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## Immediate Response Syndrome and Acceptance of AI Robots

### --Comparison between Japan and Taiwan

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#### Abstract

Immediate Response Syndrome (IRS) is driven by the obsession that they must reply immediately once they receive an e-mail, and this is a state where they can't release their mobile phone even for a moment. In this paper, we aimed to compare and examine the relationships between consciousness of AI Robots and IRS among Japanese and Taiwanese college students by questionnaire survey. As a result of ANOVA, it was found that Taiwanese students often use the Internet from Japanese students, and their IRS tendency is high. For AI Robots, Japanese college students tended to be higher than in Taiwan concerning [Expectation] [Anxiety] [Interest] [Concern] [Excite] [Useful] items. Regarding expected robots, for Japanese college students from Taiwan about robots active during disasters, rescuing activity robots such as rescue workers, robots serving dangerous work, cooking robots, security robots, and transportation industry robots. It is expected that the Taiwanese students are expecting from Taiwanese students about cleaning robots, answering machine robots, robots that oppose children, agricultural working robots, customer service robots, and family robots.

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## 1. Introduction

### 1.1. AI Robots

Numerous humanoid robots have appeared in the SF world so far. Tetsujin “Iron man No. 28” operated by a remote control, was a robot that could turn his actions to both evil and justice by the remote control operator. On the other hand, Astro Boy has both emotions and judgment ability and is drawn as a super hero who passes through justice without defeating to evil. In the SF world, Astro Boy is the oldest humanoid robot, right? After that, there were many animated cartoons in which battle robots such as “Mobile Suit Gundam”, “Super Space-time Fortress Macross”, “Armored Trooper Votoms” etc. had appeared.

The history of masterpieces depicting robots coexisting with people in daily life is very long, and there is a play drama named Rossum Universal Robots (Rossumovi univerzální robot in Czech) company by Czech author Karel Capek announced in 1920<sup>1</sup>. The robot drawn in this work is a bionoid (an anthropomorphic human being close to a human being and heart). Organs such as the brain, internal organs and bones are created by the machine (like a modern 3D printer), blood vessels and the like are manufactured by a spinning machine, assembled like a car, and the program for doing the intended labor is installed. Although it faithfully carries out work, there is no emotion and feeling, and if it is regarded as a defective item, it is existence which is mercilessly disposed of by the crushing apparatus. A robot appearing in R.U.R. is positioned as a lower part of a human being, like a slave, completely a user. Robots are responsible for heavy work, robots for brain labor and so on, they are responsible for each application and perform work with cost performance more than people, but even if they are morally wrong, they will not administer the users.

Among contemporary animation, there is a cat type robot “Doraemon” which was set up to come from the future of the 22nd century when robots coexisting with people in their lives were drawn. “Doraemon” sometimes advises you to lead Nobita in the right direction, while helping the user, Nobita. There is no master-servant relationship between Nobita and Doraemon. They are bounded by the relationships of friendship and of trust. Robot services that already appear in R.U.R. are being realized as machines, while AI Robots such as Pepper, Robi, PALRO and Palmi are evolving as a robot closer to people by communication.

### 1.2. Occupations that will survive and disappear

The necessary work is changing together with time. Alvin Toffler<sup>2</sup> calls the society after the agricultural revolution from the culture of the hunter gathering society as the first wave, the transition from agricultural society to industrial and industrial society is called the second wave, and from industrial and industrial society it is deconstructed. We define society as the third wave. In the second wave, mass production, mass distribution, mass media, uniformity etc were mentioned as key words. With the third wave, the era of production consumers, centered on the modern service industry, has come, an information society has been created, and an information revolution has occurred as well.

And with the recent rapid development of AI, the fourth wave is coming. The “emopa” of the AI which is installed in the Aquos smartphone reacts as “Do not sleep twice” after stopping the alarm clock, “I am hungry it's lunch time” at noon, “I’m mentally strong” – the system send such voice signals to the owner at the appropriate timing. Also, accidentally dropping a smartphone appeals “It hurts, please handle easy”. It behaves as if the smartphone has a will. AI Robots, smart phones, and different shapes, machines that talk to people as if they had the intention, became very familiar existence in the modern time.

As opportunities such as smartphones come closer to people, some of the work that people have been doing is being replaced by machines and robots. In order to receive orders at the restaurant, the method of choosing the dishes from the menu on the touch panel provided in the Table is quite sufficient. Shops that have adopted this method are also becoming popular, and it is convenient as you can order quickly by your hand when it is crowded. Watching the Table, tidying up the dishes that are empty, and pouring water into the cup of a water-free person will be a function-specific robot that moves around.

A machine that cooks the food according to the recipes also has a place to set for each seasoning and food ingredients and produces one machine that can individually set the seasoning quantity and procedure, etc. according to the fraction to be boiled and the thickness of the meat. Since it is predicted that a machine with high versatility can

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