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Education for All Revisited: On Concepts of Sharing in the Open Educational Resources (OER) Movement

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Abstract[ii]

Relationships between the private and public sphere in education have been discussed repeatedly and in various ways. However, the role of media and media dynamics is widely underestimated in this context. It is only recently, since the digital turn, that the focus of the debates has changed. In the past few years, manifold initiatives have aimed at opening up education on various levels using digital communications technologies and Creative Commons licenses. Additionally, massive open online courses (moocs) have been developed. Today, OER (Open Educational Resources) is used widely as an umbrella term for free content creation initiatives: OER Commons (http://www.oercommons.org/), Open Courseware (OCW), OER repositories, OCW search facilities, University OCW initiatives, and related activities. Shared resource sites such as Connexions (http://cnx.org), WikiEducator (http://wikieducator.org), and Curriki (www.curriki.org) have an increasing number of visitors and contributors.

On one hand, the motif of 'education for all' is once again appearing in related debates and practices. On the other hand, notions of sharing play a crucial role in open content and open education strategies. This purpose of this paper is threefold: It starts with an outline of selected understandings of sharing in educational contexts; it then addresses their relevance for OER development through examining contrasting and relational conceptual dimensions. Lastly, the contribution aims to sketch different forms of sharing related to media forms.

Keywords: Open Educational Resources (OER), Open Education (OE), universal education, sharing, educational philosophy

Introduction

The relationship between the private and public spheres in the context of educational processes is significant to pedagogical and educational discourses in multiple ways. In the Western tradition of thought, historical research sometimes refers to Plato's private academy, to his educational teachings, and his idea of establishing an educational state as an initial milestone. For Plato, education was tantamount to stepping out of the cave with its shadows and false images. Evidently, people who are tied to their chairs must be liberated and led out of the cave. Eventually, those who accomplish the difficult and painful ascent to find the sunlight of 'ultimate reality' can consider themselves fortunate and pity those who are left behind. Although individuals must accomplish the ascent for themselves, they can only do so through a collective effort, and by heeding the advice of a midwife. In this process, opportunities are distributed unevenly; they are tied to age, social status, and gender, and in Plato's model it is only male adult philosophers who can obtain the highest level of education. Such men, once they have advanced to the idea of the 'good' and the 'true,' are capable of reasonable action both in private and public life. Generally speaking, Plato's model is that of an authoritarian corporate state consisting of workers and farmers as well as guardians and rulers. In this model, the education of individuals is subordinate to the objectives of the state, thus representing an elitist view that relies on training and drilling.

Various elitist views of education have been present since Greek antiquity. Regarding the public sphere, such views generally manifest as social norms. Even when one comes to the conclusion, as Urban (2004) does, that elitism and democracy are not incompatible (Urban, 2004, p. 35), doubts regarding the equality of opportunity (see Bourdieu & Passeron, 1971) and the issue of the "possibility of an equality of opportunities" (Bremer, 2008) persist. We need to remember that formal efforts of establishing equality of opportunity have had undesired secondary effects, or have resulted in the contrary, which in view of the many paradoxes that exist in educational settings (Winkel, 1986; Hug, 2011) is not altogether surprising.

In German-language educational manuals and reference books the term "public sphere" appears in the second half of the 19th century, with the corresponding educational subjects studied throughout the 20th century (Brüggen, 2004, p. 724). Public opinion, understood as a relative consensus of large sections of the population, has always played a role by providing points of orientation for government and the groups and individuals in a society governed. This applies to traditional, pre-bourgeois societies and the bourgeois and postmodern ones, with the respective complementary phrases being public vs. secret and public vs. private.

Many of the more recent reinterpretations and new understandings of the 'public sphere' and 'public opinion'—key themes in the social and cultural sciences ever since the Enlightenment—have been taken up in pedagogy and educational science. This is particularly true of the fields of primary and secondary educational pedagogy, educational anthropology, and philosophy of education (see, for example, Oelkers, Peukert & Ruhloff, 1989; Oelkers, 1993; Levin 1999; Casale & Horlacher 2007; Amos, Meseth & Proske, 2011). In these contexts, media-related subjects and the dynamics of media change were referred to only occasionally (Meder 1989; Vogel 1989; Korte 2007). At least in the German-speaking world, no systematic overview of the ways in which current concepts of the public sphere have been discussed by educationalists exists (Seubert, 2013; Wallner & Adolf, 2011; Internet & Gesellschaft's Collaboratory, 2011).

However, for several years, digital media, aspects of openness, and the public sphere have been discussed under the headings of Open Education (OE) and Open Educational Resources (OER; Atkins, Brown & Hammond, 2007; Caswell, Henson, Jensen & Wiley, 2008, Bergamin, Müller & Filk, 2009; Iiyoshi & Kumar, 2010; Butcher, 2011). It is telling that these debates are conducted vigorously on the Internet, but they do not (yet) appear in specialized manuals and reference works (McCulloch & Crook, 2008; Tippelt & Schmidt, 2010; Bockhorst, Reinwand & Zacharias, 2012).

In these debates, the more long-standing issues of open access to education, to educational opportunities, and to learning materials are addressed once again and reconsidered under the conditions of mediatization, digitization, individualization, and globalization. In historical terms, calls for "free educational infrastructures" (Stallman, 2010, p. 155), "enabling universal education" (Caswell et al., 2008), and "Free Education for All"[iii] are anything but new (Comenius, 1967, Tenorth, 1994), yet OER debates tend to be characterized by a disregard for history.[iv]

One key concept in this context, and one that also figures prominently in debates of Web 2.0 and net culture (Castells, 2009, p. 126; Sützl, Stalder, Maier & Hug, 2011), is *sharing*. To be sure, models and practices of sharing are not a novelty in pedagogy and education, or in the culture of communication.[v] However, the frequency and the varying ways in which the term is used the Web 2.0 context (John, 2013), and in OER debates, makes it necessary to consider the term more closely. The fundamental importance of sharing practices with respect to socio-technical aspects of processes of opening and the creating of (partial) public spheres also makes such consideration necessary. What does 'sharing' in education, and in the discussion of OER in particular, refer to? What meanings and conceptual dimensions might be identified? In this paper, my intention is to attempt an answer to these questions, and to sketch briefly various forms of sharing in media terms.

Sharing in Educational Contexts and in the OER-movement

Sharing is part of our everyday experience insofar as most of us have been taught the concept in one way or another and are thus acquainted with various ways of approaching sharing. In line with the educational styles, relationships, and sociocultural customs present in our upbringing, we were encouraged to share food, toys—as well as time and knowledge. We may consider the results of these educational efforts pleasant or disagreeable, incomprehensible or obvious, and these efforts may have generated the desired results or their opposite; whatever the case may be, the confluence of our experience and of the use of the word 'sharing' has familiarized us with some of the communicative, distributive, and moral meanings of the term. Definitions include: to divide something into parts, to take part, to empathize or sympathize, to be involved in something, to have something in common, or to have something together, to cede, to make available, to pass on, to distribute, to communicate, to use together, to show, to experience something together, to share concerns, to care for something, to be concerned about somebody or something, etc. (in German, many of these verbs contain the root *teil,* as in *teilen,* sharing).

Yet even if we have not systematically thought about these experiences, and about the related insights in terms of education, socialization, and enculturation, there are generally three aspects that stand out as relevant:

- The various forms and rationales of sharing correspond to affects such as joy, sorrow, anger, or shame. Given that situational contexts and

patterns of experience are repetitive by nature, we can expect affective-cognitive interactions that are stabilized intrapersonally and through communication, and then are normatively assessed in cultural contexts. Subsequently, when perceptions or thoughts of sharing give rise to certain feelings, which in turn modify cognitive functions such as memory, remembrance, attention, and combinational thought, we can speak of an *affective-logical context* in as defined by Ciompi (1997).

- Furthermore, the aspect of time is relevant: sharing may refer to moments of showing, or dividing, to short-term and situationally circumscribed forms of jointly using a resource, to medium-term common experience (such as the temporary care of someone), or to permanent friendships.[vi]
- And finally, we learn that the promises behind the admonishments and requests to share may or may not be empty promises. We learn that sharing is a more or less risky behaviour, the outcome of which is open, and that others may well reap the fruit of our sharing. Even if the people around us expect sharing to pay and that it is legitimate to expect a return on it, there may on occasion be a large gap between insistent promises and the outcomes observed. Sharing may be risky, or, in other words, the difference between sharing common values, and sharing as an unconditional value may be a painful experience.

As a pedagogically relevant phenomenon, the moral dimension of sharing is evident in a wealth of manuals/can be seen in the wealth of guide books. For some time now, the sharing of custody (German uses 'erziehungsberechtigt' or having the right to educate, to raise, to bring up a minor) has become a common theme in divorce procedures. However, in recent pedagogical and educational manuals and reference works, the term 'sharing'—in spite of its ubiquitous relevance and centrality as a keyword—does not appear.

This is different in works on media socialization and, above all, work on teaching and learning with digital media. Here, the term 'sharing' appears with increasing frequency, and the term 'sharism' has occasionally been used, too (Ackermann 2011, pp. 2–3).[vii] In the past few years, a variety of new initiatives aim at opening education on various levels, using digital communication technologies, Creative Commons licensing, and massive open online courses (moocs). Today, Open Educational Resources (OER) is widely used as an umbrella term for free content initiatives, OER commons,[viii] Open Courseware (OCW), OER archives, OCW search tools, academic OCW initiatives, and similar activities. Commonly used resources such as Connexions,[ix] WikiEducator,[x] and Curriki[xi] have a constantly growing number of users and collaborators.

The first public mention of the term Open Educational Resources occurred in 2002 at the UNESCO forum on the Impact of Open Courseware for Higher Education in Developing Countries (UNESCO, 2002). The discussions focused on Open Courseware and possibilities of improving access to open teaching and learning resources mostly in what the United Nations regarded as developing countries. In working towards a definition, the following preliminaries were indicated:

> In defining Open Educational Resources, the elements to consider are:
>
> – The vision for the service: open access to the resource, with provision for adaptation.
>
> – The method of provision: enabled by information/communication technologies.

– The target group: a diverse community of users.

– The purpose: to provide an educational, non-commercial resource

[...]The recommended definition of Open Educational Resources is: The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes. (UNESCO, 2002, p. 24)

Figure 1: Global Open Educational Resources Logo[xii]

In a report for the OECD's Centre for Educational Research and Innovation, Jan Hylén sums up a widely used definition, adding to it as follows:

> Open Educational Resources are digitised materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research.' To clarify this further , OER is said to include:
>
> - Learning Content: Full courses, courseware, content modules, learning objects, collections and journals.
>
> - Tools: Software to support the development, use, re-use and delivery of learning content including searching and organization of content, content and learning management systems, content development tools, and on-line learning communities.
>
> - Implementation Resources: Intellectual property licenses to promote open publishing of materials, design principles of best practice, and localization of content. (Hylén, 2006, p. 1–2)

This and other open definitions of OER[xiii] contain a certain amount of imprecision and ambivalence, of which some writers are fully aware.[xiv] The same applies to the term 'sharing.' Its use in OER literature is frequent, but usually it is not accompanied by a detailed discussion of the term.

In his report, Hylén first asks for the reasons of sharing, preparing a point that is relevant both to Open Source Software (OSS), Open Access (OA), and OER:

> The first and most fundamental question anyone arguing for free and open sharing of software or content has to answer is – why? Why should anyone give away anything for free? What are the possible gains in doing that? Advocates of the OSS, OA and OER movements of course have arguments in favour of their specific cause. But there are also general arguments that apply to all three. These can be divided into pull arguments

> which list the gains to be reached by open sharing of software, scientific articles and educational materials, and push arguments that register threats or negative effects that might appear if software developers, scientists and educationalists do not share their work openly. (Hylén, 2006, p. 5)[xv]

Hylén points to the risk of marginalizing traditional academic values as a result of business interests as well as of hard and software monopolies, and emphasizes the advantages of sharing:

> On the other side, a number of possible positive effects from open sharing are put forward, such as that free sharing means broader and faster dissemination and thereby more people are involved in problem-solving which in turn means rapid quality improvement and faster technical and scientific development; decentralised development increases quality, stability and security; free sharing of software, scientific results and educational resources reinforces societal development and diminishes social inequality. From a more individual standpoint, open sharing is claimed to increase publicity, reputation and the pleasure of sharing with peers. (Hylén, 2006, p. 5)

According to Hylén, there are also several points that speak in favour of a commitment to OER from an institutional perspective, the foremost of which is altruism:

> One is the altruistic argument that sharing knowledge is a good thing to do and also in line with academic traditions, as pointed out by the OA movement. Openness is the breath of life for education and research. Resources created by educators and researchers should subsequently be open for anyone to use and reuse. (Hylén, 2006, p. 5)

No precise meaning of 'sharing' is given in the report. As in many other works on OER, the term is used frequently, but lacks precision. Below are a few more examples of this kind of use: Lerman, Miyagawa & Margulis (2010) take the Open Courseware development at MIT (Margulies 2004) as their point of departure, and state, at the outset of their contribution:

> Open sharing of knowledge is at the heart of the academic process. For many faculties, it is an intrinsic value, convincingly demonstrated in their teaching and research. OpenCourseWare (OCW), developed at MIT, is a structured, institutional manifestation of this personal and professional value. (Lerman et al., 2010, p. 213)

Lerman et al. emphasize that in 2010 as many as 150 other academic institutions launched, or were in the process of launching, OCW websites, and in doing so were promoting a culture of sharing.

> We believe that this increasing adoption of the OCW concept will promote an even more widely accepted culture of open sharing, which will become more and more mainstream and will eventually become customary practice in education at all levels. (Lerman et al., 2010, p. 213)

Further into their contribution, they refer to a "global culture of sharing" (ibid. pp. 223–224) and to "two-way sharing through communities of practice" (ibid., pp. 225–226) as the next steps in this development. Furthermore, they refer to the benefits generated for MIT, and to the positive effects within the institution (ibid. p. 221), without, however, discussing the problematic aspects of OCW as a tool of marketing and recruitment, or as strategy of commercialization.

Topics directly discussed in the Commonwealth of Learning's *Basic Guide to Open Educational Resources* (Butcher, 2011) include, *inter alia*, quality improvement and marketing aspects:

> Taking a demand-driven approach can be justified in terms of the improvements in quality that can flow from it. In addition, though, this approach to materials development is cost effective. A further advantage is that, as an obvious by-product, it will typically lead to institutions starting to share a growing percentage of their own educational materials online, released under an open licence. Most institutions and educators are instinctively nervous about this, but evidence is now starting to emerge that institutions that share their materials online are attracting increased interest from students in enrolling in their programmes. This in turn brings potential commercial benefits, because the sharing of materials online raises an institution's 'visibility' on the Internet, while also providing students more opportunities to investigate the quality of the educational experience they will receive there. As students in both developed and developing countries are relying increasingly heavily on the Internet to research their educational options, sharing of OER may well become an increasingly important marketing tool for institutions. (see Butcher, 2011, p. 15)

The authors list various benefits which can arise from sharing content under an open license (2011, pp. 11–12), and they are also aware of concerns:

> A key concern for educators and senior managers of educational institutions about the concept of OER relates to 'giving away' intellectual property, with potential loss of commercial gain that might come from it. This is often combined with a related anxiety that others will take unfair advantage of their intellectual property, benefitting by selling it, plagiarizing it (i.e. passing it off as their own work), or otherwise exploiting it. These concerns are completely understandable. In some instances, of course, when educators raise this concern, it actually masks a different anxiety – namely, that sharing their educational materials will open their work to scrutiny by their peers (and that their peers may consider their work to be of poor quality). Whether or not the concern is justified, it is important to determine what is truly driving the concerns of educators. When the concern is the loss of commercial opportunity, this requires a particular response (engaging with the incentives for sharing). But when this masks a concern about peer and student scrutiny, this needs to be dealt with differently (and will usually involve some policy or management drive to overcome resistance to change). (Butcher, 2011, pp. 9–10)

Additionally, I wish to cite two examples from the German-speaking world that present a similar argument. With reference to Hylén (2006), Barbara Rossegger (2012) writes:

> By freely sharing and reusing materials developed at public institutions using tax payer's money, other public institutions will be able to benefit from them. Content and materials do not have to re-invented, although this continues to be a widespread practice. (Rossegger, 2012, p. 23)

Bergamin and Filk (2009) adopt a more sceptical position, asking whether "OER serve the sharing of knowledge, or whether they should rather be seen as part of a 'new' culture in which everything can be consumed for free" (p. 26). They question the feasibility of a didactical change of course—away from traditional towards OER-based learning and teaching—and also ask "who will bene-

fit from this new form of distribution of knowledge and educational materials" (p. 36).

Elsewhere they point to a general relevance of media-didactical and media-pedagogical transformations in the age of Web 2.0, and in modern, knowledge-based societies, where "new ways of combining teaching and research must continuously be conceptualized and tested" (Filk & Bergamin 2009, p. 10).

> If we agree that through the Web learning continues to become an increasingly autonomous and individual activity, we may assume, given the user numbers presented by Open Courseware providers, a similar development to take place on open-resource E-learning portals. A general success of such projects, including their specific adaptation to the various levels of learning, might in fact not only be expressive of a media-pedagogical and media-didactical change of course, it might indeed be indicative of a larger change of direction in educational policies and educational science in this domain, away from the 'privatization' of knowledge (internalization) and from the respective modes of communication, to the 'sharing' of knowledge, and ultimately to a cooperative production of teaching and learning themes. (Filk & Bergamin, 2009, p. 10)

Leading on from this speculation, the authors ask whether "open educational resources will in future define a *sui generis* **(media) pedagogical standard of education"** (ibid. p. 11; emphasis in the original).

Many other examples could be added here. Most of them have several points in common:

- they consider sharing as having a key role in the OER movement;
- practice-centered, pedagogical, socio-technical, economic, and policy-centered perspectives are predominant;
- although the use of 'sharing' is frequent, an explicit discussion of various ways in which the term could be understood rarely takes place.

Given the key significance implicitly or explicitly attributed to practices and dynamics of sharing, it does seem remarkable that theoretical discussions of the sharing phenomenon are largely absent. The focus on practical application has pushed differentiated theoretical approaches—as they might be made in philosophy, cultural theory, educational science, media studies, and communication—into the background, or at least such discussions are not taken up in any detail.

However, these reflections on sharing in educational contexts and in the OER-movement should not detract from the fact that both sharing and openness or "going open" are not restricted to OE and OER discourses. On the one hand, the connection between ideas of open/openness and sharing is related to relatively narrower perspectives, for example the vantage points of private enterprises and mainstream political economy perspectives, as well as broader perspectives such as those related to Free Culture, Free Education and the use of Free/Libre and Open Source Software (F/LOSS) (cf. Gonçalves & Figueiredo, 2014) in different ways. Interplay and overlaps of different meanings of sharing and openness vary depending on discursive contexts of employability, formal education, media activism, or expansion of the human horizon by activities of humans, animals or robots. On the other hand, concepts and values of open(ness) and sharing in educational contexts as well as in communicative

contexts are generally related to media constellations and the corresponding dynamics of opening and closure (cf. Leschke, 2012).

Versions of Sharing: Towards a Dynamic Conceptual Understanding

If we wish to investigate the theoretical aspects of sharing more closely, going beyond its noted communicative, distributive, and moral meanings, then we can do so by looking at the philosophical, theological, and social science discourses that explicitly address various aspects of sharing. For some time, current work that focuses on the question of sharing in digital culture has been available (in particular Benkler, 2004; Stalder, 2011; Stalder & Sützl, 2011; Sützl et al., 2011; John, 2013; Sützl, 2013).

Faced with problem of explaining sharing, Belk (2010), for example, describes the phenomenon as a "fundamental consumer behaviour that we have either tended to overlook or to confuse with commodity exchange and gift giving" (p. 715). Considering a number of different attempts at defining sharing, and prototypical forms of sharing, such as "mothering and the pooling and allocation of resources within the family" (p. 717), he highlights the aspects of connecting and bonding:

> Sharing tends to be a communal act that links us to other people. It is not the only way in which we may connect with others, but it is a potentially powerful one that creates feelings of solidarity and bonding. (Belk, 2010, p. 717)

His contribution aims at a better understanding of consumer behaviour and takes socio-cultural and socio-psychological approaches into consideration. Overall, his reasoning can be positioned within the economics discourse.

Nicholas John, in his empirical study Sharing and Web 2.0 (2013) sums up a new meaning of sharing that emerged in tandem with the development of Web 2.0. Using grounded theory methods, he analyzes 44 of the largest and most widely used Social Networking Sites (SNS). Accordingly, his interest is not in how pre-existing concepts might be applied, but in exploring relevant practices:

> My analysis does not seek to apply a name to a set of observed phenomena, but rather to interrogate the name that has already been given to the practices that underlie those phenomena. (John, 2013, p. 168)

He reaches the conclusion that the new meaning of sharing in Web 2.0 comprises three key features: "fuzzy objects of sharing; the use of the word 'share' with no object at all; and presenting in terms of sharing functions of social network sites that used not to be so described" (John, 2013, p. 167). He sets out major changes occurring at a time of transition:

> The data show that the years 2005–7 constitute a watershed in terms of the use of the concept of sharing. As described above, terms such as 'share your world' or 'share your life' did not appear before then; similarly, the injunction to share (without any object at all) did not appear until the second half of the 2000s either. I have also shown how certain activities, such as keeping in touch, came, over time, to be described as sharing. (John, 2013, p. 178)

Wittel (2011), too, examines new forms of sharing, such as they developed through the spread of digital technology, and brought a qualitative change to

the social aspects of sharing. These changes concern the possibilities of *large-scale sharing* as well as ways "in which digital technologies can transform the sharing of immaterial things" (p.7). According to Wittel, sharing is characterized by exchange and reciprocity: "In the pre-digital age sharing is always mutual, always social, and always based on the principle of generalised reciprocity" (p. 5). In his conclusion, Wittel underscores the difficulties of understanding what precisely surfaces when several different purposes of sharing come together.

> Definitions and meanings of words are not set in stone. They change over time and so does the term 'sharing'. Whereas sharing in the pre-digital age was meant to produce social exchange, sharing in the digital age is about social exchange on the one hand and about distribution and dissemination on the other hand. What makes sharing with digital media so hard to understand is exactly this blurring of two rather different purposes. (Wittel, 2011, p. 8)

The various analyses and characterizations referred to here should certainly make a differentiated discussion of the phenomenon of sharing in the digital age more feasible, both in general terms and with regard to OER developments. Even if the sources cited may seem exceedingly theoretical from the point of view of applied scholarship, researchers with an interest in meta-theoretical questions will need to enquire into the relationship between the established and the new definitions of sharing. Indeed, they will have to ask how the different perspectives, often in contradiction to one another, such as they appear in the various discourses on sharing, can be related to one another at all. Are we perhaps looking at a plurality of incommensurable descriptions of sharing?

The answers to these questions will largely depend on the epistemological orientations chosen, and on the preliminary choices. For example, if our enquiry is based on the conviction that the various basic understandings of sharing are part of incommensurable language games, vocabularies, and discourses, then we may highlight the strengths and problem-solving capacity of a particular perspective, in keeping with our argued preference. However, the perspectives themselves will remain placed next to one another, without any interrelation.

One way to address this problem constructively is offered by Goodman's concept of variations (Goodman, 1978; Goodman & Elgin 1988).[xvi] His thinking is guided by the belief that questions of knowledge cannot be settled once and for all on the basis of a stable foundation. There is no innocent view from the outside, no mega-perspective to which all other perspectives might be reduced. Goodman illustrates this using, *inter alia*, examples of worldviews in physics, phenomenology, and everyday life:

> The physicist takes the world as the real one, attributing the deletions, additions, irregularities, emphases of other versions to the imperfections of perception, to the urgencies of practice, or to poetic license. The phenomenalist regards the perceptual world as fundamental, and the excisions, abstractions, simplifications, and distortions of other versions as resulting from scientific or practical or artistic concerns. For the man-in-the-street, most versions from science, art, and perception depart in some ways from the familiar serviceable world he has jerry-built from fragments of scientific and artistic tradition and from his own struggle for survival. This world, indeed, is the one most often taken as real; for reality in a world, like realism in a picture, is largely a matter of habit. Ironically, then, our passion for *one* world is satisfied, at different times

> and for different purposes, in *many* different ways. (Goodman, 1978, p. 20; italics in the original)

We may each adopt different perspectives, but we cannot bring them together into a single, overarching perspective, or make universally valid judgments from some kind of superior, all-inclusive point of view. On the other hand, the various worlds are not made up of nothing, but generated from other worlds (Goodman, 1978, p. 6). They are created "by making such versions with words, numerals, pictures, sounds, or other symbols of any kind in any medium; and the comparative study of these versions and visions and of their making is what I call a critique of worldmaking" (Goodman, 1978, p. 94). The worlds thus created can certainly be related to one another, not by tracing them back to a universal underlying reality, but by thinking of these descriptions as variations and as relational. This concept of variation refers to the philosophical aspects of the potential conceptual interrelations among different worlds, rather than to the psychology or the sociology of world-creation. The variations may in principle be seen as representations of an original, but there is no original 'in itself' that could serve as a criterion for comparing the descriptive variations. Rather, individual perspectives bring about the similarities among the descriptive variations, and these perspectives also generate the difference between the given version and the original (Goodman & Elgin, 1988 p. 69). The similarities with the original, which make a variation a variation, are always created by a certain perspective. A decisive role is played by metaphorical transfer and the differentiation of similar and contrasting conceptual dimensions. Like metaphors, variations are about similarity and contrast at the same time. Next, in addition to this formal condition, a functional one is necessary. Goodman and Elgin explain this using music as an example:

> First, to be *eligible* as a variation, a passage must be like the theme in certain respects and contrast with it in others. Second, to *function* as a variation, an eligible passage must literally exemplify the requisite shared, and metaphorically exemplify the requisite contrasting, features of theme, and refer to it via these features. *Being* a variation derives from functioning as such: a variation is a passage that normally or primarily or usually so functions. (Goodman & Elgin, 1988, p. 71–2; italics in the original)

In keeping with this statement, our purpose cannot be to search for an original form or variation of sharing 'in itself' that could serve as a criterion towards comparing varying descriptions. Rather, we must seek to explicate potential conceptual interrelations among different worlds and variations as suggested by Goodman and Elgin (1988, pp. 66–82). In other words, we must seek to explicate perspectives that make the various descriptions of sharing appear as variations around a common theme.

With the afore-mentioned examples of sharing in mind, we can readily identify such conceptual perspectives:

> *Private and public*
> The relationship between the private and the public represents a conceptual dimension present in all forms of sharing—whether it is Martin of Tours sharing his cloak, whether we share the use of a car, a computer, a home, or a sailing boat, or whether we share our holiday photos on a social media platform. In all these cases, sharing also amounts to an interpretation of these relations and their components. Just how different these interpretations may be is readily apparent when we look at various areas such as the private sphere (the intimate sphere, or civil society), the public private sphere (particularly family and friends), the public sphere (such as the state apparatus and public discourse in Habermas' sense).[xvii]

In these cases, our understanding of sharing will be a result of our interpretations of these arenas, and how we interrelate these interpretations. Even if an industrial secret is shared only by some among a given workforce, these workers represent a partial public, independent of any desired or inevitable effects the secret might have in a larger public.[xviii] Interpreting these relations along with the corresponding processes of subjectification (see Sützl, 2013) as well as opening and closure (Leschke, 2012) generates difference. In the process, aspects of openness and closure will serve as instruments of power in media cultures in ways that differ from how they are used in industrial or tribal societies. The specific modes of private and social exclusion or openness, the regulation of access and belonging, and the degree of flexibility with which they are addressed are significant.

Spatial and temporal reach

Spatial and temporal reach is a variable that allows significantly different basic understandings of sharing (for example, sharing can be ad-hoc, short-term, indefinite, medium-term, life-long, relating to narrower or larger experiential spaces, globally oriented, etc.). Additionally, sharing can be the result of intentional actions, or occur as a secondary effect. In any event, sharing is positioned within temporal and spatial horizons. Spatial and temporal designs are the foundation of respective understandings and practices of sharing.

Materiality

Materiality is another variable that allows the differentiation of sharing forms. Even variants of sharing that concern ideas will involve some kind of object relationship. In many cases such objects may readily be identified (for example, objects used on a daily basis , blog entries, or video postings) or may at least be named (for example, thoughts, experiences, knowledge), yet the material dimension tends to be complex and hard to explicate in digital cultures of sharing. But even when sharing is referred to as sharing 'in itself,' without an apparent context, or when it takes the form of a grammatical imperative, as in "share!" or "share your life!," we are looking at an experiential context that involves a variant of "productive contributing" (Fassler, 2012). Thus, even when no defined object seems apparent at first sight (John, 2013, p. 174) there is a memory of an experiential context of sharing that one knows, and an incentive to participate in or contribute towards something.

Mediality

Potential conceptual interrelations among varying worlds of sharing may also be generated by aspects of mediality and mediatization, as sharing will inevitably involve communication. The conceptual dimensions of mediality and mediatization will determine the modes of communication that may be relevant in an individual case. Different basic understandings of media will result in different perspectives on sharing, and the same is true of the various historically relevant media constellations, means of communication, media offerings, media institutions, media technologies, media programs, media formats and, not least, symbolically generalized communication media (recognition, power, love, etc.) and algorithms that function towards enabling and directing processes of sharing.

Economics

Economic aspects are widely considered as key to a definition of sharing, whether these aspects are framed in an affirmative or critical mode (Belk, 2010). Various perspectives of sharing may be articulated against the

background of exchange and the gift. New forms of creating, distributing, and using digital materials allow new "economies of sharing"xix and new business models. The various concepts applied here and the different kinds of capital at play (economic, cultural, social, symbolic, informational, biopolitical) allow corresponding designs of sharing to emerge.

Economies of affect
I referred to affective and cognitive interactions earlier. Affect plays a role in all forms of sharing. However, the ways in which affective and cognitive dimensions are connected, and the stability of the patterns that emerge, may differ greatly. The various ways in which sharing creates bonds (or fails to do so) may be specified by explicating this point of view.

Normativity
Processes of sharing always possess a normative dimension. Depending on the rules and the forms of assessment involved, various sharing designs may emerge. These may be conceptualized in a non-purposeful or a goal-oriented way, or they may be structured around care, responsibility, utilitarianism, or didactics, with the respective moral, psychological, pedagogical, and political convictions in place. In no case will all possible aspects of this dimension be relevant, with a limited number of aspects determining how a specific variant of sharing functions.

This outline might be substantiated and differentiated further. The aspects indicated mark perspectives that allow corresponding possibilities of contrast without requiring an ontological definition. They represent a common denominator that brings the various descriptions of sharing into view as variations around a theme.

Discussion

As noted, there is a diverse range of possibilities for describing the conceptual interrelations that characterize various worlds of sharing. Depending on the goals set by theoretical or practical research, these descriptions will not necessarily replace the specific definitions or discursive localizations; however, they will encourage a dynamic view of and, thus, flexible analyses of the various cultures of sharing.

So what is the significance of this for sharing in the context of OER? First, I think it makes it clear that a differentiated and explicit analysis of sharing—a term often used loosely in OER discourses—is valuable and allows a better understanding of its fundamental relevance. It does so without any need to draw on specific theoretical tenets, but also without relapsing into a random diversity. Secondly, it makes it clear that we are well advised to consider historical forms of sharing as relevant in education, rather than allowing ourselves to think of them as behaviours made obsolete by digital technologies. Instead, it makes sense to fathom the commonalities and differences among the various dynamics of sharing, rather than pit the 'good old times' against 'new ignorance' or to praise new or old forms of sharing as objects of world hope or condemn them as sources of educational and social ills. Thirdly, the outline demonstrates that a narrow understanding of educational economy will fail to live up to the relevant dynamics of sharing in OER settings. Sharing is more significant than OER marketing and the impact of OER; it concerns more than creatively responding to budget cuts in education by attaching the label 'open' to educational materials, the quality of which requires examination. Accordingly, a broader understanding of educational economies would focus not only on the expected or evident effects that educational measures

have on individual and macro-economic outcomes in the labour market, or on evident or covert forms of privatizing costs in education; rather, such an understanding would consider the interplay of various kinds of capital, the interests that new business models serve, and the role played therein by sharing. Moreover, critical-examination must be applied to the tendency to 'educationalize' processes, and even more so to the risk of using the concept of sharing as a tool to limit education.

The flexible possibilities offered by examining both contrasting and relational conceptual dimensions of sharing give rise to several additional considerations that can be summarized as follows:

- The potential large-scale dispersion of OER will require attention to quality assurance. Adjectives such as 'massive' or 'open' have no meaning with regard to improved equality of opportunity, educational deliverables beyond mere qualification measures, or the material or didactical quality of OE and OER. The focus must be on the quality of sharing processes and their results, and the definition of criteria for quality assurance. Even if it is true that in systems of public education more is learned from popular culture than is generally admitted, the differences in standards between education, popular culture, and entertainment should be acknowledged even when the three combine in productive ways.

- Affective and cognitive interactions are relevant to educational processes in many respects. They concern aspects of the psychology of learning such as improved memory or problem solving capacity, social dimensions of group-belonging, subjective meanings of teaching content, and so forth. Given that we are examining questions of sharing, we are also looking at balancing the dynamics of giving and taking, and the differences between connecting and bonding. The latter are particularly relevant to digital cultures of learning. Here, too, we must critically examine the quality of the networking occurring as well as the quality of the social relationships created and the bonding patterns that emerge. Large-scale connecting without quality bonding among students, and between students and teachers, cannot justify hope for high-quality educational processes.

- Both *sharing* and *openness* tend to have positive associations, particularly in OER environments. However, this should not keep us from remembering that both of these terms do not per se represent values—as is the case with terms such as laziness, security, punctuality, etc. In these instances, whether we can appropriately speak of positive or problematic values will depend on the contextual and situational conditions, on the constellation of actors, on study requirements and educational objectives, and on desired or undesired outcomes and secondary effects. Just as in some group processes, trust can only emerge when the group members are able, at least temporarily, to rely on a closed structure, advocating unlimited openness may be counterproductive. Thus, it is important to consider the limits that correspond to specific forms of sharing and openness.

- Inasmuch as in digital cultures of sharing the *dividing line between production and consumption* is blurred and new mutual dependencies between processes of production and consumption arise, there are implications for the design and the distribution of open educational resources. Educational competencies regarding design and

production are not evenly distributed in society (the same is true in general of specialized knowledge). Given the path the development of media cultures has taken thus far, there are reasons to doubt whether "something like a universal competence in media production is a meaningful objective of cultural development at all" (Leschke 2012, p. 65). Regarding sharing in OE and OER environments, we must also ask how media competencies of action, design, and use are distributed across society, in which forms they exist, what their level of quality is, and, finally, what these indicators mean for education.

- The various *forms of sharing* in OE and OER may play a special role in so far as they can form part of a larger reflection on the means and contents of educational processes. This creates an opportunity that can be grasped better in the absence of a certain view of sharing that acts as an unquestioned mode of execution, but when, instead, various models of sharing may be contrasted, experienced, and critically discussed.

The above points are by no means a full representation of the relevance and the possible results that a meta-theoretical analysis might yield towards a critical study of the OER movement. However, they demonstrate that the distributive and communicative aspects of sharing require differentiated perspectives, and that a theoretical perspective on sharing can be a rewarding enterprise in itself. By way of summarizing, we might conclude that we need medium-range concepts that allow us to describe adequately both the stability and the dynamics of media constellations, given the diversity of sharing practices in media cultures, the loose usage of concepts of sharing, and the prominent role played by them in demands for free education for all. These new constellations require a new kind of formal knowledge.

> While in the humanities the complex of hermeneutic knowledge, identity construction, and self-concept was historically largely based on book printing, leading to a generalized ability of reading and generating meaning, the current media constellations, including Augmented Reality, the interchange of forms among media, and the subtle transits between entertainment and technical media, require mostly formal knowledge. (Leschke 2008, p. 49)

Once we agree that it has become problematic to organize our understanding of systems of knowledge around individual media technologies and dispositifs (Leschke, 2010, p. 303), then transversal and transmediatic dimensions will gain in importance. Rainer Leschke suggests a focus on mediatic forms as aids in organizing our knowledge of transversal media systems (Leschke, 2010, p. 305). The various forms of sharing can be described as such mediatic forms. Building our knowledge of these forms and analyzing them is relevant in terms of examining and creating cultural, social, and educational concepts and practices.

The core of Leschke's (2008) theory of medial forms is a flexible concept of dynamics that provides a description and analysis of exchange processes between different media as well as between mass media and arts. This theory is consistent with, albeit a further development of, Ernst Cassirer's concept of symbolic forms. It is compatible with the concept of variations presented by Goodman and Elgin (1988) and also with narrower concepts of schemata formation (Winkler, 2012), wider theories of media dynamics (Rusch, 2007) and media-cultural philosophy (Schmidt, 2008). Accordingly, and in contrast to both concrete and abstract conceptualizations (see Fig. 2), the theory of medial forms may be applied with versatility in contexts of sharing, too.

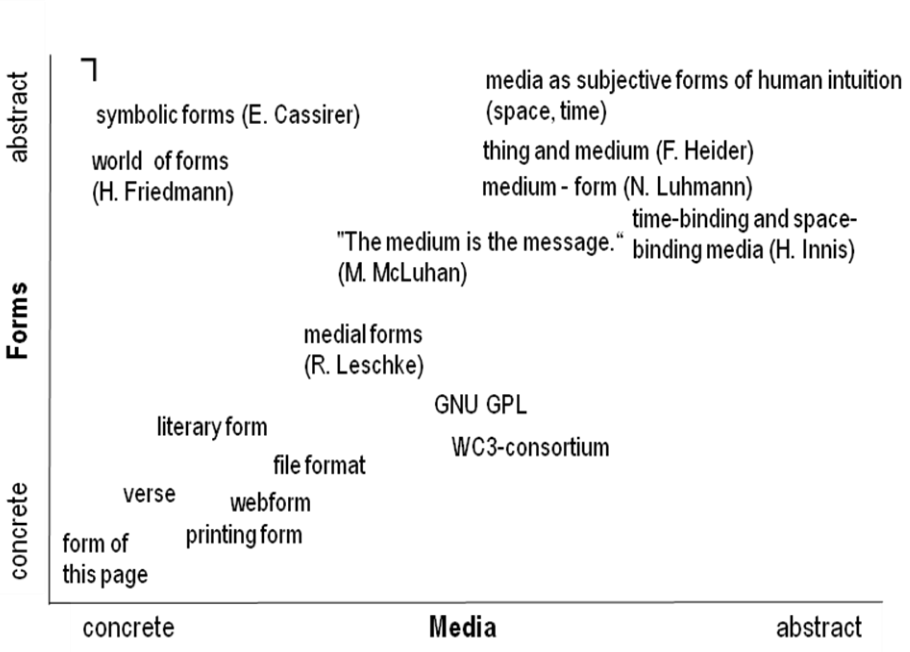

Figure 2: Forms and Media: Scopes and Selected Examples (author's depiction)

Regarding OER, we may expect more from a differentiated consideration of the various conceptual dimensions of sharing than from lamenting the disappearance of some cultural spaces and forms of knowledge. This applies in particular to education, teaching, and learning in the context of schools, where the OER movement can also draw on a critique of primary and secondary education that is grounded in media theory.

Thus far educational designs drawing on media theory (Böhme, 2006) have been mostly absent from the discussions on pedagogy and educational policies. Yet this may change, in spite of widespread reluctance towards reform in the primary and secondary educational system. Insisting, implicitly or explicitly, on primary and secondary schools as standard-bearers of book-based education (Böhme 2006, p. 70) may still represent the majority opinion in educational policy, theory, and technology. Nevertheless, in the future we will increasingly have to shift our focus to the conceptualization and design of transmediatic educational spaces[xx] if we are to resolve current problems in education.

To this end, the OER movement offers a range of guiding concepts for all levels of education. At present, however, it is unclear whether the hopes for change in our educational culture will remain unfulfilled, as they were with respect to e-learning, or whether the developments in OER will lead to the establishment of new (media) pedagogical educational standards.

Conclusion

Sharing processes inevitably involve several areas of potential tension: first, there may be tensions among those who share; secondly, between sharing as an activity and shares as parts, partial aspects, or segments; and thirdly, between the activity of sharing and sharing in relation to a larger imaginary or real and available whole. In other words, we are not just looking at tensions among the agents of sharing, or at tensions between the parts and the whole, or at tensions arising from the activity of sharing in light of an imagined whole,

or at tensions originating from the sharing in the face of limited resources, etc., but also at a dynamic interplay of all these areas of tension, an interplay that can be more or less balanced.

The logic of affect plays an important (and foundational) role as well. It plays a part, not only in the creation of tension, but also in its stabilization or destabilization, resulting in further changes of affect. Affect is relevant inasmuch as the interaction between cognitive patterns, models, and interpretations on the one hand, and the corresponding affective states of individuals, groups, and communities on the other, is continually destabilized in communicative, economic, and socio-cultural ways, resulting in this interaction taking on describable forms.

We have seen that material and immaterial objects play a role both in pre-digital media constellations and in the digital age, and that such distinctions are of relative significance. Based on a dynamic and analytical view of the cultures of sharing that draws on the concept of variations as proposed by Goodman and Elgin (1988), it is possible to think of the various forms of understanding sharing as conceptual designs of practices and experiences, and to examine them for commonalities and contrasts through metaphorical exemplification. In doing so, it appears that forms of sharing supported by algorithms facilitate and promote a mass distribution of content, of media poor in content, and of systems of production without any content at all. However, these forms of sharing, considered as the quintessence of sharing by some segments of digital culture, are relatively *weak forms* of sharing, as opposed to *stronger forms* of sharing rooted in social psychology, theory of education, philosophy, and criticism as well as political theory—which are differentiated and form part of an explicit and (self) reflexive argument.[xxi]

Regarding sharing in the OER movement, these stronger and weaker forms of sharing play a role in the current debates. In both cases, there seems to be an obliviousness regarding history. This is true, on the one hand, of various efforts to teach "everything to everyone," a phenomenon known in both dated and more recent history of educational science, and on the other hand, of the results and the implications of critical-emancipatory programs and pedagogical media promises.

Paradoxically, the OER movement is not immune to promoting elitist notions of education as well as half-realized education (*Halbbildung*) and non-education. OER discourses that are overly euphoric, anti-theoretical, or tied to the media industry should therefore be regarded with a certain scepticism. When such discourses are dominant, it may well happen that OER turns out to be the problem it promises to solve. In this case, efforts towards OER would amount to a delusion that does more towards pacifying the collective conscience of a minority of elitist educationalists than they are willing to admit (Herra, 1988). If this were the case, then the OER movement would not be concerned primarily with sharing and re-sharing knowledge, educational materials, educational opportunities, or a 'new' culture "in which everything may be consumed for free" (Bergamin & Filk, 2009, p. 26). Rather, it would amount to a kind of opium for the masses, and facilitate re-governmentalization in the name of de-governmentalization of the educational mainstream.

Nevertheless, OE and OER might promote a paradigm shift in education if attention is paid to theoretically informed OER discourses that cast a differentiated light on the role of sharing in open educational resources—discourses that are historically aware and willing to explore the boundaries of openness in educational resources, and that consider education both as a public and a private good (Giesinger, 2011), and which therefore critically assess the results and secondary effects of the OER movement. Such a paradigm change would merit its name, it would open transmediatic spaces of education, allow innova-

tions in our educational systems, and be desirable both from an individual and a societal perspective. I share the opinion of many of my colleagues in the field that at this point it is still unclear which direction the OER movement will take.

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[i] **Bionote**
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[ii] The paper was translated from German by Victoria Hindley and Wolfgang Sützl.

[iii] see http://www.openeducation.net/

[iv] , The subject has awakened little scholarly interest. In publications to date only fleeting reference has been made to the subject which still awaits extended treatment (see Peter and Deimann 2013) . Older issues regarding open access to education concern a wide range of topics including the educational reform and reorganization of knowledge by Petrus Ramus (1515–1572) and elementary education promoted by Johann Heinrich Pestalozzi (1746–1827).Also included are the reform of pedagogical concepts aiming at

more open schools, the introduction of free school books for all pupils in some countries several decades later and debates concerning open learning and open curricula, and more recently, open and distance education (cf. Evans and Nation 1992).

[v] In digital culture, the cultural and economic significance of time-sharing and, in particularl, file-sharing have played a major role from the beginning (see Aigrain 2012).

[vi] Consider the idea of a shared history and shared knowledge symbolized by a split coin whose halves are carried by people in friendship—an ancient example of communication as *symbolon* (Krippendorf 1994, p. 82).

[vii] Surprisingly, the neologism 'shareaholic' is being used in application-oriented online networks (https://shareaholic.com/), but so far has not been employed in media-pedagogical research on excessive or addictive use of computers or the internet.

[viii] http://www.oercommons.org/

[ix] http://cnx.org

[x] http://wikieducator.org

[xi] http://www.curriki.org

[xii] http://commons.wikimedia.org/wiki/File:Global_Open_Educational_Resources_Logo.svg

[xiii] In "Giving Knowledge for Free," a report by the Centre for Educational Research and Innovation (CERI 2007), OER is defined as follows: "Open educational resources are digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research" (ibid. p. 30).

[xiv] Hylén, for instance, is fully aware of the ambivalence of the terms 'open' and 'educational' and of the need to clarify them (Hylén 2006, p. 2). However, theoretical attempts at clarification seem to play a subordinate role across the entire OER discourse.

[xv] See also Centre for Educational Research and Innovation (2007, p. 573).

[xvi] Josef Mitterer's non-dualistic philosophy offers a similar possibility (Mitterer 1992).

[xvii] Even if we invert our perspective and examine sharing phenomena on the basis of concepts of the public sphere in political theory, it is clear that concepts of public as constituted by using the share button on social media sites should not be confused with the concepts of the public sphere as theorized by Kant and Arendt (Frick and Oberprantacher 2012). However, it does not follow that various forms of sharing have nothing to do with one another. I have already referred to the variety of current concepts of the public sphere that might be relevant in this context (Seubert 2010; Wallner and Adolf 2011).

[xviii] However, the hackneyed phrase "the private is political," often used in such contexts, is merely an example of circuitous thinking.

[xix] See economies of sharing as discussed in the context of "economies of the commons" (http://ecommons.eu/session-the-economies-of-sharing).

[xx] In simplified terms, this refers to educational spaces that are not primarily or exclusively based on oral presentations and printed materials as well as an occasional use of audiovisual media. Instead, there are cross-mediatic structures in which media technologies and communication media are connected in ways that allow both constrasting perceptions and transmediatic complexes of meaning, thus promoting educational processes.

[xxi] See Hierdeis' discussion of self-reflection as a component of pedagogical professionalism (Hierdeis 2009).