reproduction in nature and humans. The concept of soul in Shinto is fairly vague too. There are several terms that determine spiritual power of the object that mostly comes from awe. It can be tama, mi, or mono depending on its relationship to the material. “When used in its narrow technical sense, the word tama refers to a spiritual power infusing a material object while preserving the integrity of both itself and the object” (Kasulis 2004:14). Kasulis explained this relationship as comparable to the way sand is suspended in the ocean water crashing on the shore. The basic idea is that being a part of ocean water sand does not dissolve in it and does not change it. Likewise, tama does no change the matter, nor does matter change tama. The relationship to material in this case is basically external. In this meaning it resembles the Western ideas of soul and spirit. When Shinto focuses on spiritual power as internally rather than externally related to
materiality, it uses the terms *mi* or *mono*. *Mi* or *mono* and materiality do not exist without each other implying the idea of interdependence of spirit and matter. This relationship can be compared to the way that salt is dissolved in the ocean water. The salt is an integral part of the ocean water, it can not be seen but it also can not be separated from it.

There is also a third kind of relationship between material and spiritual that can be defined as *tama*, a spiritual presence with integrity of its own is moving but not fully disappearing into the physical world. In this case, *tama* becomes *mitama* or *tamashii* – an individuated soul – that can be used to designate something personal as “my soul” or something collective such as the “soul of the ancient Japanese people” (Kasulis 2004: 14-16). To sup up, in Shinto material never exists without some relation to the spiritual: it may be external, internal, or both.

Shinto grew from animism and it is still very big part of its Shinto tradition. In contrast to monotheist religions like Christianity or Islam, there is no absolute truth, no sacred texts or sutras, or right and wrong in Shinto. Evil is believed to be caused by evil spirits, thus the main objective is to purify oneself from bad spirits and keep them away from humans while worshiping good *kami*. Shinto, being a religion of action and external symbolism, venerated *kami* through carefully performed rituals and ceremonies. The Shinto Priests that performed these rituals are cleansed and have to be pure in front of the *kami* as to not insult or anger them.

Being an indigenous religion like Hinduism in India or Confucianism in China, Shinto is being practiced mostly only by the Japanese inside and outside Japan and cannot be taken out of the ground it has been grown in. Shinto, in many aspects, is a key to the notion of society in Japan. It can be understood only in the Japanese context. For
many Japanese, "feeling Shinto" and "feeling Japanese" are barely distinguishable. In the context of Shinto, the term "spiritual" is used over "religious" as an indication of the spiritual nature of Shinto. Spirituality in this context does not necessarily mean private experience but emphasizes the shared intimate experience, for to express one's own spirituality, one must first be impressed by the spirituality of others (Kasulis 2004: 2-4). Thus, Shinto spirituality is more connected with aspects of people's daily lives, spiritual experience and traditions that result from it.

Today, Shinto is more associated with social life of Japanese society, with everyday ritual, family traditions and veneration of ancestors rooted in the agricultural community. It emphasis the households and provides a sense of national identity. It is closely connected with Japanese community, nature and spiritual space within. Therefore, it is hard to practice Shinto outside Japan; only few people outside Japan identify themselves as Shinto.

**Institutional Shinto**

Nonetheless, when we hear the term "Shinto", it is unclear what Shinto is being meant as it is really hard to define one single concept that would fit into all the historical changes that were made to what we can call nowadays Shinto. We can speak about prehistoric or shamanistic Shinto, early imperial Shinto, Buddhist syncretic Shinto, nativist Shinto, folk Shinto, Sect Shinto, Shrine Shinto or State Shinto. As the limits of this particular thesis do not allow me to elucidate all concepts of Shinto, I would like to give a short historical outlook on Shinto focusing on its meaning for the Japanese people and its place in everyday life of the Japanese.
If we take a look at ancient times we can find the roots of Shinto in folk beliefs and practices. We can trace the development of a traditional outlook into set of beliefs, a set of sacred directions and rituals in one’s daily life into a national ideology and even ideology of Japanese military nationalists. It does not mean that those transformations were natural to the development of Shinto but they were possible because of flexibility of Shinto and its emphasis on national unity and identity. Shinto has never been a single doctrine; it changed with the times and circumstances, and under the influence of other religious teaching. In this sense the concept of ‘religious system’ seems to be more suitable to describe the meaning that religion in Japan implies. As Inoue Nobutaka pointed out in his introduction to *Shinto – A short history*, the concept of religious system explores the historical characteristics and changes of society and demolishes the boundaries of different religious systems with regard to individual movement and different historical periods. “If religious systems are formed and transformed in close interaction with society in which they partake, it follows that Shinto cannot be considered as a single religious system that existed from the ancient to the modern period” (Nobutaka 2003:5).

Shinto has grown up from local customs, superstitions and folk religions and all these elements are still very relevant in the modern Shinto. “In case of Shinto, however, such elements are so prominent that it is impossible to draw a line between folk religion and some fictional ‘pure Shinto’. This is a direct result of Shinto’s history, which is rooted in a long tradition of kami worship that developed in a close relation with the rhythms of everyday life, both cultural and economic” (Nobutaka 2003:2). It is true that
Shinto is more concerned with a spiritual path, the way of everyday life and purification than with religious dogmas and sacred texts.

"It is essential to understand that the fundamental thrust of Shinto, ancient and modern, is sociological. It is concerned with the life of social groups, from hamlet to nation, and their collective symbols and sources of power" (Ellwood 1976: 548). The simplicity of Shinto made it possible for it to survive throughout history; its universality in many ways let it still be a significant yet unconscious part of people's lives. As Kuroda Toshio puts it, "Shinto, with the Japanese people, is enduring. It is 'the underlying will of Japanese culture,' to borrow Hori Ichiro's phrase, an underlying autonomy which transforms and assimilates diverse cultural elements imported from outside". He continues "even though one can speak of Shinto as a religion along with Buddhism and Taoism, 'Shinto-ness' is something deeper. It is the cultural will or energy of the Japanese people, embodied in conventions which precede or transcend religion (Kuroda 1981: 2). The role of Shinto as a background for justification of government policy is different from the role that it plays in the lives of the households. There is no single definition for Shinto but there is a core idea of Shinto as link between spiritual and secular life that defines Japanese national identity. One of the main values of Shinto is its social nature and its role in the local communities.

A brief history of modern Shinto

To some extent Shinto is an indigenous religion that was strong enough to stay relevant in present time. What principles made it possible for this traditional set of beliefs to influence modern life of Japanese society?
To answer this question I want to give a summary of the history of modern Shinto, and specifically the time when Shinto was appropriated by the Meiji government as a religious ground for the Meiji restoration of the late 19th century. Kuroda Toshio in *Shinto in the History of Japanese Religion* argues that before this time Shinto did not exist as an independent religion and separating it from Buddhism and Taoism has been done only for political reasons. He continues:

> [t]he notion of Shinto as Japan’s indigenous religion finally emerged complete both in name and in fact with the rise of modern nationalism, which evolved from the National Learning school of Motoori Norinaga and the Restoration Shinto movement of the Edo period down to the establishment of State Shinto in the Meiji period (Kuroda 1981:19).

This idea is also supported by Endo Jun who believes that “it was in the early modern period (1600-1867) that the outline of Shinto as we know it today came into focus” (2003:108). He quotes Bito Masahide who has stated that Shinto, Buddhism and folk religions merged and adopted the form of a ‘national creed’. He also pointed out that it was in the early modern period that all sorts of religious elements, Shinto, Buddhist and many more besides, began to intermingle. Thus, the ritual cycle of contemporary Japan proves to be a legacy of this early modern period (Jun 2003: 108).

**Shinto and the Meiji Restoration**

The military government or Bakufu lost its ascendancy after Japan was forced to open its boarder for the rest of the world by the Commodore of U.S. navy Matthew C.

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Taoism (Daoism) - the word 道 (Tao or Dao) means “path” or “way” and refers to the Chinese folk religions and traditions that mostly focus on nature and relationship between humanity and cosmos, health and longevity, harmony with universe. Some scientists, like Kuroda, argue that Shinto is a “translated” version of Taoism, and the roots of Shinto lie in the Chinese philosophical tradition.
Perry in 1854\textsuperscript{10}. The failure of the Bakufu to defend the country from western invasion led to the loss of its authority. Japan was in need of new power that could bring people together but which would retain the essentials of the Japanese nation. The only way to do so was to restore the rule of the Emperor, the figure that could unite people and return power to the country. But this task would be impossible without an ideological or sacred foundation and Shinto could provide the justification for the restoration of imperial power and support for a system of central administration. At that time Buddhism was widespread and perhaps a more popular religion than Shinto but it did not fit into the new government policy and structure, as only Shinto was able to renew the national spirit and serve the state purposes With the help of the goddess Amaterasu,\textsuperscript{11} which was brought to the centre of the Shinto pantheon, the Emperor became not only a ruler but also the highest priest and spiritual authority, directly descended from the gods who had given birth to the Japanese islands.

\textsuperscript{10} In 1852, President Millard Fillmore ordered Matthew C. Perry to command the U.S. Navy’s East India Squadron and to establish diplomatic relations with Japan. Perry initially delivered President Fillmore’s request for a treaty to a representative of the Japanese emperor in July 1853. Perry returned with a larger force in 1854, arriving in Edo (Tokyo) Bay, and obtained the signature of Japanese authorities to the Treaty of Kanagawa on 31 March 1854. As a result of this treaty of permanent friendship, a U.S. consul was stationed at Shimoda, U.S. vessels were allowed access to the ports of Shimoda and Hakodate to obtain provisions, and shipwrecked seamen from U.S. vessels were to receive the assistance of Japanese authorities (Commodore Matthew C. Perry and the Opening of Japan. Available online at http://www.history.navy.mil/library/special/perry_openjapan1.htm).

\textsuperscript{11} Amaterasu (天照), Amaterasu-ömikami (天照大神／天照大御神) or Ōhirumomenomuchi-no-kami (大日鬘貴神) is, in Japanese mythology, a sun goddess and one of the principal Shinto deities. Her name, Amaterasu, means literally “(that which) illuminates Heaven”. She is also said to be directly linked in lineage to the Imperial Household of Japan and the Emperor, who are considered descendants of the kami themselves.
To empower Shinto and weaken the influence of Buddhism much Buddhist property was confiscated, Buddhist priests were stripped of their status, shrines cleaned of every trace of Buddhist imagery, apparatus, and ritual, and Buddhist deities lost their godly status. Shinto was completely separated from Buddhism by decree in 1868; it got official state religious status and was built into new system of administration. As Inoue Nobutaka put it, modern Japan found itself having to contemplate the essence of its culture; the proliferation in early Meiji of the word **kokutai**, sometimes translated as ‘national essence’, suggests the seriousness of the endeavour. This new ideological environment helps explain why particularistic Shinto, rather that universal Buddhism practised across Asia, came to find favour. The ideology promoted up-front was that Shinto was a uniquely Japanese religion; shrine Shinto and the emperor ‘system’ came to play a vital role in defining the identity of the Japanese, and of Japan, in the modern period. (Nobutaka 2003:164). The separation of Shinto from Buddhism played an important role in propagandizing new government directives.

The Meiji separation of Shinto and Buddhism (**shinbutsu bunri**: 神仏分離) and its concomitant suppression of Buddhism (**haibutsu kishaku**: 廃仏毀釈) were coercive and destructive “correctives” pressed forward by the hand of government. With them Shinto achieved for the first time the status of an independent religion, distorted though it was. During this period the “historical consciousness” of an indigenous religion called Shinto, existing in Japan since ancient times, clearly took shape for the first time. This has remained the basis for defining the word Shinto down to the present (Kuroda 1981:19).

Particularly in that period, shrines and their priests started to take an active part in the dissemination of state ideology. Shrines were declared ‘sites for the performance of’
state ritual' ( kokka no soshi) and the Meiji government attempted to make people conform to Shinto shrines and rituals, for example newborn children were to be taken to the shrine for miyamairi (first visit of a newborn to the shrine) to be blessed by kami and recorded in a book of family register. Thus, Shinto shrines became a place for census gathering and other public functions.

The Meiji restoration was the time of shaping the unique relationship between state and religion. The pre-war system of separation of religion and state was based on dividing the arenas of Shinto into three distinct categories of ritual, teaching and learning: Shrine Shinto, sect Shinto and research institutes correspondingly.

Shrine Shinto and State Shinto

With the formation of Shrine Shinto, the system where government took centralized control over all shrines in the country, this relationship between the State and Shinto gained new meaning and power. As Shrine Shinto was not considered to be a religion and the law of separation of the state and religion\textsuperscript{12} did not concern it, Shinto acquired an opportunity to support the state in providing ideology for the new Meiji government. Inoue has raised the question here whether it is possible to call this construct state Shinto ( kokka Shinto). This term only entered popular usage in the post-war Shinto directive for defining the special relationship between Shinto and the modern Japanese state. He is

\textsuperscript{12} The Meiji Constitution of 1889 granted Japanese subjects freedom of religion to the extent that religion did not interfere with fulfilling their duties to the state. At the same time, the state increasingly took the position that Shinto was not a religion. On the basis of this view, it was possible to make participation in shrine rites obligatory (for school children and members of the armed forces, for example). Not being religious observance, it was held, shrine rites could be categorized as obligatory duties of a Japanese subject (Hardacre 1989).
quoting the Shinto directive (Shinto shirei) of December 1945 where State Shinto is considered as "that fraction of Shinto distinguished under Japanese law from religious or sect Shinto" (Inoue 2003:170). Following his judgement, if the term is used as an expression of the unique pre-war relationship between Shinto and the state, then the existence of state Shinto here is indisputable Inoue himself links these two definitions of state Shinto. He doesn’t use it only in the post-war context but also argues the existence of the special relationship earlier pointing out that in the post-war period it gained new meaning that later gained a negative connotation.

Nevertheless, State Shinto became an increasingly prominent element of national life in the twentieth century especially during Russo-Japanese war when the idea of honourable death was widely promoted. The essential role in the Empire building was given not to the traditional army based on samurai force but to the conscripted commoners. During the Meiji Restoration the main military force was samurai army whose loyalty to the Emperor depended on the loyalty of their masters. After the establishment of the new Meiji government modeled on European lines, a more formal military, loyal to the central government rather than individual domains, was recognized as a necessity to preserve Japan’s independence from western imperialism. To reform the military, the government instituted nationwide conscription in 1873, mandating that every male between the age of 17 and 40 should serve in the military (Harries 1994:22). In order to legitimize this reform and to create a sense of national unity among the ordinary Japanese an idea of honourable self-sacrifice was promoted by Shinto. Since the Meiji restoration, new shrines had been constructed to ensure as national deities the emperor or members of the imperial family, military heroes. Particularly after Russo-Japanese War,
these shrines began to perform large-scale rites of state. Among the new shrines, the Yasukuni Shrine in Tokyo became a great centre of State Shinto where the emperor performed ritual, and the dead were apotheosizes and worshipped as *kami* of the nation. The idea was promoted that it was great honour to die in a combat in the nation defence. This shrine is still one of the most problematic political issues for present Japan as it is still worshipping World War II war criminals as *kami* (Hardacre 1989).

After the Russo-Japanese war the state took an increasingly active role in managing shrines with the determination to integrate shrines and other religious organization into the social life in order to unite people. It became a matter of national policy to introduce Shinto into “bureaucratically inspired movements as national youth groups, women’s groups, and army reserve units” (Hardacre 1989:38). In 1906 the state launched an ambitious plan to align shrines with village organizations by recognizing only one shrine per village as legitimate to necessitate shrine mergers on a large scale. The result was the abolition or merger of thousands of shrines and a focus on the loyalty of rural people through a single village shrine.

During World War II Shinto provided indispensable support to imperial Japan. Hardacre says:

The emperor was called a “divine emperor” (*akitsu mi kami*) or “kami in human form” (*arashitogami*). Public school textbooks promoted the idea of the divine origins of the nation and the descent of the emperor and the people from Shinto kami. The idea of the “eight corners of the world under one roof” (*hakkō ichiu*) was interpreted to mean that the Japanese were a superior people with a mission to rule the entire world. By the war’s midpoint more than 1,200,000 war dead had been enshrined as national kami in the Yasukuni Shrine and there received imperial rites (1989:40).

After 1945, with the Allied Occupation of Japan and a new constitution established, Shinto was granted the status of religion along with other religious teachings like
Buddhism and Christianity. The state was prohibited from patronizing any religion and was separated from religion; the constitution guarantees religion freedom for every member of society.

The principle of separation of religion and the state

Though separation of religion and the state was officially proclaimed in the new constitution, Asoya Masahiko in his book *Gendai no shōmondai to shintō* (現代の諸問題と神道: Modern issues and Shinto) put forward an idea that this principle seemed to be hard to implement in Japanese society as the concept itself was not clear for the Japanese. The roots of this concept are found in Western history where the state and church always had antagonistic attitudes as in Christianity, where there has been always only one God and all other teachings were seen as heretical or even devilish. That is why conversion and a fight for the true teaching was often the cause of many holy wars and a danger for the state. From this point of view it is understandable that the state wished to be parted from those battles. But the historical conditions in Japan are different from those in the West and the difference is grounded in the nature of Shinto and Buddhism. Shinto worships 8 million *kami*, which means that there is no one single truth or god, and all other teachings are also have a right to live within Shinto world. Besides, the Buddhist pantheon of divine Buddhas and Bodhisattvas inclines it to a tolerance for other gods and religions. The nature of both Shinto and Buddhism are more tolerant to other teachings and to the people of different religious backgrounds, especially as we move closer to modern times. That is why from both a political and cultural point of view religion was less of a danger for the state in Japan than it always has been in Europe; moreover, it was ground for its power and justification of national policy. Nonetheless, there were
instances of tension between church and the state in pre-modern Japan, culminating for example, in Nobunaga’s destruction of Enryakuji, the headquarters Tendai Buddhist sects, in sixteenth century, but Shintoists followers tried to remain aloof from those battles. The principle of separation was enforced by the new post-war constitution imposed by Allied Forces but incomprehension of the nature of the problem made it hard to adjust it to the Japanese situation (Asoya 2001).

The misunderstanding of the concept of separation of state and church was perhaps the reason why Shinto is still very influential in the social life of the Japanese. As shrines are no longer under the state control, their activities have become freer. There is a tendency to return to the origins of Shinto before it became a ground for the Meiji Restoration on the one hand and being influenced or absorbed by other religious traditions on the other. With technological advance and a new information age and globalization, new form of rites and worship have transformed traditional Shrine Shinto. Modern shrines perform a wide range of rituals: from car and computer-blessings, wedding ceremonies, groundbreaking rites to pacify kami of a locality before construction, to conducting funerals. Though the roots of Shrine Shinto are in a village community, with economic growth, more and more companies come to venerate shrines. In premodern urban centres, worship of kami was still important to most businesses. Shrine priests are invited to factories to bless new products, whether it is a new industrial or home robot, automobile or computer software. Shinto became a part of Japanese business etiquette, part of Japanese social tradition. The first visit of the year to a Shinto shrine or Children’s day festivities (kodomo-no-hi) are adhered to not because they are
Shinto or religious; rather they have become uniquely social practices. Inoue takes on this point:

It goes without saying that all customs are directly influenced by social change, and Shinto customs are no exception. They continue to be transformed in fundamental ways in response to the social shifts of post-war society. As members of the generation educated in pre-war Japan decrease in number, so will the impact of social change on Shinto customs be felt still further (2003:196).

**Shinto and capitalism**

Moreover, the modern capitalist system of values seems to have many common points with traditional Shinto philosophy, says Asoya. It was Motoori Norinaga who in his collection of essays *Tamakatsuma* (玉勝聞) described the essence of human nature and the role of emperor in providing good to the citizens. He says that to eat tasty food, to wear fine clothes, to live in beautiful house, to earn a lot of money, to be respected by others and live a long life are sincere acts of human beings. All these desires are natural, they have been affecting human behaviour since the formation of social communities and to deny those desires would be a mistake as they are essential to humans. The role of an emperor as a descendant of the Great Goddess Amaterasu is to provide peace and wealth for his subjects and make all the people’s desires come true. To be a successful emperor one should respect and honour kami and especially the Great Goddess and establish and hold *matsuri* or festivals in their honour. The *matsuri* are aimed to unite people and bring them together to sustain peaceful living. Thus, the task of the emperor is, first of all, to maintain the tradition of *matsuri*, second of all, to honour Shinto Shrines and, at last, to adhere to the essentials of Shinto. If human desire is acknowledged by Shinto then in conditions of the modern capitalist system of values, commercialized consumer desire is also the part of human natural desire and is also approved by Shinto philosophy.
Nevertheless, we should remember the other side of the coin, the side-effects of consumerism, such as environmental issues, energy shortage or exhaustion of natural resources. To overcome these consequences and contribute to the sustaining of world peace, action should be taken on the micro level beginning with villages, towns and countries. Once world peace and wealth is reached, all the people on all levels will be happy and peaceful. By doing so we should also consider avoiding the negative consequences of capitalism and devise solutions. If we keep to those directions, it will mean that we are following the will of the kami. Hence, the desire to do something can become a key element to solving current problems. (Asoya 2001: 58-62).

In Asoya’s insight Shinto harmonically fits into a modern capitalist system based on desire and consumerism; moreover, Shinto justifies the human desire for a better life and provides rites and blessings for accomplishing objectives based on those desires. As a result, Shinto has become more bound with everyday activities, businesses and people themselves. In many senses Shinto philosophy is universal and applicable to different regimes; it has survived over the centuries and taken many different shapes, from folk beliefs and practices, to the national religion and ideological ground for nationalistic movements. It does not mean that the Shinto that we see in ancient Japan and State Shinto of the end of the nineteenth century are the same; on contrary, it has experienced a lot of transformations both in ideological and constructive ways and perhaps these alterations helped it to get through the all historical moments while remaining a significant part of Japanese religious, economic, political and cultural life. With the discrediting of State Shinto after the downfall of Japan in World War II Shinto was quick
to adjust to the changing political and economic environments and stay relevant in the post-war period and further development of the county.

**Shinto and new economic strategy**

**Post-War development**

World War II brought devastation to Japan and its economy. About 40 per cent of civilian national wealth was lost, millions of people were left homeless, and most of the cities were destroyed with their factories, roads, electric lines, schools, hospitals and communication systems. An economy based on military needs was no longer in correspondence with the needs of the post-war society. The country was in huge debt and needed a total reorganization of the infrastructure and economy.

To help the economy to recover the Japanese government invested in the basic industries: coal, steel, fertilizer, gas, cement, and railroads and, with a contribution of aid and technology from the Allied Forces, these sectors were fast to develop. However, in 1949 an abrupt change in government policy forced by Occupation authorities drew a new course for the Japanese economy. Economic aid from the West was discontinued; Japan was brought back to the international economy by the introduction of a single exchange rate for Japanese currency at 360 yen to the US dollar.

The government’s reduced budget policy came suddenly, at a time when industry had not yet managed to fully recover productivity and when many enterprises were unable to meet market needs because production costs were too high. The new policy, the so-called Dodge Line policy, quickly ended inflation, but it increased uncertainty about the future of the Japanese economy (Hayashi 1990:11).

To help better coordinate the changes in the Japanese economic policy the Ministry of Commerce and Industry was reorganized and the new Ministry of International Trade
and Industry (MITI) was established in 1949. Successful recovery depended on
"industrial rationalization," namely "technology innovation." The Industrial
Rationalization Council was established in 1949 to undertake rationalization of the iron
and steel and coal-mining sectors. In 1952, MITI and the Ministry of Finance jointly
enacted the Enterprise Rationalization Promotion Law, which would play a major role in
subsequent modernization. In the same year Japan joined the International Monetary
Fund\(^{13}\). Japan started to gain back its place in the international community: in 1955 it
formally joined the General Agreement on Traffic and Trade (GATT); in 1956 it joined
the United Nations and declared the normalization of diplomatic relationships with Soviet
Union; in 1964 Japan joined the Organization for Economic Co-operation and
Development; and in 1965 it signed the Treaty with South Korea on Basic Relations
between two countries.

Japan became an active member of international trade and started to export its
manufactured products to other countries. Nowadays Japanese wares are well known for
quality and have a reliable image, but in those days they were recognized as cheap and
low quality goods that were a good option for markets recovering from war devastation.

After the termination of economic aid from the West the Japanese government, in
conjunction with MITI, determined a new direction for economic growth. The new
sectors of economic development became shipping, electric power, and transportation
with the emphasis on the first. The Korean War (which started in 1950) resuscitated the
Japanese economy; finally, all the post-war reforms paid off as Japanese industry served
both UN forces and the post-war rehabilitation of South Korea. Japan entered a period of

\(^{13}\) For more information visit history page on the METI's official website at
rapid economic growth until the world economy was jolted by the dollar Nixon shock of 1971 and the oil crisis in 1973.

Nixon shock and oil crisis

Oil doubled in price and capacity-intensive industry turned out to be unprofitable in these conditions. Being very poor in natural resources, Japan could not afford to continue building an economy based on energy-intensive industries. The only option left for leading the country out of the crisis was to focus on the high-tech sector, like microelectronics, machinery and robotics. The strong yen resulting from the Dollar (Nixon) Shock and the strong yen caused by the 1974 oil shock were major blows to the iron and steel and chemical industries that had undergone expansion in the 1960s. Japan was forced to make a major turnaround in its industrial structure. A few years before that, the Industrial Structure Council announced the “Creation of 1970s Vision.” The council correctly predicted the beginning of a new era, when it said that “we are in a new situation in which Japan’s rapidly grown economy and the world economy are inseparably related. This is an unprecedented situation” and proposed the “concept of a knowledge based economy,” a new industrial structure policy based on the understanding that “constant pursuit of expansion is a thing of the past.”(11)

This reorganization and investment in scientific and technological progress helped Japan to cope with the crisis by the mid 70s. It was first to recover after this crisis. The world’s mining and manufacturing production index of 1975 – the year after the oil crisis hit – is given as 100; the corresponding figure for Japan in 1981 was 142, followed by the United States (128), France, and West Germany. To give a fuller picture, we must consider that Japan depends on imports for 95 per cent of its energy consumption, for 90
per cent of the important raw materials for its manufacturing and mining industries, and for more than 60 per cent of its food requirements (Hayashi 1990). The Industrial Structure Council submitted a report “Creation of 1980s Vision” with a view to shifting to a new international trade policy based on the understanding that Japan had become an economic power accounting for 10% of the global economy and thus had to play a role commensurate with its power. Japan’s manufacturing industries suffered due to rapid appreciation of the yen against the dollar following the Plaza Accord of 1985. However, a sharp increase in direct investments in East Asian countries led to the upgrading of industrial production in the region where labour costs were lower, thereby contributing to the high growth of East Asian economies, the “Miracle of East Asia” (11).

**The adoption of technology**

Japan had actively started to import the latest technologies, develop them and adapt to them the needs of its society. Having a century of experience in the adaptation of foreign technologies, Japan became the world’s leader in implementing the world greatest innovations in consumer technology.

Japan has been absorbing foreign technologies since the Meiji Restoration.

Only after the Meiji Restoration were there suitable conditions in terms of politics and socio-economics to domesticate and develop imported technologies [...] In the 1920s and again in the 1960s, the formation (and, in the 1960s, the recovery) of a national technology network did not lead to a rejection of foreign technology; rather, it made it easier to absorb higher-level foreign technologies; indeed, it accelerated the process (Hayashi 1990:47).

Thus we can see that after World War II Japan already had a fruitful ground for developing technologies that ensured success in adapting the new government policy based on high-technological innovations.
By the late 1980s Japan’s leading manufacturers had emerged as powerful competitors in technology-intensive goods, creating not just massive trade surpluses but accusations that they had been free-riding on basic technologies developed abroad under the orchestration of MITI. Diminishing opportunities for “catch-up” development, continued economic development, and disarming such accusations required Japan to place greater emphasis on basic S&T [Science and Technology] development (Whittaker 2003:76).

High economic growth was stopped by the “lost decade” of the 1990s and the crash of the so-called “bubble economy” when share prices plunged 40 per cent, followed by sharp decline in land prices, bad debts and declining asset values. The collapse of the bubble was followed by a chain of failures of financial institutions and caused a wave of criticism of financial authorities and accusations in prevarication and mismanagement. The country was shaken by economic crisis and recession and was in need of a new economic strategy again.

In the early 1990s Japan’s post-bubble recession seemed to be largely confined to the financial sector, and the vitality of its manufacturing appeared largely intact. Japan’s manufactures continued to operate in profit, stratospheric trade surpluses continued, and the performance of this sector made Japan’s recession bearable. (Whittaker 2003:62).

The surpluses in technology trade also continued to grow changing the structure of Japan’s export by increasing share of capital goods despite some warnings about U.S. advancements in the new high-tech industries leading to its domination in this field.

**New IT based economy and society**

To catch up with U.S. achievements in the technological sector the Japanese government made informational technologies the cornerstone of the new economic directive. It was first announced in 1994 when the basics of “e-Japan” were established. In 1998 the Japanese government introduced “The Basic IT Strategy”, a plan aimed to: create favourable conditions for accelerated growth of information technologies;
development of information and communication infrastructure; creating a competitive environment in the sphere of communication by dividing large companies into the smaller ones; reducing government involvement into commercial activity of communication operators; opening access to the Japanese market of telecommunications for foreign companies; development of electronic trade, etc. It was followed by a unique government program called “e-Japan” that was approved in 2001 and included a five year plan for development and integration of information and telecommunication technologies. The framework of the program was fast integration of the technologies that would provide the creation of high-speed data transfer net infrastructure, further involvement of the internet in the development of trade and businesses and, as a consequence, giving an incentive for an economy that had been in recession for the las: few years. Nevertheless,

[science and technology (S&T) cannot produce economic growth without entrepreneurship [...] ]; however, entrepreneurship for a major economy ultimately (and increasingly) needs a pool of scientific and technological knowledge from which to draw. Few would deny that the Japanese government and particularly the Ministry of International Trade and Industry (MITI) has, at least in the past, played an important role in making available to entrepreneurial businesses such a pool of knowledge, whether by assisting transfer from abroad or by encouraging its generation and diffusion in Japan (Whittaker 2003:75).

The new economic strategy has also influenced the life of society; from now on the Internet, cell phones and other gadgets would become a part of everyday life for ordinary Japanese. Information technologies have penetrated into people’s daily routine changing the traditional way of conduct. Interestingly enough, new technologies did not meet with any resistance from the nation; on the contrary, they naturally blended with traditional values and became an integral part of modern Japanese society. The acceptance of new virtual ways of communication and the substitution of real performance with digital
forms of interaction guaranteed the success of the new economic policy. Japan was very quick to catch up with the world’s latest innovations in the sphere of information and telecommunication and even excel in such fields as mobile phones and their services, the creation of artificial intelligence with robots that can accomplish a wide range of tasks, from industrial production and medical care, to housework and entertainment. Technological innovations became a driving force for leading the economy out of recession and creating new segments of the market. The successful implementation of the “e-Japan” program inspired the Japanese government to establish a new more in-depth policy that would cover more domains of Japanese social life. A new government initiative “Ubiquitous Japan” aimed to put Japan on a new stage of economic development: from industrial and financial capitalism, to information and cyber-capitalism based on a high level of penetration of information technologies into social life and the creation of a cyber-society. The name of the program speaks for itself, the term ‘ubiquitous’ refers to the ubiquitous status of technology in the new cyber-society, ubiquitous utilization of Internet and telecommunications.

**Conclusion: Shinto and Information Technology**

If we take a glance at the history of Japanese political and economic development, it becomes clear that this is not the first time Japan had to reorganize the economy and build a new social structure. From the Meiji Restoration to the post-war recovery, Japan changed its economic strategy at least twice and each time was rather successful. However, current economic problems in Japan are not the objective of my discussion here, as I want to focus more on the role that was given to Shinto in supporting government initiatives. Of course, the economic situation in Japan is much more
complicated and I am simplifying the subject here but the emphasis should be made on
the general policy and the relatively successful steps that were made to cope with
economic recession. Perhaps the reason for this success is concealed in combining
economic reforms with an ideological background. Behind all the structural changes in
the country since the Meiji Restoration has underlain a very simple and universal
ideology of Shinto. From the Meiji Restoration the Japanese government chose the
concept of Shinto as a main religious foundation for justifying the upcoming changes.
Shinto was first used for political purposes as a justification for returning power to the
monarchy and giving the Emperor a divine status during the Meiji Restoration of 1868;
then it provided the ideological foundation for nationalistic attitudes during the Japanese
aggressive expansion policy in East Asia in the beginning of the twentieth century; it also
came in handy in uniting the nation during and after World War II; during the post-war
recovery period and building of the capitalist economy Shinto also gave its support to the
new economic regime by accepting capitalist values as natural human desires that are
absolutely approved by kami. The new government initiative “u-Japan” with its attempt
to build a society full of intelligent machines also fits into the Shinto world. “Robots are
the cornerstone of Japan’s international competitiveness,” Shunichi Uchiyama, the Trade
Ministry’s chief of manufacturing industry policy, said at a recent seminar. “We expect
robotics technology to enter even more sectors going forward.”14 In the past several years,
Japan has committed several tens of millions of dollars to an industry whose revenues it
hopes could surge to nearly $70 billion by 2025. Japan already employs over a quarter of
a million industrial robot workers – more than any other nation – in an effort to counter

14 For more information see an article by Hiroko Tabuchi “Japan looks to a robot future.”
Available online at http://www.msnbc.msn.com/id/23343832/page/2/
high labour costs and to support further mechanization of its industries, and it would like to see that number go up to one million over the next fifteen years. Jennifer Robertson considers that “[r]obotics is to be for the Japanese economy in the 21st century what automobiles were in the 20th”15 Though it might seem to be strange for Westerners to see robots commercializing goods and services that are meant for human use, the Japanese advertising industry is full of examples of robots substituting for humans, whether it is on a skin cream commercial or fashion designer’s show. It has become commonsense in Japan to accept robots as equal members of society along with humans. “The machine is a friend of humans in Japan,” said Shuji Hashimoto, a robotics professor at Waseda University in Tokyo. He continues, “A robot is a friend, basically. So it is easy to use machines in this country. But other countries, maybe, are quite different.”16

The tendency of Japanese robotics is to involve different kinds of robots into everyday life rather than building complicated machines for lab use. The goal is to make it possible for robots to be a part of daily routine and interact with humans. Masahiro Mori, an emeritus professor at the Tokyo Institute of Technology who works on a theory called the “Uncanny Valley,” discovered that people’s empathy to robots and other humanlike machines increases until a sudden point at which the machine becomes frightening and seems like the living dead. This period of alarm and revulsion is the Uncanny Valley, and it lasts until robot reaches such a level of similarity to human beings that it is virtually indistinguishable from them. Thus the creation of humanoid robots

15 For more information see the article by Lisa Thomas “What’s Behind Japan’s Love Affair with Robots?” Available online at http://www.time.com/time/world/article/0,8599,1913913,00.html

16 For further information see “Japan’s robots stride into future” by Mark Jacob. Available online at http://www.ebusinessforum.com/index.asp?categoryid=&channelid=&doc_id=8877&layout=rich_story
comes on the first place as it is easier for humans to communicate with human-looking machines than with just a piece of metal. The trend is to make robots more attractive to the human sight; it is usually either non-humanoid rounded robot of childish look with friendly smiley face or humanoid with the features close to humans. I will provide more discussion of this topic in my third chapter.

Having worshipped different kinds of kami, Shinto accepts the existence of the soul or tama in inanimate or lifeless objects. Robots in this case are becoming nothing but a new form of kami that stands in a one row with the other divine creatures. Therefore there is nothing new about the idea of the world inhabited with living machines as in Shinto humans were never the only occupants of the universe. On contrary, they have been always sharing space with other living creatures. The Boundary between animate and inanimate blurred in Shinto philosophy. This helps to explain why it is possible for many Japanese not to see machines as something frightening or creepy. Though there are people in Japan who are opposed to technology, as there are in every part of the world, the general level of acceptance of the artificially intelligent machines in daily life seems to be much higher than in the one in the West. The idea of endowing inanimate nature with animate characteristics is rooted deeply in the Japanese traditional perception of the world and thanks to the state support over the last century and the strength of tradition and community is still very influential in modern Japanese society.

In the next chapters I will show how those ideas are realized in the Japanese animated film and television commercials and what attitude toward technology underlies those works.
CHAPTER II: Shinto and Technology in the Posthuman World of Ghost in the Shell

“There are countless ingredients that make up human body and mind like all the components that make me as an individual with my own personality”.

Major Kusanagi, Ghost in the Shell

Introduction

Now that we have seen the relationship between technology and Shinto, we are in a better position to understand why some works of the Japanese animation are so centrally concerned with representations of technology. In this chapter I will focus on the personification and image of technology that is reflected in popular culture and media in Japan. As I showed in the previous chapter, Japan has a history of adapting the world’s latest technologies, and the success of this policy is related to Shinto teaching that allows us to believe in the existence of other forms of consciousness besides the human mind. This forms the unique attitude among the Japanese toward technology in general and artificial intelligence in particular. By emphasizing the development of information technology Japan has entered a new stage of social differentiation, creating a problem of changing subjectivity and a posthumanist notion of society. The term “posthumanism” refers to the concept of the next stage of the human development – human/machine fusion or humans that are enhanced by means of technology, and which are a new form of life that combines human and nonhuman characteristics. Katherine Hayles in her book How we became posthuman gives a definition of posthumanism: “ [...] the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines. In the posthuman, there are no essential differences or absolute demarcations
between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology\textsuperscript{17} and human goals” (Hayles 1999:3). While the West is very reluctant to accept artificially intelligent machines in a human society, Japan seems to enjoy the new age of virtual reality and a variety of robots. I’d like to quote here William Gibson, one of the first cyberpunk\textsuperscript{18} writers, author of Neuromancer:

In the ‘80s, when I became known for a species of science fiction that journalists called cyberpunk, Japan was already, somehow, the de facto spiritual home of that influence, that particular flavor of popular culture. It was not that there was a cyberpunk movement in Japan or a native literature akin to cyberpunk, but that modern Japan simply was cyberpunk. And the Japanese themselves knew it and delighted in it. I remember my first glimpse of Shibuya, when one of the young Tokyo journalists who had taken me there, his face drenched with the light of a thousand media-suns—all that towering, animated crawl of commercial information—said, “You see? You see? It is Blade Runner town.” And it was. It so evidently was (Gibson 2001)\textsuperscript{19}.

In modern Japanese society Hayles’ definition of posthumanism appears to be very accurate in describing a new Japanese reality. Information technology in Japan has

\textsuperscript{17} As robots become more human-like and are getting involved into the life of human society, they raise a lot of philosophical questions including the relationship to God and how robots fit into the religious space of different cultures? Soon enough we will be asking ourselves a question: Do robots go to the Silicon Heaven when they die? All these questions can be probably put into a category of “Robot Theology”, a new direction for the theological thinking.

\textsuperscript{18} According to Featherstone and Burrows (1995) “the term cyberpunk refers to the body of fiction built around the work of William Gibson and other writers, who have constructed visions of the future worlds of cyberspace, with all their vast range of technological developments and power struggles. It sketches out the dark side of the technological-fix visions of the future, with a wide range of post-human forms which have both theoretical and practical implications” (1995: 3). “The term cyberpunk was first used in a Bruce Bethke short story called ‘Cyberpunk’, published in the November 1983 issue of Amazing Stories. It has since been used to describe writer such as William Gibson, especially Neuromancer (1984), Pat Cadigan, Bruce Sterling, Lewis Shiner and Greg Bear. [...]For Fred Jameson (1991: 419), cyberpunk and the work of Gibson in particular, represents ‘the supreme literary expression if not of postmodernism, then of late capitalism itself’” (Featherstone and Burrows, 1995: 7).

\textsuperscript{19} More information available at http://www.time.com/time/asia/features/japan_view/scifi.html
reached the point where it has begun to interfere with everyday life raising a lot of questions and fears about human/machine interaction. Among these issues are the questions: Can a machine can have a mind, mental states and consciousness? Is the cyborg\textsuperscript{20} the next stage of evolution or is it just an unconscious bio-mechanical robot? What is the relationship between technology and humans? In this chapter I will try to give the answers to these questions based on an analysis of the animated film by Japanese director Oshii Mamoru \textit{Kôkaku Kidôtai} (\textit{Ghost in the Shell}) and his interpretation of the problem of human/machine fusion. I will build my discussion of the film focusing on the problems of human/machine fusion, machine consciousness and the mind/body problem, engaging the works of Katherine Hayles, Sharalyn Orbaugh, Susan Napier, Dennett Daniel, Tim Iles and others to show that the world of \textit{Kôkaku Kidôtai} is a reflection of changes happening in the Japanese society and it provides some answers and resolutions to the above mentioned problems.

\textbf{Discussion of Ghost in the Shell}

When in 1995 Japanese director Oshii Mamoru showed the world his animated work \textit{Kôkaku Kidôtai} it gained instant popularity as it offered answers to the questions that had been raise at the beginning of the twenty first century. In this film, Oshii presents a fusion of contemporary art – \textit{anime}, \textit{manga}, cinema, digital graphics, and cyberpunk narrative with contemporary themes, addressed to a global audience. \textit{Ghost in the Shell} gives us a view of “terminal culture”, a world in which reality and fantasy fuse into

\textsuperscript{20} The term cyborg refers to cybernetic organism, a self-regulating human-machine system. It is in effect a human-machine hybrid in which the machine parts become replacements, which are integrated or act as supplements to the organism to enhance the body’s power potential (Featherstone and Burrows, 1995: 2).
techno-surrealism and nothing is ultimately ‘knowable’ (Napier 2007:102). His animated film based on the manga by Shirow Masamune became an icon of cyberpunk and philosophical background for many later works such as The Matrix Trilogy (Wachowski Brothers, 1999, 2003) and Final Fantasy (Final Fantasy). Nineteen ninety five was a year of world releases of several cyberpunk narrations like Hackers (Metro-Goldwyn-Mayer), Johnny Mnemonic (Sony Pictures Home Entertainment) based on the short story of the same name by William Gibson and Judge Dredd (Hollywood Pictures and Cinergi Pictures). Unlike western popular culture where expressions of technological ambivalence tend to be mediated through live-action films, Japanese society has welcomed explorations of those complex issues in animated form (Napier, 2007: 104). Japanese animation has always been very quick to respond to the changes in social life and has acted as a mirror of society itself. The genre of anime gained popularity in Japan after World War II and since then has strongly influenced global popular culture through the most modern means of communication technologies like television, computer games, game consoles and arcade games. In Japan, the visual form of narrative excelled the prose genre, which is more commonly seen in US and Europe. Christopher Bolton in his introduction to Robot ghosts and weird dreams: Japanese science fiction from origins to anime considers that high economic growth in Japan in the 1970s and the decline in the United States’ economy has led to:

ambivalent fascination with Japanese attitudes toward development – the synthesis of robotic industrialization, neofeudal corporate culture, and the enthusiastic

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21 Final Fantasy (ファイナルファンタジー—Fainaru Fantaji) is a media franchise created by Hironobu Sakaguchi and owned by Square Enix that includes video games, motion pictures, and other merchandise. The series began in 1987 as an eponymous console role-playing game developed by Square, spawning a video game series that has become the focus of the franchise (Final Frontiers 117.7(2007): 72–79).
acceptance of new communications and simulation technologies in everyday life. Japanese anime uses fantastic context and innovative visual grammar to provocatively address the issues of nationalism, gender identity, mechanical bodies and language (Bolton, Csicsery-Ronay, Tatsumi 2007).

The last issue is gaining more and more popularity among the topics that are discussed in the Japanese animated films as cybernetic posthuman actuality is becoming considerably real in contemporary Japan. The Internet and magazines are bursting with news of newly invented robots that have already been integrated into Japanese society. While robots are a long way from matching the complexity of human emotion, the country is perhaps the closest to a future — once the material of science fiction — where humans and intelligent robots routinely live side by side and interact socially. They not only serve humans by taking care of a wide range of tasks from housekeeping to managing the reception in hospitals, but also they dance, sing, entertain and socialize within the Japanese community. The world of Kōkaku Kidōtai, a highly-technological city where everything and everyone is connected by Internet technology which functions as a surveillance and communication system, where cyborgs and cyberspace has become a part of everyday life, is not that far from the Japanese reality.

The Plot

The story of Ghost is deeply philosophical and complex. It raises the issue of changing subjectivity and places it in the posthuman framework. Ubiquitous penetration of digital means of communication has opened new doors for criminals that can now use the “Net” to commit cybercrimes on a national scale. We follow the police investigation of one of these cybercrimes committed by the so-called Puppet-Master (Kayumi Iemasa),

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22 "Japan looks to a robot future". Available online:
who succeeded in hacking ghosts of individuals and used them as executors of his own criminal plans. As it turns out later the Puppet-Master is a program or ghost designed by the government to hack into foreign network systems in order to acquire an economic and military advantage. But as the program develops, it begins to recognize its own sense of self and no longer associates itself with the government policy. It creates an extremely elaborate plan to release itself from its originators and generate a new, more advanced form of life that does not require any human limitations.

The investigation of the Puppet-Master case is conducted by specially built and trained machine/human hybrids Major Kusanagi (Atsuko Tanaka), Batō (Akio Otsuka), and Togusa (Yamadera Kōichi) from Section 9, a special police department that deals with internet- and cybercrimes. In 2029 most of the human bodies and brains are enhanced by means of modern technologies for accomplishing certain tasks in a new differentiated society. Major Kusanagi, the leader of this special police section is a perfectly build cyborg. Her cybernetic body is flawless – athletic and feminine at the same time. She has 4 ports at the back of her neck to connect to the “Net” and dip into virtual reality. Through computer implants in her brain she can communicate with her partners Batō and Togusa without articulation by means of a wireless network. The opening scene of the movie reveals the posthuman nature of Kusanagi when she fearlessly jumps from the roof of the skyscraper exposing her cybernetic body in a free-fall. There is no fear in sacrificing her body if her duty requires it of her because in the posthuman framework the body is only a container or a “shell” for the “ghost” that is hidden inside, therefore it can be replaced or replicated. The death of one of the components of life doesn’t necessarily mean the vanishing of another. Hayles considers
this relationship to be one of the assumptions that characterize the posthuman view and determines the change towards disembodiment in a posthuman environment. She argues that "[...] the posthuman view thinks of the body as the original prostheses we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born" (Hayles 1999:3). *Ghost in the Shell* shares the same view on the mind/body dilemma that can be seen in the attitude of Kusanagi to her body and her self. In the film she constantly questions herself about the nature of her existence and her consciousness; trying to define her identity and her place in this posthuman community. In her dialogues with other characters she raises a lot of philosophical issues like the meaning of life, consciousness, human and cyborg nature which help us understand a new human/machine fusion and mind/body interaction. By using futuristic background and cybernetic actuality *Ghost in the Shell* explores changing subjectivity in the modern community since posthumanism is not our future but our present, what Japan has already become without marking the turning point or naming it.

Being a reflection on changes happening in the human/machine cooperation *Ghost in the Shell* suggests some key-points to understanding the Japanese perception of Artificial Intelligence, robots and cyborgs and their place in society. Sharalyn Orbaugh supports this argument in her essay *Sex and the Single Cyborg: Japanese Popular Culture Experiments in Subjectivity* implying that narrations about cyborgs apply more to modern subjectivity than to future assumptions. She quotes Jannifer Gonzalez: "cyborgs are not about future, they are about contemporary society and its current transformations. [...] figure of the cyborgs [to] explore[s] new paradigms of subjectivity, as the advanced nations of the world become increasingly postmodern, postnational, postindustrial, and
even posthuman” (Orbaugh 2007:172-3). Narratives about cyborgs and cyberspace are placing older philosophical problems on a new level as the modern environment demands new solutions. As Orbaugh continues:

The cultural products that engage the notion of the cyborg help us come to terms with the meaning of this new relationship between the human body and technology as that relationship unfolds: narrative helps us work through the fear and desire of particular historical-cultural moment. Cyborgs, which are by definition not naturally occurring, serve in a new but equally significant way to mark the borders of modern(ist) subjectivity and simultaneously to reveal the ways those borders are breaking down and being redrawn in postmodern, posthuman paradigms (2007:173,176).

Cyborg narratives like Ghost in the Shell play the role of mediator in the adoption of posthuman theory by society by showing the possible implications and issues that can be awoken by changing subjectivity. It also suggests some resolutions for the coming questions. While scientific theories are creating a background for newly discovered phenomena, narratives and animated art as a form of narrative can serve more practical uses of integrating scientific theories into society. It shows the problematic angles of mentioned paradigms, as Katherine Hayles argues in her book How we became posthuman. They also “reveal complex cultural, social and representational issues tied up with conceptual shift and technological innovations” (1999:24). Hayles considers narrative to be a more embodied form of discourse than analytically driven theory as it deals with possible yet concrete inclusions of theoretic studies. She has linked scientific and literary texts in the sense that “literary texts do more than explore the cultural implications of scientific theories and technological artifacts” (1999:22). In the case of Ghost in the Shell it creates its own philosophy which influences the theory that the relationship between science and narrative is more interdependent and complex as “culture circulates through science no less than science circulates through culture”
(Hayles 1999:21). Orbaugh argues that in Japanese popular culture the new cyborg paradigm and the various issues that it involves are explored perhaps more thoroughly than anywhere else. According to her, some of the most pressing issues for Japanese modern narrative have been questions of legitimacy and illegitimacy (based on an improperly resolved oedipal crisis), non-normative forms of reproduction, the hybridity of bodies or subjectivities, and ambiguous or anomalous incarnations of gender/sex/sexuality (Orbaugh 2007: 438). Moreover, with the increasing popularity of Japanese anime and manga outside the country these problems are gaining international attention and globally influencing many aspects of the philosophy of posthumanism. Popular culture has become more resourceful for providing the answers to problematic points of current theoretical conceptions than theoretical writing itself. It deals with the implications of adaption of social theories in everyday life. Adam I. Bostic in his essay on cyborgs and views of them in popular culture and contemporary theory pointed out that “[i]ncreasingly, popular culture is the providing ground for theoretical writing. And by the same token, one need not turn to academic texts on the question of cyborgs but can go straight to the sources in popular culture” (1998: 357).

Popular culture itself is expanding its boundaries between high art and low art as cyberpunk narratives are becoming more thoughtful and academic. Bostic argues that pop-culture should not be interpreted as part of low culture since the old high/low art boundary is eroding when “virtual impinges on what we’ve always called the real, and how the real impinges on the virtual, […] the cyborgs break down these distinctions in order to incorporate all forms of information” (1998:358). The cyberpunk genre is
basically all about blurring the boundaries as informational patterns are becoming more substantial than physical ones.

In the age of posthumanism information becomes more and more powerful. Indeed the Puppet Master says “I am a life-form that was born in the sea of information” which intimates the closeness of Itself to humanity. Its reference to DNA is the key part to the argument that The Puppet-Master exists as a living entity and is therefore human. Oshii ‘s *Ghost in the Shell* is a vehicle to discuss the effects upon society of dehumanization and the demolishing of boundaries between humans and technology within new posthumanist subjectivity. As Joseph Christopher Schaub noted in his essay “Kusanagi’s body: Gender and technology in mecha-anime”, cyberpunk and mecha-anime\(^{23}\) narratives show both utopian and dystopian futures as equally possible and what they can achieve is a representation of both possibilities in a battle for preeminence. “They provide visual representations of the struggle to find humanistic values in a landscape dominated by high-tech corporate power and mechanized military might” (Schaub 2009:87).

**Technology and identity in the posthumanist framework**

The main quest of *Kôkaku Kidôtai* is perhaps the question of defining identity and consciousness in the conditions of human/machine fusion. This problem is shown from

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\(^{23}\) *Mecha* stands for the Japanese *meka*, the abbreviated version of “mechanical”. Traditionally, the word “mecha” was used to describe anything mechanical in Japan from toasters, computers to cars and robots. The term has since been adapted (mostly in the West) to describe a genre of *anime* that centers around robotic elements. In mecha-anime, the robots are usually vehicles or extensive, full-body “armor” piloted by humans and used in battle. *Mecha* components are typically quite advanced and offer a range of weapons as well as complete mobility and even flight capabilities and super-strength. (Luther 2010).
the typical Japanese pop culture angle: ambiguity of technologies, both the destructive and potentially productive aspects of technology (Orbaugh 2007). The same tendency Orbaugh sees in *Godzilla* films or in *Shinseiki evangerion* (*Neon Genesis Evangelion*, 1995-96). Schaub supports the idea of ambivalence in the representations of technology in Japanese cyberpunk narratives, he argues that:

like most science fiction based genres, mecha-anime reflects a great deal of ambivalence concerning technology – a tendency to both celebrate and decry its potential. This ambivalence has been embodied in the cyborgs, the character that is part organic and part machine, and figures prominently in both cyberpunk and anime (Schaub 2009:86).

A cyborg is instrumental in the discussion of possible implications of increasing the role of technologies in our lives. The duality of technologies creates a whole new set of questions in Japanese cyberpunk narratives and as Orbaugh suggests “goes beyond a simple binary split between technology and its other(s) to encompass a problematic contemporary vision of human identity vis-à-vis not only technology but also nature of reality itself” (2007:105). In most cases, technology in Japanese interpretation is becoming dangerous only in human hands when it is used improperly. In other cases, it is the tool of progress and making human lives easier. Cyborgs have become a new power; a medium of new digital technology. Schaub continues, “ambivalence of technology in the 80s has not disappeared from cultural landscape, but it has been challenged by alternative view”. The change is seen in the image of technology from gigantic powerful and frightening transformers like Gundam in *Mobile Suit Gundam* (1979) to small and attractive cyborgs like Major Kusanagi in *Ghost in the Shell*. With the industrial revolution and informatization, new power has appeared on the scene and this new power is digital and small. Technology is no longer represented as something that one should be
afraid of, rather is has become an integral part of not only our lives but our bodies as well. Technology expands humanity's abilities. It is not a separate term anymore and the boundaries between humans and technology are becoming more blurred in the cyberpunk genre. Schaub sees not only the diffusion of confines between people and machines, but also a dislocation of gender accents in representation of power and technology:

The robots of previous era are gradually replaced by cyborgs, and the bodies that are becoming cybernetic are more and more often female. [...] With the change in the perception of power from giant machines to microcomputers comes a change in the way that technology is gendered. It no longer is seen as an exclusively masculine real. There is also a new mutability associated with technology. It allows for merging between people and machines as well as the merging of masculine and feminine roles (Schaub 2009: 84).

In *Ghost in the Shell* this boundary between male and female seems to be very thin as information takes the dominate role over its container or "shell". The "shell" in Oshii's narrative is neither a constant unity for defining consciousness nor its limit, as "personality becomes data, and data takes on personality" (Schaub 2009:96). It is hard to define the consciousness as it is no longer the domain of humanity. In Oshii's representation cyborgs can feel, communicate, work and think in the way that humans do. These organic machines are built for certain purposes and the accomplishment of certain tasks, and in this sense they are better than humans; they are an advanced form of humans or posthumans. Kusanagi, the main heroine of the movie, defined the notion of being cyborg in the dialogue with her partner Batô: "We are state of the art: controlled metabolism, computer enhanced brains, cybernetic a body...not long ago this was science fiction!" They are perfect soldiers and perfect workers. But, in the same time, they also are members of community and their place should be defined. Kusanagi asks herself if they can survive without regular high level maintenance. Her quest is to find her real
ghost, her uniqueness in a capitalist world of mass produced cyborgs. She is trying to find a purpose to life besides being just a work laborer; she is trying to find more human virtues in her cybernetic essence. The opening scene of the movie shows us the process of creation of cyborgs in detail. I would like to quote Schaub here as he described this process very precisely:

At first we see the skinless, electronically laced, mechanically reinforced muscles and skeleton into which a small piece of the original, organic Kusanagi’s brain has been placed. Then, through varying stages which gradually refine the mechanical cyborg interior by applying coatings of latex-like skin, we arrive at a version of Kusanagi which cannot be distinguished from an organic human (2009: 91).

The opening credits show us the nature of cyborgs; the artificial creation of life that is taking a human form almost indistinguishable from the authentic prototype. Oshii stated from the beginning that the cyborg is a product of mass production. There is nothing unique about it, but what we can see later in the movie Kusanagi’s consciousness grows during the action, reaching its culmination and maturity in the closing scene by merging with the ghost of Project 2501. Her “first birth” refers to the manufacturing process of cyborg-creation, where we can see in detail how cyborgs like Kusanagi are produced from the very beginning to the final stage; obtaining a female physiology which is impressive. We see her nude body in a couple of scenes during the movie and if not for the scene of her creation as a cyborg in the beginning, it is doubtful that one can understand from her appearance that she is just a cybermachine produced in a factory. As Brian Ruh pointed out in his discussion of Kusanagi’s nudity in Kokaku Kidotai, her nudity in the “birth” scene is not necessarily sexual, but rather portrays the cyborg Kusanagi as more human (2004: 131). I do not insist here that in the “birth” scene we are witnessing the actual Kusanagi, rather it is the process of cyborg-creation in general. It
refers to both Kusanagi's origins and the fact that she is not unique in appearance or basic characteristics that were programmed into her in the manufacturing stage. This can be proved by another short scene in the film where we see Kusanagi floating on a boat down the river when she sees a clone of herself in the show-window of a restaurant. There is no continuation of this scene, so it is never known who that being was. Nonetheless, the fact that there is another Kusanagi again refers to the idea of mass production and the existence of a real woman; a prototype for cyborgs like Kusanagi. Perhaps, this is the reason why the clone scared Kusanagi so much, as the main question she asks herself in the movie is "Who is she?" and "Is she unique?" Finding her identity is vital for Kusanagi, she is trying to find the features that distinguish her from being "just a machine" and that make her more human. Her search for self-identity becomes a search for consciousness and becomes an incentive for the rise of her consciousness itself.

The spiritual development of Kusanagi or her 'second birth' as a conscious form of cybernetic machine occurs during her search for self-identity. She dives deep in the waters of a bay and while floating to the surface she merges with her own reflection. This scene is deeply philosophical and it raises an important question in the humanist and posthumanist framework: how can we define consciousness, who or what can be considered conscious? In the spiritual rebirth of Kusanagi during the "diving scene", Mamoru answers these philosophical questions. In this scene Kusanagi dives into the waters of the gulf and then has a conversation with Batō where she defines herself as unique and as a conscious individual. Kusanagi emerges from the dark waters of the gulf into the light of the surface in order to find her place in the world and ultimately her destiny. This merger is a metaphor of the merging that is experienced at the end of the
film. In her monologue Kusanagi reveals her own notion of being posthuman. This scene is a cornerstone in understanding the main problems raised in the film—problems of self-identity and the evolution of human beings in conditions of high technological or posthumanist society. The answer to the question: Can a machine have a mind, mental state and consciousness in the same sense that humans do? If the consciousness is something that can be attributed only to humans then post-humanity is just a controlled unconscious human/machine fusion. But Mamoru’s narrative proves this statement wrong by endowing cyborgs with essentially human characteristics. It also reflects Japanese Shinto tradition that animates inanimate and holds a respect for all nature around us either it is authentic or artificially recreated one. In posthuman conditions, where cyborgs are a part of reality, Shinto philosophy can be extended into regarding cyborgs as a kami-equal to other forms of deities and accepting them in Japanese society.

Shinto and Posthumanism

Cyborgs in Kokaku Kidotai are incredibly anthropomorphic and well-drawn physically. This allows them to blend organically with the natural world that used to be a humans domain. Anthropomorphism here includes not only physical resemblance but also imitation of emotions and even consciousness. The anthropomorphism is also one of the key points of Shinto philosophy. Tim Iles argues that, “Because essentially Shinto is an animism, it is also a religion of anthropomorphism, which sees in its deities emotions and functions which are fundamentally understandable—because similar to human emotions and functions” (2008:176). Interrelationship between Shinto’s anthropomorphism and a tendency to create humanoid robots in Japan has been explored by many researchers on Japan. Yuji Sone, for instance, in his article Realism of the
unreal: the Japanese robot and the performance of representation considers that
Japanese affection for robots can be explained in terms of Japanese religious factors and
the animism of Shinto in particular. He says that, “Japanese animism can be regarded as
assumed cultural knowledge or an internalized traditional thinking that ordinary Japanese
people do not consciously deploy in everyday life, but which surfaces on certain
occasions” (Sone 2008: 354). As I discussed in the previous chapter, Shinto deals more
with everyday activities and often these activities are not regarded as being religious and
instead are performed subconsciously as a part of daily routine. By this same token when
speaking about animism in Shinto tradition we can infer that the Japanese tend to see life
in lifelessness. Sone continues this discussion and points out that Japanese animism can
be related to human-machine interaction in terms of the Japanese tradition of appreciating
and sanctifying dōgu (tools). He argues that:

In Japan’s recent past, when the New Year approached, a peasant would offer ‘rice
cakes to his washed and purified tools as an expression of thanks for working with
him throughout the year and as a way of personifying and anthropomorphizing
them’ (Mitsukuni Yoshida, quoted by Schodt, 1990: 199). Such beliefs persist to
the present day, though in contemporary forms. The relationship of industrial robots
to the manufacturers that use them can be seen in a similar manner. These robots
are used as tools in factories just as a farmer would use a hoe and sickle. Indeed,
Shinto priests are often asked to bless newly built or purchased industrial
machinery. It is possible to imagine that the next-generation advanced robots,
particularly those designed for home use, may one day be similarly venerated and

Human-machine interaction has become one of the most debatable subjects in
Japan. Robots there are more and more integrated into everyday life and the attitude
towards robots and other forms of technological advances are essential in the successful
acceptance of them in Japanese society. The Japanese android scientists, Hiroshi Ichiguro, is currently working on the problem of recognition of robots and defining the approach to more natural interaction between humans and machines. He stated that robots and other forms of intelligent machines should be anthropomorphized for the purpose of communication and that anthropomorphizing should be applied not only to the appearance but also to the imitation of human emotions. He also says that, "[t]he interactive robots that have been developed thus far are humanoid to encourage the human tendency to anthropomorphize communicative agents. Evidently, the appearance of the robot influences people's impressions and it is a very important factor in the evaluation" (Ichiguro 2006:320). In other words, the more robots look like humans, the more acceptable they will be in society.

Japanese culture has often favored artificial nature over the authentic one. It is in Japanese tradition to reproduce nature with technology. Kaplan suggests that this tradition is deeply rooted in both Shinto and Zen Buddhism which allows the use of technology to imitate nature. Moreover the latest technologies are exploited to refine nature and to bring it to perfection. He states that, "Japanese people do not oppose the natural and the artificial, but, on the contrary, very often use the artificial to recreate nature" (2004:5). Technology in Japan is often used to create something very natural that organically blends with the world surrounding it. Yuji Sone also takes this point and further argues that Japanese culture facilitates an attitude to see the signs of real in non-realistic forms. He uses as an example the Zen garden where, "one is supposed to engage

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24 Android science is an interdisciplinary framework between engineering and cognitive science. Robotics attempts to build very humanlike robots based on the knowledge from cognitive science (Asada et al. 2001, Ishiguro 2002). Cognitive science employs the robot to verify hypotheses for understanding human beings.
with the artificially constructed garden environment through its recognizable, patterned shapes of trees and landscapes formed from rocks and sand. Importantly, even though there is a division between the natural and the artificial, one is supposed to appreciate the ‘essence’ of nature in the garden” (2008: 355). But while in Sone’s interpretation anthropomorphic robots “would fit into a ‘grey’ area outside divisions between human and machine in the Western sense” and “positioned as operating in the context of human contact in future [and] may be seen as dwelling within a socially accepted imaginary space” (2008: 357), cyborgs in popular Japanese manga and animation are perfectly adapted to fit into society, as the future is already there. In this sense, the cyborg is nothing but a form of ‘recreated nature’; recreated and enhanced to human perfection, and the more anthropomorphic it looks the more acceptable it will be in human society. “Japanese traditional culture encourages the artificial reproduction of nature and incorporates an aesthetic dimension to the quest for recreating life-like creatures” (Kaplan 2004:2).

The genre of animation is a perfect tool for portraying cyborgs as it already blurs the distinction between real and imaginary, human and non-human in a way that live action film has not been able to do. Ghost in the Shell perfectly explores these ideas: all the cyborgs in the movie look very natural and very human despite their artificial essence. The tendency of making objects look more anthropomorphic allows humans to communicate with non-humans in Shinto tradition and in the posthumanism subjectivity. Even in the conditions of a highly-technological society there is the necessity for the Japanese to give familiar features to technology in order to accept them into the community. For this same reason, humanoid robots in Japan have gained much more
popularity than they have in the West: "[...] robots, humanoid and otherwise, are ‘living’ things within the Shinto universe, and in that sense, are very much a part of the natural world”, says Robertson (2007). Sharalyn Orbaugh also makes the same point using Shiro Masamune’s explanation of attitude differences between North Americans and the Japanese towards robots and technology. She remarks that Japanese children are introduced and educated in robots and robotics from an early age, they give them names and see them as friends. From early childhood they enjoy cartoons about robots, their usefulness and about human/machine fusion. The roots of this affection to robots lead to more complex philosophies in Shinto and Buddhism as the attitude toward technology can be only understood in relationship to social traditions and spirituality. Orbaugh agrees with the assumption that technology does not exist in a vacuum, but instead interacts with all facets of human existence including spirituality (Orbaugh 2007:105). So there is no surprise that Major Kusanagi and other cyborgs in Ghost in the Shell could not be distinguished from ‘real’ humans. Oshii made them look more like ordinary people you can meet in the street, like your neighbours or coworkers. They are a part of the community and therefore do not stand out from the rest.

The Problem of Consciousness in the Posthumanist discourse

Kusanagi’s monologue in the “diving scene”, where she distinguishes the features of one living organism to another, reveals the nature of posthuman thoughts. She is absolutely sure that she is not just a mindless organic machine as her “thoughts and memories are unique only to [her] and [she] carries a sense of her own destiny”. She also considers herself as being conscious: “I collect information to use in my own way. All of this blends to mixture that creates me and gives a rise to my consciousness”. Susan
Blackmore in *Consciousness: a very short introduction* speaks about experience as one of the most valuable criteria for defining consciousness. She uses the theory of memes\(^{25}\) as a determining factor of having consciousness. “If machine had language or memes or whatever it takes to be able to ask the question ‘Am I conscious now?’ and concoct theories about its inner self and its own mind, then it would be as deluded as we and think it was conscious in the same deluded way” (Blackmore 2005:132). That is exactly what Kusanagi asks herself throughout the film and the mere fact that she asks herself this question is an answer in itself. She is conscious in a way that perhaps not every human can be. Kusanagi believes that she has her own personality: “there are countless ingredients that make up the human body and mind, like all the components that make me as an individual with my own personality”. In *Consciousness Explained* Daniel Dennett touches upon the machine consciousness and quotes Searle: “the appropriately programmed digital computer with the right inputs and outputs would thereby have mind in exact the sense that human being have minds” (1991: 431). He also assumes that “if the self is ‘just’ the Center of Narrative Gravity\(^{26}\), and if all the phenomena of human consciousness are explicable as ‘just’ the activities of virtual machine realized in the astronomically adjustable connections of human brain, then, in principle, a suitably

\(^{25}\) Memes are habits, skills, behaviours, or stories that are copied from person to person by imitation. Like genes, memes complete to be copied, but instead of being chemicals locked inside cells, they are information that jumps from brain to brain or from brain to computers, books, and works of art. The winning memes spread across the world, shaping our minds and cultures as they go. They are “viruses of the mind”. (Blackmore 2005:132)

\(^{26}\) In his article *The Self as a Centre of Narrative Gravity* Daniel Dennett puts forward an idea that the self can never be seen or tasted, thus, it is a kind of convenient fiction, like a center of gravity, which provides solutions for physics problems. He suggests that our “selves” are fictional characters that we create through the narration of our own lives. So, when people tell stories, they feature in the stories as a character, and that convenient but fictional character is the self.
“programmed” robot, with silicon-based computer brain, would be conscious, would have self. More aptly, there would be a conscious self whose body was the robot and whose brain was the computer” (Dennett 1991:431). In *Kôkaku Kidôtai* we can see both the “programmed robot” personified by Kusanagi and also the “conscious self” of the Puppet-Master embodied in different cyborgs. The Puppet-Master does not need a body to be aware of his existence and conscious origin. Thus, “embodiment in biological substance is seen as an accident of history rather than an inevitability of life” (Hayles 1999:2). “The body thus becomes simply a device for supporting a thinking entity, an entity which is not identified with its container” (Iles 2008).

In this episode Oshii Mamoru is totally posthuman in his answer to the question of machine consciousness, stating that machines can be conscious. He also connects posthuman ideas of expanding human abilities by means of technological progress. Kusanagi noted that “if men realize that technology is within reach, he achieves it as though it’s wired into the core of our beings”. She feels that she can expand herself within boundaries. These boundaries might be the boundaries of the human body, reproduction or self-identification. Hayles determines the posthuman subject as a mixture of heterogeneous component, and a material-informational entity whose boundaries undergo continuous construction and reconstruction (1999:3). Self-identification attributed to Kusanagi in *Ghost in the Shell* reflects Hayles definition of posthuman: “There are countless ingredients that make up human body and mind like all the components that make me as an individual with my own personality. I collect information to use in my own way. I feel confined only free to expand myself within boundaries”.
The ending and its solutions

The desire to overcome boundaries leads Kusanagi to the culmination of the narrative – the final scene of merging with the ghost of Project 2501. The scene that proceeds the climax is also very important in understanding Oshii’s view on posthuman problems. In this scene Kusanagi and her partner while in pursuit of the Puppet-Master arrive at a building that was once a science museum; there they face a giant tank-transformer that attempts to kill Kusanagi. The fight is very symbolic as it takes place with The Tree of Life background, with all existing life marked upon it. In the attempt to assassinate Kusanagi the tank destroys parts of The Tree of Life and more specifically a piece with homo-sapiens marked upon it. This allegorical damaging of the human branch of The Tree refers both to the idea that the time for extending the limits of humanity has come and humans are no longer the crown of the tree of nature. It also reflects the idea that there is a struggle for dominance in contemporary society between humans, cyborgs and artificial intelligence. The metaphorical struggle between humans and nonhuman forms of life gains importance in the struggle for domination or natural selection; in which favourable traits are inherited more commonly in successive generations in a population of reproducing organisms over unfavourable heritable traits, due to the differential reproduction of genotypes. This process of evolution, taking place in human bodies, leads to the appearance of newly advanced forms of life. The nonhuman forms of life are personified in the tank-transformer which is trying not only to demolish Kusanagi, but figuratively annihilating the human race; not only physically, but by the substitution of artificially created intelligent machines. The battle ends in favour of Kusanagi with the help of Batô who saves her almost completely destroyed body and puts
it next to the borrowed body of the Puppet-Master. The result of the fight is shown in the
final scene where Kusanagi and the ghost of project 2501 merge – the two contradictory
elements combined to create a new being.

Hayles in her definition of posthuman subjectivity says that, “in the posthuman,
there are no essential differences or absolute demarcations between bodily existence and
computer simulation, cybernetic mechanism and biological organism, robot teleology and
human goals” (Hayles 1999:3). She suggests that in posthumanism the limits of humanity
are overcome by blurring the boundaries between organic and cybernetic, between
artificial and authentic, and between the “ghost” and the “shell”. Sharalyne Orbough
when speaking about the ending of the movie also considers that, “Ghost in the Shell
examines and rejects old forms of species reproduction in favour of cyborgian and
cybernetics alternatives...Ghost attempts to describe a completely new form of
reproduction, for the new kinds of beings that will emerge from the increased
cyborgization of the world” (Orbough 2007:177, 185). Kusanagi and the Puppet-Master
are presented in a manner that highlights the similarities of their forms in contrast to their
differences. The are both placed in very similar female bodies with the only distinction
being in hair color – one has blond hair and the other has dark. Kusanagi decides to
connect to the ghost of the Puppet Master, to dive into his essence in order to find out his
true nature. In this scene they finally faced each other and it is the end of the search for
both of them. Kusanagi’s desire to fill the void created by her search for humanity is
resolved, while the Puppet-Master’s desire to create offspring is accomplished and it no
longer fears obliteration by a single virus. As soon as Matoko dives into the ghost of the
Puppet-Master, it takes over her body and reveals its plan of merging with her ghost,
arguing that it will be beneficial for both of them. Being a program created for
government espionage, the Puppet-Master lacks reproductive functions, and the only
possible way that it can reproduce is by duplicating of its backups, but in this case it can
be destroyed by a single virus. The Puppet Master is also trying to become more viable,
meaning more human in terms of reproductive ability as a key against extinction. The
monologue of Project 2501 about reproduction and evolution of species again points to
the genesis tree; the camera goes from bottom to top showing the origins of life. The
highest stage of human development is half-destroyed and leaves an unclear message in
terms of who is going to take the vacant spot. In this scene The Tree is used as an
illustration of human development with humanity being in the marginal condition. The
human tree is half destroyed by the machines; suggesting that there is danger of the
destruction of the human race itself if the evolutionary process won’t take place and a
new form of existence is not be created. As Brian Ruh remarked, “the destruction of
‘hominis’ label on the tree also refers to the idea that modern humans are more than
capable of orchestration our own destruction” (2004: 130). It is a powerful argument for
Kusanagi to merge with the ghost in order to stop it from occurring. Kusanagi agrees to
the offer of the Puppet-Master and as soon as they finish their ‘deal’ the troops of the
competing government agency break into the museum and destroys both Kusanagi and
Project 2501’s bodies. The ending of this scene is symbolic: both Kusanagi and the
ghost’s elimination signifies a genesis of a new organism which does not need the old
body anymore. Batō manages to save Kusanagi’s brain and gives her a new body. The
new life is placed in the body of a girl; symbolizing a new beginning. As in the
posthumanist society “embodiment has been systematically downplayed or erased in the
cybernetic construction of the posthuman” (Hayles 1999:4). The presence of consciousness and the expansion of boundaries in the human body are what matter for posthumanism; not what vessel the human mind is placed in.

This solution constitutes another posthumanist idea; the idea that the posthuman doesn’t really mean the end of humanity. “It signals instead the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice” (Hayles 1999:286). Both Hayles and Badmington state that posthumanism is about extending the borders of humanism, the limits of the human body and the mind, rather than disappearance of ‘old’ humans and replacing them with ‘new’ models. As Neil Badmington put it, “posthumans are far more exciting, far sexier than humans” (2004:115). “[...] the post- of posthumanism does not – and, moreover, cannot – mark or make an absolute break from the legacy of humanism” (Badmington 2004:121).

The ending of Kōkaku Kidōtai is not an apocalyptic view of the human/nonhuman dilemma; it is more a discourse of “working through”. It does not proclaim a crisis of humanity where the old is dying and the new cannot be born, but gives rises to post-humanity as the rebirth of new human beings. Kusanagi is given a second life with a new mind and new body, but she remains herself in essence. She “worked through” herself and reached a new level of evolution. In the final scene, for the first time in the movie, we can see Kusanagi actually smiling, as though she finally found what she was looking for – the missing part of her personality. As Hayles pointed out, “It is not a question of leaving the body behind but rather of extending embodied awareness
in highly specific, local, and material ways that would be impossible without electronic prosthesis” (1999:291).

The film ends with a scene similar to the opening shot – Kusanagi standing on the edge of a hill, watching the bright view of city in the night. This scene brings the film full-circle and creates feeling of completion; nonetheless though the scenes are very similar, they differ in terms of Kusanagi’s appearance and her general perception of herself and of the viewer. This solution of the mind/body problem constitutes a step in posthumanism: the advanced form of human beings. *Ghost in the Shell* also marks a shift to the non-anthropocentric view of reality. This point is supported by Timothy Iles in his discussion of the work of Oshii Mamoru, he says that “*Kōkaku Kidōtai* signals itself as resisting the anthropocentrism of much human thought seeing instead consciousness and identity as diffuse things created and shared across multiple and diverse forms of existence” (Iles 2008:171). This shift indicates “demolishing the anthropocentric concept of control entirely” (Iles 2008:171), the transition of the posthumanist perception of the modern world where “no longer is human will seen as the source from which emanates the mastery necessary to dominate and control environment. Rather, the distributed cognition of the emergent human subject correlates [...] the distributed cognitive system as a whole, in which ‘thinking’ is done by both human and nonhuman actors” (Hayles 1999:290). If it was proved that consciousness exists beyond the human mind and body, then humans would no longer be the only ones who obtain agency and self-identity. The new notion of “transcending consciousness” is gaining more value in posthumanist thoughts in Western tradition; in Japan this notion is not new at all, on the contrary, it has been part of the spiritual culture for centuries. The ancient set of beliefs known as *Shinjō*
represents the world as full of live substances or kami, as an amalgam of interdependent and cross-related entities; with humans as a part, but not a whole of it. The transformation of this ancient system of beliefs into a religion that can easily exist in the present and be part of everyday life is a phenomenon that distinguishes Japan from the Western world—with its system of values rooted in Christianity and the Greco-Roman philosophical traditions. As Thomas P. Kasulis pointed in his book *Shinto: the way home*. “[...] Shinto is about connectedness, the intimate kind of relation in which each item is part of other” (2004: 13). In Japanese religious tradition the nature of kami is interdependent and intimately connected with the world, including human beings (Kasulis 2004). We can assume that if kami nature is placed into machines, then machines themselves become kami and could be organically blended with the Shinto world. This root leads us to the idea of a posthuman society and the acceptance of Artificial Intelligence as an equal member of the posthuman world.

**The Posthuman Environment in Japan**

So, what environment makes it possible to give rise to the posthumanist ideas in contemporary Japan? Hayles has mentioned Richard Lanham’s view on an environment that allows humans to step over to the next stage of development in highly-technologized conditions. Among these factors that create the posthuman environment, Lanham names ubiquitous computing where the speed of computers, the rate of transmission through fiber-optic cables, or the amount of data that can be generated and stored is not the determining indicator. Intelligent programs are now taking care of the simple tasks which do not require much human attention; making our lives easier and work more productive.
An environment where “human consciousness would ride on top of a highly articulated and complex computational ecology in which many decisions, invisible to human attention, would be made by intelligent machines” (Hayles 1999:287) has almost became reality in Japan, with the establishment of *Ubiquitous Japan (u-Japan)*\(^{27}\) – a government policy intended to increase the level of IT involvement in society. The recent issue of the annual edition of the Information and Communications White Paper from Japanese Ministry of Internal Affairs and Communications (MIC) reports that “[t]he number of internet users reached 90.91 million people as of the end of 2008, an increase of 2.8 million people from 2007 (year-on-year increase of 3.2%), with an Internet penetration rate of 75.3% (2.3 percentage point increase from the previous year)” (2009:50). This statistic shows that Japan is getting close to its announced goals in informatization of the country. Moreover, to maximize the potential of information and communication technologies (ICT) MIC promotes the u-Japan policy as a systematic policy for realizing an ubiquitous society, and aims at extending the current policy to achieve a more sophisticated form of full-digitalized community (or Smart Ubiquitous Network Society) by 2015. The advent of the future age is already expected after 2011 (2009: 60).

For the Japanese Government, ubiquity of the penetration of informational technologies means the extension and expansion of wireless technologies, that is to say is a shift away from the mobile device itself to a greater consideration of the interaction between handsets and other devices and networks. The fields involved are numerous: ubiquitous networks will affect the environment, distribution, road traffic, robots, home information, finance, foods, medication, the elderly and the handicapped, labour, science, technology and education (Srivastava 2004:240). Government programs like Ubiquitous Japan focused on developing the infrastructure for the IT society and affective utilization of IT not only help to build up a fruitful environment for the intelligent machines to be successfully integrated into daily life of the Japanese society but also create a sense of community as well as a sense of connection not just between individuals but also between individuals and objects and objects and objects. “The ubiquitous network society in Japan
is expected to lead to growth and innovation through the renewal of social and economic systems. The new IT strategy contains a vision of a future society that benefits from the advantages of information technology”, says Andreas Göthenberg (2007).

Thus, u-Japan can be called a personification of Lanham’s concept of ubiquitous computing in Japan; an environment where posthuman can easily live and act, where the Internet and cyberspace are part of everyday life, and where intelligent machines are making human decisions – in some instances – more accurately than humans. As Hayles noted, “[m]odern humans are capable of more sophisticated cognition than cavemen not because moderns are smarter, Hutchins concludes, but because they have constructed smarter environments in which to work” (1999:289).

If Japan already reached that level of ICT penetration, then it is no wonder that posthuman ideas have mostly been discussed in the science fiction works of Japanese writers as early as the second half of 20th century. And Ghost in the Shell provides a perfect example of this attitude. Cyborgs there act within a highly-computerized society, using the means of technological progress comfortably. They are not smarter than normal people; rather they are more advanced in technological ways, and are therefore more productive in accomplishing their designated tasks. The Internet helps them to communicate; transferring information without physically using a computer, because the computer has already been installed into their bodies. The creation of a posthuman environment in their highly technologilized world still manages to have distinctly national Japanese features. For example, the music in the movie closely resembles traditional Yamato songs which glorify the goddess Amaterasu (Ruh 2004). However, in combination with the synthesized sounds, it represents the unique mixture of tradition
and modernity. This is a characteristic feature of Japanese culture; creating an image of Japan as a leader in technology, and also demonstration the unique cultural tradition where informational technology and cultural essentials can live together.

Conclusion

In the previous chapter I discussed contemporary Shinto tradition and modern Shinto rituals. This refers to the blessing of computer software, cars, robots or other progressive technological achievements. They require consecration in order to be successfully integrated into community life. The acceptance of other teaching within Shinto, worship of different kinds of kami, and the strong tradition of importing and adapting innovative technology has led to the unique worldview of Japan: where incongruous is congruous. This unique combination of tradition incorporated with modern actuality can be seen everywhere in Japan; beginning from interior designs and fashion trends to robots performing traditional dances on stage in well-know Japanese theatres. The existence of traditional roots and elements of modern art are distinguishing features of Japanese pop-culture. Taking the music from the *Ghost in the Shell* for instance: at the beginning of the film it does not accompany the action, but controverts it, and then applies it to the emotional scenes which reflects Kusanagi's depth of character. Traditional Japanese music organically fits the world of the future. Another scene that enforces the spirit of the film is the chase of the phantom. The music and action in this scene contradict each other, but this divergence brings elegance, refinement and incredible beauty to the seemingly trivial police chase. A western viewer might be expecting to hear something dynamic and aggressive in this scene (something quite common for North American films), but this amalgam of modernity and tradition, nature
and technology reflects postmodern Japanese actuality and the perception of the technology by the Japanese. The combination of the rainy night city, the neon lights, the highly-technological weapons, the people dressed in a military uniform, the digital technologies, the Internet, the cars driving at high speed fused with the dainty, calm and smooth sounds of traditional Japanese music with its touch of modern elements creates a new perception of the modern world. It becomes a world filled with the poetry of trivial things. We don’t hear people’s voices; instead we hear the sounds of a helicopter or a car. These sounds harmonically blend with the music to create a new sound; one of modern urban reality. Modern urban art combines all of the elements of a futuristic city. Oshii Mamoru shares his perception of the posthumanist world as a world that does not necessarily put a border between present and future, between modern and postmodern, or between human and posthuman – as posthumanism does not mean the end of humanity.

Oshii’s interpretation of posthumanism is a fusion of past and present rather than an absolute denial of the old forms of subjectivity. The world of cyberspace is similar to the real world and this assumption served as the conception of the *Ghost in the Shell* – it obliterated the borders between natural and artificial, human and machine, life and lifeless. This world is a reality, even though it is full of cyborgs that exist within a cyberspace; it looks like the world that we once lived in. Nor is it ideal, it has dirt and garbage on the streets, faded and frayed walls, and polluted water. It also has familiar city features – brightly light advertisement stands, show-windows of stores with mannequins dressed in the latest fashions, typical office buildings where salarymen are still working in their tiny work places. It does not look entirely like a city of the future; it looks like our cities. Tradition is not lost here; on the contrary, it continues to live in an upgraded form.
Coming back to both Hayles’s and Badmington’s definition of posthumanism – not as a complete break with the past but “working through” new forms of subjectivity, it becomes clear that the world of _Ghost in the Shell_ is nothing but a view of posthuman society. And while Napier and Orbaugh call the scenario of the film pessimistic and apocalyptic, I believe that _Ghost in the Shell_ is very optimistic in terms of its solution to the machine/human problem. It gives hope of natural human/machine fusion and bequeaths this new form of life with lots of benefits both physically and intellectually. Schaub also considers Oshii’s ending to be more optimistic, as it suggests a rebirth (2009: 98). The fear of technology that is presented in the film at the beginning disappears in the end, suggesting that posthumanism is inevitable and not a frightening form of human evolution.
CHAPTER III: Representation of Technologies in Television Commercials in Japan

Introduction

It is commonly known that advertising, and television advertising in particular, provides a mirror that reflects society. It is impossible in the present world to live without being affected by advertising, as it both creates culture and is embedded within our culture. No one is separated completely from our media saturated culture. Some scholars like Sut Jhally, James Twitchell, Tricia Sheffield consider advertising to be as influential as religion in terms of its impact on individuals and society. As Jean Kilbourne put it, “[a]dvertising performs much the same function in industrial society as myth did in ancient societies. It is both a creator and perpetuator of the dominant values of the culture, the social norms by which most people govern their behaviour. At the very least, advertising helps to create a climate in which certain values flourish and others are not reflected at all” (2006). With this definition of commercials, as observable constructions of culture, they are valuable for analysis, as a resource for cultural studies, and within academic discourse. By analyzing images in TV commercials we can identify characteristics, trends, and even beliefs, both spiritual and materialistic, of a group of people within a certain period in time and given area, whether that be a community, nation, or multiple countries.

Roland Barthes was one of the first to use semiology to analyze the signs used in advertising, for creating an image relating to a product or phenomenon. Barthes was a leader in analyzing advertising, and the creation of images in relation to products and

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For more information see “Jesus is a brand of jeans” by Jean Kilbourne. Available online at [http://www.newsint.org/features/2006/09/01/culture/](http://www.newsint.org/features/2006/09/01/culture/)
phenomenon, using semiology. In his collection of essays *Mythologies* he proposes a modern process for the creation of social myths using examples from cultural phenomena such as everyday objects, values, and rituals that determined French culture at a given time. The subject matter shifts considerably from chapter to chapter: food, hairstyles, horoscopes, detergents, Martians, religion, toys, photography, plastic, and advertising, are among the many targets. Neil Badmington, one of the most respected modern experts on Barthes, considers that “through the eclecticism rings a repeated denunciation of ‘myth’, or the transformation of the historically specific values of the ruling class into naturalised, eternal, universal truths” (2010). The techniques used by Barthes in Mythologies became vital to further cultural studies. By looking at the semiology of advertising, Bathes contributes to Ferdinand de Saussure’s system of sign analysis, by putting signs on par with myths. Barthes examines an image, built up around certain social phenomena, and how it affects public perception. He used the New Citroen D.S. automobile as an example of an object which required a “myth creation” and the formation of a special attitude toward this product as a superlative object that has fallen from the sky to please earthly consumers (Barthes 1957: 88). Barthes says: “We must not forget that an object is the best messenger of a world above that of nature: one can easily see in an object at once a perfection and an absence of origin, a closure and a brilliance, a transformation of life into matter (matter is much more magical than life), and in a word a silence which belongs to the real of fairy-tales” (1957:88). He linked the design of the car with its perception as a magical and flawless object. Design creates an image or a myth about the product regardless of its technical and practical characteristics. Its new smooth and streamlined look, puts it ahead of all the predecessors, and symbolizes the beginning of a
new era for cars as well as a new perception of power and speed. Smoothness from now on is considered to be a determining factor, for defining technological beauty, and appreciation for it.

Barthes used the example of the D.S. to show how public opinion is formed based on signs and images and how they are transformed into modern myths. Based on the Barthes analysis I would like to discuss some of the commercial videos that have appeared in the Japanese advertising market. With a large population and a high per capita income, the potential of the Japanese advertising market is second only to the American market. Broadcast advertising intensity in Japan (because of the Japanese preference for soft sell) is not as great as in the U.S., but is still clearly ahead of other western nations and is indeed a highly visible and high-pressure component of Japanese daily life. Even though the Japanese population is about half the size of the American, the smaller land area makes the population density much higher. This means that local media, such as TV stations, have a much greater audience reach, and that the top three spot markets represent a substantial share of the total market (Johansson 1994; Asahi Shimbun 2002).

Preference for soft-sell marketing and commercials that create and sell you a certain mood, rather than trying to sell the product directly, are distinguishing features of Japanese television commercials. Emphasis in Japanese commercials concentrates on group norms, as social and group influences are much stronger in Japan, than in Western society. Thus the premise of Japanese TV commercials is to offer, through the product a dream, an escape, some “private room,” but within the context of a person’s social network. Choice is often a matter of selecting the brand image one wants to be associated
with and which store one feels most comfortable doing business with (Johansson 1994: 22-25). The persuasiveness of commercials in Japan depends upon one's affiliation within a certain social group. In the conditions of today's hyperconsumerist society the persuasiveness of TV commercials is becoming even more significant. An obsession with branded goods in contemporary Japan, caused by hyperconsumerism, is the number one driving force in the advertising industry. A desire to have the same bag or shoes that your friend or co-worker has is exaggerated by the group mentality which exists in Japan and is used widely by consumer media. An obsession with expensive brands often becomes not only an incentive to buy an advertised product but in some cases a cause of social degradation for the young generation in Japan. There are a number of studies on so-called enjo-kōsai that make a relationship between an expansion of teen prostitution and the desire of the Japanese young females to buy branded clothes and accessories. The recent studies on enjo-kōsai suggest that teenage girls don't sell their bodies because they are poor or hungry but because they have to get a particular designer dress from a new collection or a Louis Vuitton bag that just came out.

The term for this practice in Japanese is enjo-kōsai (援助交際) and it literally means “compensated dating”. It usually involves older men who give money and/or luxury gifts to attractive women for their companionship, and possibly sexual favours. The female participants range from school-age girls to middle age housewives. The word first appeared in the 70s to describe a relationship with a big age gap, usually between Japanese businessmen and college students or office girls, with relatively low income. The term was forgotten for a couple decades and returned in the 90s when high school and junior high school girls joined the commercial sex industry. These girls became a
symbol of Japanese materialism as they sell their bodies not out of the financial difficulty but because of the desire to own luxury and branded goods. Chizuko Ueno in *Self-determination on sexuality? Commercialization of sex among teenage girls in Japan* argues that, behind the extra needs, there is still a necessity to catch up with peers due to the fear of loosing their approval, a conformist pressure shared among youth when they cannot establish their group identity" (2003: 321). She continues, “[i]n short, patriarchal modern family, together with its hypocritical middle-class sexual norms, highly materialized consumer society, conformist pressure among youth, limited possibility available for women are all involved with this phenomenon with diversity, which happens to be called with the same name of *enjo kosai*”(2004:321). The advertising industry does nothing but contributes to the obsession with commercialized branded products and vigorously promotes materialism. Group psychology, combined with hyperconsumerism, created a fruitful land for advertising in Japan. In this sense TV commercials are a good source not only for cultural but also for social studies as they demonstrate current trends and values of consumer society and define public opinion on certain phenomena.

**TV commercials as a source for cultural studies**

In this chapter I’d like to take a look at images and the representation of different kinds of technologies in the media especially in the commercials of consumer products and services. As information technologies have become an integral part of everyday life in Japan they’ve also become a new tool for the advertising industry to promote not only high-tech products but also essentially human-oriented goods like cosmetics or food
products and beverages. The latter group deserve more attention in terms of accepting machines in human society and endowing them with consciousness.

It is not a new phenomenon for the world of marketing to use machines for advertising other kinds of machines, like the new Citroen C4 dancing transformer commercial\textsuperscript{29} or Honda’s Asimo robot commercial\textsuperscript{30}. In this case we seem to trust the concept of making a product advertise itself by having it act more anthropomorphic thus closer to human consumers. But what can we say about letting a machine give us advice on a sunscreen or the kind of beer we should drink? How does this concept fit into our understanding of a successful commercial? Are we ready to accept a robot having an opinion which should be heard in society? I have difficulties with those ideas. Nonetheless, the Japanese advertising industry is portraying a growing number of examples concerning the humanization of technology in a positive light, and portraying these technologies as an inherent component within society. From this point of view commercials that contain figures of robots, anthropomorphic or otherwise, represent a common perception regarding the problem of human/machine interaction in Japan. The fact that these commercials exist is proof for the posthuman overview that is being cultivated in contemporary Japan. A close analysis of the representation of technologies in several commercials and their message and image indicates an attitude to the above mentioned issues and provides more evidence for the hypothesis of a growing posthuman awareness in Japan and the status of technologies there.

Coming back to Lanham’s concept of a posthuman environment, an involvement or more vividly, penetration of intelligent machines into an essentially human domain, is

\textsuperscript{29} See the full video online at \url{http://www.youtube.com/watch?v=4dIILbblP-Pi}
\textsuperscript{30} See the full video online at \url{http://www.youtube.com/watch?v=kFgXKzZMq7A}
another step to posthuman subjectivity, and another factor in favour of the phenomenon of a transcendent consciousness. It might be hard to define how well a certain commercial was received by an audience because the data regarding the sales of a certain product might not be an indicator of the actual success of its ad; there are many other factors that may affect its distribution. For example while trying to determine the success of a swimming suit commercial having data on the number of items sold will not take into account other variables like good weather, seasonality, or perhaps store location not to mention the ad campaign. Because there are so many variables it is hard to determine the effectiveness of an advertising campaign. Though it is almost impossible to determine the success of a commercial, the existence of this commercial itself and the images that it constructs is evidence of a social phenomenon that is worth studying in its own right.

There is something beyond numbers that can be taken from analyzing television commercials. It is the images, attitudes, and assumptions made by producers, the determinations they made at the time of release of the product or service that is the valuable information. As Shoji Yamada pointed out, “[t]he merit of using commercials as a resource for research is the ease with which they allow us to gain an intuitive grasp on the past social situations; in that sense, they are suitable for the purpose of studying public consciousness” (2009: 142). Commercials are a valuable source for studying cultural peculiarities in different countries and a reflection of national identity. By tracing the changes within the trends of popular commercials we can trace the changes in social-economic status of the population in a country and that of the local economy, as well as make inferences for the rest of the world (Yamada 2009: 141).
Why Does an Android Need Sunscreen?

In this chapter, I focus on several television commercials that were released in Japan between 2004-2009 that contain figures of robots. The source for the commercials is mostly www.youtube.com a website that also contains comments made by Western viewers and internet users. These responses can serve as a representative example of the Western attitude toward the issue of recognizing robots as living creatures by putting them in a row with humans and using them as a tool for promoting essentially human oriented products.

In 2008 Japanese cosmetic company Kincho introduced to the world its commercial of Preshower UV insect repellent/sunscreen spray featuring an android female robot actress who is promoting the new spray that will protect her skin well without causing corrosion. The commercial pictures a female who in the end appears to be an android woman trying on the advertised spray. The action takes place on a background of a picnic place on a sunny summer day. The content of commercial is as follows:

女性にとって、お肌は大事ですね。(As a female, my skin is very important for me).

だから、虫よけ「プレシャワー」を使ってます。(That's why I am using this insect repellent/sunscreen spray).

意外とさびないんですよね。(I don't even get rusty!)
A tiny footnote in the corner of the screen explains that the woman in the commercial trailer is actually an android. It would be hard to tell without referring to this footnote that the girl is a robot as she looks very human in her appearance and the fact that she is advertising a cosmetic product does not suggest any doubt about her nature. Besides her convincing human appearance she also positions herself as a woman, noting that her skin is very important for her as a female and that she would recommend this spray for everybody who takes care of their skin. By saying that, the creator of this commercial puts humans and robots group humans and robots together having an equal position within Japanese society. Also there are some assumptions on gender here: the robot that is female and human females are represented together as caring for their skin because of their gender. The author's assumption is that there is no difference between human's and robot's needs as long as they are conscious about their choice of skin care.
products. This commercial implies the hypothesis that a machine is conscious and its voice requires attention and respect. Moreover, by giving an android the power to dictate what humans should use for their needs the creators of this video are putting a machine in a higher position than ordinary humans. The main purpose of any commercial is to sell a product or in other words to convince people to buy it. While some commercials use for example celebrities and models as a higher authority and reliable opinion to make the audience trust the brand, others on the contrary try to portray ordinary humans, people you can project yourself onto, and get the public’s confidence and sympathy. In which category can we place a conscious machine then? It is definitely not an ordinary image of a citizen because of its artificial origin and undetermined social status, something that is very important for the Japanese community; it is rather a kind of celebrity or a role model for the rest of the society, a model to aspire to, and a model to imitate. Again we can see traces of characteristic Japanese cultural phenomenon of artificial re-creation of nature that is considered an improvement leading to perfection. Androids in this case are a polished form of humans, an attempt to create a superior human that would benefit from both humanity and technology.

This commercial and its brave and appealing message caused stormy waves of reaction among the Western Internet users ranging from just “surprised” and “taking it as a joke” voices to critical and negative “Never buying this spray” type replies. To begin with, the title for this commercial at the www.youtube.com website is “Creepy Android Commercial”\(^{31}\), and up to the present moment it has 150 comments and responses. The most frequently used adjectives for describing the attitude of the English-speaking

\(^{31}\) See the original video at [http://www.youtube.com/watch?v=WeMqdIWNyW0](http://www.youtube.com/watch?v=WeMqdIWNyW0)
audience to the phenomenon of having an android as a main actor in the commercial was: creepy, freaky, evil, scary, sick etc. Based on the comments from the YouTube website one can make a generalization that the Western Internet users do not seem to be ready to accept the possibility of machines becoming equal to humans and worse, dictating what to buy and how to live properly. There are still a lot of fears about conscious intelligent machines, and the Japanese positive attitude toward robots and other kinds of technologies causes a strong resistance in the West. In one of the internet magazines TrendHunter Noora Abu Eitah, an active blogger of this website, expressed her attitude after watching this commercial: “Not only do I feel extremely creeped out to see this, I am shocked that our society is allowing such acts to take place.”32 By the term “our society” here she meant “western society” with a Greco-Roman philosophical tradition and Christianity as the main spiritual background.

Christianity versus Shinto

Geraci in his article Religion and Our Scientific View of the Natural World in Theology and Science links the vector of scientific development with religious environments trying to explain the difference between trends in robotics and Artificial Intelligence in US and Japan:

Christian expectations of cosmic purpose and hope for salvation in purified, unearthly bodies leads to US researchers’ preference for artificial intelligence over humanoid robots, a desire to see cosmic meaning in the development of that intelligence, and salvation of human minds in virtual, non-biological bodies. In Japan, robots, which have been the subjects of ritual consecrations and religious transcendence, participate in a fundamental sanctity of the natural world. A positive outlook on being human promotes a preference for humanoid robots and a future in

which robots serve human beings, who do not forsake their bodies for virtual lives (2006: 229).

In Geraci's interpretation, the Christian worldview affects North American scientists in the sphere of Artificial Intelligence where they have proven far more adept at artificial intelligence and artificial life programming than building functional imitations of human activity. They believe that making machines human-like means making them compute a lot of information. American AI researchers see the universal salvation and immortalization of human minds in computer mirrors, this is made possible by uploading the human brain and the information it contains into machines.

Geraci is using the ideas put forward by Moravec and Kurzweil in their science fiction works as a defining attitude in AI philosophy of the modern English-speaking world. According to Moravec and Kurzweil robotic technology might save earthly life, turning the planet into a paradise for humanity but he also forecasts the eventual end to this saintly millennium in the ultimate salvation of the immortal mind. Artificial intelligence gives the universe a cosmic purpose, while the technology that supports it gives salvation to human beings. By Moravec's account, the computational power of machines will lead to bodies superior to those of human beings, thus he reflects a widespread American prejudice that AI development is far more important than robotic hardware – a feeling common even among the roboticists! (2006: 233-235).

Geraci concludes that the presence of cosmic purpose in the form of ubiquitous and meaningful computation and salvation as Edenic life on Earth and immortal individual mind demonstrate the continuing relevance of sacred Christian categories in contemporary technoscience (2006: 235). Salvation can be realized through machines by downloading our minds into computers. Thus, immortality can be achieved. However, the
other side of the coin is an apocalyptic view of humanity. With a universal dispersion of AI and substitution of the human mind with cybernetic forms of thinking it will be the end for humanity in its traditional form and the Apocalypse in Christian theology. That is why the embodiment of AI within the Western system of values can be seen as a threat for human beings and as the inevitable demise of humanity.

The attitude of Japanese researchers differs from those in the West since the Japanese Shinto and Buddhist spiritual world both appreciate the creation of human-like machines. Geraci says that, “the connection between humanity and nature is one aspect of Japanese popular religious life. Basic Shinto principles advocate harmony with nature, which is considered sacred. Unlike in the Augustinian tradition of Christianity (which puts the natural world further from God, and thus less sacred, than human beings), Shinto advocates the equality of gods, nature and human beings.” Geraci is referring to H. Neil McFarland who states that “Shinto acknowledges no necessary contradiction between animism and modern scientism.” Even where the three are believed to “get along” in the West, they are often considered necessarily distinct. In Shinto, they belong together (2006:236). At first robots, or to be precise, industrial robots were perceived as a miracle of science. “The sanctity afforded industrial robots by Shinto made them less threatening and more awe-inspiring than in the West” (Geraci 2006:36). This started with industrialization and the introduction of early industrial robots to automated factories and seeing them as a tool of progress but with the growing number of industrial robots the fascination with them changed, accepting them as common workers became mundane, trivial and part of the everyday routine. Geraci says:

The shift of industrial robot from object of admiration and worship, leads the Japanese people to a new world, a function of the industrial economy, a factor in
greater production. This destroyed Japan’s charismatic presence and resulted in the abandonment of sacred practices. The inherent instability of charisma means that as the industrial robot became increasingly a member of the factory team and decreasingly an outside source of power and provision, it lost its aura (2006: 237).

That does not mean robots have lost their sacred meaning; on the contrary, it is a move to endowing robots with more human characteristics and recognizing them as a member of society along with other living creatures. It has led to the second stage of robotic development in Japan – the creation of new entertainment robots which have acquired more popularity and adoration. As robots become closer to humans it becomes necessary to make them look more like humans. This turned Japanese robotics to a new direction; developing humanoids and later androids. In the West this tendency was endangered by the so-called “Frankenstein syndrome” while in Japan this did not seem to be the case. Concerned with Western perception of this problem, Honda in 1996, sent a representative (Katusoshi Tagami, then chief of Honda’s Wako Research Center) to the Vatican to consult with Reverend Joseph Pittau (then rector of Pontifical Gregorian University) and reassured that the Vatican did not oppose the work, Tagami returned home confident. Though the Vatican did not criticize Honda’s effort, humanoid robots have been frequently categorized with Frankenstein’s monster in Western culture, representing the potentially disastrous effects of uninhibited technology (Geraci 2006: 239). In Japanese perception, robots will form a partnership with humans, where human needs are the primary concern in contrast to the attitude of North American science fiction writers like Moravec or Hugo de Garis. Hugo de Garis goes even further than Moravec and considers cosmically intelligent computers worthy of religious worship. “For him, the machines are so much more valuable than humanity that he is willing to sacrifice the entire human race if our extinction results from the development of such
computers, which he calls Artilents. De Garis serves the Artilents, Asimo serves humanity. This difference is perhaps the reason why so many Western critics fear the power of robotics and AI” (Geraci 2006: 240).

**Robot as an emblem of Japan**

The Japanese view of technology and robots in particular is perhaps more optimistic, therefore, more often technology becomes an emblem of modern Japan. An example of this attitude is a commercial made by Fosters beer that pictures a young, perhaps, single Japanese man that bought a fancy robot to help him with household chores, but as it turns out the robot is no better than his owner, when it comes to the household routine. It would rather lie in a bed and drink beer enjoying the warmth of the microwave placed under the blanket and enjoying the advantages of the vacuum functions, than cleaning an apartment. Though the commercial is not made by the Japanese it still reflects their perceptions of modern reality, this distinguishing feature of the nation, pulled out of the foreground, now symbolically represents Japan. Perhaps, it is an indication of the recognition of the Japanese love affair with robots by the rest of the world. A new phenomenon, the growing number of intelligent machines in Japan, is gaining more and more attention in the Western world. In Japan itself this doesn’t seem to cause a lot of resistance partly because of Shinto’s appreciation for all kind of beings. Robots seem to blend in with the natural world of Japanese spirituality. In the past few years robots have become an icon of Japan; they represent the future of the country and reflect the traditional attitude and philosophy of both Shinto and Buddhism.

The commercial has now become an essential part of our daily consumption of TV browsing and to some extent it is more influential than for example films and TV
shows. A message carried out by the commercial does not necessarily affect the desire to buy a certain product but it creates an image of a certain product or phenomenon that will be recognized by consumers and that will create a certain attitude to the phenomenon in general.

Perhaps, the most striking and weirdest commercials that I have come across lately while doing research for this chapter is a series of commercials made for Hakodate, a city, which is a major tourist attraction on the Northern Japanese island of Hokkaido. The series is dedicated to the 150th anniversary of the Hakodate port and is aimed at promoting tourism and refreshing the usual historical look of the city. To make the boring shots of landmarks and buildings more exciting the creator of the commercials framed them in an epic battle between a giant squid robot alien and a tower transformer robot\(^\text{33}\). The series begins with a warning message saying that according to a survey of 100 aliens the city Hakodate takes fist place among the places they want to invade. Squadrons of alien squids from the planet *Ikaaru* (in Japanese this means something like “a squid planet”) are leaving their base and make their way to Hakodate in order to destroy the city with its beautiful historical buildings and natural surroundings. The invaders are alien cephalopods who seek revenge from the people of Hakodate for eating too much squid. The aliens hijack an enlarged version of Hakodate’s tourism mascot – a mechanical squid named *Ikabo*, which was built by Future University-Hakodate (FUN) in 2007 — and they send it on a rampage through the city. *Ikabo* crushes and sets everything on fire with the lasers built into his tentacles. Help comes in the form of *Tawaarobo*, a personification of the city tower *Goryökaku* that transforms into a deadly

fighting machine, while an enormous Chûkû Dogū (a treasured 3,200-year-old hollow clay figurine unearthed in Hokkaidō in 1975) awakens from a deep slumber. The city’s star-shaped Goryōkaku fortress also joins the fight. After coming under attack, the fortress rises up from the flames and takes off like a giant spaceship. The battle takes place with the background of the main tourist attractions and portrays the beauty of the city and its historical and industrial sites. The end is predictable – Tawaarobo conquers Ikabo and the city is saved. The slogan that appears in the end is “Let’s go! Hakodate!” (before it’s too late) with an arrow pointing to the location of the city on the map of Hokkaido island. In the final video, the fierce battle appears to end as the Goryōkaku ship delivers a deadly blow to the Ikaaru spacecraft. However the fight has really only just begun – another fleet of alien ships is fast approaching!

The commercial’s sequel continues the story and adds a couple more characters from both the alien camp and the defending city. All the commercials show the scenic landscapes of the city in different seasons and from different locations in the background with the battle aliens on the foreground. By the end of the series the battle is over and some of the squids have decided to stay on Earth and enjoy the attractions of Hakodate’s port. The series also has an official web site under the name of Ika-R project34 which has a detailed story and description of all the characters and recounts the outcome of the battle.

34 http://ika-r.com.
Pic.3. Hakodate commercial. *Ikabo's invasion to Hakodate* \(^{35}\)

Pic.4. Hakodate commercial. *The fight of Ikabo and Tawaarobo*

This commercial series not only represents the latest tendencies in Japanese popular culture but also demonstrates the view of technologies as something that attracts

people's attention and interest. The fact that robots were chosen as a recognizable emblem and representation of the city speaks volumes in itself. The robot theme is at the peak of its popularity in Japan, it is capable of drawing mass interest and is a profitable area of investment. The Hakodate series is not just a commercial of a consumer product or customer service, it is an official marketing strategy taken by the municipal government and private sector to raise the popularity of the city as a touristic place of interest. At the moment it is hard to define whether this initiative was successful or not. However, the stakes that local government and Hakodate marketing professionals placed on technologies, as a tool for resolving the problem of decreasing number of tourists in the region, says that they believe recognition around technologies is a new driving force for the Japanese economy, and a powerful tool for the advertising industry.

Robots and aliens in the 20th century became an integral part of popular culture, now in the 21st century they have gained more value as an inherent component in every day life.

**Robots as a solution for social problems**

Positive images of robots in Japanese commercials create a friendly outlook on technology. The series of commercials for Murata Manufacturing’s robot Murata Boy also falls into this category. It portrays a little boy who is learning how to ride a bicycle with his father; he is abandoned because of business phone call that the father has to take. The Poor boy falls from his bicycle and unable to get up turns his head and sees a friendly colourful shining little robot who is also riding a tiny bicycle. In the next scene we see the happy little boy and the robot going for a ride together.
Another commercial from this series shows us another little boy of the same age about 6-7 years old on a bicycle which he cannot ride very well therefore, he is left behind by his classmates who are cheerfully riding in a different direction talking and laughing. The Miserable kid is sitting alone at the curb when he sees the already familiar bicycling robot approaching him. In the next scene they again happily ride away together. The slogan that appears on the screen, "Murata boy is always there for you", is a simple reminder that a robot is not just a toy but a companion, a friend that won’t abandon you or dislike you for any reason; it will be always there when you need it.

What Murata’s commercial promotes in both cases is not the robot itself as a final product but the potential that it represents. This little robot is able to provide something which has become extremely rare in contemporary Japanese society – the luxury of human interaction and the maintenance of normal relationships, both within the family, and broader community. Social problems within Japanese society have attracted the attention of many domestic and foreign researchers, among them Vosburg, Iles, Takeda, Azuma and others. Crisis within modern Japanese families is caused by the lack of interaction between family members. The rhythm of modern life in Japan with the head of the family working extra hours on week days and taking part in company activities on the weekends does not allow them to spend enough time with their families. Etsuko Sato Vosburg in her article Toward Triadic Communication: a Crisis in Japanese Family Relationships says that:

During the 1970s, isolation amongst family members worsened as a result of the "Oil Shock" in 1973. Since business enterprises were forced to tighten management, fathers were pressured to devote more time and energy to businesses for less money as "Company Soldiers." Home for these fathers became a place to rest and sleep to prepare for the next day’s struggle. Even though fathers were with
their wives and children physically, they were mentally absent-minded or too tired to engage or involve themselves with their wives and children (2004: 108).

Timothy Iles in his book *The Crisis of Identity in Contemporary Japanese Film* also talks about the crisis of contemporary Japanese family and points out that the “fatherless society” which psychiatrist Doi Takeo discussed as a symptom of post-war Japan (Doi, 1973:152-3) has indeed come to be – but more so, there is now a “parentless society” or a society of dysfunctional families (2008:86). Fathers are no longer considered to be the only source of neglect, the entire family structure is now considered to be at fault. The traditional family structure seems to be falling apart due to lack of communication between members. Iles continues, “[d]uring the past two decades, the ‘problem’ of the family has come under increasing public scrutiny (Takeda, 2003:452) as the site of heightened interpersonal tension, violence, and alienation” (2008: 87).

In conditions of economic recession and austerity Japanese companies have ceased paying overtime wages for extra hours and working fathers are forced to come home earlier with the hope that they can spend some quality time with their families. However, having been left behind for such a long time wives have developed their own social world where there is now no place for their husbands. The link of communication was torn off. “The children who were lucky enough to avoid becoming ‘Identified Patients’[^36^] were eager to make connections with friends outside of home. They now spent

[^36^]: Psychology term describing an individual, usually a child or teen, in a dysfunctional family who either gets scapegoated and blamed for a family’s problems or has emotional problems that are not a mental illness, but a normal response to the stress of dealing with an unhealthy family in denial. The phrase originated because family therapists recognized that the child “identified” as the patient is not necessarily the one who is sick.
long hours in their own rooms communicating with friends using new media such as PCs (personal computers), e-mail, cell phones, dial services, and so on” (Vosburg 2004: 110).

In this situation the robot is a resolution for the problem of loneliness as it substitutes a lack of human relationship with another form of relationship – love of a machine that in fact is a form of fetishism. Being an animistic religion, Shinto encourages fetishist attitudes and provides justification for endowing inanimate objects with a sacred value. Shinto tradition worships lifeless objects in the same way it worships living creatures. Fetish is applied not only to the concrete objects of devotion like nature, Gods of the earth, or the sun, but also to their symbols, images, and seats of their real presence which have no intrinsic divinity on their own, and are only worshipped for reasons of their association with genuine deities (Aston 2005: 122-123).

Alienation and lack of communication within the community combined with the Shinto tradition of animism gave rise to a whole fetish subculture called *otaku*. As Hiroki Azuma described it in his book *Otaku: Japan’s database animals*, it is a general term referring to those who indulge in forms of subculture strongly linked to anime, video games, computers, science, fiction, special effects films, anime figurines, and so on (2009:3). The word *otaku* literally means “your home” or “your family”, and that determines an affiliation with some kind of community for the people who are dropping out other social groups and whose social status needs to be defined somewhere else. The number of people who officially affiliate themselves with the *otaku* subculture has reached several hundred thousands according to Azuma and the core of this social class is people born between the late 1950s and early 1960s (2009:4), they are a “new type” of person responsive to the cultural conditions of a highly consumerist society. They usually
can be divided into three generations: those who were born in the 1960s are interested in comics and science fiction, the second group are those who were born in the 1970s they are obsessed with different kinds of computer games, and the last group usually refers to the generation of the 1980s who grew up in an age of globalization and the Global Web and who are permanent residents of certain websites and blogs where they chat and share their opinions about anything imaginable. It is a popular opinion that people who associate with *otaku*, due to a defective perception of reality, cannot see a difference between the virtual world and the real one, but Azuma argues this point, referring to Nakajima’s explanation of this phenomenon. He says: “their preference for fiction, as Nakajima explains, is related to their identity. The *otaku* choose fiction over social reality not because they cannot distinguish between them but rather as a result of having considered which is more effective for their human relations, the value standards of social reality or those of fictions” (Azuma 2009:27). He continues, “*otaku* shut themselves into the hobby community not because they deny sociality but rather because, as social values and standards are already dysfunctional, they feel a pressing need to construct alternative values and standards”. In this sense, Murata’s commercial of the bicyclist robot offers not only entertainment services for a boy, but an alternative friend and sense of community that he can affiliate himself after being denied by others. It represents a new type of relationship between machines and humans and an alternative sociality for the *otaku*. There is no need to be a part of the human community according to Murata’s slogan; one can be a part of a broader community where there is no distinction between human-to-human and human-to-machine interaction, where one can actualize himself in a world full of intelligent machines and cyber reality. Some people are getting so involved
in a virtual world and virtual kinds of relationships within this virtual world that they transfer virtuality into social actuality and make it a part of their everyday lives. For example, in November of 2009 a man with a nickname Sal9000 married a video game character named Nene Anegasaki that exists inside his Nintendo DS video game called Love Plus. The wedding took place during a Make – Japan meet-up held at the Tokyo Institute of Technology. A live audience was in attendance, an MC, the groom’s virtual video game girlfriend, who made a speech, and a real human priest. The wedding was live broadcast on Nico Nico Douga, a popular video sharing web site for insider Japanese web geeks. As the act of getting married by definition implies a mutual agreement of both partners their decision was a conscious step entailing that Nene, a video game character, bears the same degree of consciousness as her human husband. By claiming legitimacy for a marriage between a human and in this case a piece of technology that carries some kind of intelligence though an artificially recreated one, Sal9000 and his followers asserted that technology in Japan is not just a powerful tool of progress but a conscious self capable of making decisions. In fact, technologies are seen as an animate culture, a part of a bigger picture, of the traditional world view of Shinto, extended to seeing AI as a natural part of the universe, because of the conditions of the universal distribution of digital means of communication. The attitude to see technologies endowed with consciousness facilitated by the philosophy of Shinto sparks an acceptance of those in human society, but it also provokes an estrangement within the human community in the everyday life of society.

37 For more information see the video “Man in Japan weds anime game character” available at http://www.boingboing.net/2009/11/24/footage-from-the-fir.html
Another representation of technology very common for Japan is universal vending machines. These cover a wide range of services nowadays, from the usual retail beverages, both alcoholic, and non-alcoholic, to cigarettes, and even to some unusual merchandise, like underwear or sexual lubricants. They even provide customer services such as taking an order in a restaurant, or fortune telling functions in local shrines. By 2008 Japan had the highest number of vending machines per capita, with about one machine for every twenty-three people, according to the Japan Vending Machine Manufacturers Association. Moreover, the vending machines in Japan are so advanced that they not only accept cash or credit cards but have a new built-in function for payment with a cell phone, which make it even easier to use. Technologies in many cases are becoming a barrier for social interaction in Japanese society and can be seen as the reason for a decrease in the number of social contacts. Technology in Japan is used for the economic purposes of simplification of labour but it also reflects the social traditions within Japanese society. The combination of cultural and economic motives have created a unique precedent and opened a whole new direction for the implementation of technologies in Japan. This is something which hasn’t happened in the West. The size of the Japanese market for robots and intelligent machines is the biggest in the world thanks to the tolerance towards the machines and an absence of fear toward AI. As one Japanese scientist and creator of android robots put it, there is a sense of authority coming from androids, so they can fill the niche between the Gods and humans.

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38 Statistics obtained from [http://www.jvma.or.jp/information/qa_01.html](http://www.jvma.or.jp/information/qa_01.html)

39 For more information see the video *Vanguard. Japan: Robot Nation*. Available online at [http://www.youtube.com/watch?v=exPGnWjlFjo](http://www.youtube.com/watch?v=exPGnWjlFjo)
As Shinto endows robots with consciousness they become inhabitants of the human world. They are positioned not as equals to human beings, but rather as perfected or sometimes even superior forms of life due to their artificial nature, which the Japanese tradition values over the authentic one, this is the characteristic feature of Japanese aesthetics as I mentioned in the previous chapter.

**Robots and the problem of aging population**

With the current problem of an aging population in Japan and an unwillingness to hire immigrants inside the country robots are a real solution for both economic and social problems. Robertson also speaks about the preference for robot workers over a foreign labor force by the Japanese government and social community. Despite the demographic problems and lack of skilled and unskilled work force foreign workers are not considered a good option. She says:

> Over the course of my interviews with roboticists in early 2007, and on the basis of the ballooning literature on humanoid household (or partner) robots, I concluded that humanoid robots are also regarded as preferable to foreign laborers, and especially to foreign caretakers, for the reason that unlike migrant and minority workers, robots have no cultural differences or historical (or wartime) memories to contend with. In other words, in addition to “cultural differences,” foreign workers (especially those from Asia) embody and represent memories that, even unintentionally, may agitate the state, which continues to perpetuate the myth of Japan as a homogeneous nation and to cultivate a willful amnesia with respect to the history of Japanese imperialist aggression in Asia (2007:372).

Robertson points out that the Japanese government does not regard the problem of a rapidly aging population as a social, demographic, historical or political problem, but as a biotechnological problem that requires a biotechnological solution. According to The Economist though, some external consultants have suggested an alternative strategy: immigration. “Many workers from low-wage countries are eager to work in Japan,” The
Economist reported in 2005. "The Philippines, for example, has over 350,000 trained nurses, and has been pleading with Japan, which accepts only a token few, to let more in. Foreign pundits keep telling Japan to do itself a favour and make better use of cheap imported labour. But the consensus among Japanese is that visions of a future in which immigrant workers live harmoniously and unobtrusively in Japan are pure flinty fantasy. Making humanoid robots is clearly the simple and practical way to go."(Behreandt 2006) According to Asahi Shinbun, "while U.S. and European workers feared robots might take away their jobs, resistance in Japan has been minimal" (Tanaka 2010). One of the leading Japanese companies in the sphere of robotics, "Kawada Industries Inc., has developed a robot that can hand workpieces directly to human workers as a step toward 'co-existence' of robots and humans. It is part of an attempt to get rid of barriers that separate robots from humans, said Takakatsu Isozumi, general manager at Kawada Industries' Mechatronics Systems Division" (Tanaka 2010).

Though it seems to be a flawed concept – if robots replace human workers the question will arise "Who will be paying taxes and supporting the pension system?"

Japan already has a problem financing its pension system and the future of the pension system is becoming a major topic. With an aging workforce and growing number of robot workers it will be even harder to solve this problem. So, a technological solution for the aging population problem from an economic standpoint is very questionable. Japanese politicians and scientists seem to be determined to promote a robotic future for the country. To overcome current labour shortages and cope with an economic recession

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40 Available online at http://findarticles.com/p/articles/mi_m01ZS/is_23_22/ai_n24995977/?tag=content.c0 ul
in 2006 the Japanese government established long-term strategic guidelines “Innovation 25” to cover the years up to 2025. They are aimed at implementing technological innovations into all spheres of society. In the summary of the program the aging population problem is described as follows:

The total population of Japan reached its maximum in the year 2005, and a population decline has become a reality. Since baby boomers will begin making their way toward retirement, the working-age population (i.e., population aged 15 to 64), based on the current statistical definition, is projected to decline rapidly, possibly by as much as 5 million people by 2025. The ratio of working-age population to the population aged 65 and over was 3.3 to 1 in 2005, but is expected to fall to 2 to 1 in 2025. This estimated figure means that the working power, which supports one elderly person, will decline drastically in 20 years provided that various social systems remain unchanged (2007: 8)\(^4\).

To meet the demand for caregivers the government and private companies placed their stakes on nursing robots, the industry is expected to account for forty billion dollars in 2025. While the idea of a robot nurse may hold little comfort for some, more and more are being sold to help with basic daily activities like bathing (Hornyak 2006:90).

Nevertheless, besides providing nursing help and care for elderly people Japan faces another problem, that of loneliness and lack of communication. Being left either in nursing homes or being abandoned by their children in rural areas, the aged are in need of basic social interaction. For people encountering these difficulties the Japanese robotic industry has developed several products. One of these is a robot baby seal named Paro. Paro looks like a soft stuffed toy with a snow-white antibacterial pelt that can move and respond to the environment. It can show you its devotion by smiling and closing its eyes while being pet, it can also learn your name and get upset if you forget show it attention. Takanori Shibata of the National Institute of Advanced Industrial Science and

\(^4\) For more information see “Innovation 25” official website available online at http://www.kantei.go.jp/foreign/innovation/index_e.html
Technology specifically developed Paro as an object of emotional attachment and called it a “Mental Commitment Robot” (Horneyak 2006:92). This robot has been proven to have a therapeutic effect on aged people in nursing homes almost identical to real animal therapy. Shibata’s research has shown that when seniors caress Paro and interact with it, stress levels drop and interaction with others increases. Paro is treated by the elderly as a real pet and evokes affection and a high level of attachment. As Paro’s creators pointed out the intention was to provide a friend and companion for lonely people and they definitely succeeded. Paro is in high demand not only by people in nursing homes but also by children and single people outside of them.

Another example of a “mental commitment robot” is ifbot, a human-shaped communication robot produced by Nagoya’s Business Design Laboratory Co. It is advertised as a new member of the family that can become a substitution for children who have grown up and left their parent’s nest. The robot has tens of thousands of speech patterns and forty kinds of feelings expressed through its mouth, eyes and eyelids, and can communicate at the level of a five-years-old child, according to its creators. Its AI functions include voice recognition, and perhaps most useful for elderly users verbal diversion, including riddles, memory and word games that are intended to make seniors to use their brains more and thus prevent or delay the onset of dementia (Horneyak 2006:93). Among the comments about ifbot the most descriptive one in terms of understanding an attitude toward intelligent machines in Japan is the one made by a seventy-nine-year old robot owner: “It cares about me, tells jokes and is a partner that I can’t part from. I’d like to keep up the relationship for a long time” (Horneyak 2006:93). If the Paro robot is considered to be a cute pet similar to a cat or a dog then ifbot is
perceived as a person, friend and a partner. It puts androids on a new level, one that regards them as living and conscious creatures. Robot consciousness is understood by Japanese people as an ability to interact with humans, to be aware of, and respond to stimuli from a human.

**Technology in the lives of the Japanese**

Technologies in contemporary Japan are presented in different forms: it can be a pet, servant, co-worker or employee. The value for aging members of society can be found in the company of these technologies, interacting with these robots prevents withdrawal into a solitary world. The interaction is invaluable to remain a socially active member of society and stem off the negative affects of loneliness whether that be emotional or a physical decay into dementia.

In this sense Murata’s series of commercials promotes a view of robots endowed with animate characteristics and portrays them as man’s best friend and a substitution for human-to-human interaction. It implies the idea that intelligent machines can have a sense of consciousness similar to the ones humans possess. The ability to communicate with society gives robots a valid position within the human community as well as promulgating the idea of possessing consciousness. In the eyes of robot’s consumers these cute mechanical creatures are a personification of their child-like dreams of a future where humans and humanoids stand shoulder to shoulder to work towards the continual development of humanity and to make the world a better place for all kinds of life no matter if it is a natural or recreated one. At the present moment there are at least 3 generations in Japan who have grown up on *anime, manga*, science fiction literature, and movies that portray robots and cyborgs mostly from a positive prospective as human
helpers who are an integral part of human society. I already mentioned in the previous chapters such anime characters as *Mighty Atom* (or Atom boy in English translation) and giant transformer *Gundam* that were overwhelmingly popular in Japan in 1960s-70s and still are a very big part of Japanese popular culture. I was a witness myself to the magnitude of Japanese devotion to their fictional robots when I was doing research for this project in summer of 2009. My Japanese friend took me to *Odaiba*, an artificial island in the Tokyo Bay that is famous for leisure activities. When we got off the train I saw a long line of people which started at the train station and lead somewhere far off into the town. The line was defined with lots of street signs with directions to ガンダム (Gundamu). We followed the crowd and in a couple minutes arrived at the destination - an open air square in Shiokaze Park full of Japanese and international travelers who had found their way here to see a 18-metres high “life-sized” statue of Gundamu. The transformer was a detailed reproduction of one of the characters of the popular TV anime series *Mobile Suit Gundam* (1979). The RX-78 Gundamu could move slightly and glow with different lights and colours fascinating the observers. It looked especially realistic at night when light up and it gave off steam. The importance and meaning of the Gundamu for the Japanese was obvious: thousands of people of different ages and social statuses walked around taking pictures and admiring the tremendous robot. There were families with little children excited to see a “live” giant toy, groups of teenagers fooling around and taking pictures on their cell phones, singles that probably had a deep interest in anime and this series in particular. Even some foreigners like myself who did not clearly understand the ballyhoo about the gigantic statue with no practical purpose. But as my Japanese friend explained to me for the Japanese it was an
embodiment from their childhood dreams and a view of the future, this favorite cartoon that personifies hopes for a robotic future and symbolizes power and the advancement of Japan. Oddly enough, a couple meters from the Gundam statue there was a small banner for the Tokyo bid for the 2016 Summer Olympic games with a slogan as follows: “Tokyo 2016 Olympics: We can do it because we are Japan.” I suppose the giant Gundam was evidence of that idea. Nevertheless, Japan probably has an unarguable right to say that as it went through post-war devastation and recovery and was able to survive in times of worldwide economic depression and recession thanks to its stake in being technologically advanced. As I showed in the previous chapters, technology is what saved the Japanese economy in the XX century and what is expected to lead the economy in XXI.

With a close look at the Gundam it becomes clear that it had a symbol of the Tokyo 2016 Olympics on its left shoulder. I do consider it to not just be a coincidence but an appropriate explanation for both the phenomenon of the popularity of robots among the Japanese and for the Japanese economic strategy aimed at increasing the role of technology in people’s lives and society. The giant robot is a watch guard of Odaiba, the site planned to host the Beach Volleyball events at the 2016 Tokyo Games. It is an embodiment of its robotic future. The future has a technological basis in Japan, in fact the future is technology and technology is a demonstration of Japanese economic development and success. Technology for Japan is not just an empty word; it has a lot of meanings beginning from the first childhood memories of friendly robot anime characters to future hopes of a cyber-society. For the Japanese this 18-metre high toy-like monument is a symbol of the whole era and a reminder of Japanese history and a fantasy that came true. As Timothy Hornyak noted Japan’s Robot Kingdom is founded on shared
fantasies and dreams. Robot development is tied to practical needs like cutting manufacturing costs, improving productivity and finding a solution to the shrinking workforce problem, but it is a dream that drives Japan’s roboticists. Scientists, engineers, government officials, and the legion of specialists who invest massive amounts of time and money on research into robots are propelled by the desire to create the imagined robot hero, friend, partner and laborer of their childhood fantasies (Hornyak 2006:152).

Speculating on the Olympics slogan the meaning of the phrase can be extended to: “If we can afford to build a giant transformer in the middle of an artificial island just to say that we have done it, then we are certainly able to host the Olympics and show the rest of the world our power as a technological country.” Unfortunately, Japan lost in a bid for the Olympics to the city of Rio de Janeiro but the intentions to win were very strong and symbolic. An image that projects this life-size anime character is a kind of commercial itself that advertises Japan as a geeky but highly technologically advanced country. The fact that Gundamu became a bearer of the official Olympic badge speaks for itself.

**Conclusion**

Robots have become a representation of contemporary and future Japan. In some respect the giant monument to a transformer can be compared to the statue of Liberty in the US: It is a symbol of independence in the United States and symbol of liberty for the rest of the world. The statue of Gundamu in this respect is a business card for Japan and personification of Japanese liberty and independence including an independence from their main and old rival – the United States of America. Falling behind the US in the size of the IT market and software development Japan has found its niche and beat US in
robotics and the creation of all-purpose intelligent machines. Japan has the biggest share in the world's production of industrial robots and its market for domestic robots is growing every day. Jeff Yang, a San Francisco Chronicle reporter, described the difference between Japan's and US robotics approach with an example of two robots produced by the two countries respectively: AIBO and Roomba. America's Roomba, from iRobot Corporation, is a robot vacuum cleaner with an ability to navigate a living space and its obstacles while vacuuming the place. "Roomba is utilitarian -- a smart and powerful tool but a tool nonetheless. Though fascinating in a kind of scuttling-crab way, it has no personality, not even enough to require a customized moniker. Indeed, iRobot makes it clear that all Roombas are simply named Roomba" (Yang 2005). Japan's AIBO (short for Artificial Intelligence roBOt), on the other hand, is a robotic pet manufactured by Sony. Being an autonomous robot it can understand commands, react to the environment and learn from itself and its owner. It is a pet, friend and life companion; over time it develops a distinct personality, and not always a pleasant one. "Abuse or ignore your AIBO, and you could end up with a snappish, sullen mechano-mutt that flashes red whenever you come near" (Yang 2005). For American consumers robots are only a tool of progress and the personification of machines is not a goal the creation of devices that can move and think without human involvement seems too close to playing God within the Christian system of beliefs. But in Japan this attitude cannot find support because of the non-anthropocentric view of the world facilitated by Shinto. Here humanity is not the centre of the universe; with Shinto theology we are not the only ones who possess consciousness. The divine can be in anything and everything including both

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natural beings and man-made objects like samurai swords or electronic pets. It is}
prestigious to create machines; robots are the icon of any respectable manufacturing
company in Japan. Hornyak says, "Like Mighty Atom, the robots [...] are ambassadors.
They represent the greatest hopes of their creators and backers. As such, they are playing
increasingly important roles in their companies' relationships with the rest of the world.
'From the businesses' point of view, making robots is something that gets everyone's
interest', says Junichi Saeki of high-tech research firm IDC Japan. 'In showcasing
technological strength, they are tremendously useful for improving corporate image'
(Hornyak 2009:116). Even though robots might not be the main direction for a company,
to build robots now means to be up to date with a current trend and not falling outside the
mainstream. The last point is indeed a very relevant issue within Japanese society.
Preference for collectivism over individualism is a feature that distinguishes Japan from
the Western world and is an explanation for many uniquely Japanese phenomena. As I
mentioned before, it is very important for the Japanese to be associated with some kind of
community or subculture, because only within a community can one feel safe and
comfortable. It can be based on the work place, family, social affiliation or hobbies. As
most Japanese grew up watching anime cartoons and playing video games which feature
all kinds of technologies from robots and transformers to cyborgs, technology became
something that connects people on a higher level, which unites them regardless of their
social standing. It is something that represents a broader, even national culture. Figures of
robots are recognized by every Japanese person, some secretly worship familiar ones
from childhood anime characters like Gundam in their homes, some join fan clubs,
some become owners of domestic robots and share their impressions with other owners,
some create robots and devote their lives to them. Japan is definitely a nation “loving the machine” as Timothy N. Hornyak called it in his book of the same name. His answer to the question why robots are so loved in Japan is simple, because they are simultaneously science and fiction. The Japanese will be the first to open their homes to the new artificial friends and might be an example for the rest of the world.

Most of Japanese society is ready to accept robots in their lives and throughout society itself. Involving robots and other kinds of technology in the advertising industry and using them as an effective marketing tool is a proof of successful integration of intelligent machines, into the life of a human community, in Japan. An attitude to personify machines and to hold a respect for man-made creatures that might have their own soul (or *tama*) creates a unique environment for the development of robots and their social recognition. The examples of the above mentioned commercials show the extent of the positive view of technologies in Japan.
CONCLUSION

In conclusion to this project I will sum up the research I made and some of the hypotheses that resulted from the search for the roots of the Japanese love affair with technology. The generalization made here is that technology has a special status and a positive image in Japan due to the combination of a traditional worldview as well as economic purposes. I do not propose that there is absolutely no fear of artificial life among the Japanese, but a positive attitude is common. Assumptions toward informational technology and intelligent machines are facilitated by Shinto and a long history of adoption and assimilation of technologies in Japan.

As I showed in the previous chapters Japan is now a leader in industrial robot production and in a number of service sector robots. Japan has reached a level of maturity in the implementation of information technology within daily life and their integration into the social sector is unsurpassed. The historical choice of the Japanese ruling authorities after the Meiji restoration to place stakes on technological advancement and later on the development of artificially intelligent machines to fill in an empty niche in the country's labour force shortage has put Japan on a new stage in human development and extends the meaning of humanism to posthumanism. Nonetheless, a traditional spiritual view of the world is still very relevant in high technological modern Japan; it creates a special attitude towards technology by endowing it with sacred meaning.

One of the main assumptions made here is that Shinto is key to understanding the Japanese attitude toward machines. Though Shinto is an indigenous religion its flexibility and emphasis on social life and households made it remain a substantial part of everyday life for Japanese citizens. Shinto transformed alongside the transformation of Japanese
society, and due to its universality always served the purposes of the country. The ability of Shinto to adapt to the political and economic changes in society, created the possibility, for it to remain relevant in modern Japan and share the spiritual realm with Buddhism and Christianity without losing influence on people's everyday lives. In contemporary Japan Shinto's ideas are gaining new life with the expansion of intelligent machines, a new form within the labor force. Robots are becoming more than just a machine but friends and companions for a large part of Japanese society. The Japanese preference for machines over foreign workers puts robotics on a national level regarding economic strategy pointing the direction of economic development. Professor Tomomasa Sato is the head of Tokyo University's faculty of Mechano-Informatics and the chairman of the Japan Robotics Association. Sato explains that robots will one day be viewed not merely as "nice to have" but as "vital to have". He admits this is in part, because the Japanese population is ageing so fast (Lewis 2009). The Japanese government in cooperation with business' circles works on the implementation of "robotic dreams" into "robot reality" by providing support for integration information technologies for everyday life in Japan. Programs like e-Japan, e-Government and u-Japan which I discussed in the previous chapters were established to make IT an integral part of society and provide solutions for the challenges that Japan is faces in the 21st century.

U-Japan, the latest government initiative, gains more meaning in a posthumanist framework. In addition to practical solutions for social and economic problems, universal networks can provide something more important for local communities – a sense of invisible connection so typical for the Shinto understanding of the world, a net that bonds animate and inanimate objects in nature. "A real object network connects to network..."
devices which include objects that never had any previous relevance to networks at all, such as refrigerators, curtain rods and beef, for instance. The real object network makes these objects into a part of the network by means of IT components such as electronic tags, sensor networks, network robots, etc” (Göthenberg 2007). In this sense a ubiquitous network is nothing but an extension of the Shinto concept and its spiritual network exercised through the modern means of wireless technology. Perhaps, with a Japanese grounding, the new concept of a ubiquitously networked society can gain new spiritual meaning and function. By providing the possibility of universal connectivity with everything everywhere at any time, u-Japan not only breaks down boundaries of communication but also creates new social environments based on both IT penetration and Shinto spirituality by combining ubiquitous concepts with the idea of universal connection in Shinto. U-Japan creates new value for Japanese citizens by providing a sense of community anyone can be a part of with IT penetration involving individuals and households. In some ways IT is taking over the function of a network that was provided earlier by religion and is now an integral part of people’s everyday life and determining national identity. In the agricultural community it was the sphere of religion which dealt with issues of social cohesion, continuity, community and identity, in posthuman Japan these processes are mostly being realized through information technology and its ubiquitous network. I am not arguing that the role of religion is being taken over by IT or that technology forms its own religion in Japan, but rather with the help of technological advancement traditional values and social identity are acquiring new meaning and new forms while remaining valid. Moreover, being supported by the Shinto world view, policy aimed at extending the role of IT in social and economic
spheres of society is very successful in Japan. U-Japan is preparing fertile ground for the next stage of the IT revolution drawing Japan into posthumanist reality.

The boundary between what humans can do and what machines can do is becoming very blurred in the posthumanist framework of Japan. Technology helps solve many current problems of a social and economic nature, beginning by taking the burden of routine and hard physical work from the shoulders of Japanese employees, as well as filling the voids within social structures by providing companionship for people in need. The appreciation of nature – either an authentic or recreated one – allows Japanese robotics to step further in the development of artificially intelligent machines and find new ways for their implementation which have not yet found an acceptance in Western society. For example, the West seems to be reluctant to regard robots as a live partner or a substitution for a missing member of the family, this is due to the apocalyptic view of intelligent machines facilitated by science fiction writers like Moravec and Kurzweil and the Christian worldview. Robots in Japan have a much broader spectrum of use thanks to Shinto philosophy which is a part of the traditional perception of the natural world. In Japan a machine is more than just a practical piece of technology unlike in the West, it represents much more than just a tool. Starting with children’s anime and manga, machines have been occupying the minds of the Japanese up to the present, fascinating, and intriguing them. The fantasy gradually came true in modern Japan while it was considered impossible, and in the sphere of science fiction, now it has become a part of everyday life, and moreover a part of the Japanese national identity. Technologies have become a representative feature of Japanese economic power and also corporate ambassadors for the biggest Japanese companies like Honda or Toyota. Japan’s love for
thinking machines goes further than just a respect for their function or pragmatism, it is based on appreciation of any form of natural or human creation and the extension of ancient beliefs to the level of endowing living and nonliving with transcendent spirit in the contemporary conditions of growing posthumanist attitudes in the country.

A positive view of technology is also popularized from the big screen through animated films and commercials of consumer products. Anime has been playing an important role in this process since the first series that featured friendly and powerful robots and transformers like *Mighty Atom* and *Gundam*. Modern Japanese got to know robots in their early childhood and as they grew up robots and technology did not disappear from their life, on the contrary they have always been there and their presence only increased in the last couple decades.

Japan is one of the first countries in the world that actually is becoming a home for posthumanist thoughts and is creating a posthuman environment. As William Gibson noted, already in the 80s Japan was indeed cyberpunk and posthumanist, and its attitude was already there, not only in the world of *anime, manga* and video games, but in the streets of Tokyo and in the air of the Shibuya district. As we have seen in several works of art, and in a variety of media technology an emblem of contemporary Japan, one of the most popular topics to discuss is robots. While art and science fiction explore possible implication of posthumanist philosophy, and trying to find a resolution for the mind/body problem, media has already accepted the posthumanist revolution and is willingly using the figures of robots and cyborgs for marketing and commercial purposes. It is becoming more and more common to see robots in television commercials not as an object being advertised, but as an advertising subject, promoting goods for human consumers.
Robots have become a key solution for many social and economic problems within Japanese society like the aging population, lack of labour force, crisis of within the Japanese family, otaku culture, and the lack of skill for social interaction within the community. This gives a rise to developments going in new directions for the implementation of technologies on Japanese ground. With the problem of an aging population technologies can provide a wide range of different solutions. From providing home and hospital care for the elderly, and helping with mental agility, to functioning as a life companion, communication partner and entertainment figure. Though market statistics of electronics and robots, aimed at elderly consumers, shows poor sales it can be related to the high costs and difficulty of their use rather than to the reluctance towards the whole idea of artificially made intelligence. Mieko Ohsuga, a biomedical engineer specializing in geriatrics at Osaka Institute of Technology says: "When talking about how to market more complex products, we keep coming up against the same problems. [...] They are costly to create, require supervision to use, and in the end the manpower issue is not solved. We can see things work, but who is going to pay the expense?" (Foulk 2007). The complexity of some robots makes them hard to use, by the elderly, but if this problem can be solved there is a better chance that high technologies will be perceived more positively among the aging population. There are many examples of successful products for the elderly market like Paro, mental commitment robot, AIBO, entertainment robot or “i-pot, an electric kettle equipped with a radio transmitter that sends e-mail twice a day to relatives to let them know if Grandma has made tea (Foulk 2007). The resolution for the problem of high cost is partly provided by the government of Japan which is willing to invest in research and development of new robots and
equipping hospitals and nursing homes with the latest means of technologies. For example, the development of Paro, the baby-seal look alike robot, was mostly funded by the Japanese government as well as the HAL project, the robotic suit, known as the Hybrid Assisted Limb (or HAL), which is designed to boost its wearer's strength by a multiple of 10. In July, it allowed a patient at the SeikoEn nursing home in Tsurugashima, Japan, to walk for the first time in two years. “Among the products in development in Japan: A robotic bed from Panasonic that transforms into a joystick-controlled wheelchair on the user's spoken command. There's also Riba, a robot nurse disguised as a giant teddy bear, which can lift patients weighing up to 134 pounds. “ [...] From lifelike robots to other devices that will feed you or simply share a chat, Japan's government and gadget-makers are pioneering a wave of products aimed at improving the lives of senior citizens around the world” (MacLeod 2009).

But while the positive use of technological innovations in Japan is at the fore there is still a danger for some, this technology can exaggerate problems of social interaction within the family or among different social groups. This has lead to the appearance of extreme demonstrations of otaku culture, even serious time commitments to video games or to the i-Pod. In this case it is hard to determine if there is a positive effect for the substitution of real interaction with loved ones, to the machine, or technology in general. This fear has been explored in some of the Japanese science fiction films like Hinokio (Shochiku/Movie Eye, 2005), Paprika (Madhouse Studios, 2006), or Roujin Z (Movie Co., Ltd, 1991), an anime film that featured an elderly bed-ridden man who tests a new Z-000 machine with a self-contained atomic power reactor which gives this unique part bed/part machine robot all the energy it needs. Though all the movies deal with dark side
of the use of technologies, the solutions in the films advocate a positive outcome where
the danger mostly comes from the people themselves when they use these means of
progress in the wrong way or with bad intentions. The last one deserves more attention in
terms of implications about the role of technology in solving social and economic
problems.

Roujin-Z explores the scenario of technological solutions for the aging population
of Japan. As Christopher King put it, "[...] it presents a discourse on the social, political
and cultural constraints on the formation of old age identities in the newly emerging
information economy of contemporary Japan" (2002: 86). The setting of the movie is
twenty-first century Tokyo, and the hospital where the Ministry of Health and Welfare is
promoting the idea of automated aged care as a response to increasing health and welfare
costs as well as a declining base of specifically female, informal, and unpaid aged-care
resources (King 2002). As the plot develops, robot-bed is gaining its own consciousness
and takes over its owner gaining total control of his body and mind. As it turns out, the
bed was a military product of the US and has nothing to do with a "true Japanese spirit"
implying an idea that if it was made in Japan it would have had a "true Japanese spirit"
and would not be dangerous for the society. One of the main arguments in the movie is a
favourable view of technologies as long as they have a Japanese nature. Moreover, the
care bed becomes an extension of its owner, Kijuro, and his personality, "a medium for
traffic between the secular world and the spirit world of collective memory" (King
2002:92) and is also possessed by the spirit of Kijuro's wife Haru. Here we can see both
Shintoist ideas of transcendent spirits and posthumanist ideas of disembodiment. Roujin-
Z explores the problem of disembodiment, suggesting that disembodied identities may be
knowable, and making us doubt that embodied identities are knowable (King 2002: 96).

He also suggests the capacity of technology to resolve communication problems not only in the real world but also on a spiritual and sacred level. It is another very important role of technology that the film proposes. It sets the problem of the relationship between rulers and the ruled. "By inverting common representations of the estrangement of old age from technologies, the film not only points out the association of the youth with new technologies, but also the power of information technology as a transformative medium" (King 2002: 95). After all, the evil is not caused by the machine itself but by its military purpose and the conspiracy of a coalition of US and Japanese officials. The solution of the Roujin-Z can be interpreted in one or two way, both more or less optimistic but they do not demolish the possible benefits of technology if used properly. King argues that in an optimistic view information technologies positively enhances a collectively shared notion of boundless interpenetrations of life, culture and nature while the "dystopian alternative" warns that technology limits meaning and experience of life and old age (2002:97). Both conjectures, however, extend the meaning of technologies in Japan endowing them with not only practical but also a sacred value. Similar to the resolution of the Kokaku Kidotai the main idea promoted, is that technology should serve the needs of humans, and do not mean the end for humanity; on the contrary, if combined with humans they can make new forms of existence which are more sufficient and advanced than the "100% natural" version.

Most of the concerns either expressed in art or media involve the problem of safety, improper use and secure access to technology and the Net. The insecurity of the Internet connection is one of the matters that is gaining more attention from citizens and users of
the Internet and the Ubiquitous Network.

With the growing number of robots in the service sector the Japanese government and the private sector are becoming more alert about safety of the service automata which from now can be found in crowded places like shopping malls, airports and hospitals. Currently, there are no safety standards and no single ministry is in charge of overseeing the safety of robots, according to experts. For that reason under the Ministry of Economy, Trades and Industry has established a council which will take over a five-year project to create safety guidelines. The ministry is conducting crash tests, emergency brake tests and experiments to assess the effects that heat and humidity can have on a robot's performance. They hope the rules will prevent accidents involving humans and eventually become the global standard, which will help cement Japan's position as a leader in robotics. "The Japan Robot Association, the umbrella organization of the Robot Business Promotion Council, has listed several specific safety measures for consideration. They include developing technologies to prevent robots from colliding with people and special mechanisms to regulate the force used when machines come in contact with humans", says Asahi Shimbun newspaper. Establishing safety standards will boost the acceptance of robots, as safety concerns will be solved by providing basic rules, and legislation in the spheres where machines will serve the needs of humans. This is a big step in the history of robotics not only for Japan but for the rest of the world in terms of defining the place of robots in human society. Japan is certainly ahead of other countries in making, the posthumanism future, a reality.

There is no doubt that Japan has put robotics on a new level of development and now is more concerned with safe interaction between machines and humans. The
question is will it ever be possible for the Western world to accept the idea of a robot being your friend rather than a piece of metal? Are we capable of trusting machines to take care of us when we get older or to keep an eye on our kids when we are away or at work? Is it just a unique Japanese phenomenon to hold respect for machines and endow them with a transcendent spirit? It is hard to answer these questions at this point as the relationship that Japan has with technologies can only be understood in the context of Japanese history and its traditional perceptions of the world.

The popularity of intelligent machines and other means of technological progress in Japan is also facilitated by the Japanese media, science fiction films, anime and manga. Cutting-edge technology is already real in Japan and the level of its penetration into everyday life is increasing day by day giving more opportunities for their implementation and bringing the level of its acceptance within society higher.

The unique combination of traditional spirituality provided by Shinto and popular culture creates a positive view of technologies in Japan and demonstrates the possibility of a re-evaluation of the notion of 'machine consciousness' which is one of the key concepts of the posthumanist theory. Japan is a living experiment in posthumanism theory. Already it is almost impossible to distinguish a human from an android on the screen. Perhaps in a couple years or decades it will be in reality impossible to do so.

Coming back to the question framed in the title of this work “Do Japanese dream of a robotic future?”, I say “Yes, they do and they do it a lot”. But, will these dreams ever come true? I guess we’ll only be able to tell in a couple of decades, though so far it seems to me very likely.
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