

# Uncanny, Hyperreal, Supernormal Virtual Relationships

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## Abstract

This paper focuses on problems of virtual relationships and virtual characters including phenomena of the uncanny valley, virtual marriages, the supernormal and the hyperreal. Shifted anthropocentric paradigm, where a human being is not the central point in the world, but his origin, organism, and behavior are doubtful and may be correlated with the animalistic roots or machine-like pre-identifiers of humanity. Virtual relationships can bring wellbeing to people, but there are legal deficiencies in the face of these relationships. Too many virtual relationships may cause strange feelings to enter the uncanny valley of virtual relationships. Humans have always had the desire to find an object/individual. This paper analyzes the nature of virtual character evokes various emotions in a person from multiple perspectives.

## Keywords

Virtual Relationship, Virtual Idol, Uncanny valley, Supernormal, Hyperreal

## Introduction

When virtual characters dance, communicate with humans, tell jokes, take care, and profess love to humans, it is perfectly reasonable some people may establish feelings and relationships with virtual characters in the process.

In this article, one of the key examples is the virtual idol or virtual love interaction with human beings. For the purposes of this article, we consider a virtual idol as being is equivalent to a human-like robotic being, but without a physical body. To illustrate: you are guided by the emotions in the book when you read and feel the joy and sorrow of the character when you watch the movie. Whether organic flesh is necessary seems unimportant. This perhaps sheds light on further understanding the trend, particularly evident in Japan, to find virtual partners.

On consideration, it seems that practically all relationships can be virtualized; there are examples of virtual families, virtual children, virtual wives, virtual friends, virtual pets. These relationships are healthy to a certain extent because when there is a lack of real relationships, the void can be supplemented by virtual relationships alleviating risks of depression and suicide, also

instilling important senses of self-value and wellbeing. For example, in terms of elderly care, as people grow older and become disconnected from society, fewer and fewer people are familiar with it. The feeling of loneliness and powerlessness can be filled well by virtual environments and virtual characters. However, can we predict what might happen if the majority of a person's relationships were replaced with virtual ones, of increasing realism? This is reminiscent of the so-called uncanny valley, which gives people a strange feeling when something is close to reality but not real. Nevertheless, virtual products continue to develop. And if virtual relationships and feelings become more realistic than real ones (entering the realm of the hyperrealism or supernormal), will the so-called virtual reality feel more beautiful than the real? In this article, we will out a discussion of normal, uncanny, surreal, hyperreal and supernormal virtual relationships.

## Virtual relationships

The development of the virtual idol has a deep connection to otaku culture in Japan. Virtual idols emerged as early as the late 1990s.[1] This media image's independence from any single living body provides an opportunity for a new kind of relationship to develop between idol and fan.[2] Although Japan was not the only place where virtual idols developed, it has been the most fertile ground for virtual idols to branch into many different forms of application, and Japan remains the most active location for virtual idols today.

In general, virtual idols are designed and programmed by companies. They may or may not be embedded with limited AI capacity. As such, the quality and authenticity of an idol may be considered in terms of its programming, the developers who authored them and their superiors, investors, etc.



Figure 1. Man marries computer-generated hologram [3]. Image from CNN news video.

### The evolution in the relationship

In as early as 2009, a young Japanese person and virtual character were married, and since then, more and more people have announced their marriage to virtual characters.[4] In 2018, a 35-year-old youth hosted a wedding to marry Miku Mirai.[3] She is one of the most influential virtual idols and first emerged in the early 2000s.[5] The man claimed that he was bullied by women in his early years and could not even work until he met Miku, fell in love with her and rebuilt his life.[3] It is a challenging fact towards a presumption in discussing the nature of the romantic relationship between human beings and virtual idols.

Although the relationship is one-sided, it can still be real love inside. As in drama, the theatrical reality is obtained through the illusory qualities of acting. I believe it can be applied to the cross VR/AI-human marriage in Japan. This example is a demonstration of the appearance of a real relationship despite the fact that it is entirely one-sided. The human party in the relationship has no doubt developed a strong feeling towards the VR counterpart. The VR counterpart, however, was unable to think freely, yet appeared to reciprocate after completing a search in its database. It acted or “behaved” as if it is in a real relationship. Therefore, in combination, the realness of the relationship is constituted by the real feeling of the human part and the illusory behavior of the VR part. The VR counterpart acts, in general, through a reflection of the human’s feelings. In other words, the VR is redirecting the strong feeling towards the human part of the equation. The attitude and magnitude of such feelings should more or less be equal than interaction in the real relationship. Therefore, the human party in such a relationship will hardly suffer any disappointments, like the protagonist of romantic novel almost always have coincidences happen around you; chance events that make things work out just at the last minute; relationships between figures that are unlikely to meet in society; perfect harmonies in an imperfect world; etc. These are supernormal stories, they are intentionally exaggerated, we wouldn’t expect that real relationship to go this way, but we can enjoy that child-like fantasy. From a utilitarian perspective, such a relationship is highly desirable.

### The legitimacy of the relationship and nature of the relationship

Although many people have announced marriages to virtual characters, these marriages are currently illegal. At present, marriage with a virtual character is unilaterally proscribed, regardless of the meaning of the virtual character and regardless of questions of consent. (Moreover, as far as Miku is concerned, she is described as being only 16 years old [5], and the legal marriage age in Japan is 18.)

The previous session leads to the discussion of the legitimacy of the relationship between virtual idols and human beings. Relationships can be various; it is necessary to refine and limit the relationship in a discussion if it is a romantic relationship like intra-human romantic relationships. For human beings, it is important that two parties who enter such a romantic relationship possess a free mind and free will. This becomes questionable when the other party is a virtual idol. Zhen Liu & Zhi Geng Pan said “A believable 3D character should be provided with emotion and perception.”[6] It is clear at this point; the programmed virtual idols or figures are highly limited in terms of freedom. Whether it possesses a mind is highly questionable. The way it thinks or interacts with the audience is as good as the size of the database. Despite the development of AI, it is still difficult for a programmed being to create. Therefore, its actions or reactions are based highly on retrospect. However, the sentience of such a being should not be denied. As mentioned and defined in the earlier session, as long as it can react to external stimuli, it can be qualified as sentient. Therefore, it can be safely presumed that the virtual being and human being are far from equal, and relationships, especially romantic ones, are unlikely to be legitimate. Given the imbalance in power, the relationship between the virtual idol and the human being is more like that of a master and slave. The human being is not bound by rules; his/her actions are reflections of the combined influence of culture and personal motivation. The direction in which such a relationship may develop is uncertain.

### Uncanny valley virtual relationship

In 1970, robot professor Mora Masahiro coined the term “bukimi no tani genshō,” which was repeatedly applied and translated into the uncanny valley. Mori Masahiro’s hypothesis points out that since robots and humans are similar in appearance and movement, humans have positive emotions toward robots up to a certain level when their reactions suddenly become extremely negative. Even if the robot is only slightly different from humans, it will be very eye-catching, and it will look very stiff and horrifying, making people feel like they are facing a zombie. However, as the similarities between robots and humans continue to increase, humans’ emotional response to them will return to the fore again, and an emotional bond will be produced.[7]

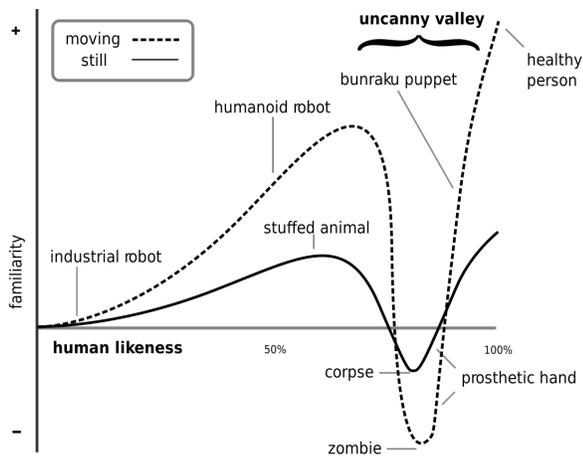


Figure 2. Masahiro Mori's "Uncanny Valley" [7]. Image from Wikimedia Commons.

### Uncanny virtual character

Some critics state that the uncanny valley effect does not exist. "The roboticist David Hanson rejects the Uncanny Valley as 'pseudoscientific'[8] and argues that robot designers should not be conceptually limited in their work by a theory that is scientifically unproven." [9] Maybe the human perception of the uncanny effect is caused by the subjective needs and demonstration of sentience in a virtual relationship. Thus, it is possible to focus on the subjective experience of individuals and their relation to robots in their relationships. [10]

A great split exists in the perception of humans of their potential partners when they come from the real world or the virtual world. The slightest differences exist between robots and individuals from the real world, such as changes in mimics, the effect of fixed faces, their uncommon features for humans.

Firstly, we subconsciously analyze and ignore any deviances from human traditional appearance or behavior. Thus, a person rejects any deviations from the norm. For example, if an individual rejects a humanoid robot with certain deviations, he perceives it as an unknown creature. From this perspective, humans cannot understand the feelings of a human-like object. The sense of rejection will spoil the relationship both in the virtual and real worlds. A human will be unable to demonstrate his or her feelings.

The uncanny valley was perfectly seen even in the development of Alice, a voice assistant for cell phones (Windows, iOS, Android). Thus, Alice can utter uncommon things for human speech. This may sound unnatural and scare off users. Alice answers the question, "What's the weather in Moscow?" And then, if you ask, "What about Peter?", she may talk not about the weather in St. Petersburg [11], but about some news happening in that city. According to the experiments, the participants of these studies said that they felt like they were communicating with a psycho. The human-robot relationship can be spoiled with chaotic and inconsistent speech patterns, a lost thread of logic, and other

negative factors. From the philosophical perspective focusing on the nature of artificial intelligence, a human being is also a robot but operates according to other principles and is effective for machines or robots. Hubert Dreyfus claims, "if the nervous system obeys the laws of physics and chemistry, which we have every reason to suppose it does, then .... we ... ought to be able to reproduce the behavior of the nervous system with some physical device." [12] Data input and the external functioning of a robot can create several obstacles along the path to harmonious human-robot relationships. Whether consciousness or tools such as Bluetooth are appropriate features for robots is a challenging issue.

### Uncanny society relationship

In wider social relations — virtual family [14], virtual child [15], virtual wife [3], virtual friend [18], virtual pet [16], virtual idol [1], virtual character live [17] — the relationship is combined to imagine it happening with himself, bringing the uncanny valley effect of society relationship.

When you lack a relationship to populate a virtual relationship, we would use romance or happiness to describe it. Even when a person lacks multiple relationships and uses multiple virtual relationships to fill their lives, we say that this person needs help to get through virtual relationships. When there is more and more demand in this area, at a point, people will feel that they are surrounded by falsehood, feel very disgusted and want to escape the existing virtual life. As in the movie *The Truman Show*, the world you know runs around you, and everyone works for you. In a sense, you are the dictator of the whole world. But if there is a place that doesn't look real enough and gives you a chance to see the real world, you will feel deeply deceived. Unlike the uncanny valley effect on robots, the uncanny valley effect on interpersonal relationships, and even the surrounding society, when you feel the life around you in a period of time, the people around you lack idiosyncrasy. With the development of AI and the development of technology, the effects of the uncanny valley will become more and more common.

### Hyperrealism/Supernormal virtual relationship

By the law of accelerating returns, Kurzweil believes AI technology will usher in rapid development. [19] By then, the virtual being may truly possess freedom. When future technology makes the so-called virtual reality more real, it makes people feel good and feels real.

In the future, in order to pursue more realistic effects, it may be possible to make robots for physical contact or to synthesize and integrate nervous systems. By adding more micro-expressions and facial muscles, the virtual characters are more realistic and more emotional. By constantly adding detail and collecting user data, perhaps at some point, virtual will surpass reality.

The fact is that when people adapt to this change through long-term contact and have feelings for these virtualities, they believe that this is true. Whether it is true or not at this time is not important; in the minds of people, he is real or hyperrealism.

The issue of hyperrealism is interpreted in different ways. Some researchers claim, “Instead of striving to build human-like social robots, engineers should construct robots that are able to maximize their performance in their niche (being optimal for some specific functions), and if they are endowed with appropriate form of social competence, then humans will eventually interact with them independent of their embodiment”[13]. Thus, to foster virtual idol-human relationships, it is relevant to emphasize the social nature of the former. It seems that the limits between humans and virtual idols will soon be blurred. Humans are fading away and prefer communication with their virtual counterparts. If to consider the stages of a virtual idol face formation or other stages of its development, then humans will identify them as machines for sure. Therefore, it is relevant to distract from the biological approach to these virtual creatures and concentrate more on the sociological perspective. The researchers offer “Etorobotics, which relies on evolutionary, ecological, and ethological concepts for developing social robots” [13].

The main corrections should occur on both biological and social levels. Another concern is to improve the impact of virtual idols on humans to increase the feeling of authenticity. Despite the idol’s ability to speak, hug and communicate, humans still do not perceive them as their sound or equal partners. Returning to Masahiro Mori, it is impossible to relate to an imitation of a human being embodied in a virtual idol. The professor in 1978 claimed that a robot or a doll can evoke positive emotions, but only to a certain extent. A similar imitation generates a negative reaction, but the more perfect the imitation is, the more positive the reaction that occurs. The highest point of imitation, a perfection, influences humans positively.

Can realistic sex dolls with artificial intelligence change human attitudes about sex? Does it depend on realistic performance or the formation of such virtual idols? People pay for sex because they want diversity in partners and another experience. Very soon, hyperrealism in human–virtual idol interaction will result in a heated debate. The use of these creatures should facilitate the lives of humans. The critics claim that society should treat love between humans and virtual idols in a more tolerant way. They go even further and discuss the possibility of marriage between humans and virtual idols or robots. In previous years, marriage between same-sex humans was also criticized, but nowadays, this has become an almost common trend.

### Supernormality

Scientific approaches to aesthetics and art have proposed that human aesthetics can calculate what features are most attractive based on neural feedback from the brain. Ramachandran, for example, proposed integrating

neurophysical results into “eight laws of aesthetic experience.”[20]

Massumi’s ‘The Supernormal Animal’ goes beyond the limits of humanity, or explanation of human nature. The author claims that non-human creative potential can go beyond the limits of human imagination. The concept of animality is the central concern of Massumi. These authors differentiate humans and non-humans. The experience of humans and everything they have inside of them is not human. Art-making survives in terms of the non-human potential. The construction of human-animal interaction should be correlated with anthropocentrism. The beauty of animal play lies in “its logic of mutual inclusion.”[21] This can be used as an analogy to play between humans and idols.

Massumi also describes how “Tinbergen, the ethologist, and the winner of the Nobel Prize, was researching the instinctive behavior of the herring gull, and he claimed that the boy, who watched this gull, and a gull itself feel the same happiness. A red spot on the female beak serves as a signal or ‘trigger’ for feeding behavior.”[21] Through these visual features, gull chicks develop parental attachment. However, when the researchers used a simple white stick with a red spot, rather than a model of a gull, the parental attachment was not less but far greater than that generated by normal visual stimulus. The development of fundamental emotional relationships required very few variables.



Figure 3. Takayuki Todo, “SEER: simulative emotional expression robot” [23]. Image from Takayuki Todo Website.

Takayuki Todo’s project SEER: Simulative Emotional Expression Robot is a step forward in the development of hyperrealism. Through a model of a human child’s head that has movable joints. The eyes with eyelids, which control the front of the eyebrows, the eyelids, eyeballs, and head movements, expressions are brought to life and evoke surprisingly strong feelings from people [23]. This also demonstrates how human beings can feel powerful emotions through some very simple features. With SEER, Todo is also committed to avoiding the uncanny valley. Through the simulation of human eyes, he accurately captures the

characteristics of human emotions. This is also an example of how to cross the uncanny valley to reach the supernormal.

Gestures are dominant markers of animals' interactions. If humans go further, they will also see that non-verbal communication, such as gestures, is also important and correlated with their actions. The process of communication evolution from metacommunication to denotative communication should also be reconsidered. Metacommunication of animals is the dominant one. That is, the animals understand each other beyond the limits of the sounds they produce. They also focus on movements, gestures and other non-verbal signals. Massumi says, "in fact, 'denotative communication as it occurs at the human level is only possible after the evolution of a complex set of metalinguistic (but not verbalized) rules.'" [21] Animal play facilitates human communication. Massumi correlates the play of animals to human language occurrences. Animals are instinctive. While playing, animals are developing and learning. This creative approach to their development is borrowed by humans and by their children when they are growing and developing through play. The same is true for humans, who choose virtual idols as their life-partners. Subconsciously, maybe, those idols are perceived as toys and the whole process of interaction with the virtual idols resembles a child's play. Animals are dominant over humans in their "power of variation." Further, Massumi develops the idea of instincts and their nature: "instinct is sensitive to the relations between the particular elements composing the lived situation." [21] The power of expressive mentality is correlated with their evolution. Basically, it is possible to argue against anthropocentric habits and focuses more on the animalistic features of humans, which goes beyond human nature. The ways of the world's cognition are also important and determinant for the life of a human being in it. Whether through a playful mode (finding a virtual idol), as animals playing, humans diversify their lives and try to reach positive emotions, a feeling of attachment and sentience.

## Conclusion

The social component is an integrative concern for the development of human relationships with their virtual partners. This can be demonstrated by love integrative aspects, such as sex, romance, and deep affection. Virtual idols provide people with these feelings. Many people are excited not only by other humans but also by reading books, watching movies, playing computer games and so on. We choose hobbies to evoke feelings of affection. Thus, feelings of affection can be evoked by the country, the home, an idea, and virtual idols. Our obsession with our cell phones, cars, and other objects or technical tools also provides humans with positive emotions. People need love, are looking for romance and can fall in love even with strangers. In hyperreality, supposedly, there can be idealized and perfect

virtual idols, robots, or machines. It will be easier to find a beloved object in the form of a virtual idol or create it if people have their own tastes and interests. In other words, all of the contemporaries can become the Pygmalion, if they wish, have enough resources, knowledge and other assets. There is a need for a spiritual animation, for speaking and arguing with virtual idols, for discussing their wishes and some spiritual concerns. Virtual idols can help lonely people, and in the modern age's fast pace of life, they can save people from self-seclusion. Some people prefer to meet with computers, and over time, this tendency can even go deeper. Can these relationships be legitimized? In these terms, perhaps the growing and the popular tendency of artificial feelings of attachment toward virtual objects should be more accepted and tolerated by society.

Supposedly, accurate features of the objects would decrease the uncanny valley effect. Once past the uncanny, the idols we make may be more compelling than real humans as partners, not just for a minority, but perhaps at one point for a majority of us. Technological development tends to accelerate these kinds of optimizations. Accepting virtual partners may be healthy in many specific cases, but it should not be accepted for the majority of society?

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