

The Performative Portrait Iconic Embodiment in Ubiquitous Computing

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ABSTRACT

The paper looks at the digital portrait used in the form of avatars in various online worlds and communication networks. It describes an ongoing modal shift from an ontological understanding of the portrait towards the portrait as performative act.

In accordance with the Western semiotic divide between representational fiction and material reality proper, the portrait-avatar is often still described as a representation that depicts the subject on the basis of a segregation between the living subject and the portrait. But the avatar-portrait functions as embodiment, thereby fulfilling a mainly performative and not epistemic purpose. Surpassing even the concept of the extension, the user and her portrait-avatar can be seen, rather, as a performing and communicating unit.

The paper looks at Eastern iconology, where the portrait is an energetic transmitter in which the depiction and the depicted converge in the realness of the picture. Key concepts such as prototype, archetype, and inverse perspective are discussed and applied to the art piece *Can you see me now?* by Blast Theory.

Keywords

Avatar, portrait, icon, communication, body extension.

1. INTRODUCTION: EMBEDDED SCREENS

Screens and images seem to be an anachronism in the era of pervasive computing. The very idea of pervasive computing, and accordingly the design of pervasive technologies, is based on the notion of invisibility. Pervasive technologies, their operational algorithms and the factual outcome should be embedded in the actuality and reality of the human being, making the notion of the user obsolete, since in the best case scenario s/he is not aware of these technologies. In fact, screen based technologies seem to constitute an obstacle for this vision of embeddedness and all-encompassing technologies, precisely because they seem to render an interface that divides and thereby constructs different ontological realms: a physical reality and a virtual data-space and its visualizations. In order to avoid this split, calm technologies make use of input and output devices that either are not meant to be noticed (the famous scenario of the intelligent toilet and refrigerator or other form of ambient intelligence) or that employ

those human senses that are said to perceive either immediate nearby reality like tactility, proprioception, or inescapable reality like sounds. This categorization of senses is obviously based on a division between reflective and non-reflective senses. The visual sense, especially in conjunction with the medium of pictures and images, is said to delineate reality from represented reality (e.g. [13], [21]); it is widely seen as a sense that enables and supports reflection, whereas senses such as tactility and smell seem to unify the human subject with his surroundings. I do not want to engage in a discussion about the usefulness and validity of these categories, but for me there is no question that it is not the sense per se but a cultural formation of the senses by different media usages that enhances (or diminishes) the reflective recognition.

This is also observable in the field of electronic art. David Rokeby's installation piece and software *Very Nervous System* [23] deliberately does not use screens. Instead the artefact measures the participant's positions and postures and uses the resulting data for sound and music generation. Even though the participant is aware of the artistic framing of the interaction, the very modality of the interaction seeks to obliterate this framing by relating the presence of the material space with the participant's proprioception and omnipresent sound. *Very Nervous System* enhances a material, ontologically secured space, in order to avoid visual displays and their images, which in general, regardless of the applied technologies or formats, mount a distinction between reality and something that reflects reality in one way or another. Char Davis' canonical installation *Osmose* [24] also seeks to immerse the participant into a reactive space. She applies technologies that measure bodily functions and body postures. Contrary to *Very Nervous System* though, the artistic space of *Osmose* is constructed as an all-enwrapping 3D space facilitated by a head mounted display (HMD), where the image replaces reality's visual features by negating the frame of the image.

Both pieces assert the logic of the reflective screen, since both try to avoid or overcome it. I want to question this seemingly inevitable tendency of the displayed image to construct a divide by proposing that, in the wake of omnipresent computing, the epistemological status of the image has changed or at least is in the process of changing.

Of course, digital imagery is a vast field ranging from digitalized paintings from art history to vector based graphics and digital photography. I want to focus on the portrait used as avatar in electronic art. Additionally, I will look at some examples from

social computing and online worlds. This article seeks to show that the dominance of the 'reflective significance' of the image is in decline. Instead the image is, especially when used by pervasive technologies and various kinds of virtual online worlds, a medium of embodied communication. This calls for an altered conceptualization of the digital portrait.

2. CAN YOU SEE ME NOW?

A portrait depicts a person by means of painting, sculpture or photography, normally with the face as the predominant body part conveying the individual personal traits of the depicted. Yet, the portrait is not confined to the face; the whole body or parts of it, as well as symbolic attributes and props can depict individuality and social status. The etymology of the portrait asserts that the portrait "traces or draws forth" (from lat.: *trahere* – to drag [25]). Used as avatar in data spaces, the portrait can have a variety of expressions and features depending on the function and visualization of the data world in question. In social websites, the avatar-portrait is mostly a digital picture of the user; in MMO's the avatar is a synthetically constructed 3D or 2D figure. But it is not so much the pictorial and formal design of the portrait-avatar, but its function and usage in virtual realms that discloses the alleged epistemological shift of the picture.

My example, which informs my argument throughout the paper, is Blast Theory's art project *Can you see me now?* (2001), because of the piece's exemplary blending – or better, simultaneity – of virtual and urban spaces. This simultaneity lies at the roots of the functional significance of the avatar-portrait. *Can you see me now?* is an urban gaming project that combines and juxtaposes effectively urban, material spaces and their virtual representation on screen. The game consists of two parties, so-called runners and players. Runners are flesh and blood persons located in well-defined real urban districts chasing virtual avatars. Players, who can participate in the game from their personal computer at home or from computer terminals set up by the organizers, control the virtual avatars.



Figure 1. Screen dump, *Can you see me now?* Blast Theory [26]

The website for the game in Brasilia states:

"Players are dropped at random locations into a virtual map of the streets around the Praxa Duque de Caxias in Belo Horizonte. Tracked by satellites, Blast Theory's runners appear online next to your player. Situated in the real city, handheld computers showing the position of online players guide the runners in tracking you down." [22]

The communication between those ontologically different realms is done by conventional PCs with monitors, mice and keyboards on the side of the players and on the side of the runners by PDA with GPS navigation systems and auditory transmission devices. The PC and PDA give access to the virtual data representation of the very same urban space depicting a cartographic image that includes both the player's and the runner's avatar in the form of a simple icon of a running man.

"Use your arrow keys to flee down the virtual streets, send messages and exchange tactics with other online players. An audio stream from Blast Theory's walkie talkies lets you eavesdrop on your pursuers: getting lost and out of breath on the real streets. If a runner gets within 5 meters of you, a sighting photo is taken and your game is over."[22]

The interplay between these two different spaces problematizes the notion of reality and representation, since the runners are chasing virtual persons that are populating the urban space. Yet the very same persons are sitting somewhere else in front of their computer monitors. The players simultaneously exist in the terminal room and in the real space of the city - and yet, as we all would concede, they do not. The players are captured, their pictures are taken, but the photo consists merely of space - and an imperceptible ghost (for the knowing participant and beholder).

The players and runners are represented by small pictographs of a human figure comparable with the pictographs in traffic lights or escape signs. *Can you see me now?* uses very simple avatars, and one can criticize my conflation of portrait photos and pictogram; yet the performative aspects of the pictograms open up the possibility for using portraits in ubiquitous online domains. No mimetic personalized form connects the player with his avatar, yet the runners in the urban space are chasing distinct, yet absent players. The playful merger of virtual and urban spaces gives the crude avatar another status. The player interacts through the avatar with real persons. The same is the case of other online worlds. This correlation in action between the avatar and the player/runner constructs a performative relationship between them.

3. EPISTEMOLOGICAL SEPARATIONS

Robert Jauf [9] claims that the distinction between reality and fiction is a typical modern trait initiated in the middle of the 12th century. The Middle Ages, so he writes, was unaware of the notion of historical truth. The mere materiality of a document guaranteed its truthfulness; the reliability of documents was not questioned. Hence interpretations and historic facts were indissolubly intertwined.

But since the dawn of modernity during the Renaissance, reality has been defined as a stable supra-personal fact beyond subjective perception. Even today, perceptual subjectivity still seems to endanger factual reality. Reality has to be verifiable by scientific measurements and is thus 'true' for each and everyone. The scientific method of natural science was one of the catalysts of modernity, which created an everyday culture that began to distinguish between reality and its antinomy fiction. Fiction has since been defined as something made up either by intentional active fantasies (novels, theatre plays, and motion pictures) or (supposedly) unintentional and sometimes pathological imaginations (e.g. schizophrenia).

The arts in particular have exploited and still are exploiting this divide. Alberti [1] created the window metaphor in order to

delineate the represented in its mathematical harmony. Leonardo da Vinci's drawings and sketches of bodies were scientific, anatomical depictions and at the same time artistic investigations. Another example is the theatre since the era of the Enlightenment in the 17th century. This theatre is based on the impermeable distinction between fiction and reality. Not only do the stage curtain, the stage itself, etc. construct a divide between reality and fiction, positioning the observer at a distance, but right in front, the fictional occurrences on stage are also seen as a kind of epistemological mirror, reflecting reality and disclosing truth by means of, for example, metaphors. This is even re-reflected in the presented narrative, where the hero's recognition of 'true' motivations and reasons for the displayed fictional occurrences is a recurrent theme. The arts, being the manager of imagination, were now able to point at hidden (and therefore seemingly factual) truths by making up reflecting fictions. Due to the humanistic ethos of the Renaissance, the painted portrait obtained an important value; the reflective human positioned himself in the center of the world.

By contrast, the purpose of medieval processions, parades, and liturgical dramas is to be found in the appraisal of the truthfulness of a transcendental kingdom beyond earthly materiality and imperfection. There was no need for fiction since truth in the form of eternal forces resided beyond human recognition, with discernible influences on earthly life. Thus, images and portraits were venerated as materializations of eternal forces used in liturgical processions, and not seen as mere depictions of late or living individuals.

Since Modernism, the distinction between reality and fiction has been under constant evaluation; it is a main focal point of 'modern' art altogether. Luhmann's [12] system theory makes this distinction even into the basic formal operation of autonomous art, reflecting the general epistemological thematization of the subject as observer forming an observed reality. According to him, each piece of art constructs its particular world by observing 'the world' thereby constructing a difference between the thus established fictitious or 'observed' world and its *umwelt* (its surround, which by definition cannot be known). In Modernity, the system of art operates through a 're-entry' of its initial distinction between reality and fiction into itself (rendering a second order observation). In other words, modern art often thematizes the distinction between reality and fiction, thereby complicating it without being able to abolish it. Even though the different avant-garde movements tried to abolish the divide between fiction and life praxis, they ended up enforcing the system of art. For example, Happenings and performance theatre were, and still are, problematizing the strategy of the epistemic mirror by abolishing the stage as confined space for fiction and emphasizing the reality of performative actions (see e.g. theoreticians like Fischer-Lichte [7], Schechner [16] or artists like Kaprow, Beuys, Naumann, and many more). Even though the relationship between reality and fiction is complex and ambiguous, it is nevertheless a distinction the autonomy of Western art is based upon.

4. THE FICTITIOUS IMAGE

It is plausible to consider the arts' thematic and formal examination of its own distinctions as a token for an ongoing shift of the image's general epistemic status. Paradoxically, the usage of the photographic image in different art forms underpins this

development. The photographic image is generally considered to be a material thus documentary trace of reality (e.g. Barthes [3], Sontag [15]). The optical apparatus conserves and depicts reality [15]. The act of perceiving photographic pictures including portraits has been analytical. The observer looks back in time at an already passed observation, either reviving personal memories or interpreting possible origins and genealogies of family or ancestors, archaeological imaginations of people(s) remote in time and space, etc. The very act of looking at pictures seems to be a realization of the difference between representation and reality, and of the forever lost.

Yet, the arts are complicating this sense of reality. On the one hand, the fact that photos in newspaper and other news media maintain and transmit a sense of reality, gives a sense of factuality to art photos that are exhibited and declared as art. On the other hand, exhibitions of documentaries in galleries and museums negate this assumption, once again complicating the distinction. And doesn't Pop Art's referential usage of photos and video - be it portraits or soup cans - not question and modify the documentary promise of photos in mass media? The invention of digital photography questions further and even more rigorously the ontological foundation of photography.

If fiction is defined as mimesis or correspondence (Aristotle) belonging exclusively to the arts, then it must be the particular use of the photographic image that determines the fictional character of the image. The distinction between fiction and reality has long left the field of ontology and has become an observational construction and prerequisite. Fictitiousness is a product of the insertion of a (media) difference, namely the difference between the observed and the depiction of the observed. Seen in this perspective, any photographic image is fictitious, since it always will be a second order observation due to its mechanical and asynchronous quality. Even live transmitted video images cannot liberate themselves from fictitiousness, being observations by means of media machines. This also holds true in the case of, for example, performance theatre working with real time mediated images shown on stage monitors, since the performance and the camera already mark several observational distinctions.

However, hidden in Sontag's characterization of the photograph as giving an appearance of (voyeuristic) participation [15], lies the seed for the participatory, performative characterization of the image.

5. PERFORMATIVE PICTURE

The underlying assumption of my argument so far seems to be that the visual display, being the preferred medium today, is indissolubly connected with the reality/fiction distinction. Reflection and recognition seems to be enabled by the picture's capacity for distancing the onlooker. This leads ultimately to the claim of an epistemic sense-hierarchy, where the visual sense seems to reside at the 'reflective top' as a result of either a historic, contingent development or a biological and evolutionary fact. As said before, I do not want here to engage in this discussion; my hypothesis is a different one, namely that the usage of digital imagery in online domains is changing the modality, use, and reception of the portrait from being a reflective portrayal to a performative medium.

The data space of online domains is often called meta-space and is generally described as virtual reality (VR), comprising either

abstract, not perceivable data and/or visualizations of these data. In the case of many multiuser online games, virtual reality denotes a very distinct fictive world showing landscapes and villages or futuristic scenarios. Many computer games use fiction worlds as a framework for interaction between players. For example, the game “World of Warcraft” takes place in adventurous universes that are inspired by pre- or rather a-historical mythological realms. Also, social online platforms like Second Life construct a ‘second’ world as a virtual meeting place. There seems to be no doubt that VR has to be subsumed under the category of fiction. In the case of other social sites such as Facebook, which do not make use of representational worlds, the question of categorization is more complex since the site does not apply mimetic strategies even though the site is clearly a constructed metaverse where people ‘meet’ via photos, updates, chat, and other applications.



Figure 2. facebook, screen dump

In an academic, aesthetic discourse, the avatar has therefore long been compared to a theatrical role belonging to the fictional realm. Paradoxically, the avatar is also considered to be a representation of the player in the virtual world, although the avatar in no way has to correspond with the user’s material and historical ‘reality’, neither physiologically nor psychologically. On the contrary, the avatar is often seen as a representation of a fictitious figure (elves, etc.). Even in the more or less realistic representational world of Second Life, the avatar can have the shape of anthropomorphic animals or whatever other figure. The player is thus said to en-act (to role-play) the avatar, which thereby represents both a fictional figure and him/herself. Following the logic of the reality/fiction divide, the player seems to be divided between on the one side playing a fictional role, which by definition is not the player’s self (e.g. Schechner [16]), and on the other side, being represented as a ‘person’.

Since theatrical plays (and motion pictures) are artistic expressions presented to an audience, they always communicate their very fictitiousness by, among other things, inserting a frame into the material continuum of the stage and the auditorium. In motion pictures and TV, monitors and projection screens draw this division line. The realism of picture and sound is here guaranteeing the material continuum between the represented and the referred. The highlighted paradox of a material or representational continuum and the referentiality of signs is the

very foundation of the audience’s ‘willing suspension of disbelief’ and its emotional and intellectual engagement (the famous ‘as if’).

Online worlds are different. They are intended for players and users who want to communicate and (inter-)act with each other either in artificial worlds or virtual social platforms. There is no audience, only players. Here, the technological divide between virtual and material worlds has to be overcome, minimized and dissolved. Hence, we have to look at the epistemic modality of the avatar from the perspective of performativity, not reflexivity [8]. The very concept of the avatar-portrait in virtual worlds evades the Western notion of pictorial, mimetic representation by being profoundly performative and participatory. The avatar-portrait and its use as communicative tool have changed (or propel the process of changing) the very notion of the portrait. They are able to build affective and communicative bridges between the material realm of the player and the virtual worlds of his/her avatar. Digital technology, which is able to construct very concrete palpable feedback mechanisms activating the majority of our senses, help a great deal to overcome this ontological divide, e.g. tactile feedback systems, which allow occurrences in virtual worlds to have physical consequences for the player; or biosensor systems, which use unconscious or conscious user data like heart beat, skin conductivity etc. in the presentation of the avatar and/or the modulation of narrative traits in the virtual world. Yet, I claim that technology only supports this development, not engenders it. The crucial change lies within the altered epistemic characteristics of the avatar picture itself

6. THE CONCEPT OF THE BYZANTINE ICON

In order to grasp the decisive difference between reflecting and performative representation, between “art as a means of separating subject and object and hence creating aesthetic distance” and “art as a means of bridging the subject and object” [20], I want to revisit the concept of the Byzantine icon. The Byzantine icon is originally a ceremonial and performative part of the Christian liturgy. Painted mostly on wooden tiles or as frescos, the icon depicts holy subjects like saints, Mary or Christ himself. It is simultaneously “a scenic representation and presentation” [5]. This duplicity is at the core of Eastern iconology since it contains two functions at the same time: it is both a visual representation (of the depicted venerated person) and a concrete materialisation (of the depicted and their supra-natural, eternal forces). Liturgical veneration as “dramatic enactment” [5] reveals and, more important, operationalizes a “likeness in essence” between the depicted (presentation) and the depiction (representation), making the icon an energetic transmitter for the believer more than a reflection in a Platonic sense. Consequently, the icon is a kind of material carriage transmitting the believer’s veneration to the depicted. The icon materializes in this way the saint; hence s/he forms part of this earthly world.

In the orthodox worldview “man must always relate to the spiritual *through* the physical”, Auxentios [2] writes. This ‘physical spirituality’ allows “that [the icon] constitutes a *real* image of that which it depicts. The image is in some way a ‘true’ form of the prototype, participating in it and integrally bound to it” [2]. A prototype (or archetype) is the energetic essence of the depicted and the icon the material medium for it; or as H. Belting expresses it: “The difference between the image and what is represented seemed to be abolished in [the icons]; the image *was*

the person it represented, at least this person's active, miracle-working presence, [...]” [4]. The image and the depicted person conflate in the archetype, in one presence. This is hard to grasp for a western mind like mine, since our cultural mindset seems to be molded by Alberti's and the Renaissance's window metaphor, which stresses the absolute divide between reality and painted or otherwise mediated representations.

7. VIRTUAL ONLINE DOMAINS AND CONCEPTUAL BLENDING

Despite the undeniable differences between more profane online sites and religious practices, between spiritual realms and virtual reality, there are striking similarities, which help in identifying and describing the ongoing status transformation of the digital portrait. Like the orthodox icon, the avatar is both a pictorial representation and presentation: a representation of a fictitious figure and a presentation of the player.

Firstly, the avatar-icon can be a representation of a fictitious figure, often taken from mythological narratives and universes. It is no coincidence that many online games and worlds are built around mythological themes with orcs, tauren, dwarfs etc., constructing an eternal, timeless platform for the players' potential actions. These actions don't have to follow a certain predetermined narrative path, but are obviously inspired by these mythological, narrative themes. In other cases the avatar is a representation of a custom made figure, which can, but need not depict the player's worldly appearance. But, secondly, the icon is first of all a presentation of the players' communications and actions in the virtual world. The avatar is therefore to be understood as a performative 'prototype' that allows for interpersonal communication and actions in virtual realms. The fictional figure and the player's actions conflate in the prototype or archetype. In the case of an online game, while playing, the player and the fictitious character cannot any longer be separated.

But how can we accept and explain the simultaneity of two different ontological states? Robert Scott, in his article on relics [17], explains the phenomenon of the mystical transference of holy forces by means of material relics of deceased saints, by applying Turner and Fauconnier's idea of conceptual blending. The three mental spaces mentioned (the saint, the divine and the corpse) blend into a forth concept: the relic. If we apply the conceptual blending theory to our theme, the avatar can be understood as the emergent result of the conceptual blending of the avatar portrait as representation of a fictive or existing figure and of the avatar-portrait as presentation of the user/player's actions. The orthodox icon “was a scheme that could be filled with new life, for the intention was not to preserve an earthly form but to communicate the archetype that alone justified the cult of images itself.” [4] The iconic portrait frames and makes possible conceptual blending – in the moment of performance (be the performance of religious veneration or communication in virtual realms). The archetype as conceptual and performative emergence supersedes the inherent dichotomy between the subject and its various representations.

The avatar is a performative part of the player. The performative action, not the contemplative reflection, constructs a direct affective and emotional bond between the player and his/her iconic presentation. That is why occurrences in virtual online worlds can cause bodily effects (as described by e.g. [19], Taylor [18] and many others); that is why we can experiment with our

personal and social behaviors and our identities in more than a symbolic, semiotic way.

8. INTERPENETRATING REALITIES

Since the first performance of Blast Theory's piece in 2001, mobile technology has made a huge leap in the convergence of different technologies. Today, smart phones like the iPhone and similar products facilitate Wi-Fi and GPS functions, allowing the user to be online and making visible their own and others geographical positions. Also, Blast Theory developed the interfaces and the cartographic maps, which in their Tokyo performance is an immersive 3D world where the players actually can choose different perspectives. The avatars are not simple pictograms anymore, but are often digital portraits of the user and his/her friends and acquaintances. My cell phone rings and shows the picture of the friend calling. I not only get a second for mental preparation, before actually talking to my friend, but the portrait's visual sensory expression seems to open the communication channel. Facebook and similar social sites, which also can be accessed by smart phones everywhere and at any time, include the portrait in the interface, making it a permeable icon during the communicational act. The portrait is no longer a counterfeit, but functions through “likeness” [2][4][14]. Likeness has nothing to do with realistic depictions of visual appearances, but is to be understood as concordance between user and avatar that supports communicative and emotional agency. The concept of likeness has shifted from an epistemological to a performative one.



Figure 3. Christ and Saint Mina 6th-century icon from Bawit Egyp

The formal composition of Byzantine icons is often based on reversed (or inverted) perspective with the beholder as the vanishing point. This is, as the term indicates, opposite to Renaissance linear perspective, which places the focal point at the horizon of the depicted space. The linear perspective ‘constructs a beholder’, who is not part of the picture and furthermore not existent, because detached contemplation transcends the act of observation into the timeless being of the represented. The iconic picture in contrast situates the believer as a part of the picture,

since s/he is the very focal point; somebody else is contemplating the performance of veneration. It is true that many online worlds are constructed according to the geometrical rules of Cartesian spaces, yet the focal point is constantly shifting depending on the user's actions, choice of perspective, and, not in the least, the other avatars' (players') actions. In the case of Facebook, the portrait is but a tiny part of a mainly textual world. Thus, inverted perspective must in our case not be seen as the opposite of the dominating pictorial paradigm, but as an indication of the performative functions of the portrait in ubiquitous computing. The users form by means of the avatar portrait part of the 'one reality' of communication conflating ontologically separated realms.

9. CONCLUSION

For the orthodox outlook, the materiality of the picture and the picture's referential 'content' is of equal importance. "Both the material and the immaterial find themselves on the same side [...]"; writes Auxentios [2]. There is no impenetrable division line between the created earthly and the uncreated holy. Ubiquitous online worlds are not transcendental in a religious sense, avatars do not seek entrance to eternity, but they permit access to immaterial data driven communication domains. Computer monitors are widely seen as screens conveying information. But monitors are also material artifacts. The runners of *Can you see me now?* carry material devices. Smart phones are material artifacts (that are, by the way, sometimes carried around like relics). As with orthodox icons the materiality of computer devices ensures the continuum between intangible data space and the individual user. The communicator relates through body movements and postures to the device and to the iconic presentation of the other, and subsequently to the other him/herself.

It is the player's actions that let emerge the avatar portrait as a prototype, thereby dissolving the distinction between subject and its representation and between material and virtual reality. The avatar portrait as archetype surpasses our understanding of a technological medium, since the iconic picture constructs a direct material and sensory relationship between people in the act of communication, despite the fact that communication technology only transmits measurable data based on physical laws (e.g. measurable parameters of the voice). The digital iconic avatar seems to undermine the western epistemic distinction between the human subject and pictorial representation, questioning the notion of the body as a mainly biologically defined entity. This subsequently calls for a revision of the humanistic concept of identity, which has its foundation in the material human body as enclosed entity. The (technologically extended) performative body on the contrary transcends material limits without ever losing its material and homeostatic dependency.

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