Being *Riajuu* [リア充]

A Phenomenological Analysis of Sentimental Relationships with "Digital Others"

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Abstract. The aim of this paper is to study the possibility of sentimental relationships between human and digital beings. We are interested in what kind of "other" a digital being can be for a human subject because it is the first step in understanding how our intimate lives will be shaped by the introduction of new digital technologies.

Today computer technologies are growing fast, and they are becoming pervasive. They are intertwining their digital content with every aspect of our everyday lives and they are placing themselves as our "companions". This co-existence is so tight that it is possible to think of sentimental relationships growing between users and these devices. We will analyse these relationships from a phenomenological perspective by introducing the Japanese term *riajuu* [リア充] which tackles the problem of having a sentimental and intimate relationship with a digital being. Moreover, thanks to Husserl's phenomenology, we will show how it is important to discern the digital content of the "other" from how this entity relates to the subject.

We will show if the subject can build with a digital other an intimate relationship even when users know it is not a human person they are dealing with.

Keywords: Phenomenology · Postphenomenology
Human-robot intimate relationships · Riajuu

1 Introduction

The aim of this paper is to study the possibility of sentimental relationships between a human being and a digital one. More specifically, we will try to answer to a simple question by following a phenomenological analysis of the "other" involved in the relationship: "Can a subject look into the eyes of a robot and have feelings towards it?" Thus, we will be interested in understanding if it is possible to develop an intimate relationship with an object even if the user does know it is not human.

Today we are facing many new computer devices which start to inhabit our everyday world and to be intertwined with our common praxes. They are so

close to us to be our companions and to "live" with us. This closeness can found the basis for building an intimate relationship with them.

There are many works exploring this possibility from an engineer approach,[1] from a psychological [16,21], legal [27], and sociological [1][2] perspective aiming to analyse how such an intimate relationship is possible and its effects.

There is an evident trend in developing robots and, more generally, digital devices [32] for enabling subjects to have intimate interactions with them. We can find examples all over our culture like in the film *Her* directed by Spike Jonze, *Ex machina* directed by Alex Garland, and the Swedish TV series *Real Humans* written by Lars Lundström.

How can we develop such kind of relationships with lifeless "creatures"? Is it even possible?

If it is possible, then we need to think of these intimate relationships as part of the subjects' life, and so as something which re-shapes the way human beings think at love and sex and the way they love each other. Thus, the question about feelings towards robots even when the users know the other is not a human being could sound quite silly, but it is not because it tackles the possible change in how we live our intimate relationships with other human beings in the future. Mediation theory clearly suggests the introduction of a new technology reshapes who we are and how we live in the world [38]. Technology is not neutral, but they actively constitute the world where we live. The introduction of digital beings to have intimate relationships with is not neutral, but it will shape the way we look at each other and the way we live our intimacy in general.

Moreover, this way of being "connected" to computers cannot be taken so lightly because it is touching exposed nerves in our society. For example, the Second International Congress on Love and Sex with Robots, which should have been hold in Malaysia, was cancelled by the government for the nature of the topic.[3] However, even if this topic rises many questions, there are very few works analysing the kind of "otherness" the computer represents for the users according to a phenomenological analysis [5]. More specifically, it is not clear if this "digital other" can provide the subject with the same basic elements required to be an "otherness" like other human beings. It is not clear if it can be something/someone the subject can have a sentimental relation with even when they are clearly perceived as unhuman beings because they are visibly not made of flesh and bones.

In order to study this relation, we will use the Japanese term *riajuu* [リア充] because it touches sentimental relationships between humans and

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[1] See, for example, [4,8,15,25,26,37,41].

[2] See also the website of the conference We Robot http://robots.law.miami.edu/2016/.

[3] (http://www.bbc.co.uk/newsbeat/article/34615532/love-and-sex-with-robots-conference-cancelled-in-malaysia).

digital subjects.[4] This term will help us to study this topic from a different angle by analysing the kind of perception of the "other" the subject has.

The work will be divided in two main parts:

1. The first part will be on the introduction of the term *riajuu*. We will study what it means and how it can be used in a phenomenological way to analyse the perception of the "digital other" the subject has.
2. The second part will focus on two different goals pursued by computer devices and on the different kinds of "digital otherness" encountered in these two ways of using digital technologies. Therefore, we will study the types of relationship the subject can have with these different "digital beings".

Summing up, this work will tackle the problem of being in a sentimental relationship with robots from a phenomenological perspective starting with the Japanese term *riajuu*. This work will not study the ethical issues related to such a relationship, but it will analyse if the computer can be an "other" with whom the subject can build a relationship even when it is visibly a machine.

2 Being *riajuu*

2.1 Introduction of the Term

The Japanese term *riajuu* [リア充] is generally used by teenagers to identify a person with a beautiful partner. This banal definition actually hides a point much more interesting for our analysis. The person the subject is in relation with is not just merely attractive, but it is "real". This person is not created and visualised by digital technologies, but it is made of flash and blood.[5]

Riajuu is a made up of the word "real life" and "fulfilling" (riaru juujitsu [リアル充実]) and actually it means "to have a good life" or, more interestingly, "to be fulfilled with reality". The main idea underlying this term is that there is a distinction in living a life in the everyday world, or being always connected to a digital world and living constantly in it. Therefore, according to the word *riajuu*, there is an clear difference between having a relationship in the "real world" with a "real person"[6] and having it in a "digital world" with a "digital being". This difference can be used in order to understand what kind of "otherness" the digital beings are, and what relationships subjects can build with them.

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[4] Actually the term is used for many purposes like to have a joyful existence. However, it is also used to identify a person with a relationships with other human beings instead of relationships with digital entities.

[5] Obviously we have not to think of it as a clear definition because, in that case, we would face serious problems. For example there are cases where the human person is partially digital because they use digital technologies in their bodies or they are kept alive by digital technologies such as in hospitals. In these cases people are not easily separable from the digital technologies used, and so it is not clear where the subject ends and where the technology begins.

[6] We use the term "real" as oppose to "virtual" and "digital".

One of the characteristic of the Japanese language is to be quite flexible and the official vocabulary is constantly updated with new terms in order to follow the actual lives of the citizens in their aspects. Thanks to this flexibility and to the saturation of the Japanese environment with digital contents, it is quite natural Japanese language developed new terms in order to deal with such a tight co-existence between "digital" and "real" elements even in the case of sentimental relationships. For example, in Japan, some years ago, the video game *Love Plus* [ラブプラス] was released. This video game is deliberately designed to generate a digital girl who becomes the subject's actual girlfriend and with "whom" the human subjects can fall in love. It allows the players to have a "digital girlfriend" and to be intimately related to her.[7] This possibility has been developed even in the "western" world with applications for smartphones like *My virtual girlfriend*[8] on the *Google Play Store* which aims to provide something close to *Love Plus* even if in a lesser degree. Thus, riajuu is a Japanese term developed by the Japanese culture and aimed to work in the Japanese context, but it can be useful even outside of it because it faces a worldwide phenomenon since digital entities are starting to emerge as potential romantic partners.

The term *riajuu* seems to highlight an obvious but maybe problematic point. There is a clear distinction between something generated by a program and visualised in pixels and a person in flash and blood. Therefore, the term suggests there is also a difference in the kind of relationships users can build with them, and it is possible to enframe this difference in a phenomenological analysis.

3   *Riajuu* and phenomenology

3.1   *Riajuu* and fulfilment

The idea of being fulfilled with reality is quite eloquent. It represents subjects who are living their lives in a full way by "feeding" themselves with real experiences. They have real girlfriends, they have real friends, they have real jobs and, generally speaking, they really live their lives. This idea is not only eloquent and clear, but it is quite intriguing because in phenomenology we do have a fulfilment as well.

In phenomenology, the perception is characterised by a fulfilment related to the content of the object. A subject fulfils the act of perception by "feeding" the act with some aspects of the object perceived.[9] The perceptual intentional act directed toward the object "red apple" is fulfilled by the "redness" of the apple

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[7] See also the new product *Gatebox* http://gatebox.ai/.

[8] See the website https://play.google.com/store/apps/details?id=com.wetproduction. mvg&hl=en.

[9] When the subject look at an object, the intentional act is fulfilled with the content of the object. The object in itself is not related to one intentional act only, but it enmeshed in a network of "empty" intentions directed towards the hidden aspects of the objects and towards the expectations the subject has. The perception of an object is always founded on the interplay between empty intentions and their fulfilment.

the moment the subject perceive it.[10] Thus, it is possible to think of a fulfilment with the "reality" of the object as if the real object and the digital one had a different type of content in their "realness".[11]

Our use of the term "reality" should not be confused with what phenomenology classically means with "real". We use the this term in opposition to "digital" while phenomenology commonly uses it in opposition to "fictional" and

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[10] One of the main problem Husserl, the father of phenomenology, dealt is the connection between judgements and world. We can say "there is a computer on the table", but how does it relate to the fact that there is a computer on the table?

Husserl criticised Brentano's notion of intentional act because the subject does not perform just a "mere" mental act [2], but the act of intentionality ends in the "external object". The sentence "there is a computer on the table" points to what is on the table and, more specifically, it points to the computer on it. The subject performs an intentional act by directing themselves towards an object, and the object answers to this call by fulfilling this act with its content. The subject is always connected to the world, and the fulfilment is the element which identifies such a tight connection [20]. Moreover, in Husserl, this peculiar form of "identity" [20] between what is intended and what is in the world is an element of perception too.

As Crowell clearly points out, it is not so easy to think of an application of the fulfilment in perception, but it is possible [7]. Judgements are different from perception, and so they do not work in the same way. One is related to the truth of a sentence, and so it is general, symbolic and predicative while the other one is related to perception which is individual, non-symbolic and pre-predicative. However, without going into details on how this passage between the two fields is possible, we can just say the perception of an objects always comes in a sort of fulfilment of a previous "emptiness". The object has hidden aspects which are always expected but emptily indented. Therefore, when the subject perceives these hidden aspects, the expectations can be fulfilled or unfulfilled by the content of the object [13]. For this reason Husserl always thinks of perception as a "network" [17] of partially empty and partially fulfilled intentions, and he founds perception on this play between emptiness and fulfilment [3].

We can see how the fulfilment is related to the expectations the subject has towards some hidden aspects of the object. The fulfilment is produced by the identity of the object's content with these expectations [42]. Thus, from the simple fact every object has hidden faces and these hidden faces are related to some kind of expectations and their fulfilment, we can easily deduce that perception is founded on fulfilment. As far as we think of perception as an intentional act [31] of a subject directed towards the external object, we need to take into account also its possible fulfilment and unfulfilment as its founding parts.

[11] According to phenomenology, even if it does not take into account digital technologies, the origin of the object is part of the object's content and it is embedded in different horizons [9]. In Husserl's phenomenology objects carry aspects of their past story with themselves and these aspects are embedded in their content. For example, a piece of wood curved by a skilled artisan in a particular shape carries with itself relations to the instrument used to make it. The object carries its origin in itself and so also if it is created by a digital technology or not. Thus, the "realness" and the "digitalness" of the object are content and they can fulfil the intentional acts of the subject.

"fantasy" [18]. The reason is easy to understand. Phenomenology deals with perception, and so it is primary important to express a distinction between fictitious entities perceived in a fantasy or in a dream with what is perceived in the actual world. Therefore, it uses reality and fantasy in order to show this difference.

According to this usage, the "reality" of an object is related to the modality of perception, and it is identified by its "positional act" [28, 29]. When the object is a real object, the positional act is "active". When the object is fictitious, the positional act is "suspended" [19]. Therefore, this kind of "reality" is not part of the content of the object, but it is related to the way the subject perceives the object as actual or fictional.

In our case, we are not interested in the fictitiousness of the object, but we are related to the technologies used to generate it and to its "origins". For example, the pdf file of this document is "real" according to the phenomenological interpretation because it is not fictitious. However, it is not "real" according to our interpretation because it is generated and visualised by digital technologies.

Thanks to the fact the realness is a content, we can think of *riajuu* subjects as the ones fulfilling themselves with the realness of the "other". In the case the "other" is a digital being "who" is generated by a digital technology, the subjects do not fulfil their intentional act with "realness", but with "digitalness" and so they are not *riajuu*.

3.2 *Riajuu* and "Resistance"

Side by side with the fulfilment with reality of the subject's intentional acts, there is another important element which constitutes the *riajuuness* of the subject.

The idea of living the life in its realness is tightly related to the subjects' always connection to what is happening around them in the every day. In order to be fully living the life in its realness, subjects are supposed to be living in the "real world".

Even if this element is banal, it is important because it highlights the link to the everyday world the subjects need to have in order to be *riajuu*. In addition to the "realness" or "digitalness" of the content, there is something else which is related to the way subjects live together. *Riajuu* subjects need to live among others and to intertwine their activities with them. *Riajuu* subjects need to have a partner who is part of the everyday world. Thus, a subject living in its own "private world" cannot be *riajuu*. More specifically, both the partners must colive in the everyday world in order to be *riajuu*.

Phenomenology provides us tools to analyse this coexistence by highlighting some elements which found the relations in the everyday world.

The everyday world is given to the subjects with many different aspects. One of them is tightly related to the "resistance" it opposes. This "resistance" is not related to the physical resistance opposed to the actions of the subjects, but it is related to the co-living of many subjects in the same world. The world is a place where the actions of multiple subjects intertwine, and where the intentions of the single subject encounter the intentions of the others.

The world "resists" to the subject just because it manifests others' intentions which cannot be simply ignored by the subject. The world "resists" to the subject because it is the product of the actions of other people which are out of the subject's own power [14,33,35]. In order to have a relationship with the others the subject needs to co-act with them by "interlocking" [*ineinandergreifen*] their activities with the ones of the others [34, p.170],[12] and to face the "resistance" opposed by them [6, p.51].[13]

An "other" who is not part of the everyday world cannot be "resistant". For example, a virtual character generated in a virtual reality might have resistance within the digital world, but it has no resistance outside of it because it can be ignored and it does not call for interlocking activities with the subject. Thus, in addition to the different content of these "digital others", the term *riajuu* shows there are differences in the way they relate to the subjects when we look at the "resistance" opposed by them. An entity can be resistant to the subject. If so, it is part of the everyday world, and it is able to make the subject *riajuu*. However, an entity can also be not resistant. In this case, the entity is not part of the everyday world, and it does not provide *riajuuness* to the subject.

Summing up, the term *riajuu* focusses our attention on the possible differences in perceiving "real" and "digital others" for two main reasons:

– The content is different. Real objects fulfil the subject with "realness" and the digital ones with "digitalness".
– The way the two subjects relate is different. Real subjects are "resistant" to the others while the "digital" ones risk not to be.

The two elements highlights two different aspects. The first one is related to the origin of the "other", and so on how the subject perceives the other as digitally generated. The second one is related to the way the subjects relates to these entities, and so it is related to how these devices are designed.

In the next sections, we will show how digital technologies can be shaped in order to provide resistance to the subject and to make subjects partially riajuu.

4   Two Different Kinds of "Digital" Other

We have many ways of using digital technologies. These usages produce various digital objects with different aspects and potentialities. Therefore, different ways of designing and using digital technologies produce also different kinds of "digital other". We will study two main types of "digital other": the one in a virtual reality and the one in the everyday world.

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[12] We are not interested in the other elements of intersubjectivity highlighted by Schütz [23] because we are not interested in intersubjectivity per se, but on how these "others" relate to the subjects. On the limits of Schützian philosophy applied to robotics see [22].

[13] We do not refer to Levinas because, even if he refers explicitly to the other as resistant, he also always think of the other as an ethical other: "Le visage se refuse à la possession, à mes pouvoirs" [24]. We do not want this kind of ethical aspects, but just the fact the others' actions are intertwined with the subject's ones.

4.1   The "Digital Other" in a Virtual Reality

A classical way of using computer technologies is to generate a digital world where subjects can immerse themselves. The never-ending improvement of the computing power of these digital machines allows to create a digital world ruled by strings of bit of information instead of the laws of Physics.

The ideal realisation of this attempt is the creation of a virtual reality where subjects can immerse themselves leaving the "mere" flash behind, and where they can free themselves in a digital "dream".[14] The subject is wrapped by devices which substitute the stimuli coming from the everyday world with the ones generated by the virtual world. For example, the head-mounted displays substitute the vision of the everyday world with the vision of the digital world.

In this immersion in a second different world, the possibility of "escaping" from the every day plays an important role. According to this use, computer devices are able to generate a different reality into which the subjects can immerse themselves. Therefore, it is not surprising to see many works analysing the tight connection between the idea of "escaping" from this world into a different one with the use of psychedelic drugs during the blooming of the Silicon Valley [30]. The reach of a "higher" or "different" reality is clear and evident in both the cases. The same word "cyberspace", which is broadly used to identify the space in these digital realities, was coined by William Gibson as a "consensual hallucination" [10]. The "only" difference between these two cases is in the way subjects reach it. In one case they assume some grams of psychoactive substances and in the other one they uses bits of information.

In this escape subjects becomes "free" from the real world and they are able to do what they want as far as they use the right program enabling them to do it.

In this case, the other the subject meets is a "digital other" created in this second digital world.

4.2   The "Digital Other" in the Everyday World

A new way of using computer technologies is to intertwine their activities in the everyday world. It is the opposite direction of creating a different world where subjects have to immerse themselves. According to this new way, digital activities cannot be easily confined in a second digital world because they are part of subjects' common practices and they are part of their real world.

The idea of a cyberspace and a virtual reality seems quite "surpassed" and the same Gibson, who was one of the creator of the term "cyberspace", is moving the opposite direction by talking of the "eruption" of the digital objects into our everyday world [11,12]. Our everyday world is being colonised by digital objects and, as Mark Weiser predicted [40], computers are literally becoming

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[14] William Gibson in his book Neuromancer [10] showed how a hacker used to live in the digital world would look at his real body in a very different way of other ordinary people. Case, who is a hacker living in this futuristic cyberpunk world, clearly looks at his own "meaty" body as something imperfect and to be surpassed.

part of our surroundings without forcing the subject to immerse themselves into a second digital world. There is simply no other world where the subject should be immersed in because subjects are free to interact with the digital content in their every day.

In this case, the "digital other" is not created in a second world, but it is located in the subjects' everyday world.

Now that we have a clear idea of how there are two different usages of computer technologies, we can apply the term *riajuu* to them in order to understand how subjects perceives these "digital others" and how they relate to them.

4.3   *Riajuu* and the Digital Other in a Virtual Reality

As we saw, the classical way of using computer technologies is to produce a second world into which subjects have to immerse themselves. In this second digital world they can build also intimate relationships with other subjects and so something on which the term riajuu can work.

Both of the partners are perceiving each other in their digital bodies. Thus, according to our previous analysis, the perception of the "other" cannot provide the fulfilment of the "realness" required to be *riajuu* because their bodies are generated through digital technologies.

Moreover, this other is not only digital in its content. It is perceived as part of the virtual reality, and so it is not part of the everyday world by definition. Even if there is a connection between the subject in the everyday world and the avatar in the second digital world, the experiences made in this second world are experienced by the digital avatar and not by the body of the subject in the everyday world. It is the subject embodied in the virtual avatar who acts and interacts with the "digital other" encountered. Therefore, this "other" can be resistant only to the eyes of the digital avatar of the subject and not to the eyes of the subject's everyday body.

This digital other might be resistant to subjects when they are living in the virtual reality, but they are not "resistant" at all to the subjects in the real world.[15]

For these reasons, the otherness experienced in virtual reality do not provide riajuness to the user. The subject perceives the digital other as "digital" in its content. Moreover, this digital other is not resistant in the everyday world.

4.4   *Riajuu* and the Digital Other in the Everyday World

Instead of having a relationship with a digital other in a digital world, it is possible to have a relation with an other who/which is part of our same everyday world: another human person or a robot.

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[15] We are not saying the experiences had in the virtual reality are "bodiless" [36], but just that they are experienced with the digital body and not with the everyday one. The actions of this "digital other" can be interlocked with the ones of the subject's avatar, but they are not interlocked with the ones of the body in the every day. Thus, this "digital other" cannot be resistant for the subject in the everyday world.

As we saw, this topic is rising many issues on possible effects and potentialities in the future. However, without going into speculations about futuristic technologies, there are already products that, even if without a human-like body, introduce an artificial intelligence in our world, such as the computer game *Love Plus* [ラブプラス].

Love Plus is a computer game created for *Nintendo DS* in which an artificial intelligence is designed to act as a girlfriend towards the user. This girl has the *Nintendo DS* as body, and, with it, "she" perceives and interacts with the subject by capturing the actions thanks to its sensors. The game makes the subject act towards the virtual girl by acting in the subject's everyday world in various ways.

– It makes the user spend real time to cuddle her when she is having a bad day
– It makes the user give her real gifts for her birthday or the St. Valentine's day
– It makes the user go in real vacations with her and booking hotel rooms in the facilities which are able to deal with such a digital customer [39]
– It makes the user kiss her digital "lips" with the subject's real physical ones by kissing the monitor[16]

According to our previous analysis this girl is "digital" because it is an artificial intelligence, and so it is created by a digital technology. The user clearly perceives it as a digital entity with a plastic body. Thus, the girl does not provide the "realness" in the content needed to make the subject *riajuu*. However, it is not clear what happens for the second element we highlighted: the "resistance" opposed to the subject.

The actions required by the game is completely different by the actions required by other computer games in a virtual world. *Love Plus* requires the subject to act in the real world as if the digital girl were real and physically present with the subject in the everyday world. The subject has to intertwine the everyday activities with the digital girl and her physical body.

In the virtual world the actions are encapsulated in a second digital world inhabited by avatars and so their relations are not part of the everyday world. The subjects are able to freely disconnect the digital world ending every relation in it. In the case of *Love Plus* we are moving in the exact opposite direction.

The game is not in a second digital world. Everything happens in the real world and subjects have to relate to the digital girl as if she were physically present because she has a real body. The lips of the girl the subject has to kiss are not the lips of an avatar, but they are part of the everyday world, even if they are made of the plastic of *Nintendo DS*.

We showed the "resistance" is founded on the intertwinement between the actions of different subjects. Subjects are not free to act as they want because there are always the intentions and the actions of the others to be taken into account and which resist them. A digital other in a virtual reality cannot have

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[16] It is possible because there are sensors which detect such an action and so they can make the digital girl "feel" the first subject kiss.

this element because the intertwinement among the actions of the subjects is "merely" related to their digital bodies and so it is confined to the digital world. However, the digital girl produced by *Love Plus* calls for an intertwinement of the actions in the everyday world. Therefore, for some aspects, we need to think of "her" as "resistant" because the subjects' actions in the everyday world are intertwined with the actions of the digital girl. This tight intertwinement between common actions in the everyday world and the actions required by the digital girl is what makes her "resistant" to the subject.

Even if the content of the "other" is "digital", the way the subject relates to "her" is "real" because it is based on the resistance opposed by this "digital other". Thus, according to this element, the subject is *riajuu*.

The girl is digital, but everything else related to such a relationship is not.

5   Conclusions

We wanted to analyse if it is possible to have relationships between computer and human beings even when the "digital other" is manifestly not human. According to mediation theory, if it is possible, we need to consider these intimate relationships as elements which will re-shape how we develop relationships in general even among other human beings.

In the first part we showed how the term *riajuu* works and how it can be enframed in a phenomenological analysis. The "other" can be real or digital according to its content and to the fact it is able to oppose "resistance" to the subject.

In the second part we highlighted how two different ways of using computer technology can produce two different "digital others": one in a virtual reality and another one in the everyday world. Thanks to the word *riajuu* and a phenomenological analysis, we showed the difference in the relations of these two others with a human subject. The content is digital in both the cases, but the way subjects relate to the digital other changes. The digital other in the everyday world calls for an intertwinement between its actions and the actions of the subject in the everyday world. This co-action in the everyday world is what makes the "other" resistant. Thus this "digital other", even if it has a digital content, is perceived as "resistant" from the subject.

The way this "digital other" is designed shapes the relations it has with the subject, and so the digital content does not compromise the kind of relationship it is possible to have. Even if it is a digital being, and it is manifestly perceived as not human, it provides the subjects with "resistance" and this element is the basis for any intimate relationship. Thus, we can answer to our question on the possibility of developing feelings towards digital objects. It is possible to look directly in the lifeless plastic eye-bulbs of a machine knowing it is nothing else than plastic and circuits and still have feelings towards it according to a phenomenological analysis.

They are merely lifeless objects, but this is not enough to exclude them from our intimate life.

Maybe we will find ourselves asking "Do you want to marry me?" just to receive the answer "Oh dear, . . . it is late. I do need to charge my batteries. Can we talk tomorrow?"

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