Digitalisation of sexuality: Emotional embodiment and processes of co-construction of knowledge

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Abstract

The aim of this work is to examine how the process of emotional embodiment can restructure various aspects of the person, with a particular focus on sexuality. As highlighted in the full chapter 'Digital Sexuality and Artificial Intelligence' of the book 'Emotion, Embodiment and the Virtual World' (Auriemma, 2024), this phenomenon emerges as a crucial element in contemporary life. Interaction with virtual elements, such as bots, automated chats, auto-responders and avatars, is increasingly frequent. Contrary to what Grosz argues, in the digital context the body is not defined by organs or physicality, but by processes delineated by the digital world. In this environment, people 'meet' and experience pleasures and passions through the avatar, which is controlled by the person in the physical world. The activities carried out range from the most complex to the most elementary, thus influencing behaviour. This work takes up fundamental elements of sociological classics, in particular the concepts of action and alienation of Marx and Weber. The analysis focuses on the role of the concept of embodiment in virtual sexuality, exploring how it is co-constructed, represented and inserted in a discourse of social action. The avatar becomes the point of contact that facilitates interaction between people, mediated by new technologies. This study aims to understand how emotional embodiment in the digital context can influence sexuality and social behaviour, offering a new perspective on human interaction in the virtual world. In addition, the ethical and psychological implications of these virtual interactions will be considered, analysing how the perception of the self and the other is modified through the use of avatars and other forms of digital representation. We will discuss how virtual sexuality can challenge traditional norms and create new forms of expression and identity. Finally, we will explore the therapeutic potential of emotional embodiment in the digital world, assessing how these technologies can be used to improve people's emotional and relational well-being.

Keywords: Digital sexuality; Artificial Intelligence; Embodiment; Emotional capitalism; Body

Introduction

The concept of digital sexuality, partly published in the chapter "Digital sexuality and artificial intelligence" of the book "Emotion, Embodiment and the Virtual World" (Auriemma, 2024), emerges as a crucial element of contemporary life. It touches on

various topics and authors, starting with the classics of sociology. For example, it is possible to quote Weber who describes the sexual act as a communal and private experience; in fact, Weber, as Cipolla takes up in his text, emphasises that sexual love is the most powerful force in communities (Cipolla, 2023). Finally, the element of emotional capitalism, dear to Eva Illouz, is also interesting, and can be found in some digital contexts where emotions are the primary "need" to be commercialised. Therefore, as Plummer argues, it is essential to recognise the body as the primary place for the analysis of sexuality, analysing it using appropriate tools to reintroduce it into the discourse linked to the avatar (Plummer, 2002). In this regard, what is changing is the reinterpretation of the body, no longer just tangible, but also virtual. In fact, even avatars have their own history, their own sensoriality, and we recognise them as a "body", even if it is virtualised and to be used as we please. Its reintroduction is based on the concept of veneration, which not only brings knowledge closer, as it used to do, but also the ability to be 'beautiful'. However, today the discussion is part of a debate that analyses its blurriness, starting from the very idea of the concept of the body; therefore, the concept of the body today is based on a restructuring of the unstructured idea. Contrary to what Grosz states, in the digital world the body is not characterised by organs or physicality, but by processes outlined by the digital world, where one "meets", by pleasures and passions brought by the person who controls the avatar in the physical world, and by activities ranging from the most complex to the most basic, thus influencing behaviour. In this context it is possible to summarise this process with the term embodiment. That is, a process of incarnation in an avatar, recognising oneself and living a second life within "another world". This is because the avatar offers the authors the possibility of having an "imaginary freedom" that seems to escape the Weberian logic of the steel cage. This triggers a sense of belonging in the person that, morally, prevents them from detaching themselves from their online alter ego. In the context of sexuality, embodiment takes on a venerable dimension, based on a sort of fraternal and intimate bond that allows one to freely exhibit their intimacy. Therefore, in this paper, we will try to analyse the role of the concept of embodiment linked to virtual sexuality, where the avatar becomes the point of contact that allows interaction between people in dialogue with new technologies.

The processes of the digitalisation of sexuality

The processes of the digitalisation of sexuality present themselves with various nuances, the representation of which can often be confusing. In fact, as anticipated, the process of embodiment allows people to identify with activities, personalities and processes within a practice that we will call imaginative. The process is fairly "linear"; you empathise with a situation through other people's stories or through your own. This makes it possible to take eros and sexual desire to a completely different level from what we are used to, but relegating their liberation to the realm of imagination and

reflective sensuality. As can be understood in the first part of the passage, emotional embodiment reaches a very high level, almost comparable to real emotions. Think about the level of concreteness found in these proposed experiences. They range from mild degrees (such as imaginative emotional manifestations) to higher degrees (such as expressive and factual emotional manifestations). Recognising oneself in an avatar and, as we will see shortly, recognising oneself in or as a robot, is by far the broadest expression of freedom that our body and mind can perceive at this moment in history. However, this recognition is obtained through "reflected flesh", that is, an element that allows the person to feel physical consistency in the digital world by reflecting themselves and the image of themselves that they decide to share; through what society considers beautiful and, above all, through what most people consider interesting at a given moment in history. Just like social changes, bodies also take on different relevance and importance throughout history. Just think about how people's view of tattooed bodies has changed over the years, how it was considered in the past and how it is considered today. In short, it is a process of physical and personal transformation that undermines personal interests. As one can imagine, it all happens through the co-construction of the self, where the interaction is mediated by the "body symbol", the first business card from different offline and online perspectives. This recognition is not only the recognition of oneself with respect to mechanised self-representation, but also the recognition that the other person is an "impersonal person", that is, a mechanised person who has knowledge, responds through interaction with artificial intelligence, simulates emotions and love, but is no longer a socially understood person. However, this transformation is not complete, and the body today has become a machine most of the time. We could think that this is very close to what Marcuse described in his 1955 Eros and Civilisation, proposing a non-repressive social model based on a synthesis of the theories of Karl Marx and Sigmund Freud. He believed that the progress of civilisation was based on the suppression of instinct, that is, on the abandonment of the principles of freedom, life and joy of happiness and love. But, this may represent a fantasy of sexual liberation, but it is always embodied in the process of conditioning criticised by Marcuse. Capitalist and industrial society produced a false consciousness and a homogenous mass culture and imagined an alternative society in which the individual could realise his creative and erotic potential, freeing himself from the constraints of instrumental rationality and bourgeois morality. Therefore, these processes are indeed new, but they continue to simulate older structures and, as technology advances, the degree and type of realisation increase. The reference is certainly to activities that are embedded in today's society, such as virtual sex, which includes real corporeality, implies the use of technologies such as virtual reality, interactive games or dedicated platforms. It usually involves a more immersive interaction and can include: 1) visual and sensory realism: in this context and through the use of viewers that allow you to build an avatar, it is possible to start sexual simulations within dedicated sites. To this we

can also add the possibility offered by interactive videogames that offer a visual and sensorial representation of a sexual experience based on the choices to be made. As described in the book "Emotion, Embodiment and the Virtual World", this interaction is more involving and includes visual and sensorial realism, virtual interaction, as well as the possibility of using devices that interact in real time with what happens in the virtual world. Furthermore, in recent years various emotional incarnation practices have become very popular, such as approaches between avatars. In fact, virtual sex practised through avatars represents a first step towards the unveiling of the mask. We no longer find an avatar that enters into direct interaction with the other person, but the person himself who is embodied in a digital avatar. This process should not be seen as something linear and aseptic, but rather as a process of emotional incarnation before it is biographical. By this we mean the process through which a person recognises themselves in a totally self-constructed avatar, both in its "physical form" and in its "history". This is the first step in the process of interaction with other avatars, where the only two practical senses will be sight and hearing. For this reason, emotional embodiment takes place on three distinct levels: cultural background (the only element in common with the presence of the avatar), expression and involvement.

The new processes of co-construction of digital culture

As analysed in the previous paragraph, co-construction processes are influenced by several factors, above all interactions with other people and other cultures. A different case concerns the processes of recognition and co-construction of sexualities, which cannot be explained only by the interaction between embodied avatars, characterised by their restructured cultural background, but also by artificial intelligence. The specific duty concerns the concept of co-construction of sexuality, which, within this work, focuses its interest on the processes of intimate interaction in the virtual world. However, before proceeding, it is also necessary to emphasise how the development of Artificial Intelligence is understood in sociology in this historical period; certainly this information will be valid for a very short period of time and, as early as next year, it could take on a totally different meaning from what we have today. Artificial intelligence could be understood both as the ability of a machine to replicate human abilities such as reasoning, learning, planning and creativity; and as a discipline that studies the possibilities of making computer systems capable of simulating human thought. As mentioned, information regarding artificial intelligence (AI) could undergo drastic changes, since the processes of transformation of AI are constant and often exceed all possible expectations (Russell & Norvig, 2021). We are used to seeing artificial intelligences in films that are capable of performing processes that would take a person months to carry out, such as common autonomous driving or home automation processes (Goodfellow et al., 2016). These aspects will be implemented in our daily lives in a few years, if not a few months (Brynjolfsson & McAfee, 2014). Therefore, it will be interesting to

analyse the change starting from a description of daily life with AI-powered machines, which will allow us to think about aspects that were unthinkable until now, such as love (Turkle, 2011). In fact, as is already happening in parts of the virtual world, emotional embodiment extends to the understanding of this last concept (Auriemma, 2024). Although nuanced and with a different strength than what we are used to, love has become a daily online process, like meeting on a website and telling each other about yourself (Turkle, 2011). However, this aspect is particularly dangerous; in fact, within the embodiment process it is possible to tell one's story in a way that is totally different from one's biography (Grosz, 1994). One tries to make oneself "interesting" in the eyes of the other, an interest that becomes both "artistic" (the way of representing oneself through the avatar) and narrative (the way in which one decides to tell oneself to the other) (Grosz, 1994). Certain events are embellished, others are silenced or, worse, stories are invented to create the effect of attraction (Turkle, 2011). This way of acting works until what is defined as love in the offline world happens. In the latter case, the online world and the offline world meet and the incarnation in the avatar ceases to exist (Auriemma, 2024). Reasoning about these elements could be counterproductive without a theoretical basis; in fact, it is possible to take up Weber again, in particular his metaphor about the steel cage and social action (Weber, 1922). It is important to emphasise the metaphor of the steel cage because we have the illusion, as Terranova wrote about the Internet, that we can be truly free in a digitised world in harmony with AI (Terranova, 2004). However, Weber's description of how people are subject to a series of constraints from which they cannot escape (Weber, 1922) still holds true. Constraints that, if previously came only from the capitalist economy, today also come from social capital (Bourdieu, 1986). The only way to integrate and interact with society and institutions is to adapt to a new way of working, which allows for the onset of a process of alienation much broader than that dear to Marx (Marx, 1844). Today, as in the past, it is possible to find a social structure made up of places and roles that change as we enter or leave the institutions present in our lives (Giddens, 1984). This mental construct doesn't leave much room for manoeuvre and makes people feel as if they are tied to the same reinforced steel cage, as described by Weber (Weber, 1922). Taking up Weber again, it is also possible to find the concept of acting, which becomes of fundamental importance (Weber, 1922). This concept could only fully fit into the discourse of embodiment with artificial intelligence if we consider the latter as social agents, i.e. entities that interact with other agents (human or artificial) based on rules, objectives and 'values' (Russell & Norvig, 2021). Weber uses the concept of social action to analyse historical and social phenomena, such as religion, law, bureaucracy, capitalism and modernity (Weber, 1922). Therefore, even with the full implementation of AI, we will be obliged to observe a series of rules, norms and conventions that make our lives hostage to a mental prison (Weber, 1922). Certainly much broader than in the past, given the possibilities that the virtualised world offers us, but at the same time it makes our society much more repressive than Weber's and pre-modern societies (Weber, 1922).

Embodiment and capitalism

It is reasonable to assume that not all forms of embodiment in the digital world are equally effective. As with levels of empathy, it takes some imagination to delineate the possible degrees of embodiment. On initial analysis, three can be identified: identification, involvement and transformation.

Identification represents the lowest degree of embodiment, in which the user recognises themselves in communication with an AI, be it an application or an avatar, as a projection of themselves, without however feeling completely immersed in the virtual world. The avatar is perceived as a tool for interacting with others or with the environment. In this phase, the user is not fully aware of the potential of the virtual world, using it only as a channel between the "two worlds".

Immersion constitutes an intermediate degree of embodiment, in which the user feels part of the virtual world and experiences emotions and feelings connected to the interaction with the AI. The avatar becomes a form of self-expression, influencing the user's behaviour and choices. In this phase, we also observe a projection of the individual's culture, knowledge and biographical processes.

Transformation represents the highest degree of embodiment, in which the user fully identifies with the AI, experiencing a fusion between the real self and the virtual self. The AI is perceived as a true extension of the self, capable of modifying the user's perception and identity. In this phase, it is possible to proceed with a co-construction of knowledge, modifying the degrees of reality and their projections through the encounter with other virtualised knowledge, thus generating new knowledge.

This last level is fully identified with the independent levels of empathy, as it is possible to observe every aspect deriving from emotional interaction with others. However, these processes are ambivalent: on the one hand, there is the possibility of generating new knowledge, interactions and relationships, accelerating and structuring processes that were previously slower or required greater attention and precision. On the other hand, there is the risk of alienation, which, unlike Marx emphasised, does not manifest itself as dehumanisation and exploitation of the worker in capitalist society, but as the delegation of knowledge to computer processes.

The alienation generated by AI and by the processes of embodiment with avatars could take on even worse connotations. In this context, alienation in the use of technology manifests itself as a loss of control and awareness of one's mental and creative abilities, delegated to mechanical or computer devices. If, according to Marx, the worker alienated himself from himself, from the product of his labour, from other workers and from nature, losing freedom, creativity and identity, today we lose our mental abilities, getting used to delegating our daily life to tools and applications,

alienating ourselves in the processes. This phenomenon can have negative effects on a social, psychological and cultural level, reducing the freedom, autonomy and creativity of the individual.

As in Marx's time, alienation is caused by the economic system based on private property, the division of labour and the accumulation of capital, but today there are additional aspects, especially ethical ones. The ethics of artificial intelligence, which studies how to guarantee a reliable, legal, ethical and responsible use of AI, taking into account human values and fundamental rights, has become of fundamental importance. In 2019, the European Commission published guidelines on the ethics of AI, based on seven requirements: respect for human autonomy, harm prevention, fairness, explainability, accountability, privacy and governance.

Respect for human autonomy implies that AI systems are supervised by human personnel, guaranteeing a safe, legal and ethical use of AI and preserving the autonomy and dignity of the people involved. Preventing harm requires that AI systems be reliable, resistant to errors and cyberattacks, and minimise damage in case of malfunction or misuse. Privacy is fundamental: AI systems must respect privacy and the protection of personal data, guarantee data quality and integrity, and enable access to and sharing of data in a transparent and responsible manner.

Transparency requires that AI systems are understandable and explainable, providing clear and truthful information about their functionalities, limitations and impacts. Diversity and non-discrimination imply that AI systems respect human diversity, avoid bias and discrimination, and promote fairness and social inclusion. Social and environmental well-being requires that AI systems contribute to human well-being and environmental sustainability, taking into account long-term effects and future generations. Finally, accountability implies that AI systems are subject to control, verification and review mechanisms, allowing traceability and liability in case of negative impacts.

A reinterpretation of Weber's behaviour

When Weber talks about action, he is referring to human behaviour with meaning and purpose towards other individuals. Weber distinguishes four types of social action, based on the degree of rationality and meaning attributed by the actor: 1) rational action with respect to purpose, when the most effective means are chosen to achieve a desired goal; 2) acting rationally with respect to value, when an ethical, religious, aesthetic or political principle is followed, regardless of the consequences; 3) acting affectively, when a feeling or emotion is expressed, without reference to a purpose or value; 4) acting traditionally, when a habit or custom is repeated, without questioning its meaning or alternatives.

Similarly, we can analyse the meaning and purpose of the actions of artificial intelligences, as well as their impact on human society. The meaning and purpose of the actions of artificial intelligences depend on several factors, just like human actions, including:

a) The type of AI: not all artificial intelligences are the same; there are different forms and levels of AI, ranging from "weak" or limited, capable of performing specific and predefined tasks, to strong or general, which could reach or exceed human cognitive abilities in various fields.
b) The context of application: the context is also of fundamental importance for AIs. By context we mean the "place" in which AIs can be used, with ethical, social, economic, political and environmental implications. Artificial intelligences can be used to improve health, education, security, mobility, communication, creativity, etc., but also to manipulate, control, discriminate, destroy, etc.
c) Design and programming: artificial intelligences are the result of human processes that influence their behaviour and meaning. AIs can be given values, objectives, preferences, constraints, incentives, etc., that can be explicit or implicit, coherent or contradictory, transparent or opaque.
d) Interaction with other agents: artificial intelligences can interact with other agents (human or artificial) based on rules, norms, conventions, expectations and emotions that can be shared or conflicting, stable or dynamic, symmetrical or asymmetrical. We can imagine a future in which artificial intelligences feel and understand human and non-human emotions, as described above with avatars.

In addition to the purposes, as in Weber's analysis, we also find the impacts of artificial intelligences on society, which depend on how they are designed to interact with reality, regulated, evaluated and integrated into society itself. It is possible to reflect on some types of impact, including:

1. Improving quality of life: artificial intelligences can contribute to solving global problems, such as poverty, hunger, disease, climate change, etc., and provide new opportunities for development, innovation, inclusion and participation.
2. Transformation of work: artificial intelligences can replace, integrate, modify or create new activities, professions, skills, roles and relationships in the world of work, with positive or negative effects on employment, income, productivity, satisfaction, etc.
3. Ethical challenge: artificial intelligence raises ethical questions, such as responsibility, justice, privacy, security, trust, dignity, autonomy, freedom, which require critical reflection and dialogue between the various stakeholders to ensure respect for human rights and fundamental values. In this regard, we can mention the press conference at the ITU AI for Good Global Summit 2023,

where androids with artificial intelligence interacted with real people. The event, organised by the International Telecommunication Union (ITU) in collaboration with 40 United Nations partner agencies, was held in Geneva on 6 and 7 July 2023. The summit aimed to identify practical applications of artificial intelligence to accelerate progress towards the United Nations Sustainable Development Goals. The summit showcased innovative solutions and high-level speakers in the field of artificial intelligence and robotics, and hosted discussions on how to ensure safe and responsible artificial intelligence and develop possible global governance frameworks for artificial intelligence. Eight social humanoid robots and more than 50 specialised robots were presented, demonstrating capabilities ranging from firefighting and humanitarian aid delivery to healthcare provision and sustainable agriculture. Therefore, progress has already been made in this direction and it is not pure utopia.

4. Cultural co-construction: artificial intelligences can influence and be influenced by human culture, understood as the set of meanings, symbols, practices, beliefs, norms and identities that characterise a society or group. This can lead to new forms of expression, learning, knowledge, communication, collaboration and conflict.

However, this pairing also presents challenges and limitations, since artificial intelligences are not necessarily aware of themselves and the surrounding world, at least in their current forms, nor do they possess the ability to distinguish good from evil. Furthermore, artificial intelligences are the result of human design and programming processes, which influence their behaviour and meaning. Therefore, what is proposed is only a starting point for more in-depth reflections aimed at linking Weber's concept of action to artificial intelligences.

To delineate the linearity within this paragraph, which will allow for a better understanding of the processes that will follow, it is necessary to start with the description of the levels of embodiment, so as to be able to define what is meant by embodiment with artificial intelligences.

Conclusions

From a sociological point of view, it is interesting to understand how moral norms, rules, beliefs and practices influence and are influenced by the structure and functioning of society. Several authors have dealt with this topic, including classics such as Auguste Comte, Karl Marx, Emile Durkheim, Max Weber, Georg Simmel and Vilfredo Pareto, and contemporaries such as Jürgen Habermas, Alasdair MacIntyre, John Rawls, Amartya Sen and Zygmunt Bauman. Although none of these authors explicitly discussed

artificial intelligence and ethics applied to the processes of embodiment, it is possible to interpret their thinking in light of these new challenges.

For example, John Rawls, an American political philosopher known for his theory of justice as fairness, proposed two principles of justice that should govern the basic structure of a liberal democratic society: the first principle states that every person has the right to fundamental freedoms, compatible with similar freedoms for others; the second principle states that social and economic inequalities are justified only if they benefit the most disadvantaged and are associated with positions and offices accessible to all. Among the various writings that have taken up this thought, we certainly find "AI: Ethical Profiles. An ethical perspective on Artificial Intelligence: principles, rights and recommendations" (Corea, Fossa, Loreggia, Quintarelli & Sapienza, 2023). This work emphasises an important aspect, namely the principle of human dignity, which «constitutes a limitation of the power of self-determination and action of the individual, whereby the intrinsic value of his fellow man acts as a boundary of his own freedom» (Quintarelli, Corea, Fossa, Loreggia & Sapienza, 2019, p. 186). It is emphasised that AI, given its social pervasiveness and the profound impact it is believed to have on every aspect of life, can have significant effects on respect for human dignity (Ibid.).

As we approach the conclusions of this section, we can emphasise that these two aspects of sexual embodiment have distinct characteristics and, although still little explored, several insights have emerged on which to act. In particular, it is plausible to think of a microsociology of everyday life, similar to that masterfully highlighted by Goffman, which can bring out the characteristics and peculiarities of the people involved in this type of interaction. To date, the prevailing rhetoric is that of the individual flâneur, who wanders bored among the various sites that allow a sort of immersive interaction through avatars, but which is basically seen as a pastime. In reality, there is much more: the possibility of falling in love, getting angry, being disappointed or happy are all aspects that exist and manifest themselves in this particular world.

Symbolic capacity is also of fundamental importance, a capacity that is born in a real world, as interactionist teachings maintain, but that translates into a world very different from the one in which we are used to recognising ourselves. The process of symbolic interaction, before, during and after the processes of digital embodiment, produces the co-construction of knowledge, necessary to generate both manifest knowledge and stories and to make history. Just think of those who co-constructed themselves during the massive assault, known as the digital pandemic, of World of Warcraft, and how those people who embodied an imaginary but real character with the same power as a person in that world, were able to emerge with new knowledge. Therefore, not only did they join forces, but they also experienced the same event, allowing them to have a common memory. This co-construction allows for an evident change, like all the self-constructions we experience during the various stages of life.

Since that world reflects, but personalises, the physical and tangible world, it is necessary to elaborate, in the next section, on two other emotions: anger and fear, which are an integral part of the emotional compartment that can be experienced in the process of incarnation with an avatar or in confrontation with an artificial intelligence.

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DP13193-DP13194 28-2010 Academicus International Scientific Journal
International Trademark Classification under the Nice Agreement

Presented: March 2025
Included for Publishing: June 2025
Published: July 2025, Volume 16, Issue 32 Academicus International Scientific Journal