Femininity as a virtual object. Interacting with the Japanese girl-machines: Shiori, Monika, Miku, and Kizuna

Magdalena Correa Blázquez
Universidad de Almería (España) ✉ ⓘ

ENG **Abstract.** Since the rise of postmodern critical theory and gender related activism, femininity can be understood as a discursive phenomenon and a matter of culture. Nowadays, with everything that new communication technologies have to offer, we find ourselves living in a cultural landscape populated by pixelated girls and women with, I hypothesize, their own particular ways of displaying femininity as virtual entities. Following this hypothesis and within the framework of postmodern critical theory, this article uses a qualitative approach, with its emphasis on the mass culture that digital women populate, through structural content analysis of a selection of machines (Shiori, Monika, Miku and Kizuna) following a media research method with the objective of identifying a particular pattern in how they display femininity in Japan. In this doing, I find that femininity as a virtual object can be defined in terms of the relationship established between machines and humans, needing interaction to exist.
Keywords: content analysis; gender; machine; mass culture; technology.

ES La feminidad como objeto virtual. Interactuando con las chicas-máquina japonesas Shiori, Monika, Miku y Kizuna

Resumen. Desde el auge de la teoría crítica postmoderna y el activismo de género, la feminidad puede ser entendida como un fenómeno discursivo y una cuestión cultural. En la actualidad, con todo lo que las nuevas tecnologías de la comunicación pueden ofrecer, nos encontramos habitando un paisaje cultural poblado de niñas y mujeres pixeladas con, hipotetizo, sus propias formas particulares de mostrar feminidad como entidades virtuales. Siguiendo esta hipótesis y dentro del marco de la teoría crítica postmoderna, este artículo propone un estudio cualitativo, con el énfasis en la cultura de masas que las mujeres digitales pueblan, a través de un análisis estructural del contenido de una selección de máquinas (Shiori, Monika, Miku y Kizuna) a través de un método de investigación mediática con el objetivo de identificar un patrón particular en cómo muestran feminidad en Japón. Propongo que la feminidad como objeto virtual puede definirse en términos de la relación establecida entre máquinas y humanos, necesitando interacción para existir.
Palabras clave: análisis de contenido; cultura de masas; género; máquina; tecnología.

Summary. 1. System configuration: Premise. 2. Software: Methodological notes. 3. Hardware: The machines. 4. Cache: Femininity as a virtual object. 5. References.

1. System configuration: Premise

Femininity as a quality of what is female has been defined by opposition, following the preconception of a natural division (man-woman binary) rooted in ancient Greek notions of social roles that can be traced back to the Pandora myth (Luri, 2001; Escartín, 2013, Moreno, 2015). This is why femininity manifests itself as the antithesis to masculinity: while men are considered noble and just, women are conceived as treacherous, susceptible to fits of irrational anger (Harris, 2009) and, as Aristotle writes in *Politics* and *history of animals*, less fit to rule and more jealous, compassionate, easily deceived, shameless and excitable.

During the twentieth century, in the sixties and seventies, this naturalization of sex and its assimilation to gender, with the bodily, social, legal, and cultural repercussions that went hand in hand

with it, is questioned by second wave feminism, LGBTI+ activism, and postmodern philosophy. Consequently, the criticism regarding the essentialist notion that one's sex is tied to a set of characteristics that are stable –men and women being considered separate categories from birth until death– led to the development of a theoretical framework in which sex and gender are related to identity, performance, and the discursive shaping of reality (Berger and Luckmann, 2012/1966; Butler, 2014/1990; Derrida, 1989/1972; Firestone, 1972/1970). These conceptions of gender as ontologically and existentially distinct from sex started to gain traction in the early seventies. As Ana García-Mina (2010, p. 16, own translation) writes:

> Thanks to the sex/gender delimitation, in early 1970, masculinity and femininity stopped being considered as two mutually exclusive categories, ahistorical and natural, to start being conceived as two sociocultural dimensions that can be present to different degrees in the same individual.

This work focuses on why these divisions, man and woman, with a set of characteristics attached to each category, have formed in response to institutional interests and experiences (Beauvoir, 2015/1949; Davis, 2005/1981). Parallel to these theoretical developments, the LGTBI+ movement and queer theory ask similar questions regarding the nature (or lack) of gender in transgender and intersex individuals and homosexual relationships (Butler, 2006/2004; Feinberg, 2014/1993; Henley, 1982). As a result of these inquiries on the construction of gender, femininity is left in limbo: Monique Wittig (1992/1980) famously wrote «lesbians are not women» (p. 32) in *The straight mind*, thereby opening a discussion on how intimately tied the term was, linguistically, to heterosexuality.

Consequently, even if we conform to an arrangement of qualities that are supposedly expected from femininity, we can venture that this is not necessarily what femininity is. Through this critical theoretical proposition we can understand femininity as an arrangement of discursive realities of which one, a particular discourse, is more strongly associated to what is supposed to be the defining quality of that which is feminine in different situations, with its own conditions of production and maintenance related to both history and, what is to be the focus of this study, the cultural productions of the era (de Certeau, 2004/1974; Deleuze, 2014/1985, 2015/1986; Foucault, 2018/1971).

Taking femininity as a discursive and cultural phenomenon, its ontological inquiry passes through popular culture as an agent of interest involved in the maintenance of discourse through its reproduction (De Certeau, 2004/1974, Broncano, 2020). In the 21st century, with the arrival of new communication technologies such as gestural interfaces, videogames, artificial intelligence, and holograms, these questions regarding gender (and femininity) must face the notions of body, mind, and the division between physical and digital spaces. Science-fiction as a literary genre provides evidence of these concerns in our time's collective imagination with works such as William Gibson's (1984, 1996) *Neuromancer* and *Idoru* or Philip K. Dick's (1969) *Ubik*.

In line with these cultural anxieties of the era, leading up to and shortly after year 2000, the virtual takes on greater relevance in the ontological question of femininity (Preciado, 2008; Haraway, 2019/1992): femininity is presented as a virtual object in digital platforms within technological spaces in which works of fiction are on display. This defines such works as practices, objects or games whose goal is to act as if something had happened or were present through acts of imagination, involving an audience in the creative process (Friend, 2011; García-Carpintero, 2016; Walton, 1990). In terms of understanding femininity, stories become particularly important since, as Patricia J. Manney (2019, p. 244) writes:

> Fiction is the act of taking a story character who is not you, and projecting you into their story, in which you experience the world through the protagonist's eyes, in their shoes. And often in the shoes of those society would call the 'other' or those not usually represented as powerful examples of that society. In doing so, these stories expanded the definition of who belonged in a society.

Therefore, in a way, these stories offer us the chance of actually becoming those girls and women that they confront us with, turning them into a window to the world they live in, said world always being, in digital products, a virtual reflection of ours, and how femininity is conceived in that place.

I am particularly interested in femininity as a virtual object. Understanding the virtual, or virtuality, as a field of potencies, that can happen but, in the present, has not (Deleuze and Parnet, 1996/1977), it cannot be defined by opposition to the real, rather than to the actual insofar as, while it still has not, it has the capacity to produce effects (Clisby, 2016; Deleuze, 2002/1968; Haraway, 2004). Hence, what characterizes it most clearly *a priori* is that virtual entities «clearly [they] are 'something' but there is no materiality there» (Shields, 2002, p. 38), i.e., they exist in a different plane (the screen, software, code, artificial, cyberspace) until they manifest themselves as what we understand as a material act. The digital, in this sense, becomes a fertile space of interest in which to explore how identities are collectively built and consolidated with a higher degree of flexibility (Santos, 2018). Femininity as a virtual object moves in that different plane of existence, potentially saturated with stories (fiction) as an entity awaiting its own definition or, maybe, it eludes definition entirely. As Donna Haraway writes (2016/1984, p. 68), the cyborg as a feminist bastion in science fiction «means building and destroying machines, identities, categories, relationships, space stories».

In academic literature, the study of femininity as a virtual object has moved in different directions depending on trends in the production and consumption of mass cultural products and the object of study. On the one hand, since the dawn of the dating simulation genre in videogames during the nineties, various studies have focused on unravelling love in the virtual era and the specific relationship that can be built with artificial intelligences and pre-programmed personalities. These encounters serve as both a way of reinforcing gender roles, expectations on presentation, and gendered stereotypes, and

also ways in which men can criticize masculinity and empathize with female characters (Galbraith, 2011; Pettman, 2017; Richards, 2015; Tan and Shi, 2021). On the other hand, with the rise of virtual celebrities, we can find studies on the mass building of holographic celebrities such as Miku that transform the ways in which crowd behavior, the individual, femininity and embodiment are conceived (Davidson, 2017; Guga, 2015; Lam, 2016). Finally, with the release of games such as *Second life* and phenomena like VTubers (virtual YouTube celebrities), academic literature poses the possibility of exploring identity and the implications of projecting certain gender markers onto virtual avatars (Bredikhina and Giard, 2022; Cooper, 2007; Fizek and Wasilewska, 2011; Nagy and Koles, 2014).

As heir to this theoretical tradition, and based on my interest in the ontology of femininity as a virtual object above all else, this article focuses on pursuing a better understanding of femininity as presented through female machines by posing two main research questions: What model of femininity as a virtual object is present in contemporary virtual artefacts? Whether or not that model of femininity might be something else entirely, like Haraway's cyborg?

2. Software: Methodological notes

My theoretical framework positions this study within the parameters of postmodern critical theory with a particular focus on femininity as a virtual object and, as Lindlof and Taylor (2002/1995, p. 52, emphasis from the original) put it,

> [t]he erosion of traditional identities premised on stability and essence (e.g., 'individual') in favor of those premised on ambiguity, fragmentation, and simultaneity (e.g., 'cyborg') so that identity is not the *referent* of communication but, rather, the *effect* of discourses that construct and enforce preferred narratives for understanding the self and others.

Within this framework, to study femininity as a virtual object I emphasize the importance of popular culture, in which virtual femininity is displayed through fiction (Broncano, 2020; de Certeau, 2004/1974; Foucault, 2018/1971), and I am particularly interested in how the female characters on display inhabit or actually are narrative fiction as women. Taking this into consideration, I use a qualitative media research method to analyze the structural characteristics of female characters in the context of virtual contemporary fiction. To be more precise, I present the characters within their particular story, taking into consideration their narrative roles, briefly contextualizing them, and describing the narrative fiction at play.

This follows a methodological reasoning similar to social role analysis (Berger, 1998), as well as introducing notions of textual analysis (Larsen, 2002/1991) to meet the research objectives. In doing so, I hypothesize that there will be shared fiction, roles, or patterns that will point to a model of virtual femininity.

The sample is taken from published academic literature, previously subject to analysis, and was selected due to its status as cult media, or products that set a precedent in their era's cultural trends (Laughey, 2009). Taking these criteria into account, I select three main products and a set of key by-products, chronologically, from 1994 to the present day:

- The popularization of the dating simulation genre in videogames: Shiori Fujisaki (*Tokimeki memorial*), and her contemporary narrative foil Monika *(DokiDoki literature club!)*.
- The precursor of the use of voice synthesizing software *VOCALOID* as a fiction maker, Hatsune Miku, and the iterations that make up her multitude.
- The world's first VTuber, Kizuna Ai, and the independent VTubers that have followed in her footsteps.

Hence, the elements being studied are the characters that inhabit fiction, or are, products arranged in certain ways. It is in these modes of existence where I intend to examine the role of femininity as a virtual object, whether it manifests itself or not, and if so, how.

3. Hardware: The machines

In this section I present the results of my analysis regarding femininity as a virtual object in products of popular culture stemming either directly or referentially from the Japanese cultural landscape. The analysis follows a chronological order with regards to the products analyzed and provides an exploration on how the characters inhabit, or are themselves, narrative fiction.

3.1. Love me please: Closed circuits

Shiori Fujisaki is the protagonist of 1994's dating simulation videogame *Tokimeki memorial: Forever with you* (*TokiMemo* onwards), developed by *Konami*. Through a pixelated avatar, the player controls a teenage Japanese boy about to start his first year of high school with the goal of winning the affection of one of the girls that are part of *TokiMemo*, Shiori being the one on the cover. We, as players, interact with the game through a cut and thrust dynamic that teaches us the rules that we must follow in order to adapt to the script that the narrative fiction offers. This narrative fiction is one of simple social romantic interaction: meeting someone, learning what they like and dislike, and following a pattern to make them like us.

Figure 1. Shiori Fujisaki. Source: *Tokimeki memorial: Forever with you* (Konami, 1994)

TokiMemo would become a staple of the dating simulation genre, building on its predecessor *Doukyuusei* (*Classmates*), which was launched in 1992. The game's success was a result of Japan's fascination with technology during the nineties alongside a pre-eminently masculine culture surrounding early computer systems (Saito, 2021), and the shift in the idol phenomenon (*aidoru genshou*) from the eighties onwards as a way of capitalizing on the feminine ideal of the era and the commercialization of intimacy (Aoyagi, 2005; Galbraith and Karlin, 2012; Shee, 2021) by offering a simulation of love. To partake in this simulation, the player must follow the rules.

If we are unable, or reluctant, to learn or follow the rules, the game cannot unfold, meaning the endgame –getting a girlfriend and, ideally, for that girlfriend to be Shiori– will not be achieved. In this work of romantic fiction, Shiori fulfils two roles. She is the perfect girl (she is beautiful, smart, and honest, the platonic ideal of girl), and she is a tyrant when it comes to game realism. To woo her, we must acquire deep and detailed knowledge of the rules governing the game and get acquainted with every one of the virtual girls that inhabit it, Shiori included: we have to maximize a set of attributes related to our own avatar (hygiene, intelligence, athleticism, and the like), and be kind and romantic towards Shiori. At the same time, we must keep our relationship with every other girl in a delicate balance staying strictly within the realm of friendship. In this sense, *TokiMemo*'s gameplay is particularly complex even for its own genre, since we have to pay attention to twelve characters, each with its own code and script, while turning ourselves into a viable object of Shiori's desire.

But who is Shiori, regardless of what she is? As I will state in due course, this is a tricky question, but we can attempt to get to know her, nonetheless. She is a pretty, slender, fair-skinned girl with bright red hair and bright red eyes, who loves romantic movies and classical music, who will hang up on the player if they become too insistent, who everybody loves despite her being awkward at matters of love, who's good at everything except cooking, and who hates to have her portrait painted or photograph taken. This is who she is: the girl next door, thus representing a naive, pure, idealized femininity.

But understanding Shiori as a person instead of taking her for a machine is counterproductive for the player in the sense that she is just an algorithmic entity that inhabits the game. Only in understanding how the machine works can we win the game. Her personality exists to guide the player towards understanding how she works mechanically. Hence, she is, first and foremost, a machine programmed to respond to a series of stimuli in an algorithmic interaction (when Shiori asks: «Am I pretty?» –if the player picks the right option– then the Shiori-machine sprite smiles and a +1 is added to its internal, hidden, affection meter). When the player discovers how to make the Shiori-machine work, they become an expert in a story that is already laid out before them: Shiori is programmed to love them if they reach technical perfection upon operating her; it is a closed circuit.

In our quest to woo the Shiori-machine, part of the narrative fiction of *TokiMemo* consists of objectifying its femininity and learning how to operate it, otherwise the story will not play out. It tells us that femininity can be defined as beautiful, young, delicate, pretty, pure, and sincere. But, at the same, it objectifies both masculinity and the player. The Shiori-machine is not embodied, her materiality is pixelated, and her emotions are expressed through the rippling of dots on a screen. The player 'relinquishes their flesh' to become a logarithmic creature in tandem with the game and its demands. Shiori Fujisaki is the perfect girl, and she demands the perfect boy, which only the perfect player can be. In this regard, the player must be willing to change from a whimsical playing style and, in doing so, tame their avatar into an intelligent, academically successful, athletic, handsome, clean, sociable teenager deserving of the Shiori-machine's affection.

Femininity in *TokiMemo* through Shiori is an object of conquest, but it is not inhabitable. Nobody can be her, in the same way nobody can be the perfect boy that the avatar must become. Shiori exists, narratively, to be loved and is programmed to love another only if one can recognize her fictional nature, the intricate rules of the code that determine the parameters of her affection and is willing to play along with her.

Monika was born in response to these characteristics of Shiori. Monika is the main character in the 2017 game *DokiDoki literature club!* (*DDLC* from here on) developed by the North American studio *Team Salvato*. Unlike Shiori, who inhabits *TokiMemo,* oblivious to the fact she is fictional, Monika appears as a videogame character aware of the fact that she inhabits a videogame's narrative fiction. Monika considers herself to be the only material reality within an artificial world populated by fictional girls, who, by virtue of being fictive, cannot feel or display autonomy. As a character, she portrays her creator's worries regarding the dating simulation genre: in objectifying the girls that are programmed to love us, the player might become insensitive to their struggles as characters. If one of those girls, who are programmed to love and be loved, discover that they exist within a work of fiction created by somebody else, inhabiting a digital universe of ones, zeros, and executable commands, then, what will she do and how will the player act?

Therefore, to be able to keep a conversation going with the game on its own terms we must recognize Monika as a real person who wants to communicate with us from the game, trapped in a fictional world she does not believe she belongs to, even though we know that she is a videogame character programmed to appear as a sentient, feeling, being.

Figure 2. Monika. Source: *DokiDoki literature club* (Team Salvato, 2017)

Throughout the game, the player takes on the form of the avatar of a high school boy joining a literature club focused on poetry with his childhood friend. There, he meets Monika and other two girls. As the events of the game unfold, Monika confesses to having doctored the files of the other girls to make their personalities extreme to the point of ego-death and self-harm, hoping to make them so undesirable that the player would turn to her. But the game does not let the player do that, it forces them to follow the mechanical rhythms of the dating simulation genre with the other three girls, always leaving Monika out of the equation.

DDLC is a science-fiction tragedy. The narrative that it presents poses the questions: Do machines deserve less pity since they cannot suffer like human beings? Does Monika, the real girl, deserve more sympathy? Must we forgive her for the horror she has unleashed because of her suffering? Regardless of the complexity or depth of these dilemmas, and the extent to which we might want to deal with them, Monika's role within the narrative is that of a tragic hero, a pathetic entity unable to escape her fate no matter how hard she might try. As she states:

> You'll never be able to understand one thing. It's the pain of knowing how alone I really am in this world. In this game. Knowing my friends don't even have free will… And, worst of all, knowing what's really out there, in your world, forever out of my reach. I'm trapped, [player]. But now you're here. You're real. And you're wonderful (Salvato, 2017).

She is also a conventionally pretty girl. She has fair skin, is slim, has big green eyes, long, brown hair, and a petite mouth. She is a vegetarian and an introvert. She loves poetry and literature, and the player. She is melancholy and lonely. She loves her friends, in spite of everything. She plays the piano. She has a Twitter account. She likes discussing philosophical topics. Her personality is set up in a more nuanced way than that of Shiori because the game wants us to think of her as a human being: although knowing these things about her is not going to help us in any way towards reaching any goal beyond sympathizing with her.

In *DDLC*, there is no way of playing the game that will allow the player and Monika to have a happy ending. Understanding her as the Monika-machine, there are no mechanics tied to her code that would get the player any closer to her affections. She is coded to love us from the get-go. Unlike in Shiori's case, where we have to follow strict gameplay rules and our relationship with the girl-machine is mediated by our boy-avatar, Monika wishes to break free from the fictional scenario and talk to us. We are the only other real, human, existence she knows. But she is, after all, still a machine. She will always love us; it is in her code. Yet, since she believes herself to be the only real conscience in an otherwise fictional universe, she is aware of that code and of the fact that she has no control over it, and she sees no moral impediment in deleting the other three girl-machines that share her digital world in the name of the love she feels for us, and there is nothing the player can do to change her fate.

Despite our knowledge of her awareness being simulated, she will still love us, to her own detriment, until the game is uninstalled and her file (monika.chr) disappears. In direct contrast to how *TokiMemo* is to be played, *DDLC* only works as a story if we play into the idea that Monika is human instead of a machine that we can operate at will. The fictional part of the Monika-machine is the simulation, to the player, of being a girl with feelings, one who suffers. Like Pinocchio, she is a real, flesh-and-blood, girl.

3.2. Holy virtual diva: Flickering signifier

Miku Hatsune (First sound of the future in Japanese) began her journey in 2007, when *Crypton future media's* software vocaloid-CV01 came out on the market branded with the promotional image of a thin *kawaii* android girl with long, blue, pigtails, fair skin, and almond eyes.

Figure 3. Hatsune Miku. Source: Own elaboration

Miku is voice synthesizing software built with voice samples of Japanese (voice) actress Saki Fujita. Miku is an android diva from a dystopian future in which music does not exist, and has been a massive media phenomenon ever since the software's users started producing songs and videos with her as the star, publishing them on Japanese website *NicoNicoDouga*, where they could also post their own videos, art, or comments as replies to other creators' original material featuring Miku. From that point onwards, these creative interactions helped her grow and fed into her popularity, which skyrocketed as a result (Lam, 2016). Part of her success lies in her ties with Japanese idol culture, linking the process of creation to a sense of intimacy in the emotional transaction that idols offer (Black, 2008). Nowadays, Miku is a cultural icon, appearing in commercials, concerts (as a hologram), clothing through international branding collaborations, and, in 2016, in an interview/photoshoot in *Vogue* fashion magazine alongside Italian designer Ricardo Tisci.

Miku is different from the characters that we have explored in the previous section: she does not belong to one story, «she represents the ideal surface for inscription, but also the virtual hollow body inhabiting physical spaces and accumulating multiple meanings through interactions with her creators» (Guga, 2015, pp. 38-39). Taking this into consideration, there is no

unique Miku story that can be analyzed. In fact, the only characteristic common to most Miku iterations is that she is a diva or idol, and by her iconic nature she is recognized and loved by the audience. Indeed, with every user-software interaction, a new Miku is created. The same happens whenever she is drawn, or stars in a video, amongst other creative activities. Taking all this into account, there is no true, definitive Miku character or narrative: there are, instead, a plethora of stories about Miku and characters that are Miku.

Accordingly, Miku's most interesting aspect, where femininity as a virtual object is concerned, is that she is an open circuit that never stops being updated. In this sense, she is not a machine to be operated in order to win a game, like Shiori, nor a person who suffers like Monika, but a vessel and, more importantly, she is the reference point of her own iterations. She is a machine that the software's users disguise as a potentially infinite number of women named Miku. In terms of femininity as a virtual object, the Miku-machine involves a collection of simulations of actual women that can be: viable, credible, or comprehensible, to varying degrees. Ultimately, what matters is that they are all a reflection of the Miku-machine. As such, its value rests upon allowing the user to interact with the technology that she is made up of in terms that they understand and, through her, with the world. In this process, the machine is unavoidably personified through the production of her avatars.

Figure 4. Hatsune Miku variations in mobile videogame Project Sekai. Source*: ProjectSekai colorful stage* (Crypton Future Media, 2020)

This is why Miku can be both a fancy and elegant *Vogue* model, and a cheeky 'emo' teenager in *i DO what i WANT* by Japanese producer KIRA, and everything in between and beyond those parameters. She is a fluid entity that changes according to her point of emission. On the one hand, the Miku-machine as a fiction manifests itself as having the potential to create any story through user-software interaction, since she can play any character. On the other hand, she is a digital pop star, a pixelated diva that we should idolize and gawk at in awe. Either way, our relationship with the Miku-machine feeds the character and loads it with meaning and it cannot be understood as one marker, presenting itself instead as a flickering signifier.

3.3. Your very own virtual girl: Person-machine

VTubers, or Virtual YouTube celebrities, are online personalities who use 2D or 3D digitalized models as avatars. They came into being and became popular in the year 2016, when Japanese corporation *Activ8* created Kizuna Ai to promote its products online by emulating the corporate idol model of prefabricated stardom and visceral attachment through affective engineering (*kansei*) (Hiramoto and Wee, 2019; Ohkura et al. 2022). As heir to the precedent set by Miku, Kizuna follows the pattern of personification of the machine through an avatar in order to grow an audience that is able to connect with it. Unlike Miku she has been characterized from the get-go in order to make her appealing. Part of this appeal is the interactive fiction presented to the audience that she is a form of artificial intelligence which can learn from its followers. Despite this hook, she is not a form of artificial intelligence, and everything she says and does has been scripted beforehand. In that script, she is a loveable *ingénue*, with a biting, dirty, and dark sense of humor, in whose story the audience is directly involved.

Like her predecessors, Kizuna is a pretty girl with huge, round eyes, fair skin, long hair and a slender, body. Unlike them though, she has a YouTube channel under her name (A.I. Games) where *Activ8* publishes videos in which she plays videogames, talks about her day, or participates in viral trends. She even played *DDLC* in 2017.

Figure 5. Kizuna Ai talking to Monika as she plays *DDLC*. Source: YouTube channel *AI Games*

Also, in contrast with her predecessors, Kizuna Ai is a puppet: she is embodied, which makes her encounter with Monika all the more eerie, since she is more of a real flesh-and-blood girl than Monika could have ever been. To be more precise, Kizuna is a product born out of a team effort. A unit within *Activ8* had to design her, and another one did the 3D sculpting of the character. Some members of the project actually design and develop her videos and streams. Another team writes her scripts. Finally, actors are paid to animate her using live motion capture technology and, of course, an actress (Nozomi Kasuga) voices her.

Kizuna Ai's YouTube channel has been inactive, as of 2023, for almost a year but she was popular enough to be the guest-star for a debate on the Noble Prize with prestigious Japanese scientists (Dr. Masahiro Tsuji, Dr. Yoshihiro Shimada, and Dr. Masashi Furukawa) in 2018, an event that she attended as a screen on a table. She was rather successful, or *Activ8* was, even after the narrative fiction of her being a form of artificial intelligence, inevitably, could

not sustain itself anymore. The underlying narrative involved was more powerful to her audience: that of establishing a relationship with a funny, interesting, unscripted girl.

After Kizuna, the VTuber phenomenon underwent accelerated rapidly in the year 2018, with two thousand new VTubers between May and June, and by November of the year 2020 there were thirteen thousand registered VTubers in Japan alone in the last census (User Local, 2020). As part of this proliferation of virtual avatars, some of them follow Kizuna's corporate model (like GuraGawr or Korone Inugami, who belong to the company *COVER Corporation*), but not all of them subscribe to it and independent VTubers and streamers stand out due to aesthetics.

Made by one creator, they dispense with scripts, voice actors and other agents, preferring direct communication with their audience, either existing as the character the avatar represents (like Nora Cat or self-proclaimed hamster VTuber Ham) or using their avatar as a sort of filter for their own image (like Twitch streamer Mira or independent artist Ira). They distinguish themselves from mainstream streamers most notably by trying to visually challenge the corporatized VTubers that share a standardized, pretty girl, aesthetic. Consequently, independent VTubers show more variety and can be monstrous, look like objects or animals, and blur the lines when it comes to gender presentation.

Regarding their roles, where independent VTubers are concerned, the fiction works in two ways. For the creator, the virtual avatar involves a creative journey that can work as a mechanism through which to explore identity, gender, and relationships with others. To the audience, the virtual avatar works as both the manifestation of a specific type of female character that they might find interesting and with which they can interact live, as well as the persona of a content creator and online user that they like and embodies them. This embodied nature makes them feel more tangible than other characters like Monika or Shiori. They are real flesh-and-blood people playing a character, after all, regardless of how much or little the users might resemble the avatar. They are entirely human, albeit pixelated. In this sense, independent VTubers involve a return to human-to-human interaction through the carefully presented simulation of artificiality built by the avatar.

Figure 6. Screenshot of a stream by independent VTuber Mira. Source: Twitch channel *mirakurutaimu*

Regardless of why they might choose to become a digital girl or woman for a while, these creators offer mediated human-to-human interaction. Communication with the virtual avatar does not take place via the Vtuber-machine, but the simulated image of the person (or group) over which she projects her digital shadow. It is a person-to-person conversation pretending to be one between a machine and a human, a human interaction mediated by a pixelated girl.

4. Cache: Femininity as a virtual object

The question running through this paper is what model of femininity as a virtual object is present in contemporary virtual artefacts, and if that model follows traditional notions of femininity or points towards something else, as posed by Haraway (2016/1984), through the cyborg. After journeying through virtual and culturally relevant products from the contemporary era, I gather that femininity as a virtual object lies within the parameters of the relationship, that it needs to exist, and cannot be enacted. It is, instead, to be consumed. Hence, this world of women-pixels, when faced with the task of classification within stereotypical femininity and with the potential to perpetuate a set of narratives in the discursive framework (Butler, 2014/1990; Broncano, 2020; de Certeau, 2004/1974; Foucault, 2018/1971) should be set more precisely, aesthetically, and functionally, within the locus of the Japanese idols and the pop divas of the twentieth and twenty-first centuries. To paraphrase Wittig (1992/1980), these machines are not women, they are idols.

To be precise, they are: the computer-generated counterparts to analogue idols. They are designed and/or programmed as women –young, delicate, petite girls with big, bright eyes– with the institutional interest of being marketable (Davis, 2005/1981) through affective engineering (*kansei*), while relying on the image of the virtual object as *kawaii*; pitiful, youthful, and helpless, so as to elicit a visceral reaction in the audience (Kinsella, 1995; Kumagai, 2022; Hiramoto and Wee, 2019; Ohkura et al., 2022). These *kawaii* machines, as idols, trade in the simulation of intimacy (Aoyagi, 2005; Black, 2008; Galbraith and Karlin, 2012). Shiori, Monika, Miku, and the VTubers are massive popular culture icons that offer, to varying degrees of involvement, their affection and, thus, a relationship, as a product. Hence, they are objects rather than subjects, even within their own narrative framework (Beauvoir, 2015/1949). In their virtuality, they need another in the act of becoming material; otherwise, they remain as dormant code or humans in pixelated costumes (Clisby, 2016; Deleuze, 2002/1968; Haraway, 2004; Shields, 2002). Through this process, the interaction turns into an extension of femininity.

The discursive precedent set is that a digital woman is meant to love and be loved. This aligns with what authors like Patrick Galbraith (2011), Tina Richards (2015), and Dominic Pettman (2017) discuss. These characters' roles in their discursive frameworks do not involve offering a set of enunciations through which one could identify with them (García-Carpintero, 2016; Manney, 2019), or use them as references to enact femininity (Butler, 2006/2004). They serve as cultural landmarks of the desirability of a certain form of femininity (de Certeau, 2004/1974; Deleuze, 2014/1985, 2015/1986; Foucault, 2018/1971). Following the idols and divas of

the last few centuries, they materialize as women as long as we can use them to form bonds, individually or, as in Miku's case, through collective means (Davidson, 2017; Guga, 2015; Lam, 2016).

When the question of identity emerges, as is the case of VTubers, with more relevance in the case of independent ones, in the way that Robbie Cooper (2007) and more prominently Liudmila Bredikhina and Agnés Giard (2022) have proposed, as an exploration of gender markers, identity, and social expectations, they use their virtual avatars as a prop that can be kept as a different element from their selves. To build their avatars and platforms, they follow markers of social and commercial success based on notions of recognition that depend on interaction (Butler, 2006/2004; Fizek and Wasilewaska, 2011; Lee and Lee, 2023). The hook is in the relationship and interaction is key.

Exploring the virtual objects case by case, to Shiori we owe and must give everything since she is perfect, and she deserves nothing but perfection herself, therefore we are objectified alongside her. To Monika we owe nothing and must give nothing since she, of flesh-and-blood, yet eternally a machine, is doomed to the horrors that loving us will inevitably bring. To Miku, the flickering signifier (Hayles, 1999), we owe the noble task of creation, her never-ending actualization, and we are bound to the process since we are her fans, and without us she becomes stagnant. Lastly, to the VTubers we owe the recognition a human being deserves, which in turn recognizes us as one and communicates with us, all the while pretending to converse with a fictional entity. Every work of fiction at play depends on our participation in the simulation of loving those women made of pixels presented to the audience, be it as potential romantic partners (Shiori), artistic muses (Miku), or even friends or content creators (VTubers): their stories, their becoming, depend on our involvement in the act of imagining a relationship (Friend, 2011).

Ultimately, in embarking on the task of researching femininity as a virtual object, what I have found is that the configurations of human-to-human, human-to-machine, and machine-to-machine relationships have permeated the phenomenon, and they are inseparable from it. From my exploration of contemporary virtual works of fiction about femininity I gather that femininity as a virtual object lies within the parameters of the relationship and needs it to exist. As in *Blade Runner: 2049* (Denis Villeneuve, 2017), in which artificial intelligence Joi and android detective K maintain a programmed simulation of machine-to-machine romance, the question of femininity as a virtual object must be posed in relational terms, which offers a broader horizon of possibility for its exploration in terms of gender and identity.

This approach would not necessarily be romantic, nor follow heterosexual and patriarchal models and ideals (Preciado, 2008; Butler, 2006/2004; Feinberg, 2014/1993). It has the potential to highlight monstrosity, the cyborg as a gender-defiant being, as well as queer approaches, since it dwells on interaction and the weight that it acquires through the inter-subjective game. In this sense, the path from the Shiori-machine to the VTubers can be conceived as testimony to our desire to maintain a real (material) relationship with the human-machine. We want software to be able to understand why it loves us and why we love it. Can software, a code, the cyborg as Haraway (2016/1984, 2004, 2019/1992) describes it, something indefinable, do such a thing? Is its condition as a machine too alienating?

Transgender author Alison Rumfitt (2021, p. 211) writes: «What is a woman? That's always the question, isn't it?». To a certain extent, asking the machine this question implies forcing upon it the traditional binary division of the sexes that signals woman as the complete and natural opposite of man (Escartín, 2013; Luri, 2001; Moreno, 2015). I, as a human being, am creating and exploring the machines as a culturally embedded discursive creature. Their creators, as human beings, are forcing them to present as *kawaii* girls instead of lines upon lines of code. As Baltasar Fernández-Ramírez (2016, p. 113, own translation) argues, «we all suffer the sickness of society, the sickness of relationship, the sickness of the other, doomed to not being able to be but in the fantasies of the other, victims of the other who gives us life». Therefore, in our relationship with the machine, to make it comprehensible, we have to become gender makers (Beauvoir, 2015/1949; Butler, 2006/2004, 2014/1990; Davis, 2005/1981) and pattern reproducers, expecting the machine to be able to recognize those patterns, adapt, and reproduce them in turn (Berger and Luckmann, 2012/1966; Derrida, 1989/1972) while denying it the option of staying unrecognizable, since without us it becomes obsolete. We present the non-human, as Bruno Latour (2001/1999) would put it, with a mystery so human that it can only aspire to process it because we are the ones behind its programming.

To conclude, femininity as a virtual object, through the analysis of Shiori, Monika, Miku, Kizuna Ai, and independent VTubers as elements of narrative works of fiction, does not manifest itself as a given projection of one particular stereotypical, proverbial, woman, but as the relationship between humanity and machines that is founded and maintained with the product and defines the machine as a woman in specific ways related to discursive realities intertwined with *kansei* and idol culture. Thus, it would be interesting to expand this study along, at least, three lines: to delve further into the matter through an analysis of these products' users and their experiences with them; to explore how diversity and representation (of gender, sexuality, and race), and AI ethics in turn are affected by this focus on relationships, integral to virtual femininity through analogous critical works such as *Heaven will be mine* or *we know the Devil*; and analyzing this same phenomenon in equivalent products with male-machines, such as *TokiMeki Memorial: Girl's side*, *vocaloids* Kaito or Rin, and male-presenting VTubers

such as Kuzuha and independent versions, to further unravel whether the specific configuration of pixels influences the way in which the relationship unfurls, or whether it will manifest itself and develop in the same way.

5. References

Aoyagi, Hiroshi (2005). *Islands of eight million smiles: Idol performance and symbolic production in contemporary Japan*. Harvard University Asia Center.

Berger, Arthur (1998). *Media research techniques*. Thousand Oaks.

Berger, Peter Ludwig and Luckmann, Thomas (2012). *La construcción social de la realidad*. Amorrortu. (Original work published 1996).

Beauvoir, Simone (2015). *El Segundo sexo*. Cátedra. (Original work published 1949).

Black, Daniel (2008). The virtual ideal: Virtual idols, cute technology and unclean biology. *Continuum. Journal of Media & Cultural Studies, 22*(1), 37-50. http://doi.org/10.1080/10304310701642048

Bredikhina, Liudmila and Giard, Agnès (2022). Becoming a virtual cutie: digital cross-dressing in Japan. *Convergence, 28*(6), 1-19. https://doi.org/10.1177/13548565221074812

Broncano, Fernando (2020). *Espacios de intimidad y cultura material*. Cátedra.

Butler, Judith (2006). *Deshacer el género*. Paidós. (Original work published 2004).

Butler, Judith (2014). *El género en disputa*. Paidós. (Original workpublished 1990).

de Certeau, Michel (2004). *La cultura en plural*. Nueva Visión. (Original work published 1974).

Clisby, Dale (2015). Deleuze's secret dualism? Competing accounts of the relationship between the virtual and the actual. *Parrhesia, 24*, 127-149. https://www.parrhesiajournal.org/parrhesia24/parrhesia24_clisby.pdf

Cooper, Robbie (2007). *Alter Ego: Avatars and their creators*. Chris Boot Publishers.

Davidson, Kyle (2017). Hatsune Miku and the crowd sourced pop idol. *Semiotics*, 137-144. https://doi.org/10.5840/cpsem201712

Davis, Angela (2005). *Mujeres, raza y clase*. Akal. (Original work published 1981).

Deleuze, Gilles and Parnet, Claire (1996). *Dialogues*. Champs Flammarion (Original workpublished 1995).

Deleuze, Gilles (2002). *Diferencia y repetición*. Amorrortu (Original work published 1968).

Deleuze, Gilles (2014). *El poder*. Cactus (Original work published 1985).

Deleuze, Gilles (2015). *El saber.* Cactus (Original work published 1986).

Derrida, Jacques (1989). *Márgenes de la filosofía*. Cátedra (Original work published 1972).

Dick, Philip (1969). *Ubik*. Doubleday.

Escartín, Montserrat (2013). Pandora y Eva: La misoginia judeo-cristiana y griega en la literatura medieval catalana y española. *Revista de lenguas y literaturas catalana, gallega y vasca, 13*, 55-71. https://doi.org/10.5944/rllcgv.vol.13.2007.5924

Feinberg, Leslie (2014). *Stone butch blues*. Self-edited. https://lesliefeinberg.net/wp-content/uploads/2015/08/Stone-Butch-Blues-by-Leslie-Feinberg.pdf [10/05/2022] (Original work published 1993)

Fernández-Ramírez, Baltasar (2014). Theodore y la fantasía del yo, o relaciones afectivas con máquinas que parecen personas y personas que también lo parecen. *Teknokultura. Revista de Cultura Digital y Movimientos Sociales, 11*(1), 91-116. https://revistas.ucm.es/index.php/TEKN/article/view/48262

Firestone, Shulamith (1972). *The dialectic of sex: The case for feminist revolution.* Bantam (Original work published 1970).

Fizek, Sonia and Wasilewska, Monika (2011). Embodiment and gender identity in virtual worlds. In Astrid Ensslin and Eben Muse (Eds.), *Creating second lives. Community, identity and spatiality as constructions of the virtual* (pp. 75-98). Routledge.

Foucault, Michel (2018). *El orden del discurso*. Austral (Original work published 1971).

Friend, Stacie (2011). Fictive utterance and imagining. *Proceedings of the Aristotelian Society, 85*, 150-169. https://www.jstor.org/stable/41306460

Galbraith, Patrick (2011). Bishoujo games: 'Techno-intimacy' and the virtually human in Japan. *Game Studies, 11*(2). http://gamestudies.org/1102/articles/galbraith

Galbraith, Patrick and Jason, Karlin (2012). *Idols and celebrity in Japanese media culture*. Palgrave Macmillan.

García-Carpintero, Manuel (2016). *Relatar lo ocurrido como invención. Una introducción a la filosofía de la ficción contemporánea*. Cátedra.

García-Mina, Ana (2010). *Desarrollo del género en la feminidad y la masculinidad*. Narcea.

Gibson, William (1984). *Neuromancer*. Ace Science Fiction Books.

Gibson, William (1996). Idoru. G. P. Putnam's Sons.

Guga, Jelena (2015). Virtual idol Hatsune Miku: New auratic experience of the performer as a collaborative platform. In Anthony Brooks, Elif Ayiter and Onur Yazicigil (Eds.), *Arts and technology*. *Lecture notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering* (Vol. 145, pp. 36-44). Springer.

Gunter, Barrie (2000). *Media research methods*. SAGE.

Haraway, Donna (2004). *The Haraway reader*. Routledge.

Haraway, Donna (2016). *A cyborg manifesto: Science, technology and socialist-feminism in the late twentieth century.* University of Minnesota Press. (Original work published 1984).

Haraway, Donna (2019). *Las promesas de los monstruos*. Holobionte (Original work published 1992).

Harris, William (2009). The rage of women. In Susanna Braund and Glenn W. Most (Eds.), *Ancient anger: Perspectives from Homer to Galen* (pp. 121-143). Cambridge University Press.

Hayles, Nancy (1999). *How we became posthuman. Virtual bodies in cybernetics, literature, and informatics.* The University of Chicago Press.

Henley, Clark (1982). *The butch manual*. The Sea Horse Press.

Hiramoto, Mie and Wee, Lionel (2019). 'Kawaii' in the semiotic landscape. *Sociolinguistic Studies, 13*(1), 15-35. https://doi.org/10.1558/sols.36212

Kinsella, Sharon (1995). Cuties in Japan. In Lise Skov and Brian Moeran (Eds.), *Women, media and consumption in Japan* (pp. 220-254). Curzon Press.

Kumagai, Gakuji (2022). What's in a Japanese *kawaii* 'cute' name? A linguistic perspective. *Frontiers of Psychology, 13*, 1-9. https://doi.org/10.3389/fpsyg.2022.1040415

Lam, Ka Yan (2016). The Hatsune Miku phenomenom: More than a virtual j-pop diva. *The Journal of Popular Culture, 49*(5), 1107-1124. https://doi.org/10.1111/jpcu.12455

Larsen, Peter (2002). Textual analysis of fictional media content. In Klaus Jensen and Nicholas Jankowski (Eds.), *A handbook of qualitative methodologies for mass communication research* (pp. 121-134). Routledge. (Original work published 1991).

Latour, Bruno (2001). *La esperanza de Pandora.* Gedisa. (Original work published 1999).

Laughey, Dan (2009). *Media Studies*. Kamera Books.

Lee, Sebin and Lee, Jungjin (2003). "Ju. T'aime". My streamer: A case study on fandom experience as audiences and creators of VTuber concert. *IEEE Access*, *11*, 31125-31142. https://doi.org/10.1109/ACCESS.2023.3252563

Lindlof, Thomas and Taylor, Bryan (2002). *Qualitative communication research methods*. SAGE (Original work published 1995).

Luri, Gregorio (2001). *Prometeos. Biografía de un mito*. Trotta.

Manney, Patricia (2019). Yucky gets yummy: How speculative fiction creates society. *Teknokultura: Revista de Cultura Digital y Movimientos Sociales, 16*(2), 243-254. http://dx.doi.org/10.5209/TEKN.64857

Moreno, Tomás (2015). *De Pandora a la femme fatal. Mitos, figuras y estereotipos de estigmatización femenina*. Dauro.

Nagy, Peter and Koles, Bernadett (2014). The digital transformation of human identity: Towards a conceptual model of virtual identity in virtual worlds. *Convergence, 20*(3), 276-292. https://doi.org/10.1177/1354856514531532

Ohkura, Michiko, Laohakangvalvit, Tipporn, Sripian, Peeraya, Sugaya, Midori, Chiba, Hiroko and Berque, Dave (2022). Affective evaluation of virtual kawaii robotic gadgets using biological signals in a remote collaboration of American and Japanese students. In Masaaki Kurosu (Ed.), *Human-computer interaction. Theoretical approaches and design methods* (pp. 478-488). Springer. https://doi.org/10.1007/978-3-031-05311-5_33

Pettman, Dominic (2017). Love in the time of tamagotchi. *Theory, Culture & Society, 26*(2-3), 189-208. https://doi.org/10.1177/0263276409103117

Preciado, Paul (2008). *Testo yonqui*. Espasa.

Richards, Tina (2015). Tokimeki memorial Girl's Side: Enacting femininity to avoid dying alone. *ToDIGRA, 2*(1), 101-127. https://doi.org/10.26503/todigra.v2i1.43

Rumfitt, Alison (2021). *Tell me I'm worthless*. Cipher Press.

Saito, Kumiko. (2021). From novels to video games: Romantic love and narrative form in Japanese visual novels and romance adventure games. *Arts, 10*(3), 1-18. https://doi.org/10.3390/arts10030042

Salvato, Dan (2017). DokiDokiLiterature Club! (Personal computer version) [Videojuego]. TeamSalvato.

Santos, Estela (2018). Construcción de la identidad digital a través del yo-objeto: Proceso de auto-objetivación y su relación con la cosificación del cuerpo de las mujeres. *Teknokultura. Revista de Cultura Digital y Movimientos Sociales, 15*(2), 301-309. https://doi.org/10.5209/TEKN.59724

Shee, Yasheng (2021). A cure for woundless pain. Consumption of innocence in Japanese idol culture. *Journal of Asian Pacific Communication, 33*(1), 87-102. https://doi.org/10.1007/978-3-031-05311-5_33

Shields, Rob (2002). *The virtual*. Routledge.

Tan, Chris and Shi, Jiayu (2021). Virtually girlfriends: 'Emergent femininity' and the women who buy virtual loving services in China. *Information, Communication and Society, 24*(15), 2213-2228. https://doi.org/10.1080/1369118X.2020.1757133

User Local (2020, noviembre). バーチャル YouTuber、本日1万3千人を突破（ユーザーローカル調べ）(*YouTuber virtual superan hoy los 13.000. Encuesta local de usuarios)*. https://www.userlocal.jp/press/20201109vi/

Walton, Kendall (1990). *Mimesis and make-believe. On the foundations of the representational arts.* Harvard University Press.

Wittig, Monique (1992). *The straight mind and other essays.* Boston PressBooks. (Original work published 1980).