Open Education and *Bildung*
Ideas, Assumptions, and Their Vigour to Transform Higher Education

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Abstract

We are witnessing tremendous changes and transformations in learning and education due to the advancement of digital technologies. This pertains not only to various forms of e-learning but also to more recent sorts of open online learning environments such as MOOCs or P2P-University. As Bell (2011) has argued, learning theories fall short of explaining change in learning activities as these theories do not consider the complexity of technology, social network, and individual activities. Therefore, this paper revisits the German concept of Bildung *(Formation) to get a better understanding of the ongoing changes in learning environments, especially in informal Higher Education.*

Bildung is a unique concept in German educational theory with roots in the philosophical movement Idealism, and the key figures of Schiller and Humboldt. Humboldt is most known for his theory of education, which states that each individual should fully unfold all his abilities and skills under the umbrella of a «leading force», i. e. the goal of the individual development is to merge all the different skills and capabilities into one. Thus, the task of *Bildung* would be enable opportunities to live an autonomous, critical and reflective life. The goal is to provide a means for realising and preserving rational potential and capacity for self-determination, as opposed to being determined by others, such as society. Marotzki (1990) has proposed a modern theory of education called structural theory of education which depicts education in the form of a self-reflexive processes framed in the life history of the individual and contains a perspective of individual production of sense and meaning.

Bildung's significance is highlighted by the fact that it does not have a counterpart in the Anglo-American culture, it seems indicated to highlight its significance. As opposed to learning, *Bildung* provides a frame of reference to act and behave in response to the demands of culture and society. For instance, it is well known that knowledge or skills that have been acquired in traditional schooling will last a lifetime. However, as traditional patterns such as learning in higher education become more fragile, and more open formats are available, guiding frameworks need to be transformed to cope with changed conditions. This leads to educational processes that are focused on providing guiding knowledge to learn new skills and

competencies. There is an increased importance of utilizing media for these kind of educational purposes. Marotzki and Jörrisen (2009) provide some examples of the various potentials inherent in media. However, they and other authors have not yet provided empirical evidence to substantiate these assumptions. Consequently, this research project attempts to bridge this gap, i. e. provide a theoretically-sound approach to inform learning and education in complex media-facilitated settings based on different empirical studies.

Until recently, the concept and the term *Bildung* has rarely been used in the Anglo-American culture. Yet, as Hansen (2008) points out, a discourse between German *Didaktik* and Anglo-American curriculum research has emerged over the last years. Following this line of research, this paper attempts to expand this dialogue to cover recent developments in educational technology and Open Education. The apparent relationship between Open Education and *Bildung* definitely warrants more attention and research (Deimann 2013a).

In this paper, current transformations in the educational sector, that are often summarised under the umbrella term «unbundling» will be presented. These disruptive processes are mostly triggered by the proliferation of open source software and the principles of open science (open access), and have contributed to the Open Education movement with its latest developments of Open Educational Resources (OER) and Massive Open Online Courses (MOOCs). Since OER and MOOCs, in particular, have advanced so quickly it is important to step back and reflect on their impact on education. Therefore, in a second step, *Bildung*, as a powerful theoretical tool will be introduced and it will be outlined how it can impact Open Education. The third part of the paper will develop the argument that even with a profound theoretical underpinning, Open Education is in risk of failing unless the overall educational paradigm remains unchanged. For centuries, education has relied on the intellectual culture of the Enlightenment and the economical paradigm of industrialization. A shift towards a culture of sharing and understanding the capabilities of the community is necessary in order to consequently unfold the capabilities of Open Education

Introduction: The great unbundling of higher education

This introductory section describes some of the main arguments that are used to construct the powerful narrative «The great unbundling of higher education» that is a focal point in educational debates (Pathak and Pathak 2010). Its main purpose is to provide a solution for critical problems in the educational system (explosion of student fees and tuitions, outdated teaching methods) which have led to false promises: «Going to a top university and living as part of a cloistered elite (are) no longer seen as sufficient in an increasingly multicultural and global economic environment» (Brown, Lauder, and Ashton 2011, 25).

Generally, a narrative can be compared to the concept of the «meme» (Dawkins 1978), or, in other words, a reproducible idea in the form of a basic unit of cultural transmission. A meme is an information pattern which is capable of being copied to another individual's memory and can contain anything that can be remembered and learned (e.g. a joke).

With regard to the unbundling meme, a typical example is provided by Anya Kamenetz (2010) in her book *Eudpunks, Edupreneurs, and the Coming Transformation of Higher Education*:

> Here's what I know for sure: The promise of free or marginal-cost open-source content, techno-hybridization, unbundling of educational functions, and learner-centered educational experiences and paths is too powerful to ignore. These changes are inevitable. They are happening now. Innovative private colleges like Southern New Hampshire and for-profits like Grand Canyon, upstarts like BYU-Idaho and Western Governor University, and the community colleges like Foothill-De Anza represent the future. (130)

As Kamenetz insinuates, the unbundling framework provides a heuristic technique originated in economics to sense the historical process of grand transformations that affect the higher education system. Traditionally higher education has been defined as a packaged bundle of content, services, and experiences that led to education with inherent and transferable value to the learner (Staton, forthcoming). As has occurred in the music and newspaper industry, the package is now beginning to disaggregate. Shirky describes the changes in the music industry after the invention of MP3 format (2012) as follows:

> The people in the music industry weren't stupid, of course. They had access to the same Internet the rest of us did. They just couldn't imagine—and I mean this in the most ordinarily descriptive way possible—could not imagine that the old way of doing things might fail. Yet things did fail, in large part because, after Napster, the industry's insistence that digital distribution be as expensive and inconvenient as a trip to the record store suddenly struck millions of people as a completely terrible idea.

Education, as Anderson and McGreal (2012) note «has been relatively immune from such disruptive technologies perhaps because of the high cost of entrance (building campuses), the support and loyalty of alumni, government funders and the conservatism and anti-commercial culture of many academics and academic leaders» (380). However, the specific nature of education and distance education, in particular, can be described as a «complicated set of service provision, with

many complementary and sometimes integrated services» (ibid.). Nevertheless, a process of unbundling educational services has begun which includes (1) content authoring and production, (2) content delivery, monitoring, assessment and remediation, and (3) content sequencing and pathways. While this has been a rather conceptual description without much empirical evidence, in the fall of 2011 Stanford Engineering professors offered three of the school's most popular computer science courses for free online as Massive Open Online Courses (Machine Learning, Introduction to Artificial Intelligence, and Introduction to Databases). The Introduction to Artificial Intelligence course offered free and online to students worldwide from October 10th to December 18th 2011 was the biggest surprise. Taught by Sebastian Thrun and Peter Norvig, this course really was massive, attracting 160,000 students from over 190 countries. This course has received a huge amount of mainstream media coverage and two for-profit companies (with the help of venture capital) were launched (Coursera and Udacity). Advocates for the «new» open online course experiences like Daphne Koller proclaim their solutions in a way that bears a striking resemblance to the notion of «solutionsim» (Morozov 2013), i. e. «recasting all complex social situations either as neatly defined problems with definite, computable solutions or as transparent and self-evident processes that can be easily optimized – if only the right algorithms are in place» (5). In her famous TED talk «What we're learning from online education»,[1] Koller argues that, «mastery is easy to achieve using a computer because a computer doesn't get tired of showing you the same video five times and it doesn't even get tired of grading the same work multiple times … and even personalization is something that we're starting to see the beginnings of, whether it's via the personalized trajectory through the curriculum or some of the personalized feedback that we've shown you.» A major driver for this kind of technological innovation is data-driven personalised learning like the New York based company Knewton has developed as a platform to personalise educational content. It is based on the idea of adaptive learning, i. e. a computer constantly assesses a learner's behaviour and thinking habits and attempts to automatically tailor material (content, tests) for him or her. Advocates of adaptive learning lay claim to cost savings (computers vs. personal teachers) and to overcoming the «factory model of education» that has dominated Western education for two centuries. However, critics argue that it is actually this data-driven learning and not the «outdated» teaching model that threatens to turn schools into factories (Fletcher 2013).

Looking closer to these recent developments, it seems that history is repeating itself and so again, it is claimed that technology can improve education simply by the fact that it is technology. Similarly, in the 1980s it has been argued that computers could replace personal tutors that were praised for «one-to-one-

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[1]   http://www.youtube.com/watch?v=U6FvJ6jMGHU

tutoring.» However, so called Intelligent Tutoring Systems failed to produce comparable results (Spector 2001).

However, it is not only the unwillingness to learn the lessons from the history of educational technology that should be addressed by critics. What is also deplorable is that the overall hype involving MOOCS neglects the underlying paradigm of Open Education. There is the narrative that MOOCs were the invention of Thrun, Norvig and other related scholars[2] that ignores the fact that MOOCs have a much longer history. Moreover, it also excludes the underlying specific notion of openness for which Peters (2009) gives an encompassing overview:

> Openness as a complex code word for a variety of digital trends and movements has emerged as an alternative mode of social production» based on the growing and overlapping complexities of open source, open access, open archiving, open publishing, and open science. Openness in this sense refers to open source models of scientific communication, knowledge distribution, and educational development, although it has a number of deeper registers that refer more widely to government («open government»), society («open society»), economy («open economy») and even psychology (openness as one of the traits of personality theory). The concept and evolving set of practices has profound consequences for education at all levels. (Peters 2009, 203).

The next section specifically addresses the impact that openness has been having on education that resulted in the major movements of open classroom/open schooling, Open Educational Resources, and Massive Open Online Courses.

The Open Education Paradigm

Open Education can be described as the ambiguous effort to provide as much access as possible to education, in particular by removing barriers and increasing participation. Various attempts have been proposed over the last centuries (for a historical overview see Peter and Deimann 2013), however, «its encapsulation in a general philosophy of 'open learning' appears to be a relatively recent development» (Bell and Tight 1993, 2). When it comes to defining Open Education or some of its «relatives» (open classroom, open learning, etc.), there is a shared belief in the importance of flexibility (i. e., organisation of learning and teaching) and individualisation, for instance:

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[2] Oddly enough, the German flagship newspaper DIE ZEIT recently named Salman Khan as one of the MOOC inventors (http://www.zeit.de/2013/12/MOOC-Onlinekurse-Universitaeten).

> Open learning is a term used to describe courses flexibly designed to meet individual requirements. It is often applied to provision which tries to remove barriers that prevent attendances at more traditional courses, but it also suggests a learner-centred philosophy. Open-learning courses may be offered in a learning centre of some kind or most of the activity may be carried out away from such a centre (e.g. at home). In nearly every case specially prepared or adapted materials are necessary. (Lewis and Spencer 1986, 9f.)

This definition is characteristic in highlighting the ambiguity of Open Education as a political reform project, that is the promotion of a concept (openness) that actually belongs to the «genetic code» of the idea of education. Or to put in other words: How can education be possible without opening up the knowledge from an expert teacher and sharing it with fellow students? Bell and Tight (1993) argue, the constitution of «open learning» which is opposed to traditional or «closed learning» is a gross simplification and a myth. Similar to the notion of «democratization, openness has been prevalent in education since the ancient Greeks.3 However, the actual amount of openness which had been practiced in different times over the centuries varied greatly as described in the overview by Peter and Deimann (2013). For the modern era, Open Education reached its peak during the 1960s and 70s in many regions of the world (North-America, Europe) before it sunk more completely into oblivion. The rigorous claims of «Deschooling Society» (Illich 1971) paired with a lack of empirical support for those claims had caused the fall of Open Education. Many years later, the Massachusetts Institute of Technology (MIT) introduced a concept that became one of the central boosters for the revitalisation of Open Education, the OpenCourseWare (OCW) initiative which was a response to the then growing possibilities of the Internet. As reported in the *New York Times:*4

> M.I.T. plans to announce a 10-year initiative, apparently the biggest of its kind, that intends to create public Web sites for almost all of its 2,000 courses and to post materials like lecture notes, problem sets, syllabuses, exams, simulations, even video lectures. Professors' participation will be voluntary, but the university is committing itself to post sites for all its courses, at a cost of up to $100 million.

It is important to highlight the euphoria surrounding the specific context of this time to realize the potential impact of MIT's decision. As Carson (2009, 23) notes,

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3   This is insofar related to the discussions on Lifelong Learning (LLL) as it is also a response to a situation that is perceived as unsatisfactory («education fails to prepare students to the requirements of the highly completive, global economy») which then leads to the tautological claim that learning has to be expanded over the entire lifetime.

4   http://www.nytimes.com/2001/04/04/us/auditing-classes-at-mit-on-the-web-and-free.html?src=pm

«The idea that a great many top universities might choose to share the core academic materials from their courses – including syllabi, lecture notes, assignments and examinations – on the Web, that they would license these materials in an open source model and encourage others to download and modify them, was antithetical to the thinking of most universities at the time.» Clearly, it was MIT's extraordinary financial status that enabled this step, although OCW received initial funding of $11 million from the Andrew W. Mellon Foundation and the William and Flora Hewlett Foundations.[5] Moreover, the launch of MIT's OCW was not only driven by philanthropic reasons but also by strategic considerations, namely to increase the institute's reach and expand MIT education world wide (Carson 2009). The adoption of OCW materials begun at a rather low speed but increased when strategic partnerships such as with the Chinese Ministry of Education, were established. As of April 2013, there is material available from 2150 courses available on the MIT OCW site.[6]

With the benefit of hindsight, offering all course materials freely to the general public opened the door for the «digital rebirth» of Open Education. It can be considered a brave decision because it was opposed by the mainstream, with so many institutions desperately looking for ways to capitalize on the growing boom of «Virtual Universities», i. e. through a «quick and dirty» transformation of existing courses to digital modules. Often virtual programs were of low quality so that learners skipped these courses and refused to pay. MIT took a different route by offering all of its courses without charging any fee. In his book *Unlocking the Gate: How and why leading Universities are Opening up Access to their Courses*, Walsh (2011) identifies the following divergent trends in access to higher education. First and foremost, there has been a steady trend in rising costs for higher education, in particular at the so called Ivy-League. As a major indication, tuition has increased much faster than the rate of inflation. In addition to that, demand for higher education – Walsh (2011) makes only the case for the US – is at a very high level and outstrips supply. Against this background, it is important to emphasize that MIT's decision to give all its course materials away for free is more philanthropic than educational because «At the same time, by offering course content – but not the university credit that has typically accompanied it – to nonmatriculated students, these elite institutions maintain a key barrier to entry that keeps their exclusivity intact» (11).

In 2006, the Open University UK decided to follow MIT's footsteps and launched the OpenLearn project, which is not only intended to openly publish all the content

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[5] http://cshe.berkeley.edu/research/ebusiness/casestudies/mitocw.htm
[6] http://ocw.mit.edu/about/

that has been produced at the OUUK, but also to openly collaborate with other Higher Education Institutions. OER, according to Lane (2010), are perceived as being a logical match to the OUUK's mission (open to place, methods, and ideas). Along with the growth and diversification of open materials, there has been a differentiation of the term «open.» As shown below in Figure 1, openness is now defined much more technically and less ideologically when compared to the 1960s and 1970s and now includes issues of access, modification, and production.
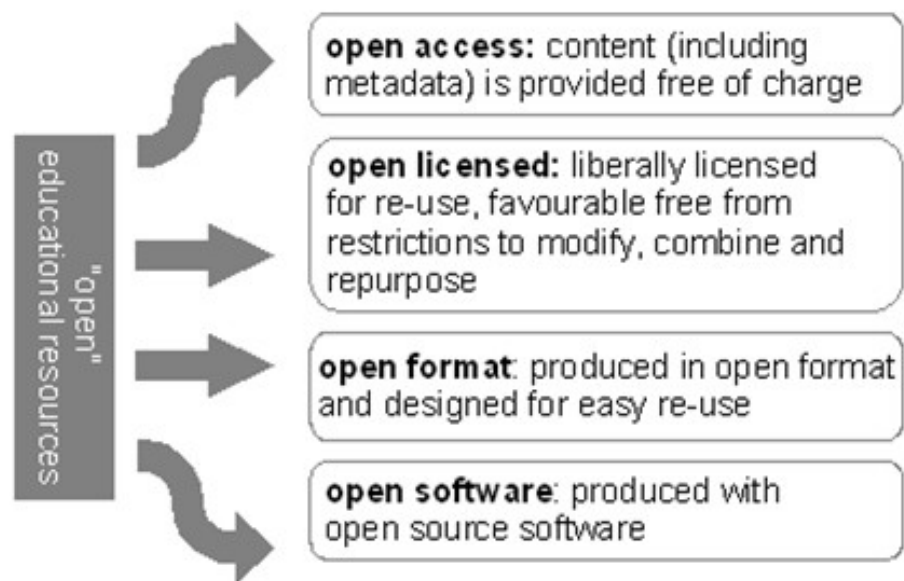

Figure 1: Various meanings of openness (Lane 2009, 4).

Moreover, the close connection of OER and open source software reflects a deeper relationship, namely with the intellectual commons, which is according to Friedman (2005) a «flattener of the world», i.e. a force contributing to a «level field play». With regard to OER, this field can be described as the provision of free materials which are not only produced by elite institutions but also by a myriad of individuals (teachers, learners, trainers) using portals such as MERLOT (www. merlot.org) to reduce social and economic inequalities around the globe.

Open Education in its earlier phase (1960s and 1970s) primarily relied on an instrumentalist perspective of technology (Hamilton and Friesen 2013), i.e. technology was considered as subordinated to education and thus a mere vehicle to realise predetermined educational goals, for example, liberate the learner from oppression. However, OER, and especially Massive Open Online Courses, have produced an essentialist perspective that assumes technology is independent of education and «will lead to the realization of an associated human potential once the technology is in place» (4).

www.medienpaed.com

The process of «opening up the gates» – which begun in 2001 with the launch of MIT OCW – to offer education for everybody (given that s/he has access to the Internet) is ambiguous and challenging to judge. Walsh (2011, 22) offers an explanation:

> Universities' willingness to share their course content, traditionally reserved for only a limited number of students, represents a laudable contribution to society. Through online courseware projects, some of the most selective institutions have exposed their intellectual capital in an unprecedented way. But – often with good reasons – they have done so while protecting the substantial part of their value proposition derived from their residential experience, interactions between students and faculty, and, of course, their prestigious degrees. In other words, these institutions have struck a careful balance between altruism and self-interest.

The rediscovery of the masses: Massive Open Online Courses

Massive open online courses (MOOCs) emerged approximately five years ago with the release of «Connectivism and Connective Knowledge (CCK08)» offered by the University of Manitoba. In this course, 25 learners from the University were joined by 2200 learners worldwide. This first MOOC intended to provide a different type of learning experience due to its atypical construction (no registration, no learning objects, no assignments and no assessment and evaluation). Learners were expected to share their ideas on blogs, Twitter or other social network tools, thus utilizing the Internet as an open cultural space. This is also reflected in the non-formalistic approach as outlined in the MOOC #change11:

> This is an unusual course. It does not consist of a body of content you are supposed to remember. Rather, the learning in the course results from the activities you undertake, and will be different for each person. This type of course is called a 'connectivist' course and is based on four major types of activity:
>
> 1. Aggregate
> We will give you access to a wide variety of things to read, watch or play with. There will be a LOT of content associated with this course, everything from relatively basic instruction to arguments and discussions to high-level interviews with experts in the field. You are NOT expected to read and watch everything. Even we, the facilitators, cannot do that. Instead, what you should do is PICK AND CHOOSE content that looks interesting to you and is appropriate for you. If it looks too complicated, don't read it. If it looks boring, move on to the next item.

2. Remix

Once you've read or watched or listened to some content, your next step is to keep track of that somewhere. How you do this will be up to you. You can keep a document on your own computer listing all the things you've accessed. Or, better yet, you can keep a record online somewhere. That way you will be able to share your content with other people.

3. Repurpose

We don't want you simply to repeat what other people have said. We want you to create something of your own. This is probably the hardest part of the process. Remember that you are not starting from scratch. Nobody ever creates something from nothing. That's why we call this section 'repurpose' instead of 'create'. We want to emphasize that you are working with materials, that you are not starting from scratch.

4. Feed Forward

We want you to share your work with other people in the course, and with the world at large. Now to be clear: you don't have to share. You can work completely in private, not showing anything to anybody. Sharing is and will always be YOUR CHOICE. (http://change.mooc.ca/how.htm)

Initially, there was a lot of enthusiasm about such open formats (Stacey 2013), but this later gave rise to some disenchantment because of the abundance of material and infrastructure. As Weller (2011) points out, education and pedagogy shift from the economics of scarcity, in which there are relatively few experts to whom learners have access via physical interaction (e.g. lecture), making the best from the limited resources (experts and materials such as textbooks) to a model of abundance in which expertise is still rare. However, access to resources is now virtually unlimited, thanks to open access journals, slide, podcasts, videos and so forth. Yet it would be short-sighted to assume that simply having unrestricted, scalable digital materials generates a new form of pedagogy per se. Instead as has been argued elsewhere (Deimann 2013b), (radical) openness may lead to a new form of social exclusion, that is, those learners who would not want to open up their materials and share their ideas with others. This is also indicated in the aforementioned MOOC principles because they impose moral values to learners (sharing, openness) albeit with the «opt-out clause» («you don't have to share»). Moreover, any instructional assistance for learners to help them master the challenges of openness and abundance are neglected, which would be especially important for novices (Brennan 2013). Not surprisingly, research has revealed an «expertise divide» (Mackness, Mak, and Williams 2010) that is not atypical for online learning, but in case of MOOCs becomes more problematic given the outstanding importance of openness and unstructuredness. In contrast to a «closed» e-learning

environment, learning in a MOOC is based on the assumption of already existing skills and not designed to compensate missing digital competencies.

Meanwhile, MOOCs have become both a medium of mass instruction and a philosophy of instruction with roots going back to the earlier Open Education movement. Boven (2013) provides an account of the historical antecedents of the MOOC movement that identifies interesting parallels, such as the «studia» (Studium generale) in medieval Europe. The studia did not have formal and central administration controlling admission, matriculation, and commencement. Instead, masters with a reputation as scholars and teachers attempted to attract students from local communities («studia particulare») and from across Europe («studia generale»). Although not massive in terms of today's understanding and also not in scale due to technological limitations, these early learning forms entail core educational values of MOOCs, namely the non-hierarchical exchange of ideas between teacher and learner on an individual autonomous level and the belief in the power to be guided by a master through the seven liberal arts. In a similar vein, Peter and Deimann (2013) reconstruct the role of openness for education by reviewing major trends over such as student driven education, open teaching and self-education, and the right access to knowledge. In their conclusion it is emphasized that, throughout the centuries there has been a strong connection between socio-technological improvements and increased opportunities for teaching and learning. This pertains not only to institutional settings but also to self-organized forms. Today this is reflected in virtual learning spaces such as Peer-To-Peer-University or Open Study, which offer free courses and an open platform for international study groups. However, a similar strong alliance between students and teachers that had occurred during the Late Middle Ages has not yet emerged. There is a rather loose connection in the Massive Open Online Courses given the very low formal structure. On the other side, iTunesU can be regarded as a digital resemblance of the historic practice of inviting scholars/lecturers to a group of students. (12)

In his review of previous educational innovations, Boven (2013) comes to the conclusion that after an initial euphoria triggered by an increased availability of higher education, innovations were «co-opted by and absorbed into the existing educational structures of the day» (3). Established institutions often perceived innovations as a threat to their very existence and thus they begun to strategise how to incorporate them into the current praxis. In many cases (e.g. the University without Walls movement in the 1960s and 1970s), the existing system simply took the new players as they were (assimilation) without succumbing to the predicted earth-shattering changes. In doing so, they forfeited the chance to accommodate the trends, i.e. altering rules and practices to better fit the purposes of the emerging changes.

With the most recent developments of MOOCs, especially with the fiercely attempts to capitalize on bringing education to the masses and the transformation to «open courses,» the process of commodification seems to be replicated. As Ogrizek (2013) argues in her recent blog posting,

> The corporate world has other tentacles in education and the portal that's granting them the most access these days is technology. The current «realism» being foisted on academics is the idea that online distance-learning, in the form of massive online open courses (MOOCs), must be implemented to save cash-strapped institutions. The idea is being flogged by corporations looking to expand their markets and has found support among co-opted academics willing to help them.

The commercialization and commodification of education that has emerged recently is surely catalysed by large MOOCs offered on for-profit platforms but there is also a growing regulation from legislation that further fuels the debate. For instance, the state of California has approved Senate Bill 520 that mandates open online courses be approved for college and high school credit. This means that students who cannot access regular, campus-based courses (so called bottleneck courses) are allowed to take a MOOC to receive academic credit. SB 520 identifies 20 MOOCs as eligible, most of which are offered by Coursera (De Vivo 2013). Commercial MOOCs, endorsed by politics, are a classical example of a public-private partnership in which «the government guides policy and provides financing while the private sector delivers education services to students. In particular, governments contract out private providers to supply a specified service of a defined quantity and quality at an agreed price for a specific period of time» (Patrinos, Barrera-Osorio, and Guaqueta 2009, 1). This alleged «win-win-situation» has not yet lived up to expectations. As reported by Kolowich (2013), a credit-bearing MOOC offered at Colorado State University has not yet attracted any learners, despite a saving from $ 961. Furthermore, the philosophy department at San Jose State University issued severe concerns against the utilization of the MOOC JusticeX, developed by celebrated Harvard professor Michael Sandel:

> Should one-size-fits-all vendor-designed blended courses become the norm, we fear two classes of universities will be created: one, well-funded colleges and universities in which privileged students get their own real professor; the other, financially stressed private and public universities in which students watch a bunch of video-taped lectures. (http://s3.documentcloud.org/documents/695245/san-jose-state-u-open-letter.txt)

Altogether, the trajectory of MOOCs departs more and more from its idealistic origin that was based on the notion of connectivism, i.e. focusing on learners' networks and personal learning environments, openness, and the associated principles around remixing and sharing (Kop, Fournier, and Mak 2011). It is thus warranted, in order to strengthen this position to have a more theoretically-sound foundation. As other writers (e.g. Bell 2011) have pointed out connectivism clearly helps to support practitioners by proposing a set of guidelines to utilize the Internet as an open cultural space. On the other side connectivism «alone is insufficient as a theory to inform learning and its technology-enabled support in an internetworked world» (Bell 2011, 98). It is the purpose of the next section to outline a more fruitful theoretical approach to better understand the distinct process of participating in a MOOC.

The Theory of *Bildung* and its potential for Open Education
Bildung is a valuable theoretical lens to analyse the concepts of OER and MOOCs because of its ability to outline those mechanisms that occur to the learner in open digital environments. In contrast to classical learning theories, which are centered around the acquisition of knowledge and skills in predefined, formal settings, *Bildung* aims at capturing transformative processes such as subject-object transformations (Schneider 2012) or the move beyond the present state of affairs (Peukert 2003).

Classical writings on *Bildung* are characterized by in-depth and profound analysis of internal processes based on grand philosophical concepts such as freedom, reason, individuality, and authenticity. In addition to that, *Bildung* has often been characterized by antithetical pairs such as state vs. event, normative vs. non-normative, reflexive vs. transitive, and occurrence vs. action (Schneider 2012). Moreover, *Bildung* is conceived of as an instrument to mediate or alleviate influences from the society on the individual that are – as illustrated in the novel Emile by Rousseau – prone to undermine the individuality of the person. Many advocates of the early Open Education movement shared an understanding that was directly inspired by the thinking of Rousseau, for example, the rejection of architectural and temporal limitations in the classroom and the belief in a laissez-faire type of education.

Within the shift from Open Education to OER, there was also a shift from a naïve compliance with the philosophy of Rousseau to more pragmatic conceptions. However, the complex nature of OER (see e.g. Peters 2008) warrants a thorough theoretical account that ensures its prosperity and reliability.

Given this specific understanding, OER can be understood as a «perfect fit» for the task of *Bildung* inasmuch as they provide a formalized approach – Open Access, «4R principles» (Wiley 2009) – to be utilized by the user. Moreover, OER facilitates

unrestricted access to virtually any digital content that has been produced as such, in contrast to copyright protected materials that require financial fees and limit the freedom of the user, OER allows a self-directed usage of materials (free to remix, repurpose, and redistribute). This comes close to the spirit of Humboldt with a strong emphasis on the unrestricted interplay between the world and the self. Therefore, Deimann (2013a) has coined the expression «kindred spirits» to account for the conceptual overlapping between Open Education and *Bildung*:

> One could say that *Bildung* could be seen as being supported by OER to achieve its goals of characteristics such as self-determination, maturity, and autonomy. One could also say that OER can offer much support for the positive social and personal vision of *Bildung*. And as a result of individual (and also collective) progress toward these goals, existing resources could be developed and refined, and new resources created – in a relationship of reciprocal interaction and benefit that might even be reminiscent of idealist notions of dialectical development. This process could also be seen as a realization of Humboldt's metaphor of strengthening all our inner powers into one force which then requires that the individual engages with a broad spectrum of topics to gain an in-depth picture of the world. (193)

In addition to this general reconstruction of Open Education with the help of *Bildung*, the following theses attempts to outline in more detail how the two concepts can benefit from each other.

Learning to utilize OER will emerge as a global need that is paradigmatic for the digital age.

Looking back at the history of education, there have been several major connections between the need of a class of population with specific educational practices, such as Christian education in the Middle Ages or vocational training for the blue- and white-collar workers. There is evidence that the values associated with OER – sharing, openness – will become as influential as their ancestors in the Industrial Age – mass production, division of labour – thus shaping a new educational practice based on sharing and collaboration (Grassmuck 2012; Jarvis 2011). Yet, it is too early for more concrete manifestations. However, the «OER university» might be a significant example for the various attempts around the globe to capitalize on the power of open content and open collaboration:

> The Open Educational Resource (OER) University is a virtual collaboration of like-minded institutions committed to creating flexible pathways for

OER learners to gain formal academic credit. The OER University aims to provide free learning to all students worldwide using OER learning materials with pathways to gain credible qualifications from recognized education institutions. It is rooted in the community service and outreach mission to develop a parallel learning universe to augment and add value to traditional delivery systems in post-secondary education. Through the community service mission of participating institutions we will open pathways for OER learners to earn formal academic credit and pay reduced fees for assessment and credit.[7]

However, it is important to supplement OER with pedagogical concepts that share the same humanistic belief and spirit. Traditional learning theories are too narrow as they assume fixed, predefined contexts and focused mostly on cognitive processing. In contrast to that, *Bildung* is a much more broader approach that accounts not only for personal variables but also for the importance of culture and history that shape the situation in which learning occurs.

The focus on Open Access and OER is important because it is likely to overcome predicaments faced by most of the classical attempts in educating the masses (Weller 2011), i. e. education was often regulated by the ability to master a certain language (Latin, Greek). This, however, excluded many people and foiled the humanistic claims. Nevertheless, it should be noted that the Open Education movement contains a tendency of exclusion, namely, all the persons unwilling to obey the «rules of openness.» Openness in this sense can be understood as a device embedded in power relations that shapes the actions of people (Foucault 1977). On the other hand, Open Education is apt to bridge the gap between the theoretical and philosophical ideal, in particular the (neo-)humanistic, and the practical realization. This was apparent throughout history in dichotomies between intelligentsia and laymen, and between the idealization of ancient culture and the actual living environment («Lebenswelt»[8]) of ordinary people. A continuing integration and adoption of OER and Open Access policies can be theorized by focusing not only on the individual as the sole target of *Bildung* but also on communities. There have been similar attempts in the history of adult education, such as the Volks*Bildung* (education of the nation) in the early 20th century, which were later completely destroyed by the Nazi regime.

OER have emerged as a disruptive force that challenges, among other things, an orchestrated political approach. This is apparent, for example, in the ongoing reluctance of German educational policy to formulate a coherent OER strategy that is in contrast to previous attempts for capitalizing on the power of technology

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7   http://wikieducator.org/OER_university/Home
8   This concept has been made famous in the writings of Habermas (1981).

(e.g. «Schulen ans Netz»[9], «Neue Medien in der *Bildung*»). OER has not been an issue on the national level nor on the level of the federal states. Moreover, OER may leverage a re-empowerment of the user. In contrast to the late 1990s and early 21st centurys, the perception of the all-encompassing power of technology has shifted from a dystopic view that tends to abandon the ideal of *Bildung* in light of the omnipresence of technology (e.g. Sesink 1998), towards a perspective that is based on affordances of technology such as the amount of control by the user, which is much more fundamental than ever before. Indeed there have been a lot of learner freedom in technology-enhanced learning, especially in the sub-discipline Distance Education (Moore and Kearsley 1996) but never before has there been a chance to alter the legal constraints of learning and teaching materials. As has been a core part of the upheaval of OER, liberal licenses (e.g. Creative Commons) offer amounts of freedom that extend beyond traditional offerings («cost free»). In a similar vein, connectivism (Siemens 2005) – developed to reflect more details about the transformations of digital technologies and its impact on learning and teaching – emphasizes the importance of digital tools such as RSS feeds, virtual classrooms, instant messaging or Yahoo Pipe to establish collaboration with peers all around the world at an unprecedented speed. In this process, knowledge is assumed to be actively constructed, rather than transmitted from the teacher to the learner.

Summary and Conclusion

This paper attempts to introduce the importance of openness in education as it has emerged in the broader paradigm of Open Education and related, technology-driven forms of OER and MOOCs. It was argued that current processes of unbundling and disruption shake up higher education based on sophisticated technological innovations. Whereas social media systems like Facebook or Twitter have been used increasingly for the last five years, it was only in 2012 when Massive Open Online Courses reached the mainstream. Since then, a heated debate with issues regarding accreditation, certification and quality control has begun, challenging institutionalized higher education («The end of the University as we know it»). The narrative that is used to argue in favour of (commercial) MOOCs follows the «education is broken» logic[9]. Nevertheless, the hasty implementation of MOOCs has led to some complications that were not initially anticipated (e.g. faculty members resolutely refuse to teach foreign MOOCs).

There is a similarity with the previous Open Education movement which had its peak in the 1960s and 1970s because it also claimed the educational system to be outdated and broken. Opening up was the formula to «free» learners from

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[9] This concept has been made famous in the writings of Habermas (1981).

the burdens of fixed curricular and spatial order. However, there was no coherent empirical evidence whether openness actually contributes to better learning.

A common theme of Open Education throughout its development refers to a highly pragmatic approach to the detriment of a solid theoretical foundation. Therefore, the idea of *Bildung* has been suggested as a productive attempt to substantiate Open Education, as has been discussed along several strands within the current MOOC debate. It is hoped that *Bildung* will benefit from this integrated perspective in such a way as traditional concepts and assumptions are re-analyzed and re-evaluated against the claims of Open Education.

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