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Sharing as Educational Knowledge Management

Abstract: The idea of sharing within digital networks in an educational context – whether it be online education platforms, blogs, technology-mediated channels of interaction or file-sharing – produces temporary communities of learners. Assuming that we are dealing here with joint value creation within public media instead of focused value appropriation, these developments accord with an understanding of knowledge as a constant interactive process involving mutual consent among the participants concerning the effect of the network. Therefore sharing in educational contexts also asks for individual incentives when crossing the line between private and public media. The talk focuses on the role of the individual member actively taking part with regard to defining ‚sharing‘ as an essential element of her/his own knowledge management.

Keywords: learning scenarios, education, individual incentive, expectation, myth, narrative, sharing

In my paper, I discuss educational processes in media cultures from the point of view of media studies. What especially interests me are the individual incentives in these cultures of sharing. The approach I will follow is first to investigate the processes governing the development of media technology as well as the changed scenarios of education to reveal the expectations implicit in them. My view is that these are also reflected in learning communities: they shape the way we evaluate sharing and individual incentives. In my opinion, it is important to be aware of these tacit expectations because they are, after all, essential for keeping these education scenarios alive, and they also shape the perception of the internet as both public and private space.

The view of these expectations as repeating patterns in the ongoing development of media technologies is supported by the following three authors:

In *Docuverse. Zur Medientheorie der Computer (On a media theory of the computer)* Hartmut Winkler is contouring a history of digitization and shows that society now has new needs which cannot be satisfied by traditional media but appear better served by the new media. You could say that the deficits of the "old" media were what created the space to be taken up by the new media. Winkler suspects that media keep changing almost automatically due solely to a recurring dissatisfaction with what has so far been achieved or made accessible. According to Winkler, an upheaval in media is always connected to the wishes and desires of the recipients. And technical innovations are merely attempts to fulfill these wishes and desires.

In his 2010 study entitled *Technik als Erwartung (Technology as Expectation)*, Andreas Kaminski presented an approach to the philosophy of technology which sees technical development projects, as well as interactions with technologies, as forms of expectation.

Along with Kaminski's category of expectation and Winkler's need structures, Klaus Krippendorff's *Semantic Turn* takes up design theory and asks what meaning users associate with design artifacts, whether they be objects, services or technologies. The fate of artifacts, says Krippendorff, is decided in the narrative discourses which accompany their emergence and use. Here, studying the respective narratives and myths is a way to promote these imputed meanings.

Myths of how the internet was founded

Media theorists are not very surprised that another sweeping revolution was proclaimed when the internet appeared on the scene, since the basic changes new technologies are expected to produce are part and parcel of the enthusiasm and the fears associated with new media. They are side effects of every change in media, exemplified in the characters of the euphoric enthusiast and the pessimistic skeptic. In our context of education scenarios related to media culture, the expectations of the internet enthusiast are especially telling. In this connection, I would like to go back to the pioneering days of the computer. In 1945, Vannevar Bush announced the basic idea of the MEMEX memory system in his publication *As We May Think*. This idea was innovative in that it enabled the content of several documents to be linked associatively. The users of this system, Bush asserted, could add their own thoughts to the existing texts. Here, searching for relevant texts was connected to writing and seen as an active process.

Bush's basic idea for the MEMEX system was again taken up twenty years later in Ted Nelson's XANADU project: Xanadu (the idea of a 'legendary place') is the vision of joining together documents by means of hypertext in a kind of text database, that is, a universal network which he called Docuverse (which provided the name for Hartmut Winkler's publication). XANADU was also intended to take its orientation from the way the human brain functions and to be based on the model of 'the fluidity of thought'. At the same time, XANADU was to be available to a large number of users, all of whom could move freely in various directions. For example, users could quickly get to the text they were looking for, correct the existing texts at any time, and retrieve all texts corrected by other users in the Docuverse. This is how Nelson describes hypertext, with the accentuation on an active role for users – and already with the computer in mind.

Common to both development projects is that they think they have found solutions to a problem already prevalent at the time. They are attempts to contain the information explosion (to help deal with bewildering complexity and the uncertainty of information) by technological means, for the body of knowledge and the number of scientific specializations appeared to overtax human capacities.

These expectations, which suggest that digital media technologies are eminently suited for education scenarios, and which still continue to influence the dialogue surrounding them, are already inherent in the myths of how the internet was founded. The dream of the universal library in media discourse is directly connected to the reordering of knowledge production and availability brought about by the computer.

Expectations of digital media technologies:

Externalizing the human brain (brain metaphor)

Revolution (basic change in the world and culture, potential for democratization, promise of salvation)

Access to the commonsense knowledge base (universal library)

Ability to make use of the commonsense knowledge base

Individual learners: freedom

When we look at the forms of online learning currently under discussion, such as MOOCs (massive open online courses) and OER (open educational resources), we notice a continuation of the "technologies of freedom" narrative attributed to the internet at an early stage (as in Barlow's Cyberspace Manifesto, etc.).

The normative openness of these learning scenarios invoked in the beginning refers to legal aspects of use and to technological aspects (cf. Foote 2005). Here it is on the one hand primarily a matter of the compatibility of various resources and systems, although the use of proprietary software or formats has a substantial restrictive effect. This is basically opposed to the idea of sharing, which is why many prefer to use FLOSS (free libre open source software). On the other hand, this openness also refers to the licensing framework of educational resources, for instance in the form of the "creative commons".

As far as the learners are concerned, it is on their part a matter of freedom *from* something (philosophically called "negative freedom"): that is, freedom from the constraints and bureaucracies of (educational) institutions. What is more, many of the things on offer are also free of charge, so that we can also speak of OER participants as having a certain financial freedom – as well as, ideally, being independent of institutions and in terms of content and ideology.

In his 1945 publication, Bush already specified the deficiencies of the human memory from a positive perspective as the "privilege of forgetting". Thus he here converted the freedom of being allowed to forget (the freedom from having to memorize) into a positive (and freedom-enhancing) aspect of being human: having machines augment the memory will let people once again be truly human. It seems to me quite interesting that in Bush's argumentation human shortcomings and deficiencies are simply outsourced, in contrast to the controversial anthropologist Arnold Gehlen, who in 1940 called humans "deficient beings", asserting that technology was part of basic human nature and originated in order to compensate for human deficiencies. Unfortunately, I cannot further pursue this interesting line of thought within the scope of my paper.

In Hegel's sense, this is a phase without coercion (thus roughly corresponding to the idea of negative freedom), but with the understanding that learners not only have freedom *from*, but necessarily have freedom *to*, as well. This "positive freedom" pertains to shaping the course of one's own life and achieving something like personal fulfillment through self-empowerment and independence in learning. Taking a closer look, this is a freedom of choice, as well as an obligation to choose. There is a striking recourse to an emphatic concept of individuality in the discourses of self-management which these learning scenarios not only offer, but even demand. The "technology of freedom" allegedly enables free forms of living and self-determined lifestyles in which individuals commit to their own abilities, talents and aptitudes, allow themselves to be advised, taught and evaluated, and accept such normative educational requirements as life-long learning and regularly updating their personal ePortfolios as a self-evident way to show themselves from their best side. Typical of the post-industrial West, according to Klaus Krippendorff, are the narratives of free access to information, unlimited contact and the ability to shape the world, including one's own identity. Added to these is the contemporary narrative of opportunities to choose (even though the possible choices cannot possibly be exhausted, the mere fact that they exist is considered to be a good thing). These mythological narratives are used to channel people's participation in a technological society. Klaus Krippendorff identifies these mythologies as being in reality the sources of power driving the narratives.

Publicist Anya Kamenetz speaks of "edupunks" and "edupreneurs" in connection with do-it-yourself learning cultures in the realm of higher education, as she calls learner-centered educational configurations. The back of her 2010 book "DIY U: Edupunks, edupreneurs, and the coming

transformation of higher education" is emblazoned with the slogan "A revolution in higher learning: affordable, accessible, and learner-centered" (please bear in mind that all these terms are merely expectations).

The edupunk is someone who escapes from the formal education system by using free educational media, while the edupreneur functions as an entrepreneur producing educational media for himself and others, giving them an institutional framework. This is intended to overcome the deficiencies of the conventional (public) educational system, while technology-supported, self-determined learning management (private and public) is supposed to lead to innovative thinking. Here the expectation is that a defective system will be replaced so that processes of transformation can begin to affect higher education and achieve educational goals. The new opportunities are intended to guarantee an educational program tailored to the needs of the individual. The characteristics expected of successful learners include motivation, focusing and decisiveness. However, the learning scenarios on offer are not accompanied by any support programs (related to the psychology of learning, for instance) to help learners overcome obstructive constellations in order to meet these expectations. Hence the actual process of learning and the motivation to do so are strongly marked by expectations, yet do not appear to go beyond the mere formulation of ideals (a "just do it" attitude is assumed). This leaves the impression that we are dealing here less with a transformation of the educational system than with a transformation of learners in a subjective learning process (cf. Holzkamp 1995), who are now expected to make good on their promise in the name of self-empowerment, self-confidence and autonomy.

As Mackness, J., Mak, S. and Williams, Roy (2010) found in their study of such scenarios, however, that many learners have no desire at all for this sort of freedom (and the self-responsibility it entails). Instead, they are confused by the freedom of the open form and expect a course structure:

The research found that autonomy, diversity, openness and connectedness/interactivity are characteristics of a MOOC, but that they present paradoxes which are difficult to resolve in an online course. The more autonomous, diverse and open the course, and the more connected the learners, the more the potential for their learning to be limited by the lack of structure, support and moderation normally associated with an online course, and the more they seek to engage in traditional groups as opposed to an open network. These responses constrain the possibility of having the positive experiences of autonomy, diversity, openness and connectedness/interactivity normally expected of an online network.

In the reality depicted in this study, autonomy is felt to be a lack of needed support. The perception of openness is also multifaceted in that it can even imply an avoidance of networking and sharing. Varying expertise on the part of learners influences online behavior and leads at most to the formation of self-contained groups. The authors of the study recommend having teachers provide moderation (in order to limit disorientation) and that undesirable behavior which can impede learning be clearly stipulated (in the sense used by Cilliers, 2005; Snowden and Boone, 2007: not stipulating what should happen, but what should not happen).

The demands arising from insights of learning theory are handed over entirely to learners by free educational media, while the incentive for learners is found mainly in the focus on personal interest and independence taking place in a culture of sharing (presented in an idealized manner). According to Kurt Larsen and Stéphan Vincent-Lancrin, a high level of innovation is achieved if knowledge is *freely* shared: "The users are freely revealing their knowledge and, thus, work cooperatively." (Larsen and Vincent-Lancrin 2005: 16) The advantages of open educational networks are seen to be their extensive diversity, connectivity and opportunities for sharing knowledge.

Learning networks as cultures of sharing

In the theory behind these learning scenarios, such temporary communities already appear as an end in themselves, and interconnectedness in networked culture is seen as a good in itself. Users in these learning communities belong to different social, cultural and ethnic groups, have different habits and pursue different goals in life. They correspond to the post-traditional communities sketched by the sociologist Ronald Hitzler. Here the significant feature is that these communities consist of people who voluntarily get together and form a defined group to pursue a common interest for a temporary period. The significant characteristic of these communities is that they arise not qua tradition, but through individual participation for a limited time (Hepp 2008: 135). These learning communities are the expression of the technical interconnectedness of users aimed at personal benefit – although we would do well to pay more regard to self-interest as the most compulsive form of usefulness in the theoretical perspective on idealized cultures of sharing, as well as better assessing the competition and rivalry among learners, which commonly permeate learning scenarios – ideally, as incentives. This is not insignificant, especially since some courses on offer are directly linked to the recruitment activities of potential employers. Another critical aspect requiring closer examination is the phenomenon of social loafing, i.e., the tendency of people working in a group to exert less effort to achieve a goal than people working alone (cf. George 1992, Ohlert 2009). These objections and concerns are not intended to deny the possibility that common grounds can be discovered and cultivated, thereby producing a sense of belonging. In terms of learning theory, a peer-to-peer configuration which facilitates horizontal instruction is most definitely to be encouraged. There is no doubt that linking up with others and becoming a member of a group can certainly give rise to a narrative "we". However, this is not guaranteed by connectivity alone. The size of the learning community unfortunately also entails an increase in "white noise" and interference (cf. Mackness, J., Mak, S. and Williams, Roy (2010)). A lack of clarity concerning the type and objectives of a MOOC, for instance, as well as a lack of moderation in the discussion forums, intensify these effects. Trust is a basic necessity for sharing. Building up trust, however, takes time as well as a certain knowledge of the people one is dealing with (lucidity). Making an effort to this end is another challenge inherent in OER, which at the same time limits independence in terms of time. This is particularly noticeable in regard to the withdrawal of participants in MOOCs: that is, the more open the conception of such a course, the more it creates obstructions to sharing.

When a multiplication of public spheres, in the sense of a radically democratic principle, is postulated in the context of these scenarios, and when the extension of public space is seen as a way to publicize to as many areas and institutions of society as possible, then these are merely expectations and wishes.

Klaus Krippendorff also speculated on the motivation for taking part in the creation of something worth striving for (here education, whereas Krippendorff was describing a vision of active design in society as a whole). This is said to be self-motivating (!) and satisfying, and that, in the process, one could give these things a meaning of their own and make them part of one's own life. Thus one would create them and create oneself as an individual and as part of a social community. (Krippendorff 2006).

Conclusion and outlook

The interplay between societies impacted by network media and changes in educational practice is creating dynamic areas of tension which, moreover, do not react to one another simultaneously. Yet media technologies are not only involved in processes which enhance availability, but also play a decisive part in producing and imparting bodies of knowledge. Under these circumstances, a basic definition of cultures of sharing is now necessary. I think that what is important in studying online

learning communities is that they cannot be evaluated in the same way as social network sites, as shown in the study by Mackness, Mak and Williams. It is possible to approximately coordinate understanding, but in no case can it be shared. What can at best be shared are learning materials, but not learning itself. In addition, relevant phenomena such as social loafing are in need of more pedagogical consideration.

The visions of learning associated with the new, media-supported scenarios sound very inspiring and hark back to long-standing educational ideals, such as "education for everyone" and historical traditions of sharing, as Theo Hug discussed in the foregoing paper. However, I think that we are still a long way from meaningfully achieving them – especially in view of the fact that the wide variety of motives for learning precludes the existence of a single best way. From the perspective of media studies, a look at the historical development of media is indispensable if we wish to assess the all-pervading processes of acceleration, relate to these processes, and question and reflect on the basic conditions of change in education and educational institutions. Those studying learning today are called upon to take a closer look at how these positive effects in online communities can be fostered and supported, and how we can actually achieve joint value creation (in a kind of achievement community) instead of focused value appropriation.

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