Avatars as user visualization and their social function in virtual environments

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AVATARS AS USER VISUALIZATION AND THEIR SOCIAL FUNCTION IN VIRTUAL ENVIRONMENTS

In order to be able to interact, social actors must always be in possession of information about each other. In this process, a vital role is performed by visual information, which in a real world context is predominantly associated with the body. In three-dimensional virtual spaces with user representation via an avatar, this role is assumed by the visual proxy. This functions as a user-representation, providing the other actors with information serving to structure action and communication. The following article will present the results of an investigation which analysed user-representation via virtual proxies in Second Life. This was an explorative study (sample size of n = 914) in which the visual data (avatar creations) was categorized and interpreted using the qualitative method of typifying structuring. Perceptual data analysis revealed a significant tendency towards representation using human avatars that correspond to the images of maleness and femininity. This result reinforces the conclusion that in virtual space not only the real bodily connotations of meaning are reflected, it seems as if they are subject to normative amplification.

Keywords: avatar, Second Life, user-representation, visual proxy, stereotype.

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The significance of the eye in the modern period as one of the central sense organs can hardly be exaggerated. Indeed, following Simmel (1903), we can even speak of a dominance of the sense of sight. Against this background, it is of especial significance that the Internet – since the mid-1990s when pictures and animation increasingly began to be integrated in web pages – has increasingly developed into a visual medium.[1] Visual information is relevant for social processes, as in order to facilitate social interaction and relationships,[2] individuals are reliant upon other actors. A provider of significant visually discernable information in this context is the human body – which in a real-world context gives out signals both consciously and unconsciously (Goffman makes the distinction between "cues given" and "cues given off") – as both phonetic and linguistic-oral utterances as well as non-verbal signals are associated with the body and used as information source (see e.g. Merleau-Ponty 1966; Elias 1976; Douglas 1974; Misoch 2006: 22 ff.).

1. The Body as a Medium

> Thinking of the body as an information channel [...] (Biocca 1997)

The body is the medium which one needs in order "to have a world at all" (um «überhaupt [...] eine Welt zu haben»; Merleau-Ponty 1966: 176). Because our being is bound to the body, we are in the world through our body, experience our being here via the body and communicate using our body. It is the undeniable substantial materiality which marks the being of man in the world, and through the state of "being thrown into life" («Geworfensein ins Leben»; Heidegger 1927: § 29) and thus a repository of the self. Through its individual, unique constitution, it is a medium of individuation and self-identification. "This process requires an instance of individuation. This role is played by the body" (Durkheim 2005: 386 [translated by the author]). In this way, the individual identifies himself

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[1] Other senses (e.g. hearing) were integrated bit by bit.

[2] A social relationship denotes the virtual-notional, actual structurally foreseen and probable, establishment of a contact of repeated nature between persons (see Gukenbiehl 2003: 41 [translated by the author]).

via his own body and its constitutional characteristics and thus develops his own identity. Yet not only the individual identifies himself via his own body (self-reference), it is also via his body that he is identified by others (foreign reference); the police for example use the body – due to its relative immutability – as a guarantor of the identity of a person.

Consideration of theories of social interaction (e.g. Goffman 1977, 2001a) also makes clear which outstanding status the body possesses. On the one hand, it is to be understood as an operative resource as a "condition and pre-condition of interaction and sociality" (Hahn & Meuser 2002: 14 [translated by the author]), on the other, as a means of communication in itself and for others, as it shapes the social situation with its visually (and where applicable, via other sense organs) perceptible character and through the communication effected by it. Thus social situations (e.g. upon meeting someone new) are fundamentally pre-structured: the communication effected within it is structured by the (amongst other factors) sexuality of the persons involved, as "clothing, voice and above all, speech address – pronominal forms and names – make the differentiation between the sexes into an omnipresent apparition" (Knoblauch 2001: 45; introduction to Goffman 2001a [only available in German; translated by the author]). Thus the (dual) gender scheme[3] is used as a code, with a socially structuring effect, making the gender of the communicant a reference point in the communication. (Müller 1996: 14): "In everyday social interaction, gender identification [...] [is] a ubiquitous, automatic process" (quoted after Kessler & McKenna 1978). However, social situations are pre-structured not only via gender-classification; studies have shown that the appearance of the actor, thus his visual attractiveness, is also a relevant factor in interaction/contact initiation. This occurs in both sexually motivated as well as non-sexually motivated daily communication (e.g. Mulford et al. 1998). Therefore, it is possible to summarize that "people's first steps towards one another face-to-face is chiefly based on physical appearance" (Schroeder & Axelsson 2000).

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[3] "In all societies, all infants at birth are placed in one or in the other of the two sex classes, the placement accomplished by inspection of the infant's naked person, specifically its genitalia, these being visibly dimorphic [...]. This placement by physical configuration allows a sex-linked label of identification." (Goffman 1977: 302).

In addition to physical attractiveness, the signs which are culturally related and thus are mutable (see e.g. Davis 1992), other bodily signals have a communicative and structuring effect, if they are perceptible to the other actor: Constitution, posture, gesture, mimic or even bodily-related abnormalities (stigmata, see Goffman 2001b) are used by the actors in order to interpret the situation and its content. Bodily signals can add support to the expressiveness of verbal messages and thus lead to improved understanding, yet on the other hand, if the two are incongruent, this can produce irritation or even call the veracity of the message into doubt.

In addition to this forms of expression directly related to the body, its limbs and muscle activity, the choice of clothing carries high significance in our culture; to such an extent that it is possible to speak of vestimentary codes (Bohn 2006). Following this, in a real-world context, "[…] we can participate in social situations only if we bring our bodies and their accoutrements along with us […]" (Goffman 1983: 4). The body thus has a significant function in the real-world context, determines the social situations via its nature of being perceptible for others, and via the communication effected through it.

2. The body in virtual Space

> […] the avatar is the primary identity cue in online environments. Thus, we might expect that our avatars have a significant impact on how we behave online. (Yee & Bailenson 2007: 274)

If we transfer these characteristics into cyberspace, it becomes apparent that the human body cannot – as in a real world context – function as a direct reference point for communication, as virtual space is not directly accessible, rather can be accessed and dwelt in only by proxy. Thereby social relationships in virtual space are not pre-structured by the body and its signals, rather must be fed with other sources of information. Communication and interaction in the internet are conducted initially as a purely text-based form of communication (e.g. chats, MUDs) and the text and textual self-description function as the source of reference. Meanwhile, it is possible to observe a significant trend towards not only textual but also object-visual presentation of social actors in three-dimensional visual

environments (e.g. object-MUDs, Active Worlds, On-live Traveller, Second Life), in which these means of user-visualisations (avatars) function as both a means of user self-representation and self-depiction and also as source of information for other (potential) actors.

3. Avatars

> Ultimately, digital bodies tell the world something about your self. They are a public signal of who you are. (Taylor 2002: 50)

The word avatar derives from the Sanskrit *avatāra* stands for "descent" and means the "body a god inhabits while visiting earth" (Damer 1998: 482). It was first used to refer to the visual representation of users in cyberspace by Chip Morningstar in 1985. As virtual proxies, avatars are designed to represent the user in virtual environments and can be configured in a relatively individual fashion. General characteristics (human, animal and fantasy), gender (female, male, androgynous, neutral), body size, constitution (athletic etc.) weight, face, hair colour/length, etc. can be selected and formed individually. Furthermore, in addition to their figure-like representation function, a range of different options of movement and action are available to them. The first can be of a conventional human manner (walking, running, jumping), as well as those exceeding human capabilities (e.g. flying, teleportation); the second can be used via various pre-programmed gestural functions in order to be able both to act, and to communicate in a non-verbal fashion (waving, pointing) in virtual space. Using these functions, the avatar thus serves as the user's representative in cyberspace with which he is identified in the virtual environment, through which he can identify himself and with which he participates in social interactions and locates himself in virtual space. In virtual spaces in which a user is represented by an avatar, this functions as the primary source of information together with the name and the behaviour of the avatar in virtual space. In view of the fact that the "glance has [proven itself to be] the outstanding of all behavioural factors," (Koch 1995: 274 [translated by the author]) it can be concluded that particular attention should be paid to visual data: the avatar.

The principle of representation, which provides the basis for three-dimensional environments with avatar use, produces the situation in which not the body of the actors' (inter)-act with each other, but social processes take place using virtual representatives. These virtual user-proxies thus possess great significance in that they function as agents of relationship, evoking particular patterns of communication and preventing others.[4] The avatar is thus not the image/visual reproduction of the user, but rather its virtual embodiment or an expression of its fantasy in the virtual environment. How far this representation is rooted in the real (corporeal) nature of the user or how far it departs from it, can only be a matter of surmise for the real-world recipient.

A three-dimensional virtual multi-user environment, currently enjoying great popularity (with over 9 million[5] "inhabitants") is "Second Life," operated by Linden Lab. This world is a three-dimensional programmed environment with avatar representations of the user and various integrated communications options providing the user to explore the environment through different modes of locomotion and gesture functions as well as the facility to shape the environment, and for active economic participation in this world via the acquisition of virtual land using the virtual currency "Linden Dollars" (L$).[6]

4. Results of the Current Study of Avatar Creations in Second Life

> In short, what these VR encounters really provide is an illusion of control over reality, nature, and especially over the unruly, gender- and race-marked, essentially mortal body. (Balsamo 1993: 128)

[4] Cheng et al. (2002: 98) ascertained: "most people used the graphic [avatar, S.M.] to convey something about their true identity, particularly gender. Others used the information to help identify interesting people to talk to and people to avoid."

[5] According to information from the operator, Linden Lab, 63% of these seem to be "unique users" (users can create more than only one avatar) which would make c. 5.6 million users at present (http://www.pc-magazin.de/common/nws/einemeldung.php?id=51171 [15.10.2007]).

[6] Second Life can be described as a special form of MMORPG (Massive Multiplayer Online Role-Playing Game).
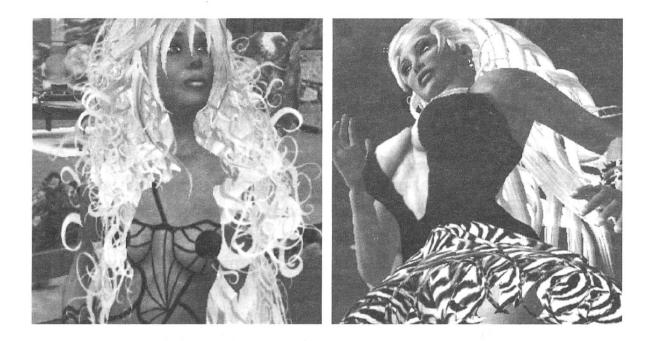
In order to investigate user representation in virtual environments and inter-action via visual proxies, the author is currently conducting an explorative (qualitative) study in "Second Life" at the University of Lucerne. One aim of this study is to investigate which avatar creations respective which "social representations" (Slater & Usoh 1994) can be proven empirically and to an-alyse how these actor visualizations can be described, and whether they can be assigned to a particular pattern of presentation/creation. The data used as the basis of this analysis is provided by a randomly generated sampling of avatar creations[7] in Second Life. The sample was drawn using screen-shots in different rooms of this virtual environment (respectively 30–40 avatars per room[8]). The following results relate to the actual scope of the random sample of a total of n = 914 avatars. The data material, presented in the form of digital visual information (Bitmap) will then be categorized and interpreted by using typifying structuring[9] to generate a typology of avatar creations. This is a perceptual approach in which the bodily characteristics of the avatar are categorized according to their bodily constitution.

Results: It was clearly demonstrated that human avatar creations are pre-ferred by the users of Second Life (95 %), and that animal or purely fan-tasy creations are hardly to be found (5 %). This tendency was already demonstrated in the analysis of the visual representative of the user in other three-dimensional virtual environments (Nowak & Rauh 2005; Taylor 2002) and thus follows the theory of social cognition, accord-ing to which the classification of environmental characteristics as human, animal or object is one of the fundamental cognitive human needs. This necessity thus appears not to loose its power in virtual environments but

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[7] Period of time for sampling was June–September 2007. The random sample con-sists of customized avatars, as the users use them within Second Life (not customized avatars are extremely rare and were not found in the random sample); most important was to ensure by the sampling procedure not to sample one avatar twice.

[8] The rooms which where used for the data sampling were "open" rooms, which might be entered by everyone (to sample avatars in "closed" rooms would make no sense and would provoke falsification of the results).

[9] Typifying structuring is a qualitative method (see Mayring 1990) which struc-tures visual data on the basis of the identification of visual characteristic values with the aim to build types of special classification.

rather to be replicated, assuming a similar orientation function to real-world contexts. Furthermore, studies have shown that more trust is placed in human avatars than animal or fantasy creations (Taylor 2002; Nowak & Rauh 2005).

98 % of these human avatars are clearly identifiable as being female or male; androgynous or gender-neutral avatars are rarely created[10]. This shows that the real-world gender duality is reproduced in the virtual space Second Life, and that this space – despite its potential – is not used for the deconstruction of gender (this tendency has already been identified in the analysis of other three-dimensional virtual spaces [Balsamo 1993; Nowak & Rauh 2005] and in the analysis of the self-depictions in purely text-based internet rooms [such as e.g. chats or MUDs]).[11]

The majority of avatars are not only clearly gender-attributable; furthermore, they correspond to the visual stereotypes of maleness and femininity. A stereotype is a cognitive construct, recurring in a schematized conception reduced to few points of reference pertaining to people, groups of people etc. In the present investigation, it concerns a stereotypical depiction of gender or gender stereotypes which can be defined as "[…] a sort of beliefs about the personal characteristics of women and men which is shared by the members of some groups […]" (Ashmore & Del Boca 1979:

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[10] See footnote 7.
[11] See also Funken 2005: 227.

221). Characteristics of these stereotypical depictions of the female avatars are a slim build, narrow hips, long legs and a large bust, all accentuated by the choice of clothing. Male avatars, which will be referred to as male stereotypes, are distinguished by a normal to athletic build: broad shoulders, a muscular torso and narrow hips. These creations resemble the ideal scheme of femininity and maleness as communicated by post-modern Western societies. The socially-prevalent ideal of beauty – reflected in exaggerated form by stereotypical depictions – are culturally variable, as already Polhemus noted in 1975: "[…] there will be a communally shared knowledge of how a 'healthy' or a 'beautiful' or an 'erotic' body is defined – by the members of a particular society […]" (ibid.: 26 f.).

Moreover, more female (53 %) than male (45 %) avatars have been created,[12] a result that is striking, as 57 % of the active users of Second Life are men, and only 43 % women (see the W3B study). Thus when encountering a female avatar, it is not necessarily a representation of a female user. Viewed against the background of the often stereotypically sexualized female avatar creations, this mode of depiction could represent a visualisation pattern of male fantasies in the form of a female avatar. How far this reverse conclusion can be applied to women in Second Life cannot be deduced from these figures.

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[12] Gender neutral avatars = 2 %.

5. Discussion

> Fully able or seriously disabled, it is through our physicality that we function as social beings, whether in face-to-face communications, through hand-written letters, printed missives, or by keying disembodied electronic symbols into a computer to stay in touch with someone half a world away. (Cregan 2006: 3)

Visual information plays a decisive role in the pre-structuring of social situations. If it has been demonstrated that for real-world situations, the body and its visually perceptible signals influence and pre-structure social situations decisively, then in three-dimensional environments with user representations, this function is assumed by the avatar, as this provides visual information for other actors. In order to be able to interact with each other, the actors must have access to information about each other. That the actors in Second Life predominantly give themselves a human form shows that the user's representation-strategies closely imitate those of real world contexts. Users follow a strategy (consciously or unconsciously) to compose human, gender-specific and clearly attributable avatars: "In other words, people use information related to the virtual image in a process analogous to the one they have learned and used to reduce uncertainty during their experience in natural, unmediated environments" (Nowak & Rauh 1995). Through this depiction of human and clearly-identifiable gender-specific visual proxies, potential irritations are avoided. This enables both the performer as well as the recipient to act with confidence.

The avatar fulfils the structural function of allowing the user to be present in the virtual environment. If the body is the instrument with which we display our presence in space in real world contexts, the avatar assumes this function in the virtual world as well as performing the function of being a visually perceptible (stable) receptacle of identity: "We can conclude that stable identity seems to be important for self-presentation, especially the user's name. Moreover, we can say that users are highly aware of issues to do with how they and other users present themselves, and that they prefer 'sociable' identities in the ordinary, face-to-face sense of sociability" (Schroeder & Axelsson 2000).

In terms of content, it was possible to show that many visual representations follow a particular pattern: the types of avatars correspond predominantly to the images of maleness and femininity produced and communicated by the media (stereotype) and which thus correspond to the ideals of beauty dominant in our culture[13]. Where studies from Snyder et al. (1977) were able to show that persons receive preferential treatment (during medially conveyed contact) when the actors proceed from the basis of the exterior attractiveness of their immediate counterpart, the practice of representation by attractive avatars could represent an attempt to evoke positive communication through the depiction of visual attractiveness. In addition to this function, the creation of a visually attractive avatar could present an attempt to create an ideal self in a virtual environment; a tendency already demonstrated by other studies (Soukup 2004). Or does it just represent the chance to possess an ideal body without the necessary work – "training the flesh"[14] – in the sense of conscious work on the body? "Cyberbodies tend to appear masculine or feminine to an exaggerated degree. We find giant pumped-up pectoral muscles on the males and enormous breasts on the females" (Springer 1996: 64).[15] Thus it becomes clear that when the social actors choose to represent themselves with stereotypical avatars, they are not only reflecting real connotations of meaning, but are even amplifying them. Thus they are not deconstructing an ideal in the virtual environment; rather have chosen to stage them in an excessive form.

[13] It must be added, that the standard avatars which are provided by Linden Lab are human and gendered. It needs some effort to customize them to neutrality or to animal style, but it needs the same effort, to customize them as overemphasized gendered avatar.

[14] Hitzler 2002: 80 (translated by the author).

[15] Springer reached this conclusion after analysis of the actors in science fiction literature and films; that this can be transferred to the area of avatar creations without problem has been demonstrated by the initial results presented here.

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