Media(,) Technologies & the body

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Abstract: The article at hand discusses the connections between media practices, implicit knowledge and the concept of agency as an activity and asks for their synergistic relation to the field of digital games techniques and its potential for gaining knowledge. First, the theory of tacit knowledge is outlined in the context of a praxeology as methodological and theoretical approach of *interobjective* practices. This cultural science orientation of media research also shows the relevance for education, formation and socialization processes.

Keywords: media; games; technologies; body.

Resumo: O texto discute as conexões entre práticas midiáticas, conhecimento implícito e o conceito de agência como uma atividade e pergunta por sua relação sinergista com o campo das técnicas de jogos digitais e seu potencial para ganho de conhecimento. Primeiro, a teoria do conhecimento tácito é esboçada no contexto de uma praxeologia como aproximação teórica e metodológica de práticas *interobjetivas*. Essa orientação a partir da ciência cultural da pesquisa de mídias também mostra a relevância para processos de educação, formação e socialização.

Palavras-chaves: mídias; jogos; tecnologias; corpo.

Introduction

The following definition of terms outlines the concept of tacit knowledge for everyday life cultures in mediated environments as knowledge for orientation or simply the competent handling of media. This requires revisiting the meaning of the term "silence"1 (KAMPER; WULF, 1992, p. 1), which refers to non-activity in speaking and can be interpreted as a break, gap, empty space or a communicative meaning. Even this minimal definition makes clear how ambivalent the phenomenon of silence is, since it can be seen as a passive occurrence (hearing, perceiving) as well as action (for example listening, rejecting or addressing) in social situations - only the utterance of the word silence generates one obvious paradox, here vividly brought up by an artistic treatment:

1 Silence is the direct translation of the German equivalent to tacit. I use the term silence only in this introductory part, for the following chapters I refer to "tacit" instead.

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This example of concrete poetry by Eugen Gomringer (1969, p.58, my translation) reflects this paradox impressively by designing a picture by the means of language, which, in the midst of the redundancy of expression, includes a void that contrasts the semantic content of the concept surrounding it – thus referring to its own meaning. The arrangement of the word(s) show(s): "From the *visual* impression, we *logically* or *logopoietically* conclude one implicit sense. However, for the words surrounding the white space the repeated statement contradicts the action (speaking, writing)". (HIEBEl, 2006, p. 204, originally in italics; my translation). The implicit message in Gomringer's poem which cannot be articulated linguistically, is grasped by the recipient intuitively by the sensual perception of the space of meaning silence and/ or tacit knowledge.The dimensions of this knowledge - as socially experienced and practice-oriented form of meaning - are virtually synonymous with formations like bodily knowledge, practical knowledge (BOURDIEU, 1988) or implicit/tacit (POLANYI, 1966) and atheoretical (MANNHEIM) knowledge, as "silence" in these forms of knowledge opposes precisely explicability, in contrast to the case of explicit and communicative knowledge. Therefore, descriptions should contour such a space of the tacit dimension (Polanyi 1966). First of all, the "explication problem" is based on two levels conditioning the "non-verbalizability and non-formalizability" (NEUWEG, 2006, p. 16). The tacit knowledge refers to an implicit ability – understood as "body-language" performance – prior-ranking to the expressive linguistic forms in so far as it relates to a knowledge *in* situations that predefines a certain way the actors may maneuver adaptably to the conditions without reconsidering each single step of action. In particular, the discourse of performativity can be used to argue for a twofold distribution of action as staging and performing (Fischer-Lichte, 2004). While stagings are considered as planned and intentional projection of a future social scene, the performance in front of and with the audience discloses at the same time its unplanability. For example, imagine the scenario of a scientific lecturing: The speaker will most probably have a relatively accurate imagination - a staging strategy - of how he acts, whom she wants to address and how the auditorium could respond. But while performing everything could be different: it might get heated up in the conference hall and the clothing is inappropriate for that circumstance or the voice might fail and there is no glass of water nearby. In addition, technical faults can lead to significant restrictions and cause irritation, as well as unexpected questions or resonances from the audience (FERRIN, 2013, p. 20). Highlighting the performativity implies focusing "on the concrete materiality of spatial, temporal conditions and objects,

on corporeality and perceptual processes". (WULF; ZIRFAS, 2007, p. 17). As such, they emphasize the limits of predictability of social situations; they point to a connection of the dimensions of tacit, implicit or practical knowledge as an incorporated knowledge that moderates social-dynamic processes. In a subsequent step, a conceptual desideratum of tacit knowledges will be outlined in order to reframe the results with techniques of media practices.

Tacit forms of knowledge

The acquisition of knowledge through conjunctive and communicative forms of knowledge – the latter refers to orientation norms as common sense knowledge and expressive rules and forms of behavior - is being inscribed into the body memory and shapes the habitus or orientation frame. This includes the everyday navigation in practices and is based on experience and socialization (BOHNSACK, 2013, p. 179). Bohnsack (ibid.) clarifies this by pointing to the metaphor "family": While knowledge as an *explicit* orientation scheme is relatively accessible to an actor, which is based on expectancy of role and where normative demands on the family are made, so is one's own family a completely different, namely a biographical case. Within the conjunctive experience of one's own family or with regard to one's own media habits it can be even more exactly differentiated what an atheoretical or tacit knowledge is about. Thus the concept of appropriation becomes of importance for the medial – the mediated – practices one form of appropriation techniques can be deduced from the example of "tying a knot":

> As long and as far as I have to visualize the knot-tying process while producing one, i. e. the motion pattern of knotting in form of material (outer) or mental (inner) images, in order to be successful in habitualizing the practice, I have not yet fully incorporated and automated the process of tying a knot. In the case of pictorial, imaginative visualization, the modus operandi is the product of *implicit* stocks of knowledge and *mental* images, which we call orientation frame or habitus. (BOHNSACK, 2013, p. 180, italics original, my translation).

The imaginative level in the process of habitualizing is thus more or less a form of acquisition that has not yet been fully adopted into the bodily organization of practice and still has a partially intentional impulse. In the oscillation between implicit and cognitive knowledge, however, mental representations of (using) technologies (e.g. of media) are significantly involved as long as they are not yet transformed into automatisms and, starting from the projective visualization, intervene more deeply into the body scheme and only then can finally be described as incorporated. Both levels of tacit knowledge, imagination and body knowledge, stand together for the organization of habitual practice - they are orienting and oriented "models" to which mimetic references refer. Implicit, action-guiding

knowledge plays a fundamental role in the acquisition of new cultural practices. The so determined tacit knowledge is therefore involved in all practices - including intentional planning - and for many areas they are even the main generators for their organisation, for example when driving a car or bicycle (NEUWEG 2006, p. 20; for implications the objects entail when driving, see BÖHME, 2006, p. 76). With regard to the scientific field it must also be assumed that tacit knowledge plays a much more important role than is generally assumed (POLANYI 1966, p. 53; BOURDIEU, 1988).

Non-explicit knowledge and media practice

In the sociology of technology the latter discourse of praxeological form plays a virulent role as well, but in a "mediated" mode. In addition to the interaction processes described so far, the external world of things - in the broadest sense technologies consisting of four types based on Foucault's differentiation (1997, p. 225), which will be dealt with in the following, must be included in the characterization of interaction. In this contribution, however, and also in the sociology of technology inspired by actor-network theory (LATOUR, 2005; RAMMERT, 2007) or educational science (NOHL, 2011), an extension of intersubjective practices by the dimension of artifacts is assumed. In media scenarios it becomes clear how "the availability and use of certain communication media (such as printing), for example, makes possible a whole complex of social practices - in companies, administrations and in education - that would not exist without these artifacts" (RECKWITZ, 2003, p. 291). This can be shown by the example of media forms such as PC games with visualizations in the form of game characters, so-called avatars. According to the thesis, a special "knowledge of interactivity" emerges; in the perspective of a praxeological view of media (ibid., p. 285), the use of artifacts and "thus their dependence on the users' knowledge stocks is 'culturalized'; on the other hand, the practice of action appears 'materialized'" (ibid.). What makes this view of knowledge formation special is that in such hybrid constellations both actors and media technologies are involved in knowledge formation processes. For example, in a human-computer interaction scenario such as translating from Chinese into German, for example, digital dictionaries, technical programs and the actor-side input, interpretation, etc., ultimately produce a result, a transfer into the other language (RAMMERT, 2007, p. 161). Here it can finally be seen to what extent such practices of using (media) technologies require explicit knowledge transfer (instructions, rules), but at the same time produce a tacit, non-explicit habitualization of practice.

This implicit or incorporated dimension of body knowledge and imagination is also prominent for media-related practice. The cultural acquisition of computer games, for example, is based on a projected and imagined visual level, which is supplied by external and internal images. The conceptualization of playing goes hand in hand with the process of habitualizing and can therefore be reconstructed empirically

as a framework for orientation. Since these are mental images interlinking media images, this new type of emerging image can be interpreted as a metaphor. Once media practices count as incorporated, they can be reconstructed by video supported forms of observation (BOHNSACK, 2013, p. 181). Also, physical and gestural forms of knowledge contribute to the interaction with the avatar via gaze and movement, which also have a retroactive effect on the implicit and incorporated knowledge as orientation with the medium. In principle, one can imagine the interaction on the basis of the concrete situation: Since the visual, the acoustic and, depending on the genre, the narration is a given technical produced content, the player must orientate (learn) himself in this mediatized environment. In the early phase of a media biography, this will initially be tentative: "Educational processes in the sense of a tentative processing of reality link [...] more strongly to the culturally coded passive memory (tacit knowledge)". (MAROTZKI, 1990, p. 154). Of course, the tentative gaming also shows features of the explicable regularity. At the same time, however, implicit moments of imaginative engagement with mental images take place. Automatizing these practices, gaming itself then just happens, it does not require (anymore) the inner projection of images or similar.

In addition, there is the material, physical and gestural interaction with the medium, which receives little attention in research, although sensory perception, hand-eye coordination, hand gestures and much more form the actor-side action activity in computer games, whereas the visualized computing processes and the processing of control signals make up the game on the technical side. In this case, actor and medium are involved in creating a plot - not to mention the practical knowledge that needed to be spent developing the software. In summary, from a theoretical point of view it can be concluded that media-related actions also require knowledge that guides action, which creates new appropriation to situations through constant, primarily economically oriented innovations:

> A special case of such a 'new context' is the emergence of new artifacts that do not yet correspond to established practice and which — taking into account 'old' elements of knowledge and practice — require the development of partially new social practices (for example in the use of computers, mobile phones, etc.). (RECKWITZ, 2003, p. 295).

Rituals in media transaction

Therefore, technology permanently mediates different technologies, as well as "the medium is the message" (MCLUHAN; FIORE, 1967), but due to that fact they also provide specific mediated selections of "World". In particular, the analysis of tacit knowledge is important, since the innovation of the contexts through the advancement of artifacts lacks explanation or is most probably not explicable. That is why the formation

of new technologies (keep in mind for later) lead to "curious rituals" (NOVA *et al*., 2012) on an implicit level. They range from ordinary "touchscreen gestures" using mobile phones to sensory-based forms of games that generate movements of the avatar by moving the controller at hand. These are simple examples, which point to the impact of new media technologies on everyday life practices. The gestures as well as the media content change the practice-oriented knowledge and illustrate the corporal aspect in media utilization. Considering mobile phones, the unplugging of headphones (interrupting of the accompanying audio-based sounds) for single moments to interact with, but also presentation of photos to other actors makes mobile phones distinctive. It becomes clear that these practices center the actor in his self-orientation or direct the focus to other actors with only a simple gesture. As a proposition, the specific media content is the decisive factor for further communication; however, the frame for this interaction is defined by technology, because the message of a medium always refers to another medium (see above). Schäffer refers to a similar idea insofar he can describe specific media cultures by reconstructions on the basis of group discussions. He puts a focus on the conception of generation and analyses different orientations using media. In his findings the aforementioned concept of hybrid practice plays a relevant role. Therefore generation-specific experiences understood as cultural-historical schemas are relevant to the actors and "predispose their current actions with each new media that the actor cannot access consciously or only with difficulty". (SCHÄFFER, 2012, p. 143). Accordingly, tacit knowledge is often linked to certain milieus and early experiences are related to (media) technologies developing into biographies dealing with things. The relevant theoretical assumptions as well as empirical results are also effects of material and symbolic productions of media themselves, or to put it another way: the performative evoke, "that the media technologies themselves are inscribed with habitual aspects of action. This habitual attunement of media technologies, for example in design, in expected handling, in usability and also semantic references to certain (often youth-cultural impregnated) scenes, practices and also (virtual) places (such as second life), transmits the habitual acting with the respective media technologies on the 'human-technology mixtures'". (SCHÄFFER, 2009, p. 43). In the end such forms of implicit knowledge induce formations or dispositives and are therefore fields of power at the same time (Foucault, 1978). Before referring to the technologies of power that co-constitute media, the differentiation of the reciprocal framing of the actor and media generating interactivity knowledge will be discussed. This is how Nohl discriminates between socialization-related transaction spaces of people and things as conjunctive, institutionalized and organized spaces. Whereas conjunctive transactions describe such spaces which are locally limited and relate to the shared experiences, which are also overlaid by other dimensions such as gender or generation, institutionalized forms denominate socially relevant formations, "precisely because they - like the 'phone', the 'car' or the 'computer' – are typified by the practices they enable". (NOHL, 2013, p. 197). Organized transaction spaces are the precursor

of the two other forms, which have already extended a habitualization. However, the organization defines the regulations and possible sanctions, which are partly necessary for the development of habits. This exactly points back to the formation of implicit knowledge, which undergoes automation before it is deeply inscribed into the body and thus becomes incorporated inch by inch.

The concepts presented so far show a clear picture of the relation of tacit knowledge and media practice. If then practices lay the foundation for biographies and slowly build up incorporated knowledge in certain processes while the continuous use of media like the computer in analogy evolves into typical, even global, signifiers. The reciprocity of this whole complex refers to the media effects inscribing into the human body and vice versa to human impacts on the bodies of media.

Media, technologies and the self

The multiple indications of technologies of action within hybrid practices can be explained and reflected by addressing the issue of media technique. It is an important step to follow the interpretation of media cultures and their educational potential. With reference to the considerations of Foucault, I would like to follow his classification into four types of technologies and transfer these to the field of media cultures. For Foucault (1997, p. 225), knowledge for the understanding of oneself depends on using technologies that are clustered in technologies of production (of things), technologies of sign systems, technologies of power and technologies of the self; each technology can be analyzed separately, which could explain the broad use of the term. Technology understood as a product and process therefore alters symbolic, social and self-technologies and vice versa. Technologies impart certain skills with determination and effectiveness, but also attitudes (ibid.) - that is why technologies of orientation are partly media routines in this context. Transferred to newer forms of playing games on the mobile phone, for example, an investigation would depend on the analysis of the product, the symbolic spaces, the power relations and the effects on the selves. Here, the role of the non-explicit of social and self- technologies becomes significant, insofar they relate between actors or point to an actor himself. Without being recognized as a media form they embody implicit schemas and incorporations. Foucault can identify a variety of self-techniques in the historical course of European cultures, thereby highlighting exercise and asceticism in the context: "While *meditatio* is an imaginary experience that trains thought, *gymnasia* is training in a real situation, even if it's been artificially induced". (*ibid*., 240, in italics in the original). The current effects of media imageries suggest similar processes, but with the addition that the imagination of experience is being mediated:

> This reality of moving images is an explicit one, i.e. from an audience as 'ready-made' recognized reality; [...] This world of mediated action determines on the

> one hand the perception, but it also allows gradually, to self-determine attention and perception, or to reflect their conditions. (TRAUE, 2012, p. 8, my translation).

The imagined experience in the context of extended self- technologies through media are part of visually dominated regimes that predispose the orders of sight and count in the sense of Nohl as organized (rule – based) transaction spaces. The computer or the mobile phone can count as examples for already transformed into institution transaction spaces. In addition, the presented focus can lead to compare technologies to the formation of habitus. In the latter case the unknown and indefinable principles become obvious, while the technical processes are relatively stringent directed to the cause of a goal. In this respect the differences between (media) self-culture and self-technology can be reconstructed and differentiated, although as self-practice they remain interwoven. On the one hand the metaphor of "media cultivation" stands for the implications to care for oneself and others (FERRIN, 2013) in the sense of reflection of the self, while on the other hand self-technologies lead to master and control oneself (FOUCAULT, 1997, p. 225).

Body formation and the interface

Consequently, if the media environment reciprocally has an impact on the actor (FERRIN, 2007) the thematization of the subject and object position is inevitable. Based on Latour's actor-network theory of a "symmetrical anthropology", objects and media technology are given a different status than they had previously in human science (LATOUR, 1993). Here they count as actants, which determine actions in a network with human actors. The reception of this theory with regard to media cultures was assumed by the educationalist Schäffer to point out the special significance of media for socialization related processes. Focused on the generation-specific experiences with media in Schäffer's reception the actor-network theory can be seen at this point as an exemplification or as model (SCHÄFFER, 2007). When the actor comes in touch with media, these "contacts" are incorporated as part of their practical involvement into the world. Equipped with such experiences, Schäffer uses Heidegger's idea of "contagion"; "hybrid actors" develop altered orientations on an implicit level, which can be interpreted as tacit knowledge dealing with media *and* the world. In the described manner, also technology sociologist Rammert situates interaction between humans and media (technology) apart from purely instrumental uses and defines it as non-explicit (RAMMERT, 2000, p. 20). He further refers to alterations in the attitude both among users and programs when it comes to inter-dependent interaction and argues: "that agency is really built into technologies as it is embodied in people […] when materials or technological designs resist human expectations or even show us new and unexpected paths to follow – and how human actors are moved to change their goals" (RAMMERT, 2011, p. 6).

In the face of hybrid practice, the sensuous and arithmetic mixture in situations questions the agency and the predictability of human actions. For the relation of media and actor in summary it can be stated, that media exercise self-references. The actualization of a "mediated" world and self is structurally different from other perceptions. The ascribed effects of learning can be enormous and cannot be substituted by other experiences.

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