Naho Kitano:

'Rinri': An Incitement towards the Existence of Robots in Japanese Society

Abstract:

Known as the "Robot Kingdom", Japan has launched, with granting outstanding governmental budgets, a new strategic plan in order to create new markets for the RT (Robot-Technology) Industry. Now that the social structure is greatly modernized and a high social functionality has been achieved, robots in the society are taking a popular role for Japanese people. The motivation for such great high-tech developments has to be researched in how human relations work, as well as in the customs and psychology of the Japanese. With examining the background of the Japanese affirmativeness toward Robots, this paper reveals the Animism and the Japanese ethics, "Rinri", that benefit the Japanese Robotics. First the introduction describes the Japanese social context which serves in order to illustrate the term "Rinri". The meaning of Japanese Animism is explained in order to understand why Rinri is to be considered as an incitement for Japanese social robotics.

Agenda

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Introduction

In my previous comparative analysis of the social acceptance of robots between the West and Japan, I indicated that the Japanese government aims to promote robot industry as an advanced, competitive industry [Kitano 2005]. It will take roughly three stages by 2025 to prepare robots technically and socially ready for work in domestic or public spaces, and by the side of people. In the last stage from 2015 to 2025, the Ministry of Economy, Trade and Industry of Japan (the METI) estimates that the robot industry could become as large as 6.2 trillion yen market. A strategic shift has taken place in the Japanese Robotics field, the national project is now focusing on a novel technological integration that could create a new industrial and academic field based on the concept "Robot-Technology" instead of the mere industrial manipulator robots in factories. Robot-Technology is not the study of robots or mechanics. It sets robots as the key that integrates the know-how related to robot R&D, economy, industry, and education, namely, as a transdisciplinary technology. With the advance of Robot-Technology, the robotization in the domestic environment might also be seen in a positive light.

Historically, the modernization and automatization of the society based on the utilization of robot provided the richness and goods to Japan and changed the life environment. In the early nineteenth century, Japan eagerly introduced the Western technology in order to modernize the nation without having much ethical discussion of it. The utilization of industrial robots in Japan in the postwar period has been outstanding, giving rise to Japan being called "Robot Kingdom". Japan succeeded in obtaining a competitive position in the international economy, and the phrase "Japanese technology" came to be used to mean accurate, functional, and the latest, most sophisticated mechanics or technological products. The Japanese pursuit of advanced technology including robots has been always related to the growth of the national economy, which has been narrated in both the Japanese and the Western culture as a uniqueness of Japan. We can see it in the modern Japanese subculture which is having many popular robot characters. Unlike the image of robots of Capek or Asimov, all tones of such imaginations in Japan contain an affinitive rapport between robots and humans.

Although the Japanese people have a positive acceptance to robots and a tendency to create the psychological rapport between robots, the introduction of robots to the domestic environment requires practical discussion not only of the technical function needs but also of social regulations, such as ordinances and safety guidelines. The process of deciding such regulations should include ethical advice, but in Japan, there is unlikely to be much philosophical discussion about, for instance, "what robots are and what humans are" as takes place in the West.[1] Although the study of robot use in society is gradually increasing and several academic groups have started dialogues among socio-cultural researchers, there has been little discussion on Roboethics. In Japan, the direction of such discussions is more practical than theoretical/philosophical.

I believe that the positive acceptance of robots in the contemporary Japan is possible to explain from the indigenous idea of how human relations work, as well as the customs and psychology of the Japanese. Such factors are intangible from inside, for it is taken for granted. In this paper, I attempt to identify these factors and provide a theoretical explanation by means of, first, the Japanese culture of Anima and, secondly, the idea of Japanese Ethics, "Rinri", which are, I believe, urging the Japanese robotization.

Before starting my argument, I should note my awareness that Japan cannot be considered a

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[1] For example, Jose M. Galvan, a Catholic priest and researcher in philosophy, argues [Galvan 2004: 1ff] that technology is not an addition to man but is, in fact, a way in which mankind distinguishes itself from the animal kingdom. With the examples of the myth of Prometheus, and Adam in the book of Genesis, he claims that human beings are forced to interact with the material cosmos, in other words, to use technology, because human beings are in an "unfinished condition." [Galvan 2004: 2] He makes one point clear in the topics of Humanoid, that the distinction between Humanoids and humans is "free will," since it is "a condition of man to transcend time and space," and "Humanoids can never substitute a specific human action, which has its genesis in free will." [Galvan 2004: 3]

uniform and single traditional entity. At the same way, although I use the terms "the West" without giving firm definitions, I do not characterize the West as a uni-cultural entity. To the international readers of this paper, I would like to clarify that I use the term "the West" in order to set it as "a mirror" to reflect "Japan"

The Existence of Sprit – Animism of Japan –

In Japan, there is a traditional belief of the existence of spiritual life in objects or natural phenomena called mi (the god) and tama (the spirit). From the prehistoric era, the belief in the existence of sprit has been associated with Japanese mythological traditions related to Shinto. The sun, the moon, mountains and trees each have their own spirits, or gods. Each god is given a name, has characteristics, and is believed to have control over natural and human phenomena. This thought has continued to be believed and influences the Japanese relationship with nature and spiritual existence. This belief later expanded to include artificial objects, so that spirits are thought to exist in all the articles and utensils of daily use, and it is believed that these sprits of daily-use tools are in harmony with human beings.

Even with the high-automatization and systematization of society, Japanese people practice the belief of the existence of sprits in their everyday lives, in an unvocal manner. Mitsukuni Yoshida explains in his book "The Culture of ANIMA –Supernature in Japanese Life–" [Yoshida 1985] how Japanese people begun to understand anima within artificial objects, like tools, not only in natural surroundings. First, artificial tools made out of natural materials are believed to possess anima. However, he states "these anima come alive from the first time as tools or implements that function along with man. And since they are companions of man in life and work, they are often given names. Objects can have names just as humans do" [Yoshida 1985: 90]. In fact, many tools used in pre-modern Japan were often affixed the name of the owner and the date of first use, which was the date that the tool took its own spiritual existence with the identification of its owner. Such a tradition of date and name keeping on tools is not so common as before, especially with the use of industrial robots. However, this belief is preserved in the manner of treating objects, even if they are made not of natural materials but of mechanical parts. When long-used tools become broken, instead of being thrown away with other garbage, they are taken to a temple or shrine to be burned divinely. In the New Year's Day, some people take their automobile (or the spirit of the car) to the shrine to pray for no car accidents. In 2005 December, a robot company Tmsuk took their humanoid robot product, Kiyomori, developed in collaboration with the Prof. Dr. A. Takanishi Laboratory of Waseda University, to Munakata Taisha Shrine to pray for the robot safety and for robot industry success.

The belief of spiritual life cannot be mixed with the idea of the subjectivity of the robot as explored in Western Science Fiction stories. As mentioned-above, the spirit of an object in Japan is harmonized and identified with its owner, so a robot appearing closely attached to its owner and serving in ordinary life for many years is likely to be regarded as possessing its own spirit. Such immanence in Japan is mentioned with reference to things of everyday life, to ideas, and common attitudes, and it is thus hardly spoken of, as Eisenstadt demonstrates with the theory of Ontological Reality [Eisenstadt 1996: 318-321]. Japanese Animism gives a sense of the world appearing as something contingent, but not as static matter that is possible to comprehend transcendentally, which is a conspicuous feature of Western thought. The immanent perception of the existence of spiritual life is not mere individual subjectivity. It brings the manner of how to relate yourself to the world.

'Rinri', the Japanese Ethics

When discussing the ethics of using a robot, I have been using the term "Roboethics" generally in my research, but it is used in very particular ways especially at international conferences. The word for "Ethics" in Japanese is *Rinri*. However, the Japanese concept of ethics differs from the Western concept of ethics, and this can lead to misunderstandings.

In Japan, ethics is the study of the community, or of the way of achieving harmony in human relationships, while in the West, ethics has a more subjective and individualistic basis. The contrast can be observed, for example, in the concept of social responsibility. In Japan, responsibility in the sense of moral accountability for one's action already existed in the classical period, but the individual was inseparable from status (or social role) in the community. Each individual had a responsibility toward the universe and the community. Thus in Japan, social virtue lay in carrying out this responsibility.

The Edo period of Japan from the sixteenth to the eighteenth centuries was under the control of Samurai. The Tokugawa Shogunate utilized the thoughts of Confucianism and Bushi-do (the way of the warrior) in order to ensure its regime. Bushi-do forms the basis of the Samurai tradition of absolute loyalty and willingness to die for one's lord, and came to be overlaid with Confucian ethics. The composite of indigenous and Confucianized Bushi-do regulated much of the ethical behavior and intellectual inquiry of the Samurai class in the Edo period. The emphasis on action, purity of motivation, loyal service, and political and intellectual leadership inherent in Bushi-do helps to explain why the Samurai class added dynamism to the Meiji Restoration, and ultimately played an influential role in the modernization of Japan.

About the time of the Meiji Restoration, many Western ideas were introduced into Japan. Several had never been known in Japan, because of the closing nation policy taken by Tokugawa Shogunate for two hundred years. Many novel terms were invented to define the Western concepts, like *Shakai* (society), *Tetsugaku*, (philosophy), *Risei* (the reason), *Kagaku* (science), and so on. In the other cases, the indigenous terms had to add the new Western concept, and changed it original meaning, like *Gijyutsu* (technology), *Shizen* (nature), and *Rinri* (ethics).

It is illuminating that Japanese scholars of that time had to struggle to comprehend the meaning of Western Ethics. The dictionary of Japanese translation for philosophy and thoughts shows that the first translation of the English term "Ethics" was done by a philosopher and politicaian, Amane Nishi (1829-1897) in 1870, *Meikyou-gaku*; which meant "the study to reveal the essence of existence of a person in order to learn his place/position inside relationships".[2] However, in 1879, "Ethics" was translated as *Doutoku-gaku*, meaning "the study of morality". In 1881, the already existing concept of *Rinri* was applied to the translation of "Ethics" and ever since it has been used.

The term *Rinri* was strongly introduced during the Edo Period as its original meaning in Confucianism. *Rinri* is made up of two Chinese characters, *Rin* and *Ri*. *Rin* indicates a mass of people that keeps order (not chaotic), and *Ri* means a reasonable method or the way (the course) to do. Thus, literally, *Rin-Ri* means "the reasonable way (or course) to form the

order and to maintain harmonized human relationships". Then, to comprehend "the reasonable way" is the key to approach Japanese society. People are expected to know where they belong in a place/position/status in relationships, in each other. Social virtue is perceived in acts based on the understanding of one's essence (or nature) of self. One example is the social applause for the death to show one's loyalty, which closely bond Samurai to their lords. Still now, there is an unvocal expectation that a person will/should act according to his social position, and breaking positional limits will lead to social condemnation and to be reflected in a sense of shame. Under the harmonization of relationships, there lay unvocal expectations for everyone to maintain one's place/position/status in the relationship and the society.

This idea relates to the concept of responsibly mentioned above. One example is the tragedy of Mr. Koda, a 24- year-old backpacker and the first Japanese hostage found dead in Iraq in 2005 October. He entered Iraq despite the fact that Japanese government had advised to evacuate from the nation, which led to social condemnation for him and his family, even though he was about to die. Once taken hostage in Iraq, Mr. Koda pleaded for his life in Japanese, and apologized to the Japanese government and society for the trouble he was causing. When his death was discovered, the parents of Mr. Koda made a public statement; "we apologize for making trouble for all of you", rather than showing anger at the terrorists or at the Japanese government for failing to save their son.

This kind of ethics, the superiority of social harmonization over the individual subjectivity is peculiar to Japanese Ethics. Tetsuro Watsuji (1989-1960), a prominent researcher of Japanese philosophy and ethics, made a study of ethics that has been regarded as the definitive study of Japanese ethics for half a century.[3] For him, the study of Rinri (Japa-

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2 2003. Tetsugaku – Shisou Honyaku-go Jiten. Tokyo. pp.289-290.

3 The thoughts of Watsuji are presented in his main work of "Rinri-gaku (the study of Ethics) first published in 1934, and completed with publication of the third volume in 1949. The whole book was translated into English by Seisaku Yamamoto and Robert E. Carter in 1996. Carter, who has a deep comprehension of the characteristics of Japanese ethics, explains in his book "Encounter with Enlightenment – A Study of Japanese Ethics" [Carter 2001], that there are the diverse sources of inspiration behind Japanese moral philosophy; Shintoism, Confucianism, and Buddhism. From the

nese Ethics) is the study of *Ningen*, in English 'human beings or person', which make Rinri distinctive and original about ethics in Japan. *Ningen* is composed of two characters, the first, Nin, meaning "human being" or "person", and the second, Gen, meaning "space" or "between". Thus, *Ningen* as a human being literally has the connotation of "the 'betweenness' of human beings". What Watsuji demonstrate with his idea of *Rinri* is a kind of system of human relationship, that the persons of the group have the respect each other, and at the same time, embraces individual persons as determined social status. Based on the etymological analysis, Watsuji finds out the Japanese idea of ethics including dual definition of individual and society, for *Ningen* composes the betweenness of individuals and society

'Rinri' as an Incitement to the Japanese Social Robots

Assuming Japanese Ethics *Rinri* to be the study of *Ningen* as proposed by Watsuji, what can we see by combining it with the Japanese idea of the spiritual existence in tools, natural objects and even in robots? Roboethics includes another sort of entity; a robot. We need to examine "the 'betweenness' of human beings and robots". The question is how the "betweenness" can be composed by an individual human being (the owner) and the spirit of mechanical objects.

In the case of human beings, by the idea of *Rinri* and *Ningen*, the existences of individuals are affiliated with their relationships and individual social status. On the other hand, in the case of human beings and robots, it is possible to create a sort of ethical system only if robots have its existence in human relationships, as an artificial object is regarded to possess an identity with its owner. As far as the owner treats the robot (or the spirit of robot) with proper manner, the robot should have the respect to the owner, act under the harmonization, and have the ethical behaviour. Thus spatially, the togetherness of the existences of the man (the owner) and the robot (the tool) constructs the limit of their betweenness. This belief is reinforced by the idea of animism as the robot is able to have its identification only while the owner is using it. Such

a relationship could be created only by the owner, the human beings.

In this context the research of efficient mechanical and computational functions in social robot development is issued in Japan, because only if the owner can easily utilize it, it is possible to provoke the rise of sensitiveness and intimacy from the human being toward the robot. I see that Japan is in the middle of the process to define the practical guidelines for social robots. Needless to say, the political and legal ordinance for the safe use of robots will not state the animistic point of view. However, autonomous or intelligent robots may be easily accepted socially because of the belief in its spirit, and gives less difficulty to prepare for the practical guidelines for the robot use.

Having the highest percentage of industrial robots in the world and attained the automation of society and robotization of industry, Mechatronics is now the prominent field for national investment in Japan. Personally, I am also involved with a few of governmental robot projects, like the robots for rescue operations, and I hardly find the occasion to discuss ethical issues on the usage of robots in the development process. It is not a negative sight of Japan, rather, in my opinion, the Japanese expectation, or belief, that robots could keep ethical behaviours to be safe, harmonious, useful, sometimes even cute and cartoon-like tools increases the social and personal interests on robots, and motivates to improve their capability and functionality. Japan maintains its tradition and rituals very strongly in the ordinary life in spite of its national development. Paradoxically, this contributes to accelerate robot R&D, and after all, leads to legitimize the being of social robots in the human society with its consequent necessary regulations change.

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Carter's work, I was encouraged with my theory that Japanese Ethics is to study intersubjectivity – or the study of the community.

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