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This publication is an initiative of the Asociación Cultural comenzemos empezemos and Festival ZEMOS98 supported by



















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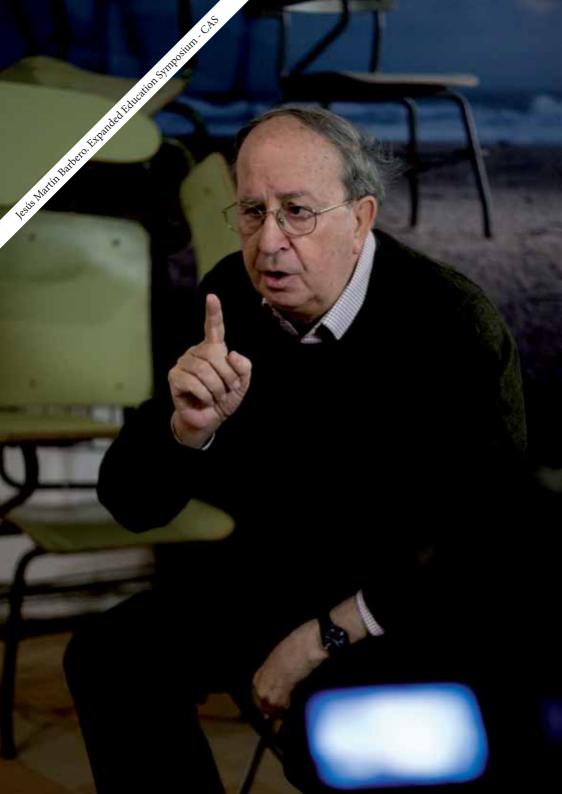




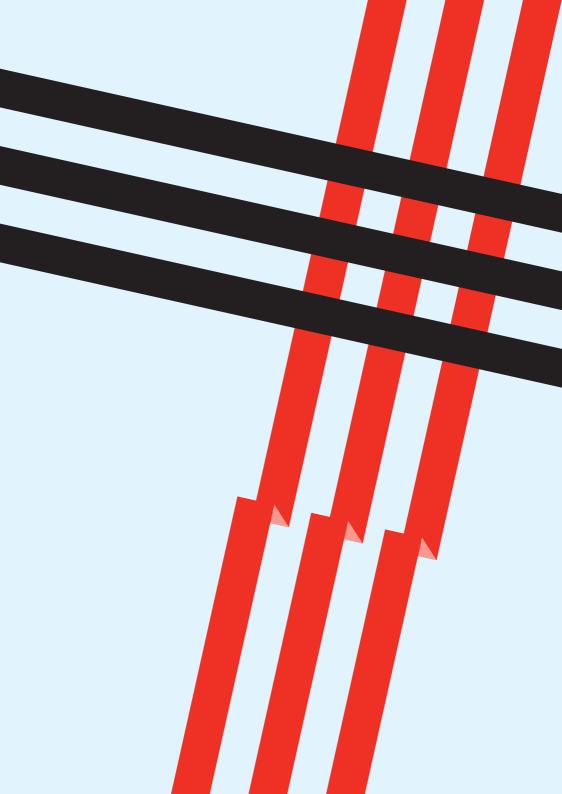


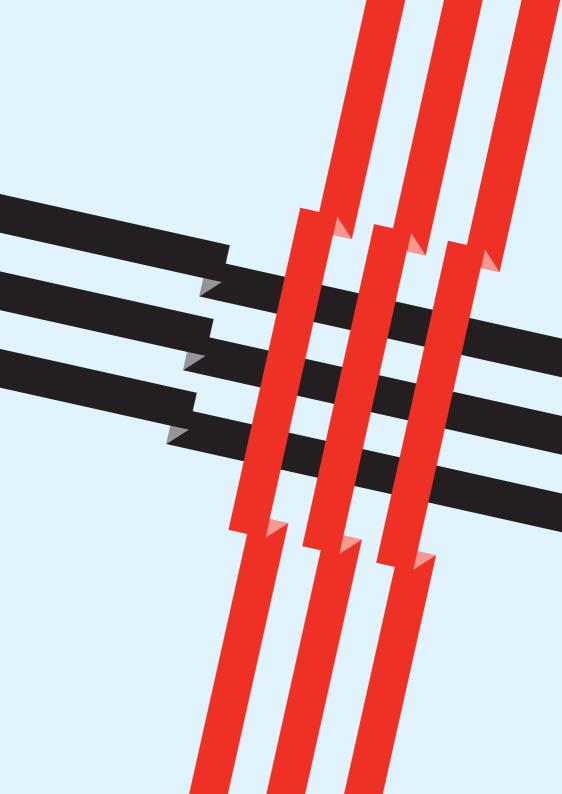






«EDUCATION CAN HAPPEN ANYTIME AND ANYWHERE»





PREFACE ZEMOS98

In software engineering, a project fork happens when developers take a copy of source code from one software package and start independent development on it, creating a distinct piece of software. The term often implies not merely a developmental branch, but a split in the developer community, a form of schism.

In media, a spin-off is a radio program, television program, video game, or any narrative work, derived from one or more already existing works, that focuses, in particular, in more detail on one aspect of that original work (e.g. a particular topic, character, or event). A spin-off may be called a sidequel when it exists in the same chronological frame of time as its predecessor work. Source: Wikipedia

Somewhere between a fork and a spin-off, this notebook compiles a series of materials that revolve around the notion of Expanded Education and are related to the book that we published on the subject. It is a kind of English-language annex to the Spanish book and includes the original English versions of some texts that were published as Spanish translations (the texts by Wesch, Ito and Lamb), as well as works that were not explicitly included in the book but contribute additional thoughts on the subject (such as 'Transmedia Generation' by Felipe G. Gil) and a translation of a text on Expanded Education that has not been published (although it was commissioned by a prestigious Spanish publishing house), written by Rubén Díaz, one of the editors of the book. It also includes The Expanded School, an account of the Bank of Common Knowledge workshop held at Antonio Domínguez Ortíz High School during the 11th ZEMOS98 Festival, where the concept first emerged. The documentary that was part of the project can be found online, with English subtitles.

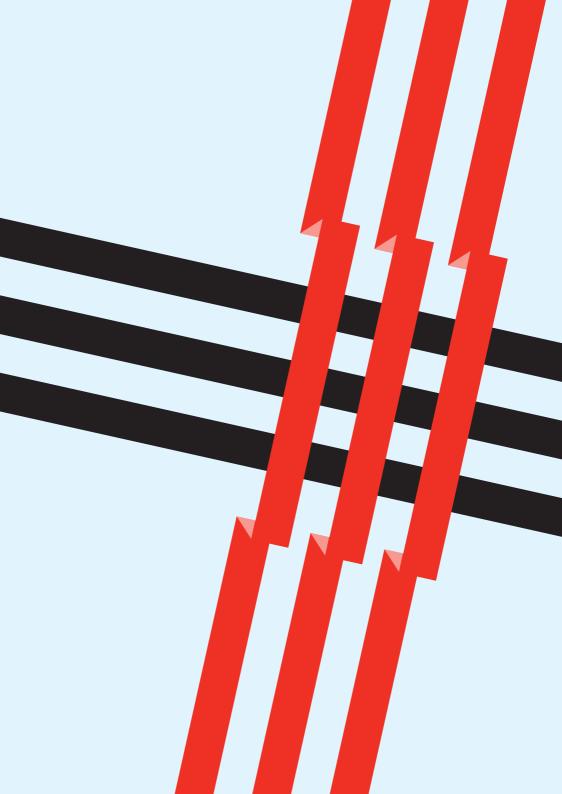
EXPANDED EDUCATION AS 'A WORLD WHERE MANY WORLDS FIT'

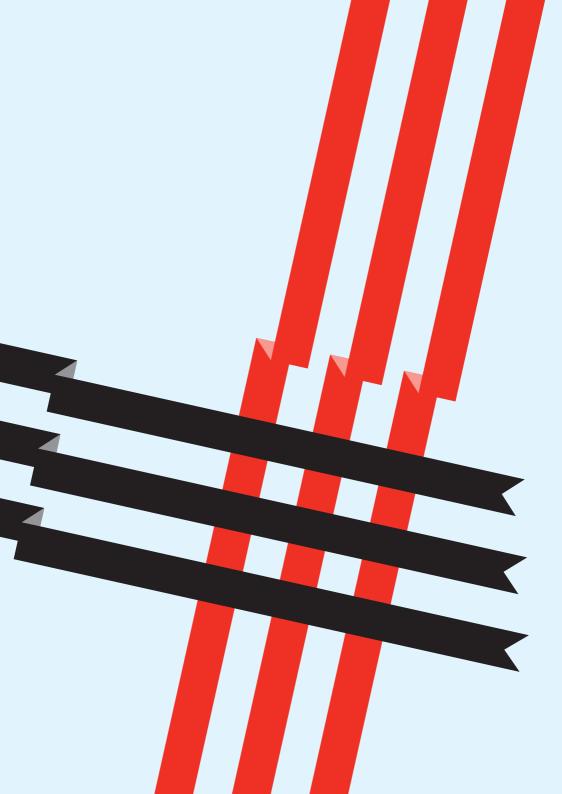
Education has always been one of the core themes of the ZEMOS98 project. Not just any old education, but the kind of education that is inseparably bound up with communication and that connects to and networks with other concepts such as audiovisuals, art and experimentation. Education as an element of ongoing personal growth, that is not limited to one particular stage of life. Education as play, a way of unravelling the media theatre. Education as an open source

operating system that turns us into critical citizens. Education as a game played by all individuals, from all eras. Education as a utopia for a culture-sharing society. When we talk about Expanded Education, we are not talking about a new concept or something that has just popped out of the blue. Some of the contributors to this very book have been talking about expanded educational practices under different names for a long time now, and if we trace its genealogy - the history of the discipline known as 'media literacy' as well as other contemporary practices, projects and concepts (media education, edupunk, invisible learning, p2pedagogy, etc.) – we can see 'expanded education' as simply an umbrella term for "educational practices, ideas or methodologies that are 'out of place." But even so, it remains a paradoxical term. As a concept, 'expanded education' may well be doomed from the start, because: what are the limits of expanded education? If it has limits... wouldn't it then cease to be 'expanded'? It may be nothing more than a catchy, evocative term, but the essential thing remains: expanded education is about transforming society, re-thinking relational systems, questioning mass communication paradigms, and constantly experimenting with formats and methodologies for training and education. At the same time, if the term does catch on and its usage continues to grow as much as it has over the past two years, we should make one thing clear from the start: it is common property. 'Expanded Education' invokes an idea, and every organisation, individual or collective can activate or deactivate it as they see fit. In any case, it will be necessary to make a distinction between those who use it with political and/or critical intent, and those who use it as a marketing strategy to attract 'new audiences'.

ZEMOS98 IN A GLOBAL CONTEXT

This project – translating and reissuing an existing book in English – emerged in response to the work that we have been engaged in for two years now as part of the Doc Next Network. It is also a contribution to our work within the network, and we hope that it will be a springboard from which to continue to imagine new educational and training processes that allow us to invent and adopt practices from the informal world and take them into the formal sphere, and vice versa.







RUBÉN DÍAZ

EXPANDING EDUCATION SO THAT WE CAN STOP FEELING THAT WE NEED TO BE TAUGHT

Like many other histories, the extremely short history of the concept of expanded education starts with an intuition: the feeling that education can take place anywhere, at any time. Inside and outside of the walls of an educational institution. And also a sense that a series of new technological tools that we use in our daily lives are transforming the way we create, store and transmit knowledge. And lastly, that these tools are affecting the ways in which we think, learn and teach. If these could be considered to be rational conjectures, why do we think that we need a school in order to learn? Why are we so sure that schools are necessary in order to learn? Why do we feel the need to be taught? What options do the Internet and Web 2.0 offer for self-education or collective learning, keeping in mind the discourse of the collaborative construction of knowledge and the network society? How can we make the most of these new tools at our fingertips to promote collaborative, solidarity-based communicative exchanges? Questions such as these open up lines of research that reflect on and resignify types of educational practices that go beyond the spaces officially set aside for knowledge transmission: schools, in the broadest sense.

EXPANDED EDUCATION AND DESCHOOLING

The adjective 'expanded' is not an attempt to create an original neologism; it is inspired by the 1970 book Expanded Cinema, by North American filmmaker, writer and critic Gene Youngblood. Expanded Cinema, which quickly became a classic, was a groundbreaking work in the field of experimental new media. It cleared a path that was later taken up in one way or another by more recent thinkers such as Lev Manovich with his ideas on digital film, and it introduced new approaches to filmmaking, such as cybernetic cinema, computer films, television as a creative medium and holographic cinema. Youngblood wrote about many cinematic experiences that could come about by thinking about something other than cinema, using alternative technologies such as video and computers. The introduction to the book was written by Richard Buckminster Fuller, a visionary engineer and designer known for catchphrases such as "doing the most with the least", for being one of the pioneers in the debate against programmed obsolescence, for his most famous work, the geodesic dome, and for his early interest in computers as tools that change our consciousness and lifestyles. In his introduction to Youngblood's book, Buckminster Fuller often mentions the word 'education' and emphasises the idea of expanded cinema as "the beginning of the new era educational system".

Also in the seventies, at the Centro Intercultural de Documentación (CIDOC) in Cuernavaca, Mexico, Iván Illich carried out research into educational institutions, energy use and healthcare centres. According to Jon Igelmo Zaldiver, his theses "were the most forceful criticism of the production model that was implemented by the major powers of international capitalism in the early seventies".

'Deschooling' theories emerged in the seventies, a period that Olegario Negrín and Javier Vergara have described as "a time of optimism and a certain euphoria sparked by scientific advances, the achievements of the space race and economic well being in the first world, all of which drew attention to educational institutions, which required big investments but were based on outdated content and methods. At the same time, socioeconomic development revealed the limits of equitable distribution and social justice in capitalist systems." Youngblood's book, Buckminster Fuller's introduction, and Illich's ideas all form part of this double epiphany: technological euphoria and the critique of progress, summed up by Negrín and Vergara: "industrialisation and the technological age favoured excess growth and the contamination of all kinds that goes along with it, it produced the 'technologisation' of life that threatens the autonomy of human beings, the super-programming that inhibits creativity (...). And on top of it all, the consumer society that has emerged from the industrial mode of production; (...) unlimited consumption. The same principle applies to the educational sphere: more education leads to more knowledge; more knowledge, more education, and so on, endlessly: the myth of unlimited progress." Illich himself wrote that "the futurists inspired by Buckminster Fuller would depend on cheaper and more exotic devices. (...) a new but possible technology that would apparently allow us to make more with less (...) The future depends more upon our choice of institutions which support a life of action than on our developing new ideologies and technologies".

EXPANDED EDUCATION AND WEB 2.0

As in the seventies, the idea of 'expanding' education has now emerged side by side with a new technological context that also provokes euphoria – in this case digital technology, and all that the change from atoms to bits entails –, which began with the arrival of Web 2.0 around 2005. At that time, José Luis de Vicente, a curator and researcher in the fields of culture and technology,

was working on a collective book called *Creación e inteligencia colectiva*. He wrote: "In 1995, Netscape became the first Internet company to be listed on the stock exchange, kicking off the age of the new economy and inaugurating a new notion of the Web as a space that was not set aside exclusively for the few who had gone through its complex initiation rites, but as a medium for many. A mass medium. Ten years later, many (...) visionaries see 2005 as a kind of second chance for the Web. Or at least for the kind of web that was born in 1995 and seemed to die for good in 2001, when the venture capital tap ran dry for Silicon Valley and the famous 'dot com bubble' burst (...). The decline of the dot.com era was obviously not the end of anything truly important (in fact, it was the beginning of another much more active and interesting Web, of the 'blogosphere', wikis and smart mobs). But unlike the 1995 web, the effects of the new Web that is being forged now may be genuinely important. The promises are exciting, the technologies are spectacularly promising. And nobody really knows what the results may be."

We are still eagerly witnessing the emergence of a whole series of social and communication processes that have essentially been brought about by the Internet, and that do not easily fit into conventional educational systems. "In the end, it is precisely the educational institution – the modern institution par excellence - that is proving incapable of engaging with the new tools of the Internet, which will have to shape and configure the education that is necessary in order to use technology today," writes Igelmo Zaldívar. Given this scenario, the spaces and contexts that encourage creativity, motivation and learning are not only - or even mainly - taking place at or through educational venues or institutions right now. These ideas, which we shared with the teacher Juan Freire from the beginning, led us to think that the opportunities that new technologies open up may offer us a chance to go back and develop lines of work related to critical pedagogies and critiques of pedagogies, and to alternative forms of distribution of knowledge. While, as David R. Olson and Nancy Torrance explain, the 'deschooling' theses of the seventies warned of the need to try to "avoid the temptation to assign any causal function to the electronic machine" and to recognise that "the cybernetic mind (is) largely independent of the individual's technical proficiency on the computer," expanded education drew inspiration from Noam Chomsky's 1998 warning of the need to put media education on the table: "If we do nothing, within ten or fifteen years the Internet and cable will be monopolized by commercial mega-corporations. People do not realize that they have in their hands the power to do what they wish with these technological instruments, rather than abandoning them to the big

corporations. To accomplish this, what is needed is coordination among the groups that oppose this monopolisation, and the creative, intelligent, innovative use of technology in order to promote, for instance, education."

The fact that this coordination has not come about can be seen in the fact that social networks are used in such a way that we are neither users nor customers, but products sold to the end client: the company that pays for advertising on Facebook or Twitter, for example. This 'televisualisation' of the Internet once again relies on the "so-called ignorant (...) educated men and women who have been denied the right to express themselves and, as such, live in a 'culture of silence", as Paulo Freire, the Brazilian creator of the 'pedagogy of the oppressed', wrote several years ago in reference to the bourgeoisie that oppresses the illiterate. Freire was backed up by Illich (who was influenced by his work), when he wrote that "educators (like the media) want to avoid the ignorant meeting the ignorant around a text which they may not understand and which they read only because they are interested in it." Because, to quote Chomsky again, "they all say (...) we have to keep them (the ignorant general population) away from the public arena because they are too stupid and if they get involved they will just make trouble. Their job is to be 'spectators', not 'participants'. They are allowed to vote every once in a while, pick out one of us smart guys. But then they are supposed to go home and do something else like watch the football or whatever it may be. But 'the ignorant and meddlesome outsiders' have to be observers not participants. The participants are what are called 'responsible men' and, of course, the writer is always one of them. You never ask the question, why am I a 'responsible man' and somebody else is in jail?" The pedagogical myth that non-critically arises from school "divides the world in two. More precisely, it divides intelligence in two," as Jacques Rancière writes, an inferior intelligence and a superior one. Those who know and those who are ignorant.

This 'hidden curriculum' that reproduces the dichotomy of those who know and those who don't is what expanded education wants to draw attention to, and to destabilise: to develop "critical thought that empowers citizens," as Roberto Aparici put it, and imagine citizens who "know how to turn to the best sources of information, who can critically analyse the communication environments in which they live and actively influence them to serve the interests of society."

As such, it is important to set out two ideas that are fundamental to understanding our approach to expanded education: (1) expanded education is critical of the dominant educational and media discourse, that is, "the myth of

pedagogy, the parable of a world divided into knowing minds and ignorant ones, ripe minds and immature ones, the capable and the incapable, the intelligent and the stupid," as Rancière writes, and "the Myth of Unending Consumption (...) grounded in the belief that progress inevitably produces something of value and, therefore, production necessarily produces demand. (...) Once we have learned to need school, all our activities tend to take the shape of client relationships to other specialized institutions. Once the self-taught man or woman has been discredited, all non-professional activity is rendered suspect. In school we are taught that the valuable learning is the result of attendance; that the value of learning increases with the amount of input; and, finally, that this value can be measured and documented by grades and certificates," in the words of Iván Illich. In spite of the title of his work (Deschooling society), Illich "did not advocate getting rid of schools. (...) Rather, as Olson and Torrance explain, his book recommends ridding schools of their official nature for the good of education (...), reversing the trends that make education a pressing need rather than a free opportunity to grow." And as Igelmo Zaldívar writes, "what Illich proposed was a way of organising alternatives to the totalitarianism of education and the compulsive construction of schools all over the face of the earth, by moving beyond the eternal question of pedagogy - "what has to be learnt?" - and facing the question that is really at stake when dealing with learning-related issues: "what type of people and things should learners be in contact with in order to learn?"

We should add (2) that our expanded education proposal challenges the total hegemony of that dominant discourse: education expands when we learn to build new worlds, not repeat existing ones. Expanded education criticises the dominant discourse in which, to quote Illich, "the man addicted to being taught seeks security in compulsive teaching. The woman who experiences her knowledge as the result of a process wants to reproduce it in others." The task we are up against, then, is to go back to *learning by doing and sharing*.

We agree with Rancière that expanding education like this, in order to stop feeling the need to be taught, is not "a matter of method, in the sense of specific ways of learning" but rather a "philosophical matter." And, as Marina Garcés puts it, that "at heart, the challenge (...) is to give ourselves something to think about. In the face of our enormous consumption of information, of the market's emphasis on skills training, of the media's 'mind-formatting', in the face of the non-critical consumption of cultural leisure, in the face of all this, today's big challenge is to give ourselves the space and time in which to start thinking." Like

Rousseau, we think that it is necessary to waste time in order to teach and, like Rancière in *The Ignorant Schoolmaster*, we want to explore "how the school and society symbolize each other without end, and thus endlessly reproduce the supposition of equality, precisely by denying it."

Truly transforming educational institutions does not mean destroying them - a conviction that Illich shares, as mentioned earlier – but making a commitment to the "experimentation and research that defines all things 'expanded" as Freire writes. Once again, technology plays an important role, of course, and we need to understand it so that it can help us in this endeavour. And to do so we need to recognise the contradictions of the school and the network society. "There is no question that at present the university (and school in its broadest sense) offers a unique combination of circumstances which allows some of its members to criticize the whole of society. It provides time, mobility, access to peers and to information, and a certain impunity - privileges that are not equally available to other segments of the population" wrote Illich in 1975. But, he went on, it also entails acknowledging the fact that it "provides this freedom only to those who have already been deeply initiated into the consumer society and into the need for some kind of obligatory public schooling. The school system today performs the threefold function common to powerful churches throughout history. It is simultaneously the repository of society's myth, the institutionalization of that myth's contradictions, and the locus of the ritual which reproduces and veils the disparities between myth and reality. Today the school system, and particularly university, provides ample opportunity for criticism of the myth and for rebelion against its institutional perversions. But the ritual which demands tolerance of the fundamental contradictions between myth and institution still goes largely unchallenged, for neither ideological criticism nor social action can bring about a new society. Only disenchantment with and detachment from the central social ritual and reform of that ritual can bring about radical change."

Juan Freire sets out "some important actions (...) to kick start the process of institutional change (...)", such as documenting expanded educational practices and organising catalogues and databases that make them visible and enable people to access them. "The objective would be to create repositories of practices, with an ontology and usability that make them genuinely useful to teachers and learners. These repositories must be constantly growing and they have to be open, so that the communities around those practices can generate the content." Freire also suggests "creating and strengthening practice communities that design, investigate and apply expanded methods. As far

as possible, these communities should remain flexible and informal, and they should be managed through the development of merit-based reputation-building mechanisms." And "generate processes for the viral spread of expanded practices in educational and other civic institutions."

Technology can't go back to being a space for the reproduction of the myth of the spectacle in which the ignorant learn and the wise teach – something that doesn't always seem to matter in the '2.0 world'. "This series of actions should (...) be based on the paradigm of free and/or open source software and free intellectual property licences, which are essential for the transformation of culture and social practices. The evolution towards the use of free software and licenses is not only or principally about instrumental changes. On the contrary, this transformation involves changing the way we think about technology, taking a critical and participatory approach on an ongoing basis. This means, for example, that introducing a user to free software also sparks his or her desire and opportunity to create, transform and adapt. This practice should be one of the main objectives of new educational institutions." (Freire, 2011)

In other words, as David Casacuberta writes, "technology is much less important than it may initially appear" and, today, expanding education means "above all, taking an ethical position in relation to the role of Internet in the development and dissemination of culture."

«YOU DON'T KNOW THAT YOU KNOW SOMETHING, OR THAT YOU CAN LEARN IT»

The set of expanded educational practices that Freire talks about, which use "technology that is new but possible and that (...) will allow us to do more with less" in order to "get the most out of new tools that we can use to promote communicative, collaborative and solidarity-based exchanges" would certainly include the Common Bank of Knowledge workshop at Antonio Domínguez Ortiz High School in Seville (http://igualdad3000.blogspot.com).

The Bank of Common Knowledge (BCK) is a project developed by the art collective Platoniq (http://www.platoniq.net). In 2009, ZEMOS98 invited Platoniq to implement the BCK at Antonio Domínguez Ortiz High School in Seville's Polígono Sur, a poor neighbourhood that has a population of around 50,000, an unemployment rate of 43%, a 40% truancy rate and is regularly stigmatised in the

mainstream media for a variety of reasons. By chance and, once again, intuition, we came into contact with the then-director of the school, Juan José Muñoz, and he actively participated in the project along with a group of teachers and students for several months.

This was not by any means the first time that Platoniq had implemented the Bank of Common Knowledge. As its website explains, the BCK has been "a laboratory of mutual, citizen-to-citizen education, based on the spread of free software, social networks and p2p filesharing systems" since 2006. In the documentary *The Expanded School*, Platoniq member Susana Noguero explains that "all our projects try to apply the philosophy and direct practice of free software to all our interactions – personal, work and all kinds of relationships. This sometimes creates very strong participatory dynamics, but at other times nobody understands anything because we are breaking down the way things are usually done; we try to break down hierarchical structures, expedite processes, skip the middlemen and ensure that everybody who participates works collectively."

This idea of leaving out the middlemen and "finding more effective strategies that lead to new forms of communication, education and citizen participation" (as peer-to-peer filesharing networks do) is also present in Illich's book when he writes about a possible project: "Let me give, as an example of what a mean, a description of how an intellectual match might work in New York City. Each man, at any given moment and at a minimum price, could identify himself to a computer with his address and telephone number, indicating the book, article, film or recording on which he seeks a partner for discussion. Within days he could receive by mail the list of others who recently had taken the same initiative. This list would enable him by telephone to arrange for a meeting with persons who initially would be known exclusively by the fact that they requested a dialogue about the same subject." (Illich, 1975:33)

The BCK uses the potential of sharing networks to "create tools and transform different aspects of life during periods of learning," implementing our initial idea: that education can take place anywhere, at any time. Nothing to do with the fetish of technology for it's own sake, the BCK project leads us back to what we see as the key problem, which, in the words of Juan José Muñoz is that "there is an enormous, very serious question being asked of schools, which challenges the old myth that students don't want to know anything." Or, as one of the students said when presenting his experience with the project, "you don't know that you know something, or that you can learn it."

As the teacher and researcher Tíscar Lara, who participated in part of the process, says, the BCK was developed "using analogue technology such as coloured post-its, but inspired by the culture of digital P2P. The students spent a week proving to themselves and others that they not only want to learn a lot of things, but that they also have many things to teach others. (...) What matters least is what is taught and what is learnt. What matters most is the communicating, sharing and interacting that takes place during teaching and learning." From this perspective the BCK should become a 'bank of values' that connects all the different active agents so that they can boost and spread the activity as much as possible. In this case, in an area stigmatised by the media as a hub for the sale of illegal drugs, the BCK should be able to promote 'good practices' and to spread a positive image of the high school and the neighbourhood. When the project was carried out, we verified that its proposed form of pedagogy could in fact achieve this to a large extent.

«WE STUDENTS, TEACHERS, LOCAL RESIDENTS ARE SEARCH ENGINES. WE ARE THE LOCAL NETWORK»

The BCK project encompassed all the stages of the creative process: research (mapping of existing social networks in the area, such as associations and civic centres where people gather), production (posters, information panels, knowledge video clips, etc) and communication (it is essential that the most active participants capture everybody else's attention). Juan José Muñoz made it clear to his students at one of the first preparatory sessions: "I'm going to be honest. What we're doing here is questioning the very way that our high school works, so feel free to say whatever you feel like." We were talking about subverting the roles of teacher and student, accepting play as part of learning, being critical of the biased views of reality (our own and those of others) that are spread by the mainstream and non-mainstream media every day, having fun, and valuing the knowledge that students learn inside and outside school, convincing others that they should also learn to value it if they don't already, sharing what each person already knows and what each one wants to learn. Hence the questions that the BCK poses to participants to get the debate going: How often have you felt that if you knew 'something' that 'something' could radically change your life? Are there things you would you like to learn to do but you've never found anybody who can explain how to do them? How many things that can help your friends can you teach them? Do you know anybody who knows how to do something 'valuable', 'strange' or 'special'?

Platoniq member Olivier Schulbaum used the example of a gazpacho recipe to introduce students to the free software philosophy. We all know the basic ingredients that go into gazpacho: tomato, capsicum, garlic, bread, etc. However, everybody makes gazpacho differently. And we all understand that gazpacho doesn't belong to anybody – the recipe belongs to everybody, even if each person makes it according to his or her own taste. The kinds of knowledge that belong to everybody and to nobody at the same time are the ones we want to include in the BCK. These types of knowledge are kind of like 'assets' (like on the stock exchange) that have value. But the knowledge itself is not as important as the strengthening of relationships and the consolidation of the network that comes about.

More of the project's key questions: What things that can help your friends can you teach them? Do I even want to share anything? In exchange for what? On what subject? What could be useful to others? Schulbaum suggested that we "students, teachers, local residents are popular search engines. We are going to put the spotlight on our hobbies, on good practices, interests, etc." And we were to do it using markers, ballpoint pens and green, pink and yellow post-its. The rules of the game were simple: pink post-its to make requests for knowledge: What do I want to learn?; green post-its to offer knowledge: What can I teach?; and yellow post-its to suggest knowledge that could be offered by people who are related in some way but aren't part of the group or the class (such as students from other classes or schools, relatives, neighbourhood friends, etc.) Later, the map of interests of each group was displayed on a board, where the post-its had been arranged according to themes or areas of interest: sport, technology, society, humanities, the body, etc.

Platoniq has coined a new word to describe this way of organising learning: p2pedagogy. The students at Antonio Domínguez Ortiz High School organised themselves into "small working groups based on similar interests or shared skills: these are the BCK's 'cells', which work autonomously and carry out specific roles." There is the communication cell (which decides on the phrases and key words that will allow anybody in the group to explain what the Bank is in a simple, clear and direct manner), the production and design cell (which designs the formats in which the ideas will be communicated), the audiovisual documentation and production cell (documents all the activities and makes short video clips or spots that express the ideas that come from the communication group) and the knowledge-seekers cell ('human search engines' who analyse the requests and offers).

Implemented in a high school like Antonio Domínguez Ortiz, the BCK was a small revolution. It not only changed some of the school's physical aspects for a week, it also affected the 'hidden curriculum'. The signs included: the response from the school management, the media interest, the self-critical, thoughtful changes in the attitudes of some of the teachers (who were highly reticent at the start). The project ended with a 'travelling knowledge-sharing market' at the school, which used maths, physics, music, mechanics and physical education to fulfil the knowledge requests and offers that the "seekers" had identified inside and outside the school during the week. These requests and offers had come out of a survey that had evaluated the things that participants were interested in learning and teaching reciprocally, without any form of assessment except their own opinion and the experience itself: the process. New interest-based communities sprung up, and the knowledge shared was secondary to the actual individuals who took part in the sharing.

Avoiding the rhetoric of 'educational innovation' (often based on an idea of changing things so that everything can remain the same), the BCK shows the *complex simplicity of an idea*. Simple because at educational centres it should go without saying that we all teach and we all learn. Because the term 'expanded education' should if anything be a redundancy, not an oxymoron. But complex because the ways in which we have come to structure roles, times, spaces, groups and subjects do not usually allow it. And this ends up bring us to a big new question: Is it so difficult to evaluate, on equal footing, all of the knowledge of different kinds that is usually overlooked in our schools? At this point, we have to emphasise the importance of the concept of community, as Rancière does: "This power of equality is at once one of duality and one of community. There is no intelligence where there is aggregation, the *binding* of one mind to another. There is intelligence where each person acts, tells what he is doing, and gives the means of verifying the reality of his action. The thing in common, placed between two minds, is the gauge of that equality, and this in two ways."

SHARED KNOWLEDGE COMMUNITIES

"Community is a crucial notion, although it needs to be disassociated from organic, ideological or belief-based connotations. There can be and there always have been distributed communities and/or communities of strangers who come together around a particular issue or a problem. These include groups of people affected by an issue, groups that become visible when a new

technology (say a test, an intervention or a survey) picks them out from the masses by allocating/manufacturing a techno-identity to them (for example asthmatics, prosthetics) that can be contested. A laboratory can also be made up of people who do not share the same beliefs. But it must be connected to other nodes in a network that is configured around protocols that guarantee the movement of objects between nodes and, as such, form part of a community: they share and create a common networked space in which the objects that (they) constitute (them) move (that is, are discussed and assessed). Basically, community cannot exist without the rigour (in regard to agreed-upon protocols) that enables the production of objects that can move between different cultural and physical spaces. And if they do not move, if there is no interoperability, the commons that supports the community cannot grow," writes Antonio Lafuente.

Developing this idea further, we have borrowed Henry Jenkins' concept of 'knowledge communities' to claim, like Pierre Lévy, that "nobody knows everything, everybody knows something, all knowledge resides in humanity." To Jenkins, the idea of collective intelligence "refers to this ability of virtual communities to leverage the combined expertise of their members. What we cannot know or do on our own, we may now be able to do collectively. (...) It may be that we can now do collectively the things we can't know or do on our own (...) What holds a collective intelligence together is not the possession of knowledge – which is relatively static, but the social process of acquiring knowledge – which is dynamic and participatory, continually testing and reaffirming the group's social ties."

In the context of digital culture, a knowledge community involves reinventing everyday life because, Jenkins writes, "our ties to older forms of social community are breaking down, our rooting in physical geography is diminished, our bonds to the extended and even the nuclear family are disintegrating, and our allegiances to nation-states are being redefined." Knowledge communities interact with other communities by creating networks of interests, mutual production, and the reciprocal exchange of knowledge based on remixes. The nodes that connect these communities act as mediators, hubs or facilitators that can transmit the idea of a 'new social contract' that makes us – as users and citizens – aware of the need to participate in and reclaim the knowledge commons and, through continual critique, demand a fair redistribution of material and immaterial wealth. As such, we will need new institutions to mediate among these communities.

We are living in a time when the tag '2.0' is being applied to everything including school, pedagogy, cities and labour, and there is talk of new spaces and forms of learning and participation, of digital literacy and networked learning; when people are looking back at works of critical pedagogy, and re-reading classic authors; a time when there is talk of digital 'natives' and 'immigrants', of the 'transmedia generation' and the 'post-Gutenberg culture'; now, when there are no certainties and gurus who return from spiritual retreats to reveal the truth are popping up faster than we can click, "the pieces don't quite fit together," writes Igelmo Zaldívar, "it seems that it is difficult to approach Web 2.0 tools without moving away from the paradigms of modernity. Institutionalised education and pedagogy as a modern construct – even in its most critical version – have no place in this new way of conceiving learning."

Knowledge sharing and participation in these communities of interest are based on another simple idea put forward by Illich: "education for all means education by all. (...) It could mean that men will shield themselves less behind certificates obtained in school and thus gain courage to 'talk back' and thereby control and instruct the institutions in which they participate. To ensure the latter we must learn to estimate the social value of work and leisure by the educational giveand-take for which they offer opportunity. Effective participation in the politics of a street, a work place, the library, a news programme, or a hospital is therefore the best measuring stick to evaluate their level as educational institutions."

FROM COMMUNITIES OF INTEREST TO REMIX AS CULTURAL CRITIQUE

We have contextualised the emergence of the concept of expanded education, describing it as a position that is critical of the dominant discourse but does not reject the possibility of deconstructing it and gaining empowerment by taking it over. We have also made a connection between this approach to the educational debate and theories that were critical of schooling institutions in the seventies, essentially represented by the work of Iván Illich. The idea has been to draw attention to the importance of new technologies, but also and above all to the value of a philosophy and an attitude based on 'learning by doing'. And to illustrate this, we have included an account of a specific educational practice – the BCK project and its implementation at Antonio Domínguez Ortiz High School – that shows the potential of a practical critical approach that can empower citizens.

These lines of research and work on expanded education are still open and in progress. Along with Platoniq's BCK and their 'p2pedagogy', we are also investigating different types of expanded educational practices, such as critical remixing as a strategy through which to reconfigure our self-representation as citizens and producers of meaning: to deconstruct a discourse, analyse its parts, its ideology and its message, and then put it back together using creativity, insight, irony, satire, humour or parody in order to reconstruct a text that can decipher the 'hidden curriculum'. And that will allow us to understand the world, and the audiovisual inputs that will inexorably continue to affect us, in a way that is more participatory, active, critical and alert. This idea of the remix makes us see things with a certain positive, proactive scepticism, which in turn leads us to critical culture and encourages us to turn our backs once and for all on the role of the selfless spectator, the obedient citizen or the acquiescent user: to decipher hidden, subliminal messages that are invisible to an eye saturated (and 'educated' from a very young age) by images that are impossible to translate without at least a modicum of literacy. In this sense, this is precisely what remix is: a form of contemporary literacy, a dictionary of cultural and political translation. Certainly one of the shared goals of expanded education and media literacy.

Buckminster Fuller asked, "if the success or failure of this planet, and of human beings, depended on how I am and what I do, how would I be? What would I do?" Perhaps the success or failure of education relies less on bits of paper with the grades of students and more on 'wasting time' thinking about these questions in regard to what we would like school to be.

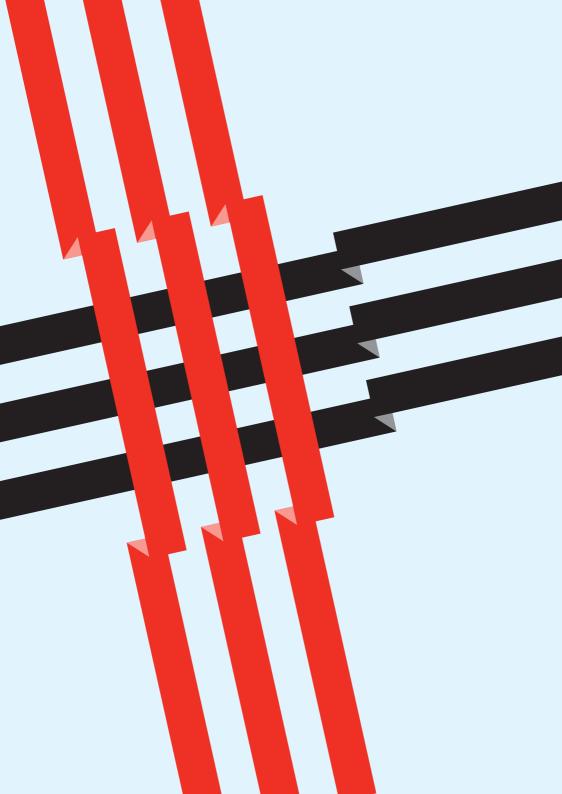
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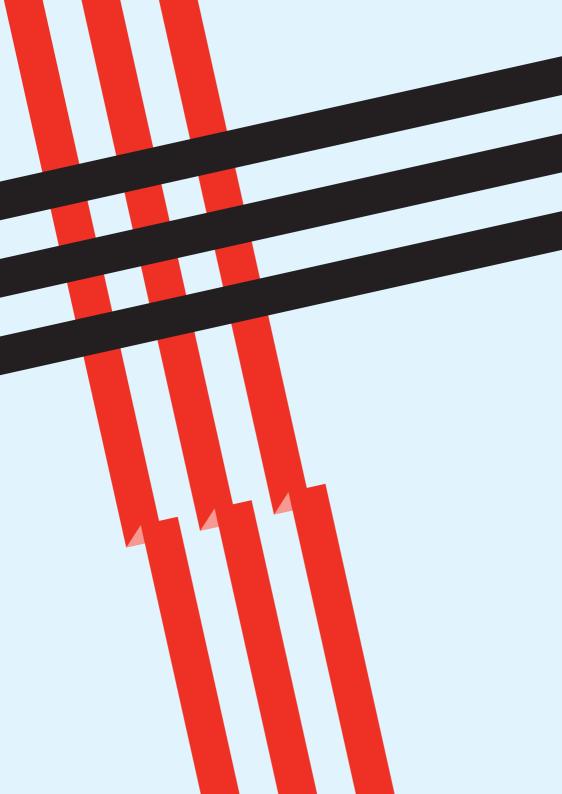
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BRIAN LAMB

OPEN AND EXPANDED EDUCATION: REFLECTIONS AND TENSIONS

THE PROMISE OF THE WEB

PC is the LSD of the 1990's... Turn on, boot up, jack in.

Timothy Leary, 1992

Just as baby boomers with a hippie bent tend to idealize the 1967 'summer of love', as a Generation X'er I cast my mind back on 1992 and recall it as a time seemingly poised for cultural revolution. The world wide web, a place of mysterious and limitless potential, an end run around the interests that owned and controlled cultural media. Disembodied and unregulated, an emerging place of secret identity, untraceable communication, alternate electronic currencies for underground subcultures of affinity. Culture jammers like Negativland used the burgeoning technologies to appropriate, to mash up and hurl countermessages back into the works of what had once seemed like a seamless cultural hegemony. It was if the digital domain was where They would meet their match, and I wanted in.

Those early impressions of the web-as-liberation were more dream than reality, an expectation stirred up by rabble-rousers and hype-mongers. Then again, I still believe that the internal logic of the web carries something like the DNA of alternative ways of being, codes that permit the idealist to dream of better days. So I suppose I keep dreaming, even as the waking reality shifts to a different story.

Thinking about where education fits on the web, thinking about what the web really is, thinking about these things while trying to make sense of the insanities of the wider world of 2010... It does not add up to a coherent narrative... at least, not a narrative that I can write. All I have is inexpert eyewitness testimony.

MODERN SCHOLARSHIP IS A RACE AGAINST ITS OWN OBSOLESCENCE

I got my first experience of this reality when I was a graduate student of literature in the mid-1990's. Back then [cue nostalgic music], if someone needed to assemble a list of references to research a given topic, at least part of the process worked something like this:

- Consult the print index of the Modern Language Association (MLA) International Bibliography, a massive multi-volume reference work that purported to index all scholarship in the field over the previous decade or so. Most major research university libraries could afford an updated set every couple of years.

There was a separate set that indexed older works, nearly as large. Because of the sheer size and value of the reference books, they could not be taken from the library. Scholarly publications were indexed by keywords, authors, and broader subjects such as literary themes. But obviously, due to the limitations of print, the number of entries and the number of places an item could be indexed in the volumes were limited. You were not likely to find entries published in non-traditional sources, and you had to know almost exactly what subjects and keywords you were looking for before you began to look.

- Wade through the volumes of the MLA International Bibliography, carefully write down by hand the citation information for articles that might prove to be useful.
- With list of possible sources in-hand, consult a library card catalog a rack of small wooden drawers containing index cards listing the contents of that particular library. One by one, hunt through these cards to see if the research journals or books you were available at that library. If not, either strike that option off the list, or initiate the lengthy and occasionally costly processes involved with an inter-library loan. If the item is available, write down the location in the library stacks where it might be found.
- Wander the stacks of the library, gathering large volumes (when they're indeed on the shelves), each one containing a 15-20 page article or chapter that may or may not prove relevant.
- Since periodicals usually can't be taken out of the library, set up with a photocopier and copy each article by hand, one page at a time. Copies not cheap, especially when your income comes from student loans and part-time minimum wage jobs.
- Take home your stack of articles and finally get the chance to read them properly. Realize that at least half of them are not as relevant as they once seemed, and that many others are devoid of anything like useful information or insight.
- Plan another trip to the library.

This cumbersome process actually involved something resembling skill, some people were better at it than others. We took orientation classes in "research methods" to learn the basics. Because I worked part-time at the library while a

student, I was something of a savant at gathering research — I could usually get most of what I needed for a short paper in only four or five hours. My ability to work the stacks was something that gave me an edge as a student, and I assumed this ability would serve me well as a scholar for many years.

Just before I finished my Masters degree, I was walking through the library and noticed tables loaded with shiny new computer terminals, and that one of them was set up with a CD-ROM version of the MLA International Bibliography. Out of curiosity I sat down and entered a few queries. I realized that my hard-earned foundational skills as a scholar could easily be surpassed by anyone with the ability to type a few words into a search box. What had once taken long hours of careful process could now be done in a few minutes, and with tools far more forgiving of error. I had spent years developing abilities that were rendered obsolete in an instant. As I recall, this realization left me with a sense of euphoria.

And of course the context of searching, identifying, gathering and reproducing information has only continued to evolve with dizzying speed. With so much changed about how research is now performed, what amazes me most is how little has changed with scholarship itself. Literary studies incorporate references exactly as they did back when I gathered them by hand. Articles are evaluated the same way. They are published in more or less the same places, in many cases more expensive for libraries to acquire than they were fifteen years ago. And if you do not belong to an authenticated university computer network, these works are effectively inaccessible to you.

Some things do not change so easily. It's a race against obsolescence.

THE RISE OF OPEN EDUCATIONAL TECHNOLOGY

That sense of pleasure I felt at being rendered obsolete by technology may suggest how I ended up working in educational technology as the new millennium jumped us in a dark alleyway. At the risk of boring readers with my nostalgia, I think it is worth reflecting how dire the state of formal learning on the web was in the first half of the decade.

At the time, the web was recovering from the wreckage inflicted by the rise and crash of the 'dot-com boom', which was probably the period when the early

dreams of the net as a Borgesian Library of Babel were first pushed aside in the interests of creating a global supermarket.

There was plenty of wild, cool stuff happening online back then, but precious little of it was related to formal education. At that time, it was widely assumed that serious online learning had to happen inside a designated learning management system, a closed and tightly controlled environment that was effectively cut off from the rest of the web. These 'virtual learning environments' seemed perversely determined to eliminate what was exciting about the web (democratization of knowledge production, global communication, rapid and virtually cost-free reproduction) and to reinforce what was most troubling about pre-Internet mass education (authoritarian structures, scarce and controlled information). This reflexive reluctance of professional educators to learn from the world around them to preserve order would continue to reappear in many ways.

The difficulties in migrating learning materials from one system to another, or even one version of a system to a newer one, were so severe that urgent activity was dedicated to defining interoperability standards such as the Sharable Content Object Reference Model (SCORM) (1) and the IMS Learning Object Metadata (LOM) specification.(2) These standards were mind-bendingly complex, and almost impossible to justify to bemused educator communities expected to adopt them. Even the expensive proprietary learning management systems that purported to comply with these standards struggled to facilitate sharing in any meaningful sense.

Meanwhile, an uncoordinated insurgent movement was taking shape on the open web. It did not take long for the obvious benefits of online self-publishing via tools such as blogs and wikis based on relatively simple web protocols (linked by the URL, syndicated by the RSS feed) to prove superior to the clumsy old paradigm. By the latter half of the decade, participatory approaches proliferated across media and tools: social bookmarking, podcasting, online video, social networking, microblogging and countless similar manifestations took hold with educators as they did with the rest of the online world.

The shared underlying principle to these diverse tools is an assumption of openness. Combined with the rise of alternative copyright licensing schemes such as Creative Commons it became clear, as Martin Weller asserted in 2008, that the cost of sharing had collapsed (even if institutional thinking still had

a vestigial attachment to its self-image as an exceptional case).(3) It seemed as if the old silos were not being interconnected so much as abandoned for a host of alternatives. It was reminiscent of how once-dominant proprietary web portals such as AOL, CompuServe and Prodigy had suddenly found themselves rendered irrelevant a decade earlier by the emergence of the generative web.(4)

«WE ARE NETWORKING WHILE ROME BURNS», **Bruce Sterling** $_{\scriptscriptstyle{(5)}}$

For a while, it seemed that when it came to online learning, the trajectory was clear. To quote David Wiley, (6) it was that "simple wins", that the values of open educational technology were certain to prevail. But as the decade comes to a close, with the world facing crises of the economy, the environment, global war without end... Higher education around the world finds itself in a bind of increasing costs, decreasing public revenues, indebted and alienated students, and a public perception as an 'ivory tower' that is ever-less relevant to the demands of the 'real world' and therefore an easy target for austerity-spouting political interests. However valid the claims of critical bankruptcy, there is no doubt that actual bankruptcy is clawing at the door. (7)

«...FOR ALL THE TALK OF AN UNENCUMBERED SPHERE, OF A UNIFIED PLANETARY SOUL, THE COLONIZATION AND EXPLOITATION OF THE WEB WAS A FOREGONE CONCLUSION. THE ONLY QUESTION NOW IS WHO WILL OWN IT», MICHAEL HIRSCHORN₍₈₎

Given the critical failure of institutions – government, finance, education, et al – it is tempting to write them off altogether, go online fulltime, perhaps throwing oneself headlong into the intoxicating churn generated by the one or the other leading powers of Web 2.0. Sign up for a Gmail account, publish websites with Blogger, manage groups and mailing lists with Google Groups, videoconference with Google Talk, write collaboratively with Google Docs, track topics with Google Alerts, manage syndicated feeds with Google Reader,

share video with YouTube, post images with Picassa, and do whatever it is that Google Wave is supposed to do. When desirable, tap into Flickr, Facebook, and Twitter. After all, this incredible functionality is delivered in remarkably stable and user-friendly environments, and it's available free of charge!

I use all these tools myself. But I can't help worrying that in some respects these exciting developments conceal a danger all their own. For one thing, the overriding and inescapable reality of all of the services mentioned above is that their business model is predicated on advertising. As Steve Greenberg has stated: "You are not Facebook's customer. You are the product that they sell to their real customers—advertisers. Forget this at your peril." (9) This simple reality underlies almost all considerations having to do with these tools, whether we're talking about the persistence of online resources, the ownership of personal data, or whose interests will be served as these online environments continue to evolve. To use these tools is to reinforce, however indirectly, the "advertised life," the incursion of commoditization ever deeper into human thought and interaction.

In addition to advertising, companies such as Google and Apple have entered into lucrative agreements with the cultural industries, and as a result, we can expect the values associated with educators and the public interest to be of secondary importance at best. Proprietary needs will prevail, even if we trust that these companies set out to "do no evil." Take the case of YouTube's Content ID service, which is described as "an advanced set of copyright policies and content management tools to give rights holders control of their content."(10) Essentially, this service is a mechanism for copyright holders to search for, identify, and remove copies of their owned materials from YouTube. Unfortunately, this automated system has difficulty discerning between instances of piracy and instances of commentary that exercise fair use rights. For instance, a parody promoting the fair use information service of the Critical Commons project, based at the University of Southern California, was removed from YouTube as part of a broader takedown of "Hitler Downfall meme" videos.(11) A lecture by the noted copyright lawyer and activist Lawrence Lessig, containing snippets of copyrighted material (themselves intended to demonstrate examples of fair use), was also silenced when it was targeted by Content ID.(12) If prominently engaged and informed users such as the Critical Commons and Lawrence Lessig can see their rights as producers be disregarded by the invisible hand of automated corporate censorship, what sort of treatment might we expect?

TALK - ACTION = ZERO

New media types like to claim that the Internet represents a revolution in human communication, one with profound effects on how we produce, consume, share, and value knowledge. (13) If that is the case, maybe the ownership, control, and structure of these environments should be more than an afterthought.

Institutions of higher education have a traditional role in society as leaders and guardians of knowledge. Yet, if the new media environment is as big deal as it appears, the response from the academy has been remarkably passive and limited. It's true that many elements of society see universities as elitist and out of touch, as an "ivory tower" that is more interested in perpetuating its own privilege than with engaging the broad concerns of humanity. Certainly, it is fair for community educators and activists to ask what higher education offers to them, particularly if they do not happen to be enrolled in a degree program or attracting research funding?

This unfortunate perception can be reinforced by a lot of the rhetoric associated with "open educational resources", a well-meaning attempt by higher education to share its work with the wider world. For one thing, OER proponents all too often presume that they are sharing solely with other formal educators, which tends to reinforce a notion of "schooling" that limits their usefulness outside of classroom and course structures. It creates the impression of a separate domain of activity, as if learning was not part of everyday life. It also suggests a product to be consumed as opposed to an iterative multi-directional process of communication and action.

And it is for that reason that I hope the work associated with the similar but distinct "expanded education" movement gains traction, both with formal education professionals and the wider world. My participation at the ZEMOS98 Festival in 2009 was one of those events that challenged and ultimately reshaped my perceptions of the field. Obviously I was inspired by the range of engaging 'para-educational' work across Spain that was showcased daily at the event. I've become convinced that not only is my profession being transformed by the deep effects of new communication technology, but needs to take heed of the social values embodied by expanded education as well.

As I write this, I have no intention of leaving formal higher education – though given the cataclysmic shifts in public services across the western world I have to

acknowledge that may not be for to me to choose. That said, my work and time spent with the proponents of expanded education has set me on something of a new path, dedicated to using what influence I might possess to promote altered goals. For one, formal higher education needs to be much more deeply engaged with non-institutional community educators, not just by sharing the products of its ongoing work, but by opening up its process so that the outside world has insight and input into what is produced.

Higher education must also use what credibility and influence that it still possesses to safeguard the environment of mass intellectuality. (14) In terms of policy, that means much more forcefully advocating for meaningful copyright reform that respects the intellectual property rights of consumers and remixers as it does of "original" producers and the cultural industry powers. It means making the broad social case for equal access to the resources found on the Internet, whether it be safeguarding net neutrality or reaching out to communities to assist those who lack the means to access the web. And it means a concerted effort to carve out "green spaces" for conviviality on the web, by the provision of environments not driven by the profit motive and the supported development of open source tools that everyone can use. To someone working in higher education, expanded education is less about access to our courses than it is about opening a multi-directional exchange around social, learning and research infrastructure, a deeper integration of education into the society that sustains it.

NOTES

(1) (1) <a< th=""></a<>	
(2) (2) <a <i="" cost="" href="http://www.imsglobal.org</th></tr><tr><th>(3) MARTIN WELLER, " of="" sharing"="" the="">The Ed Techie, November 20, 2008, http:// nogoodreason.typepad.co.uk/no_good_reason/2008/11/the-cost-of-sharing.html>. See also SCOTT LESLIE, "Planning to Share versus Just Sharing," <i>EdTechPost</i>, November 8, 2008, http://www.edtechpost.ca/wordpress/2008/11/08/just-share-already/, and JOSS WINN, "Towards a Manifesto for Sharing," <i>Expedient Means</i>, March 5, 2010, http://joss.blogs.lincoln.ac.uk/2010/03/05/towards-a-manifesto-for-sharing/	
(4) JONATHAN L. ZITTRAIN, The Future of the Internet and How to Stop It (New Haven, Conn.: Yale University Press, 2008), p. 7 http://yupnet.org/zittrain/archives/8	
(5) As quoted by http://blog.brian-fitzgerald.net/?p=830	
(6) DAVID WILEY, "Openness, Localization, and the Future of Learning Objects," keynote address at the BCNET 2007 conference, Vancouver, British Columbia, Canada, April 18, 2007, http://opencontent.org/presentations/bcnet07/ (video)	
(7) For just two examples in the English-speaking world, "University of California campuses erupt into protest" http://www.guardian.co.uk/world/2009/sep/24/california-university-berkeley-budget-protest , "Universities face going to the wall" http://www.guardian.co.uk/education/2010/mar/16/universities-allowed-to-fail	
(8) "Closing the Digital Frontier", http://www.theatlantic.com/magazine/print/2010/07/closing-the-digital-frontier/8131/>	
(9) GREENBES [STEVE GREENBERG], Twitter update, April 30, 2010, http://twitter.com/greenbes/statuses/13136044037	
(10) "Content Management," YouTube website, http://www.youtube.com/t/contentid	
(11) "Of Memes and Media Takedowns," Critical Commons, May 02, 2010, http://criticalcommons.org/blog/content/of-memes-and-media-takedowns>"	
(12) FRED VON LOHMANN. "YouTube's Content ID (C)ensorship Problem Illustrated."	

Electronic Frontier Foundation, March 2, 2010, http://www.eff.org/deeplinks/2010/03/youtubes-content-id-c-ensorship-problem

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(13) For a few examples that have appeared in one influential educational publication, see JOHN SEELY BROWN and RICHARD P. ADLER, "Minds on Fire: Open Education, the Long Tail, and Learning 2.0," EDUCAUSE Review, vol. 43, no. 1 (January/February 2008), pp. 16–32, http://www.educause.edu/library/erm0811; DIANA G. OBLINGER, "A Change in Perspective," EDUCAUSE Review, vol. 41, no. 2 (March/April 2006), pp. 80, http://www.educause.edu/library/erm06211; and LARRY JOHNSON, "The Sea Change Before Us," EDUCAUSE Review, vol. 41, no. 2 (March/April 2006), pp. 72–73, http://www.educause.edu/library/erm0628

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(14) MIKE NERY AND JOSS WYNN, "The student as producer: reinventing the student experience in higher education", In: *The future of higher education: policy, pedagogy and the student experience*. Continuum, London, pp. 192-210. https://eprints.lincoln.ac.uk/1675/



MICHAEL WESCH

FROM KNOWLEDGABLE TO KNOWLEDGE-ABLE:

LEARNING IN NEW MEDIA ENVIRONMENTS

http://www.academiccommons.org/commons/essay/knowledgable-knowledge-able

«KNOWLEDGE-ABLE»

Most university classrooms have gone through a massive transformation in the past ten years. I'm not talking about the numerous initiatives for multiple plasma screens, moveable chairs, round tables, or digital whiteboards. The change is visually more subtle, yet potentially much more transformative. As I recently wrote in a Britannica Online Forum:

There is something in the air, and it is nothing less than the digital artifacts of over one billion people and computers networked together collectively producing over 2,000 gigabytes of new information per second. While most of our classrooms were built under the assumption that information is scarce and hard to find, nearly the entire body of human knowledge now flows through and around these rooms in one form or another, ready to be accessed by laptops, cellphones, and iPods. Classrooms built to re-enforce the top-down authoritative knowledge of the teacher are now enveloped by a cloud of ubiquitous digital information where knowledge is made, not found, and authority is continuously negotiated through discussion and participation.(1)

This new media environment can be enormously disruptive to our current teaching methods and philosophies. As we increasingly move toward an environment of instant and infinite information, it becomes less important for students to know, memorize, or recall information, and more important for them to be able to find, sort, analyze, share, discuss, critique, and create information. They need to move from being simply knowledgeable to being knowledge-able.

The sheer quantity of information now permeating our environment is astounding, but more importantly, networked digital information is also qualitatively different than information in other forms. It has the potential to be created, managed, read, critiqued, and organized very differently than information on paper and to take forms that we have not yet even imagined. To understand the true potentials of this "information revolution" on higher education, we need to look beyond the framework of "information." For at the base of this "information revolution" are new ways of relating to one another, new forms of discourse, new ways of interacting, new kinds of groups, and new ways of sharing, trading, and collaborating. Wikis, blogs, tagging, social networking and other developments that fall under the "Web 2.0" buzz are especially promising in this regard because they are inspired by a spirit of interactivity, participation, and collaboration. It is this "spirit" of Web 2.0 which is important to education. The technology

is secondary. This is a social revolution, not a technological one, and its most revolutionary aspect may be the ways in which it empowers us to rethink education and the teacher-student relationship in an almost limitless variety of ways.

PHYSICAL, SOCIAL AND COGNITIVE STRUCTURES WORKING AGAINST US

But there are many structures working against us. Our physical structures were built prior to an age of infinite information, our social structures formed to serve different purposes than those needed now, and the cognitive structures we have developed along the way now struggle to grapple with the emerging possibilities.

The physical structures are easiest to see, and are on prominent display in any large "state of the art" classroom. Rows of fixed chairs often face a stage or podium housing a computer from which the professor controls at least 786,432 points of light on a massive screen. Stadium seating, sound-absorbing panels and other acoustic technologies are designed to draw maximum attention to the professor at the front of the room. The "message" of this environment is that to learn is to acquire information, that information is scarce and hard to find (that's why you have to come to this room to get it), that you should trust authority for good information, and that good information is beyond discussion (that's why the chairs don't move or turn toward one another). In short, it tells students to trust authority and follow along.

This is a message that very few faculty could agree with, and in fact some may use the room to launch spirited attacks against it. But the content of such talks are overshadowed by the ongoing hour-to-hour and day-to-day practice of sitting and listening to authority for information and then regurgitating that information on exams.

Many faculty may hope to subvert the system, but a variety of social structures work against them. Radical experiments in teaching carry no guarantees and even fewer rewards in most tenure and promotion systems, even if they are successful. In many cases faculty are required to assess their students in a standardized way to fulfill requirements for the curriculum. Nothing is easier to assess than information recall on multiple-choice exams, and the concise and "objective" numbers satisfy committee members busy with their own teaching and research.

Even in situations in which a spirit of exploration and freedom exist, where faculty are free to experiment to work beyond physical and social constraints, our cognitive habits often get in the way. Marshall McLuhan called it "the rear-view mirror effect," noting that "We see the world through a rear-view mirror. We march backwards into the future." (2)

Most of our assumptions about information are based on characteristics of information on paper. On paper we thought of information as a "thing" with a material form, and we created elaborate hierarchies to classify each piece of information in its own logical place. But as David Weinberger and Clay Shirky have demonstrated, networked digital information is fundamentally different than information on paper. (3) And each digital innovation seems to shake us free from yet another assumption we once took for granted.

Even something as simple as the hyperlink taught us that information can be in more than one place at one time, challenging our traditional space-time based notions of information as a "thing" that has to be "in a place." Google began harnessing the links and revolutionized our research with powerful machine-assisted searching.

Blogging came along and taught us that anybody can be a creator of information. Suddenly anybody can create a blog in a matter of seconds. And people have responded. Technorati now reports that there are over 133 million blogs, almost 133 million more than there were just five years ago. YouTube and other video sharing sites have sparked similar widespread participation in the production of video. Over 10,000 hours of video are uploaded to the web everyday. In the past six months more material has been uploaded to YouTube than all of the content ever aired on major network television. While such media beg for participation, our lecture halls are still sending the message, "follow along."

Wikipedia has taught us yet another lesson, that a networked information environment allows people to work together in new ways to create information that can rival (and even surpass) the content of experts by almost any measure. The message of Wikipedia is not "trust authority" but "explore authority." Authorized information is not beyond discussion on Wikipedia, information is authorized through discussion, and this discussion is available for the world to see and even participate in. This culture of discussion and participation is now available on any website with the emerging "second layer" of the web through applications like Diigo which allow you to add notes and tags to any website anywhere.

And as we note and tag these sites, we are also collectively organizing them, so that the notion that this new media environment is too big and disorganized for anybody to find anything worthwhile and relevant is simply not the case. Our old assumption that information is hard to find, is trumped by the realization that if we set up our hyper-personalized digital network effectively, information can find us. For example, I have set up my own Netvibes portal so that the moment anybody anywhere tags something with certain keywords I am interested in I will immediately receive a link to the item. It is like continuously working with thousands of research associates around the world.

Taken together, this new media environment demonstrates to us that the idea of learning as acquiring information is no longer a message we can afford to send to our students, and that we need to start redesigning our learning environments to address, leverage, and harness the new media environment now permeating our classrooms.

A CRISIS OF SIGNIFICANCE

Unfortunately, many teachers only see the disruptive possibilities of these technologies when they find students Facebooking, texting, IMing, or shopping during class. Though many blame the technology, these activities are just new ways for students to tune out, part of the much bigger problem I have called "the crisis of significance," the fact that many students are now struggling to find meaning and significance in their education. (4)

Nothing good will come of these technologies if we do not first confront the crisis of significance and bring relevance back into education. In some ways these technologies act as magnifiers. If we fail to address the crisis of significance, the technologies will only magnify the problem by allowing students to tune out more easily and completely. With total and constant access to their entire network of friends, we might as well be walking into the food court in the student union and trying to hold their attention. On the other hand, if we work with students to find and address problems that are real and significant to them, they can then leverage the networked information environment in ways that will help them achieve the "knowledge-ability" we hope for them.

We have had our why's, how's, and what's upside-down, focusing too much on what should be learned, then how, and often forgetting the why altogether. In a

world of nearly infinite information, we must first address why, facilitate how, and let the what generate naturally from there. As infinite information shifts us away from a narrow focus on information, we begin to recognize the importance of the form of learning over the content of learning. It isn't that content is not important; it is simply that it must not take precedence over form. But even as we shift our focus to the "how" of learning, there is still the question of "what" is to be learned. After all, our courses have to be about something. Usually our courses are arranged around "subjects." Postman and Weingartner note that the notion of "subjects" has the unwelcome effect of teaching our students that "English is not History and History is not Science and Science is not Art . . . and a subject is something you 'take' and, when you have taken it, you have 'had' it." Always aware of the hidden metaphors underlying our most basic assumptions, they suggest calling this "the Vaccination Theory of Education" as students are led to believe that once they have "had" a subject they are immune to it and need not take it again. (5)

NOT SUBJECTS BUT SUBJECTIVITIES

As an alternative, I like to think that we are not teaching subjects but subjectivities: ways of approaching, understanding, and interacting with the world. Subjectivities cannot be taught. They involve an introspective intellectual throw-down in the minds of students. Learning a new subjectivity is often painful because it almost always involves what psychologist Thomas Szasz referred to as "an injury to one's self-esteem." (6) You have to unlearn perspectives that may have become central to your sense of self.

To illustrate what I mean by subjectivities over subjects, I have created a list of subjectivities that I am trying to help students attain while learning the "subject" of anthropology:

- Our worldview is not natural and unquestionable, but culturally and historically specific.
- We are globally interconnected in ways we often do not realize.
- Different aspects of our lives and culture are connected and affect one another deeply.
- Our knowledge is always incomplete and open to revision.

- We are the creators of our world.
- Participation in the world is not a choice, only how we participate is our choice.

Even a quick scan of these subjectivities will reveal that they can only be learned, explored, and adopted through practice. We can't "teach" them. We can only create environments in which the practices and perspectives are nourished, encouraged, or inspired (and therefore continually practiced).

My own experiments in this regard led to the creation the World Simulation, now the centerpiece of my Introduction to Cultural Anthropology course at Kansas State University. As the name implies, the world simulation is an activity in which we try to simulate the world. Of course, in order to simulate the world, we need to know everything we can about it. So while the course is set up much like a typical cultural anthropology course, moving through the same readings and topics, all of these learnings are ultimately focused around one big question, "How does the world work?"

Students are co-creators of every aspect of the simulation, and are asked to harness and leverage the new media environment to find information, theories, and tools we can use to answer our big question. Each student has a specific role and expertise to develop. A world map is superimposed on the class and each student is asked to become an expert on a specific aspect of the region in which they find themselves. Using this knowledge, they work in 15-20 small groups to create realistic cultures, step-by-step, as we go through each aspect of culture in class. This allows them to apply the knowledge they learn in the course and to recognize the ways different aspects of culture--economic, social, political, and religious practices and institutions--are integrated in a cultural system.

In the final weeks of the course we explore how different cultures around the world are interconnected and how they relate to one another. Students continue to harness and leverage the new media environment to learn more about these interconnections, and use the wiki to work together to create the "rules" for our simulation. They face the daunting task of creating a way to simulate colonization, revolution, the emergence of a global economy, war and diplomacy, and environmental challenges. Along the way, they are exploring some of the most important challenges now facing humanity.

The World Simulation itself only takes 75-100 minutes and moves through 650 metaphorical years, 1450-2100. It is recorded by students on twenty digital video

cameras and edited into one final "world history" video using clips from real world history to illustrate the correspondences. We watch the video together in the final weeks of the class, using it as a discussion starter for contemplating our world and our role in its future. By then it seems as if we have the whole world right before our eyes in one single classroom - profound cultural differences, profound economic differences, profound challenges for the future, and one humanity. We find ourselves not just as co-creators of a simulation, but as co-creators of the world itself, and the future is up to us.

Managing a learning environment such as this poses its own unique challenges, but there is one simple technique, which makes everything else fall into place: love and respect your students and they will love and respect you back. With the underlying feeling of trust and respect this provides, students quickly realize the importance of their role as co-creators of the learning environment and they begin to take responsibility for their own education.

NEW MODELS OF ASSESSMENT FOR NEW MEDIA ENVIRONMENTS: THE NEXT FRONTIER

All of this vexes traditional criteria for assessment and grades. This is the next frontier as we try to transform our learning environments. When I speak frankly with professors all over the world, I find that, like me, they often find themselves jury-rigging old assessment tools to serve the new needs brought into focus by a world of infinite information. Content is no longer king, but many of our tools have been habitually used to measure content recall. For example, I have often found myself writing content-based multiple-choice questions in a way that I hope will indicate that the student has mastered a new subjectivity or perspective. Of course, the results are not satisfactory. More importantly, these questions ask students to waste great amounts of mental energy memorizing content instead of exercising a new perspective in the pursuit of real and relevant questions.

Of course, multiple-choice questions are an easy target for criticism, but even more sophisticated measures of cognitive development may miss the point. When you watch somebody who is truly "in it," somebody who has totally given themselves over to the learning process, or if you simply imagine those moments in which you were "in it" yourself, you immediately recognize that learning expands far beyond the mere cognitive dimension. Many of these dimensions were mentioned in the issue precis, "such as emotional and affective dimensions,

capacities for risk-taking and uncertainty, creativity and invention," and the list goes on. How will we assess these? I do not have the answers, but a renewed and spirited dedication to the creation of authentic learning environments that leverage the new media environment demands that we address it. The new media environment provides new opportunities for us to create a community of learners with our students seeking important and meaningful questions. Questions of the very best kind abound, and we become students again, pursuing questions we might have never imagined, joyfully learning right along with the others. In the best case scenario the students will leave the course, not with answers, but with more questions, and even more importantly, the capacity to ask still more questions generated from their continual pursuit and practice of the subjectivities we hope to inspire. This is what I have called elsewhere, "antiteaching," in which the focus is not on providing answers to be memorized, but on creating a learning environment more conducive to producing the types of questions that ask students to challenge their taken-for-granted assumptions and see their own underlying biases.

The beauty of the current moment is that new media has thrown all of us as educators into just this kind of question-asking, bias-busting, assumption-exposing environment. There are no easy answers, but we can at least be thankful for the questions that drive us on.

NOTES

(1) MICHAEL WESCH (2008) "A Vision of Students Today (and what Teachers Must Do)", Encyclopedia Britannica blog, Oct. 21 http://www.britannica.com/blogs/2008/10/a-vision-of-students-today-what-teachers-must-do/
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(5) NEIL POSTMAN AND CHARLES WEINGARTNER, Teaching as a Subversive Activity, (Delacorte Press, 1969), 21 http://www.academiccommons.org/commons/essay/knowledgable-knowledge-able#5return
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FELIPE G. GIL

TRANSMEDIA GENERATION

<http://embed.at/article15.html>

TRANSMEDIA GENERATION

It's Christmas. A family is gathered around a large table set for sixteen. At one end sits the grandfather. At the other, one of his grandkids, Pep. While his parents, cousins and aunts and uncles start clearing up, Pep continues immersed in dissecting a piece of fruit with a surgeon's precision. Suddenly, one of his cousins goes up to him and asks «What are you doing, Pep?» and he answers easily: «peeling a mandarin». What he has done is slice the peel in such a way that it forms a kind of orange underpants. What he is doing without realizing it is reinventing everyday life.

«Transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience.»

Pep is 13 years old, he lives in Tarragona, Catalonia, and is in his second year of secondary school. In the afternoons, he goes to his theatre group. He loves dinosaurs, videogames and watching videos on You Tube. He doesn't have an Internet connection at home, but there is one in his dad's furniture store. He doesn't have a computer of his own either: he shares a laptop with his parents and his younger sister. Since he was little, he has been fascinated by any audiovisual gadget that has come his way, using all of them to do what his generation is best at: play.

«Play is one of the ways we learn, and during a period of reskilling and reorientation, such play may be much more important than it seems at first glance.»

In the current educational system in Spain, only a few Language and Literature teaching units analyze the media. The Media Studies subjects that used to be in the secondary and upper secondary school syllabus are no longer taught. There is increasing talk of Education 2.0 and ICT (Information and Communication Technologies) but the politicians in charge of Education have paradoxically failed to notice that digital and audiovisual literacy is, to paraphrase author and academic **Gutierrez-Martín**, more than just a mouse and a keyboard. Fortunately, an expanded form of education is starting to emerge. As "We TV" (http://tv.zemos98.org/We-TV) claims, perhaps we are fulfilling the utopia of the *camérastylo* and people are transforming video cameras (and similar devices) into the writing implements of the future. So why shouldn't a You Tube video be seen as a syntagm to be analysed in Language and Literature classes?

THE "ANGRY GERMAN KID" REMIX

«Audiences, empowered by these new technologies, occupying a space at the intersection between old and new media, are demanding the right to participate within the culture.»

Pep has a You Tube channel (http://www.youtube.com/user/pepefue). One of the first videos he uploaded is «a remix of the popular "Angry German Kid" video» (http://www.youtube.com/watch?v=1sFCQvXpKqE). The curious thing about this video is that most people thought it was made by the boy's father, who wanted to capture his son's rage as he played computer games... but it turned out to be a satire by a kid who was probably much more intelligent than the millions of viewers who laughed at his supposed antics.

«More and more literacy experts are recognizing that enacting, reciting, and appropriating elements from preexisting stories is a valuable and organic part of the process by which children develop cultural literacy.»

This phenomenon is paradigmatic of the age of convergence: one day, somebody uploaded a video with certain characteristics that led others to forward it, discuss it and, above all, remix it. Thousands of users downloaded the original video and created their own versions of it. One of these is Pep's. His remix shows his synchronization and scripting skills, but, in addition, he has taken it into familiar territory (the videogame "Super Mario Bros") and added two nuances: the sound of the game, and of a supposed porn film that suddenly crops up at one point. The voice in the video is Pep's own imitation of heavy breathing. Pep thus takes three media sources and converges them into a new one: the "Angry German Kid" video, "Super Mario Bros" and a porn film.

«Convergence occurs within the brains of individual consumers and through their social interactions with others. Each one of us constructs our own personal mythology from bits and fragments of information extracted from the media flow and transformed into resources through which we make sense of our everyday life.»

As Pep himself explains in the interview, he had to work out how to hack the You Tube video (which currently doesn't have a download option), how to load it into a video editing program (he uses Windows Movie Maker), how to synchronize the subtitles, how to export the video, how to create his own You Tube account, and how to upload his video. Given this whole process, there is an inevitable question:

what drives Pep to do it? The Internet has boosted social intelligence, with its main premise being to generate specific-interest communities. Pep had seen dozens of different remixes of the "Angry German Kid" video before he began to consider adding one of his own. Before he felt the urge to become part of what he was seeing.

«Our traditional assumptions about expertise are breaking down or at least being transformed by the more open-ended processes of communication in cyberspace. The expert paradigm requires a bounded body of knowledge, which an individual can master. The types of questions that thrive in a collective intelligence, however, are open ended and profoundly interdisciplinary; they slip and slide across borders and draw on the combined knowledge of a more diverse community.»

JURASSIC PARK, LEGO VERSION

Animation is another of Pep's hobbies. Somebody once explained the concept of persistence of vision to him. He soon grasped that moving images are actually the illusion of movement created when there is a rapid succession of still images. Since then, some of his small creations are linked to this.

Pep has made several animated videos using scenes or excerpts from "Jurassic Park". This video: http://www.youtube.com/watch?v=GrfWRn_11vw is his own trailer for the third film in the series, and in the video he discusses in the interview he recreates one of his favourite scenes from the film.

«New-media theorist **Janet Murray** has written of the "encyclopaedic capacity" of digital media, which she thinks will lead to new narrative forms as audiences seek information beyond the limits of the individual story.»

Pep is part of the transmedia generation: he imitates a kind of popular form of creation (try doing a search for "Lego" on You Tube) in order to tell his own story in a video that mixes the original sound from a scene in "Jurassic Park III" with an animation he creates using his Lego pieces and other toys. Unfortunately, the mammoth audiovisual industry sees this as illegal divergence rather than cultural convergence. When will it be set down that a film's users can remix it to their heart's content?

Along with this industry aspect, this situation poses many questions: why do people have such a strong urge to tell their stories at this particular moment in history?

can we develop a public dynamic for audiovisual culture that makes it legal to do what Pep has done, and encourages it? how can education open up in order to integrate children's need to be audiovisual "prosumers" (producer+consumer)?

«The power of participation comes not from destroying commercial culture but from writing over it, modding it, amending it, expanding it, adding greater diversity of perspective, and then recirculating it, feeding it back into the mainstream media.»

VIDEO-PLAYING

One day, Pep discovered "Spore", a game created by **Will Wright**, who is also behind the popular games "The Sims" and "Sim City". Spore «allows the player to develop a species from a microscopic organism to its evolution into a complex animal, its emergence as a social, intelligent being, to its mastery of the planet and then finally to its ascension into space». In "Spore", you have the choice of progressing in one of two ways: by cooperating with, or attacking, other civilisations. It is not only the specialist press that considers videogames to be the future-present of audiovisual narrative, given their capacity to integrate different stories in different media. "Spore", for example, can be played online and allows users to show the community how their creatures have turned out, interact with other species, etc. And "Spore" has something in common with "The Sims" and "Sim City": it is an alternative reality game.

«ARG's (alternative reality games) are generating "players who feel more capable, more confident, more expressive, more engaged and more connected in their everyday lives". (...) "A good immersive game will show you game patterns in nongame places".»

THE HYPERLINK IS IN US

Pep is currently editing a documentary he made at the beach during the summer holidays, in which he asked people what holidays meant to them. He has also discovered Game Maker, a simple program that allows him to design his own videogames. And who knows what other discoveries he will make in the coming months and years. The difference between our time and other moments in history is that Pep is not alone. You probably know somebody like him. And

this is why it's important to realize that we have to keep learning, together, to read and write audiovisually instead of taking it for granted that the millions of Euros the Spanish government is spending on putting computers in classrooms is automatically going to fix the problem. This is why we have to talk about the stories that we are passionate about, not business models. And this is why we should not think of art as something exclusive to artists, but as a game that we can all take part in. This is why we have to defend the remix as a cultural ecosystem.

«In a hunting society, children play with bows and arrows. In an information society, children play with information.»

There is a *Pep* inside each one of us, we just have to wake him up. We are the Transmedia generation.

NOTES

You can see a video interview with Pep Doménech Gil (2009, Fuerteventura, Islas Canarias) at http://embed.at/article15.html

This is an English translation of the article "Generación transmedia" published on EMBED.at and Henry Jenkins Blog.

All the quotes interwoven into this text are from "Convergence Culture" (2006), the book in which **Henry Jenkins** coins the term "transmedia storytelling" and insightfully describes the changes that are taking place in the way we communicate, think, read, etc.



MIZUKO ITO

LIVING AND LEARNING WITH NEW MEDIA:

SUMMARY OF FINDINGS FROM THE DIGITAL YOUTH PROJECT

http://digitalyouth.ischool.berkeley.edu/files/report/digitalyouth-WhitePaper.pdf

Mizuko Ito, Heather Horst, Matteo Bittanti, Danah Boyd, Becky Herr-Stephenson, Patricia G. Lange, C.J. Pascoe and Laura Robinson. With Sonja Baumer, Rachel Cody, Dilan Mahendran, Katynka Martínez, Dan Perkel, Christo Sims and Lisa Tripp.

EXECUTIVE SUMMARY

Social network sites, online games, video-sharing sites, and gadgets such as iPods and mobile phones are now fixtures of youth culture. They have so permeated young lives that it is hard to believe that less than a decade ago these technologies barely existed. Today's youth may be coming of age and struggling for autonomy and identity as did their predecessors, but they are doing so amid new worlds for communication, friendship, play, and self-expression.

This white paper summarizes the results of a three-year ethnographic study, funded by the John D. and Catherine T. MacArthur Foundation, examining young people's participation in the new media ecology. It represents a condensed version of a longer treatment of the project findings. (1) The study was motivated by two primary research questions: How are new media being integrated into youth practices and agendas? How do these practices change the dynamics of youth-adult negotiations over literacy, learning, and authoritative knowledge?

EXTENDING FRIENDSHIPS AND INTERESTS

Online spaces enable youth to connect with peers in new ways. Most youth use online networks to extend the friendships that they navigate in the familiar contexts of school, religious organizations, sports, and other local activities. They can be "always on," in constant contact with their friends via texting, instant messaging, mobile phones, and Internet connections. This continuous presence requires ongoing maintenance and negotiation, through private communications like instant messaging or mobile phones, as well as in public ways through social network sites such as MySpace and Facebook. With these "friendship-driven" practices, youth are almost always associating with people they already know in their offline lives. The majority of youth use new media to "hang out" and extend existing friendships in these ways.

A smaller number of youth also use the online world to explore interests and find information that goes beyond what they have access to at school or in their local community. Online groups enable youth to connect to peers who share specialized and niche interests of various kinds, whether that is online gaming, creative writing, video editing, or other artistic endeavors. In these "interest-driven" networks, youth may find new peers outside the boundaries of their local community. They can also find opportunities to publicize and distribute their work to online audiences and to gain new forms of visibility and reputation.

SELF-DIRECTED. PEER-BASED LEARNING

In both friendship-driven and interest-driven online activity, youth create and navigate new forms of expression and rules for social behavior. In the process, young people acquire various forms of technical and media literacy by exploring new interests, tinkering, and "messing around" with new forms of media. They may start with a Google search or "lurk" in chat rooms to learn more about their burgeoning interest. Through trial and error, youth add new media skills to their repertoire, such as how to create a video or customize games or their MySpace page. Teens then share their creations and receive feedback from others online. By its immediacy and breadth of information, the digital world lowers barriers to self-directed learning.

Others "geek out" and dive into a topic or talent. Contrary to popular images, geeking out is highly social and engaged, although usually not driven primarily by local friendships. Youth turn instead to specialized knowledge groups of both teens and adults from around the country or world, with the goal of improving their craft and gaining reputation among expert peers. What makes these groups unique is that while adults participate, they are not automatically the resident experts by virtue of their age. Geeking out in many respects erases the traditional markers of status and authority.

New media allow for a degree of freedom and autonomy for youth that is less apparent in a classroom setting. Youth respect one another's authority online, and they are often more motivated to learn from peers than from adults. Their efforts are also largely self-directed, and the outcome emerges through exploration, in contrast to classroom learning that is oriented toward set, predefined goals.

IMPLICATIONS FOR EDUCATORS. PARENTS. AND POLICYMAKERS

New media forms have altered how youth socialize and learn, and this raises a new set of issues that educators, parents, and policymakers should consider.

SOCIAL AND RECREATIONAL NEW MEDIA USE AS A SITE OF LEARNING

Contrary to adult perceptions, while hanging out online, youth are picking up basic social and technological skills they need to fully participate in contemporary society. Erecting barriers to participation deprives teens of access to these forms of learning. Participation in the digital age means more than being able to access "serious" online information and culture. Youth could benefit from educators being more open to forms of experimentation and social exploration that are generally not characteristic of educational institutions.

RECOGNIZING IMPORTANT DISTINCTIONS IN YOUTH CULTURE AND LITERACY

Friendship-driven and interest-driven online participation have very different kinds of social connotations. For example, whereas friendship-driven activities center on peer culture, adult participation is more welcome in the latter, more "geeky," forms of learning. In addition, the content, ways of relating, and skills that youth value are highly variable depending on what kinds of social groups they associate with. This diversity in forms of literacy means that it is problematic to develop a standardized set of benchmarks to measure levels of new media and technical literacy.

CAPITALIZING ON PEER-BASED LEARNING

Youth using new media often learn from their peers, not teachers or adults, and notions of expertise and authority have been turned on their heads. Such learning differs fundamentally from traditional instruction and is often framed negatively by adults as a means of "peer pressure." Yet adults can still have tremendous influence in setting "learning goals," particularly on the interest-driven side, where adult hobbyists function as role models and more experienced peers.

NEW ROLE FOR EDUCATION?

Youths' participation in this networked world suggests new ways of thinking about the role of education. What would it mean to really exploit the potential of the learning opportunities available through online resources and networks? Rather than assuming that education is primarily about preparing for jobs and careers, what would it mean to think of it as a process guiding youths' participation in public life more generally? Finally, what would it mean to enlist help in this endeavor from engaged and diverse publics that are broader than what we traditionally think of as educational and civic institutions?

LIVING AND LEARNING WITH NEW MEDIA: SUMMARY OF FINDINGS FROM THE DIGITAL YOUTH PROJECT

Digital media and online communication have become pervasive in the lives of youth in the United States. Social network sites, online games, video-sharing sites, and gadgets such as iPods and mobile phones are now fixtures of youth culture. They have so permeated young lives that it is hard to believe that less than a decade ago these technologies had barely registered in the lives of U.S. children and teens. Today's youth may be coming of age and struggling for autonomy and identity as did their predecessors, but they are doing so amid reconfigured contexts for communication, friendship, play, and self-expression.

We are wary of claims that a digital generation is overthrowing culture and knowledge as we know it and that its members are engaging in new media in ways radically different from those of older generations. At the same time, we also believe that this generation is at a unique historical moment tied to longer-term and systemic changes in sociability and culture. While the pace of technological change may seem dizzying, the underlying practices of sociability, learning, play, and self-expression are undergoing a slower evolution, growing out of resilient social and cultural structures that youth inhabit in diverse ways in their everyday lives. We sought to place both the commonalities and diversity of youth new media practice in the context of this broader social and cultural ecology.

Our values and norms in education, literacy, and public participation are being challenged by a shifting landscape of media and communications in which youth are central actors. Although complaints about "kids these days" have a familiar ring to them, the contemporary version is somewhat unusual in how strongly it equates generational identity with technology identity, an equation that is reinforced by telecommunications and digital media corporations that hope to capitalize on this close identification.

Public sentiment is growing (both hopeful and fearful) around the notion that young people's use of digital media and communication technologies defines this generation as distinct from their elders. In addition to this generational divide, these new technology practices are also tied to what David Buckingham has described as a "digital divide' between in-school and out-of-school use." He sees this as "symptomatic of a much broader phenomenon—a widening gap between children's everyday 'life worlds' outside of school and the emphases of many educational systems." (2) Both the generational divide and the divide between in-school and out-of-school learning are part of a resilient set of questions about adult authority in the education and socialization of youth. Some argue that new media empower youth to challenge the social norms and educational agendas of their elders in unique ways.

This white paper and its corresponding book, *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media,* investigate these claims. How are new media being integrated into youth practices and agendas? And how do these practices change the dynamics of youth-adult negotiations over literacy, learning, and authoritative knowledge? The study approached these questions by documenting new media practices from the youth point of view, rather than beginning with adult expectations and agendas. The goal of this work is to have youth perspectives inform current debates over the future of learning and education in the digital age.

Despite the widespread assumption that new media are tied to fundamental changes in how young people are engaging with culture and knowledge, there is still relatively little research that investigates how these dynamics operate on the ground. This white paper summarizes a three-year ethnographic investigation of youth new media practices funded by the John D. and Catherine T. MacArthur Foundation as part of a broader initiative on digital media and learning. The project began in early 2005 and was completed in the summer of 2008, with the bulk of the fieldwork taking place in 2006 and 2007. This effort is unique in its breadth and the number of case studies that it encompasses. Spanning 23 different case studies conducted by 28 researchers and collaborators, this study sampled

from a wide range of different youth practices, populations, and online sites, primarily in the United States.

RESEARCH APPROACH

Although a growing body of research is examining youth new media practices, we are still at the early stages of piecing together a more holistic picture of the role of new media in young people's everyday lives. A growing number of quantitative studies document the spread of new media and related practices among U.S. youth.(3)

In addition to these quantitative indicators, ethnographic case studies of youth engagement with specific kinds of new media practices and sites continue to increase. (4) Although the United Kingdom has funded a number of large-scale qualitative studies on youth new media engagements, (5) there are no comparable studies in the United States that look across a range of different populations and new media practices. What is generally lacking in the research literature overall, and in the United States in particular, is an understanding of how new media practices are embedded in a broader social and cultural ecology. Although we have a picture of technology trends on the one hand, and spotlights on specific youth populations and practices on the other, we need more work that brings these two pieces of the puzzle together. This study begins to address this gap through a large-scale ethnographic study that integrates findings across a range of different youth populations and their new media practices.

We approached the descriptive goal of our study with a qualitative research approach that was defined by ethnographic method, a youth-centered focus, and the study of the changing new media ecology. We designed the project to document the learning and innovation that accompany young people's everyday engagements with new media in informal settings. We aimed to transcribe and translate the ways youth understand their own use of new media and, at times, the barriers they encounter in their desires to use them. Our focus on youth-centered practices of play, communication, and creative production locates learning in contexts that are meaningful and formative for youth, including friendships and families, as well as young people's own aspirations, interests, and passions.

The practices we focused upon incorporated a variety of geographic sites and research methods, ranging from questionnaires, surveys, semi-structured

interviews, diary studies, observation, and content analyses of media sites, profiles, videos, and other materials. Collectively, the research team conducted 659 semi-structured interviews, 28 diary studies, and focus group interviews with 67 participants in total. We also conducted interviews informally with at least 78 individuals and participated in more than 50 research-related events such as conventions, summer camps, award ceremonies, and other local events. Complementing our interview-based strategy, we also clocked more than 5,194 observation hours, which were chronicled in regular field notes, and collected 10,468 profiles on sites such as MySpace, Facebook and Neopets (among others), 15 online discussion group forums, and more than 389 videos as well as numerous materials from classroom and afterschool contexts. In addition, our Digital Kids Questionnaire was completed by 402 participants, with 363 responses from people under the age of 25.

The analysis in our book *Hanging Out, Messing Around, and Geeking Out* and this white paper draws upon work across 20 distinctive research projects that were framed by four main areas: homes and neighborhoods, institutional spaces, online sites, and interest groups. (6) When we present ethnographic material in this white paper, we indicate the researcher's name and which of the case studies the example is drawn from. Because we wanted to acknowledge young people as agents, we use the pseudonyms and ethnic and racial categories that our interviewees used to describe themselves.

ETHNOGRAPHY

An ethnographic approach means that we work to understand how media and technology are meaningful to people in their everyday lives. We rely on qualitative methods of interviewing, observation, and interpretive analysis in an effort to understand patterns in culture and social practices from the point of view of participants themselves, rather than beginning with our own categories. Our goal is to capture the youth cultures and practices related to new media, as well as the surrounding context, such as peer relations, family dynamics, local community institutions, and broader networks of technology and consumer culture.

The strength of an ethnographic approach is that it enables us to document young people's understanding and use of new media and, in turn, draw from this empirical material to identify the important categories and structures that determine new media practices and learning outcomes. This approach does not lend itself to testing existing analytic categories or targeted hypotheses but asks more fundamental

questions about what the relevant factors and categories of analysis are. For example, rather than assume that video games have particular "effects," we examine how video games relate to peer relations, development of technical expertise, and other kinds of media engagement, as well as the relative significance of video games in different kids' lives. We believe that an initial broad-based ethnographic understanding, grounded in the actual contexts where engagement takes place, is crucial in grasping how youth understand and incorporate new media in their everyday lives.

FOCUS ON YOUTH

Adults often view children in terms of developmental "ages and stages," focusing on what they will become rather than seeing them as complete beings "with ongoing lives, needs and desires." (7) By contrast, we take a "sociology of youth and childhood" approach, which means that we take youth seriously as actors in their own social worlds and look at childhood as a socially constructed and contested category whose definition has varied historically over time. (8) Our work has focused on documenting the everyday new media practices of youth in their middle-school and high-school years, and we have made our best effort to document the diversity of youth identity and practice. We have also engaged, to a lesser extent, with parents, educators, and young adults who participate in or are involved in structuring youth new media practices.

Readers will see the study participants referred to by a variety of age-related names. We use the term "kids" for those 13 and under, "teens" for those ages 13 to 18, and "young people" for teens and young adults ages 13 to 30. We use the term "youth" to describe the general category of youth culture that is not clearly age demarcated but centers on the late teenage years. Interviews with young adults are included to provide a sense of adult participation in youth practice as well as to provide retrospective accounts of growing older with new media. While age-based categories have defined our object of study, we are interested in documenting how these categories are historically and culturally specific, and how new media use is part of the redefinition of the youth culture and "age-appropriate" forms of practice.

NEW MEDIA

We use the term "new media" to describe a media ecology where more traditional media, such as books, television, and radio, are "converging" with digital media,

specifically interactive media and media for social communication. (9) In contrast to work that attempts to isolate the specific affordances of digital production tools or online networks, we are interested in the media ecology that youth inhabit today. We have used the term "new media" rather than terms such as "digital media" or "interactive media" because we are examining a constellation of changes to media technology that can't be reduced to a single technical characteristic. Current media ecologies often rely on a convergence of digital and online media with print, analog, and non-interactive media types.

The moniker of "the new" seemed appropriately situational, relational, versatile, and not tied to a particular media platform. Our work has focused on those practices that are "new" at this moment and that are most clearly associated with youth culture and voice, such as engagement with social network sites, media fandom, and gaming. The aim of our study is to describe media engagements that are specific to the life circumstances of contemporary youth, at a moment when we are seeing a transition to participation in digital media production and "networked publics." Following from our youth-centered approach, the new media practices we examine are almost all situated in the social and recreational activities of youth rather than in contexts of explicit instruction.

CONCEPTUAL FRAMEWORK

Our analysis is guided by four areas of focus: genres of participation, networked publics, peer-based learning, and new media literacy. In examining these different areas, we draw from existing theories in literacy studies, new media studies, learning theory, and childhood studies that are in keeping with our ethnographic approach. The frameworks we draw from focus on social and cultural context rather than on individual psychology in understanding learning and media engagement.

GENRES OF PARTICIPATION

To understand new media engagement, we draw from models of learning that examine learning in everyday activity and rely on a notion of social and cultural participation. (10) We see learning with new media as a process of participation in shared culture and sociability as it is embodied and mediated by new technologies. In our descriptions of youth practice, we rely on a framework of "genres of

participation" to describe different modes or conventions for engaging with new media. (11) Instead of looking to rigid categories that are defined by formal properties, genres of participation are a way of identifying, in an interpretive way, a set of social, cultural, and technological characteristics that participants recognize as defining a set of practices.

While we remain attuned to many of the power dynamics that shape society, we have not relied on distinctions based on given categories such as gender, class, or ethnic identity. Our genres are based on what we saw in our ethnographic material, patterns that helped researchers and participants in our project interpret how media intersect with learning and participation. By describing these forms of participation as genres, we hope to avoid the assumption that they attach categorically to individuals. Rather, just as an individual may engage with multiple media genres, we find that youth will often engage in multiple genres of participation in ways that are specific to the situation. We have also avoided categorizing practice on the basis of technology or parameters defined by media, such as media type or measures of frequency or media saturation. Genres of participation allow us to identify the sources of diversity in how youth engage with new media in a way that does not rely on a simple notion of "divides" or a ranking of more or less sophisticated media expertise. Instead, these genres represent different investments that youth make in particular forms of sociability and differing forms of identification with media genres.

- By friendship-driven genres of participation, we refer to the dominant and mainstream practices of youth as they go about their day-to-day negotiations with friends and peers. These friendship-driven practices center on peers whom youth encounter in the age-segregated contexts of school but might also include friends and peers whom they meet through religious groups, school sports, and other local activity groups. For most youth, these local friendship-driven networks are their primary source of affiliation, friendship, and romantic partners, and their lives online mirror this local network. MySpace and Facebook are the emblematic online sites for these sets of practices.
- In contrast to friendship-driven practices, interest-driven genres of participation put specialized activities, interests, or niche and marginalized identities first. Interest-driven practices are what youth describe as the domain of the geeks, freaks, musicians, artists, and dorks, who are identified as smart, different, or creative, and who generally exist at the margins of teen social worlds. Youth find a different network of peers and develop deep friendships through these

interest-driven engagements, but in these cases the interests come first, and they structure the peer network and friendships. It is not about the given social relations that structure youth's school lives but about both focusing and expanding on an individual's social circle based on interests. Although some interest-based activities such as sports and music have been supported through schools and overlap with young people's friendship-driven networks, other kinds of interests require more far-flung networks of affiliation and expertise.

- Friendship-driven and interest-driven genres provide a broad framework for identifying what we saw as the most salient social and cultural distinction that differentiated new media practice among youth. In addition, we have identified three genres of participation that describe different degrees of commitment to media engagement: *hanging out, messing around, and geeking out.*

These three genres are a way of describing different levels of intensity and sophistication in media engagement with reference to social and cultural context, rather than relying exclusively on measures of frequency or assuming that certain forms of media or technology automatically correlate with "highend" and "low-end" forms of media literacy. In the second half of this white paper, we present an overview of our research findings in terms of these three genres of participation and related learning implications.

PARTICIPATION IN NETWORKED PUBLICS

We use the term "networked publics" to describe participation in public culture that is supported by online networks. (12) The growing availability of digital media-production tools, combined with online networks that traffic in rich media, is creating convergence between mass media and online communication. (13) Rather than conceptualize everyday media engagement as "consumption" by "audiences," the term "networked publics" places the active participation of a distributed social network in producing and circulating culture and knowledge in the foreground. The growing salience of networked publics in young people's everyday lives is an important change in what constitutes the social groups and publics that structure young people's learning and identity.

This research delves into the details of everyday youth participation in networked publics and into the ways in which parents and educators work to shape these engagements. Youths' online activity largely replicates their existing practices of hanging out and communicating with friends, but the characteristics of networked publics do create new kinds of opportunities for youth to connect, communicate, and develop their public identities. In addition to reshaping how youth participate in their given social networks of peers in school and their local communities, networked publics also open new avenues for youth participation through interest-driven networks.

PFFR-RASFD I FARNING

Our attention to youth perspectives, as well as the high level of youth engagement in social and recreational activities online, determined our attention to the more informal and loosely organized contexts of peer-based learning. Our focus is on describing learning outside of school, primarily in settings of peer-based interaction. Although parents and educators often lament the influence of peers, as exemplified by the phrase "peer pressure," we approach these informal social settings as a space of opportunity for learning. Our cases demonstrate that some of the drivers of self-motivated learning come not from institutionalized "authorities" setting standards and providing instruction, but from youth observing and communicating with people engaged in the same interests, and in the same struggles for status and recognition, as they are.

Both friendship-driven and interest-driven participation rely on peer-based learning dynamics, which have a different structure from formal instruction or parental guidance. Our description of friendship-driven learning describes a familiar genre of peer-based learning, in which online networks are supporting those sometimes painful but important lessons in growing up, giving youth an environment to explore romance, friendship, and status just as their predecessors did. Just like friendship-driven networks, interest-driven networks are sites of peer-based learning, but they represent a different genre of participation, in which specialized interests are what bring a social group together. The peers whom youth are learning from in interest-driven practices are not defined by their given institution of school but rather through more intentional and chosen affiliations. In these groups, peers are defined differently than in more local networks, as is the context for how peer-based reputation works. They also receive recognition for different forms of skill and learning.

NEW MEDIA LITERACY

Our work examines the current practices of youth and asks what kinds of literacies and social competencies they are defining with this set of new media technologies. We have attempted to momentarily suspend our own value judgments about youth engagement with new media in an effort to better understand and appreciate what youth themselves see as important forms of culture, learning, and literacy. To inform current debates over the definition of new media literacy, we describe the forms of competencies, skills, and literacy practices that youth are developing through media production and online communication in order to inform these broader debates. Our work is in line with that of other scholars who explore literacies in relation to ideology, power, and social practice in other settings where youth are pushing back against dominant definitions of literacy that structure their everyday life worlds. (14)

In the following sections, we identify certain literacy practices that youth have been central participants in defining: deliberately casual forms of online speech, nuanced social norms for how to engage in social network activities, and new genres of media representation such as machinima, mashups, remix, video blogs, web comics, and fansubs. Often these cultural forms are tied to certain linguistic styles identified with particular youth culture and subcultures. (15) The goal of our work is to situate these literacy practices within specific and diverse conditions of youth culture and identity as well as within an intergenerational struggle over literacy norms.

GENRES OF PARTICIPATION WITH NEW MEDIA

Our goal has been to arrive at a description of everyday youth new media practice that sheds light on related social practices and learning dynamics. Hanging out, messing around, and geeking out are three genres of participation that describe different forms of commitment to media engagement, and they correspond to different social and learning dynamics. In this section, we draw from the lengthier description in our book *Hanging Out*, *Messing Around, and Geeking Out* to highlight the key features of these genres of participation, supported with illustrative examples. (16) The examples highlighted here represent only a portion of the more substantial ethnographic support for the findings in our book, which are organized according to key domains of youth practice: friendship, intimacy, family, gaming, creative production, and work. Here we draw from this material

in order to highlight the three genres of participation and focus specifically on the learning dynamics that we documented.

HANGING OUT

For many American teenagers, coming of age is marked by a general shift from given childhood social relationships, such as families and local communities, to peer- and friendship-centered social groups. Although the nuances of these relationships vary in relation to ethnicity, class, and family dynamics, kids and teenagers throughout all of our studies invested a great deal of time and energy in creating and finding opportunities to "hang out."(17)

Unlike with other genres of participation (e.g., messing around and geeking out), parents and educators tend not to see the practices involved in hanging out as supporting learning. Many parents, teachers, and other adults we interviewed described young people's hanging out with their friends using new media as "a waste of time," (18) and teenagers reported considerable restrictions and regulations on these activities at school, home, and in afterschool centers. Moreover, limited availability of unrestricted computer and Internet access, competing responsibilities such as household chores, extracurricular activities (e.g., sports and music), and lack of mobility (e.g., transportation) frequently reflect the lack of priority adults place on hanging out.

In response to these regulations, most teenagers developed "work-arounds," or ways to subvert institutional, social, and technical barriers to hanging out. These work-arounds and back channels are ways in which kids hang out together, even in settings that are not officially sanctioned for hanging out, such as the classroom, where talking socially to peers is explicitly frowned upon. Young people also use work-arounds and back channels as a strategy at home when they are separated from their friends and peers. Because these work-arounds and back channels take place in schools, homes, vehicles, and other contexts of young people's everyday lives, teens become adept at maintaining a continuous presence, or co-presence, in multiple contexts.

Once teens find a way to be together—online, offline, or both—they integrate new media within the informal hanging-out practices that have characterized their social worlds ever since the postwar emergence of teens as a distinctive youth culture, a culture that continues to be tightly integrated with commercial

popular cultural products targeted to teens. While the content, form, and delivery of popular culture (e.g., music, fashion, film, and television) continue to change, the core practices of how youth engage with media while hanging out with peers remain much the same. (19) This ready availability of multiple forms of media, in diverse contexts of everyday life, means that media content is increasingly central to everyday communication and identity construction. Mizuko Ito uses the term "hypersocial" to define the process through which young people use specific media as tokens of identity, taste, and style to negotiate their sense of self in relation to their peers. (20)

While hanging out with their friends, youth develop and discuss their taste in music, their knowledge of television and movies, and their expertise in gaming. They also engage in a variety of new media practices, such as looking around online or playing games, when they are together with friends. For example, GeoGem, a 12-year-old Asian American girl living in Silicon Valley, describes her time after school:

And then when I come home, I invited a friend over today and we decided to go through my clothes. My dad saw the huge mess in my room. I had to clean that up, but then we went on the computer. We went on Millsberry [Farms]. And she has her own account too. So she played on her account and I played on mine and then we got bored with that 'cause we were trying to play that game where we had to fill in the letters and make words out of the word. That was so hard. And we kept on trying to do it and we'd only get to level two and there's so many levels so we gave up. And we went in the garage and we played some GameCube. And that was it and then her mom came and picked her up (Heather Horst, Silicon Valley Families). (21)

In addition to gaming, which is pervasive in youth culture, technologies for storing, sharing, and listening to music and watching, making, and uploading videos are now ubiquitous among youth. Teens frequently displayed their musical tastes and preferences on MySpace profiles and in other online venues by posting information and images related to favorite artists, clips and links to songs and videos, and song lyrics. Young people watch episodes of shows and short videos on YouTube when they are sitting around with their friends at home, at their friends' houses, in dorms, and even at afterschool centers. The ability to download videos and browse sites such as YouTube means that youth can view media at times and in locations that are convenient and social, providing they have access to high-speed Internet. These practices have become part and parcel of sociability in youth culture and, in turn, central to identity formation among youth.

Through participation in social network sites such as MySpace, Facebook, and Bebo (among others) as well as instant and text messaging, young people are constructing new social norms and forms of media literacy in networked public culture that reflect the enhanced role of media in their lives. The networked and public nature of these practices makes the "lessons" about social life (both the failures and successes) more consequential and persistent.

ALWAYS-ON COMMUNICATION

Young people use new media to build friendships and romantic relationships as well as to hang out with each other as much and as often as possible. This sense of being always on and engaged with one's peers involves a variety of practices, varying from browsing through extended peer networks through MySpace and Facebook profiles to more intense, ongoing exchanges among close friends and romantic partners. (22) Youth use MySpace, Facebook, and IM to post status updates—how they are faring in their relationships, their social lives, and other everyday activities—that can be viewed by the broader networked public of their peers. In turn, they can browse other people's updates to get a sense of the status of others without having to engage in direct communication. This kind of contact may also involve exchanging relatively lightweight (in terms of content) text messages that share general moods, thoughts, or whereabouts. This keeps friends up-to-date with the happenings in different people's lives. Social network site profiles are also key venues for signaling the intensity of a given relationship through both textual and visual representations. Most of the direct personal communication that teens engage in through private messages, IM, and mobile phone communication involves exchange with close friends and romantic partners, rather than the broader peer group with whom they have more passive access. Teens usually have a "full-time intimate community" with whom they communicate in an always-on mode via mobile phones and IM.(23)

Derrick, a 16-year-old Dominican American living in Brooklyn, New York, explains to Christo Sims the ways he moves between using new media and hanging out (Rural and Urban Youth):

My homeboy usually be on his Sidekick, like somebody usually be on a Sidekick or somebody has a PSP or something like always are texting or something on AIM. A lot of people that I be with usually on AIM on their cell phones on their Nextels, on their Boost, on AIM or usually on their phone like he kept getting called, always getting called.



Teens socializing online and offline ("MySpacing" Photo courtesy of Luke Brassard, http://www.flickr.com/photos/brassard/138829152)

For Derrick and other teens like him, new media are integrated within their everyday hanging out practices. dragon, a white 10-year-old who was part of Heather Horst and Laura Robinson's study of Neopets, also illustrates that hanging out together in a game is important when friends are spread across time and space. At the time of his interview with Horst, dragon had recently moved from the East Coast to California. While he was in the process of making friends at his new school, dragon regularly went online after school to play Runescape on the same server as his friends back East, talking with them via the game's written chat facility. In addition to playing and typing messages together, dragon and his friends also phoned each other using three-way calling, which dragon placed on speakerphone. The sounds of 10-year-old boys arguing and yelling about who killed whom, why one person was slow, and other aspects of the game filled the entire house, as if there were a house full of boys. New media such as social network sites, IM programs, mobile phones, and gaming sites work as mediums for young people to extend, enhance, and hang out with people they already know.

Across the projects, we also saw evidence of more intense relationships, what Mizuko Ito and Daisuke Okabe call "tele-cocooning in the full-time intimate community," or the practice of maintaining frequent and sometimes constant (if passive) contact with close friends or romantic partners. (24) For example, C.J.

Pascoe (Living Digital) has described the constant communication between Alice and Jesse, two 17-year-olds who have been dating for more than a year. Each day, the couple wakes up together by logging onto MSN to talk between taking their showers and doing their hair. They then switch to conversing over their mobile phones as they travel to school, exchanging text messages throughout the school day. After school they tend to get together to do their homework, during which they talk and play a video game. When not together, they continue to talk on the phone and typically end the night on the phone or sending a text message to say good night and "I love you." (25) As becomes evident in the case of couples and close friends such as Alice and Jesse, many contemporary teens maintain multiple and constant lines of communication with their intimates over mobile phones, IM services, and social network sites, sharing a virtual space that is accessible with specific friends or romantic partners. Due to the affordances of media such as social network sites, many teens also move beyond small-scale intimate friend groups to build "always-on" networked publics inhabited by their peers.

FLIRTING AND DATING

Teens interested in romantic relationships also use new media to initiate the first stages of a relationship, what many teens refer to as "talking to" someone they have met and know through school or other settings. In this stage of the relationship, young people "talk" regularly over IM and search sites such as MySpace and Facebook to verify and find out more information about the individuals, their friends, and their likes and dislikes. The asynchronous nature of these technologies allows teens to carefully compose messages that appear to be casual, a "controlled casualness." John, a white 19-year-old college freshman in Chicago, for instance, likes to flirt over IM because it is "easy to get a message across without having to phrase it perfectly" and "because I can think about things more. You can deliberate and answer however you want" (C.J. Pascoe, Living Digital).

Many teens say they often send texts or leave messages on social networking sites so that they can think about what they are going to say and play off their flirtatiousness if their object of affection does not seem to reciprocate their feelings. For example, youth use casual genres of online language to create studied ambiguity. From the outside, sometimes these comments appear so casual that they might not be read as flirting, such as the following early "wall posts" by two Filipino teens, Missy and Dustin, who eventually dated quite seriously. After being introduced by mutual friends and communicating through IM, Missy, a Northern

California 16-year-old, wrote on Dustin's MySpace wall: "hey.. hm wut to say? iono lol/well i left you a comment... u sud feel SPECIAL haha =)."(26) Dustin, a Northern California 17-year-old, responded a day later by writing on Missy's wall: "hello there.. umm i dont know what to say but at least i wrote something... you are so G!!!"(27) (C.J. Pascoe, Living Digital). Both of these comments can be construed as friendly or flirtatious, thus protecting both of the participants should one of the parties not be romantically drawn to the other. These particular comments took place in public venues on the participants' "walls" where others could read them, providing another layer of casualness and protection.

If a potential couple later becomes more serious, these same media are used to both announce a couple's relationship status and to further intensify and extend the relationship. Social network sites play an increasing role as couples become solidified and become what some call "Facebook official." At this point in a relationship, teens might indicate relationship status by ordering their Facebook or MySpace Friends (28) in a particular hierarchy, changing the formal statement of relationship status, giving gifts, and displaying pictures. Youth can also signal the varying intensity of intimate relationships through new media practices such as sharing passwords, adding Friends, posting bulletins, or changing headlines.

The public nature and digital representations of these relationships require a fair degree of maintenance and, if the status of a relationship changes or ends, may also involve a sort of digital housecleaning that is new to the world of teen romance, but which has historical corollaries in ridding a bedroom or wallet of an ex-intimate's pictures. (29) Given the persistence of new media—old profiles can always be saved, downloaded, copied, and circulated—the severing of a romantic relationship may also involve leaving, or changing, the social network sites in the interest of privacy.

For contemporary American teens, new media provide a new venue for their intimacy practices, a venue that renders intimacy simultaneously more public and more private. Young people can now meet people, flirt, date, and break up outside of the earshot and eyesight of their parents and other adults while also doing these things in front of all of their online friends. The availability of networked public culture appears to be particularly important for marginalized youth, such as gay, lesbian, bisexual, or transgendered (GLBT) teens, as well as for teens who are otherwise marked as different and cannot easily find similar individuals in their local schools and communities. For such youth, web sites and other new media may emerge as a place to meet different people. As C.J. Pascoe's work on the

Living Digital Project reveals, for many gay teens the Internet can become a place to explore their identities beyond the heterosexual normativity of their everyday lives. As a result, dating web sites and modes of communication among GLBT teens provide marginalized young people with greater opportunities to develop romantic relationships, with the same or similar level of autonomy experienced by their heterosexual peers. Moreover, participation in these online sites can represent an important source of social support and friendship.

TRANSFORMATIONS IN THE MEANING OF "FRIENDS" AND FRIENDSHIP

In addition to changes in how romantic relationships develop, the integration of Friends into the infrastructure of social network sites has transformed the meaning of "friend" and "friendship". As with the construction of deliberately casual online speech, development of social norms for how to display and negotiate online Friends involves new kinds of social and media literacy. These negotiations can be both enabling and awkward. For example, as Bob, a 19-year-old participant in Christo Sims's (Rural and Urban Youth) study, explains, becoming Friends on Facebook: sets up your relationship for the next time you meet them to have them be a bigger part of your life... Suddenly they go from somebody you've met once to somebody you met once but also connected with in some weird Facebook way. And now that you've connected, you have to acknowledge each other more in person sometimes.

As Bob suggests, the corresponding ritual of Friending lays the groundwork for building a friendship. The practice of Friending not only acknowledges a connection, but does so in a public manner. Young people's decisions surrounding whom they accept and consider a Friend also determines an individual's direct access to the content on their Friends' profile pages. This sense of publicness is further heightened through applications, such as MySpace's "Top Friends," which encourage young people to identify and rank their closest friends. As in declaring someone a best friend, the announcement of a preferred relationship also marginalizes others omitted from the Top Friends lists and, in many instances, leads to conflict between friends. Although these "dramas", as teens phrase it, have been prevalent among teens in offline public spaces such as the school lunchroom or the mall, social network sites illuminate and intensify these tensions.

Although youth constantly negotiate and renegotiate the underlying social practices and norms for displaying friendship online, a consensus is emerging

about socially appropriate behavior that largely mirrors what is socially appropriate in offline contexts. (30) As at school, the process of adding and deleting Friends is a core element of participation on social network sites, one that is reinforced through passwords, nicknames, and other tools that facilitate and reinforce the segmentation of their friend and peer worlds. Young people's decisions surrounding whom they accept and thus consider a Friend determine an individual's direct access to the content on their profile pages as well as the ways in which their decisions may affect others. These processes make social status and friendship more explicit and public, providing a broader set of contexts for observing these informal forms of social evaluation and peer-based learning. In other words, it makes peer negotiations visible in new ways, and it provides opportunities to observe and learn about social norms from their peers.

Finally, and despite the perception that media are enabling teens to reach out to strangers online, the vast majority of teens use new media to reach out to their friends; they overwhelmingly define their friends as peers they met in school, summer camps, sports activities, and places of worship. Even when young people are online and meet strangers, they define social network sites, online journals, and other online spaces as friend and peer spaces. Teens consider adult participation in these spaces as awkward and "creepy." Furthermore, while strangers represent one category of people with whom communication on these sites feels "creepy," parents' participation is often perceived as controlling and disrespectful. As a 14-year-old female named Leigh in Cedar Rapids, Iowa (danah boyd, Teen Sociality in Networked Publics), complains, "My mom found my Xanga and she would check it every single day. I'm like, 'Uh.' I didn't like that 'cause it's invasion of privacy; I don't like people invading my privacy, so." As many teenagers such as Leigh acknowledge, most of these parental acts are motivated by the desire to protect their kids' well-being. However, much like parents who enter their kids' bedrooms without knocking or listen in on their conversations, kids view these acts as a violation of trust. They also see these online invasions as "clueless," ill informed, and lacking in basic social propriety.

MEDIA AND MEDIATION BETWEEN GENERATIONS

Although young people tend to avoid their parents and other adults while using social network sites and IM programs, much of their new media engagement occurs in the context of home and family life. Not surprisingly, parents, siblings, and other family members use media together while they are hanging out at

home. Studies by the Entertainment Software Association find that 35 percent of American parents say they play computer and video games.(31) Among "gamer parents," 80 percent report that they play video games with their children, and two-thirds (66 percent) say that playing games has brought their families closer together. (32) In our studies of gaming, we found that video games are part of the common pool, or repertoire, of games and activities that kids and adults can do while spending time together socially.(33) Dan Perkel and Sarita Yardi discuss a 10-year-old in the San Francisco Bay Area named Miguel who talked with them about playing Playstation with his dad and cousins (Digital Photo-Elicitation with Kids). Miguel described the time together as follows: Well, my dad, we used to play like every night... every Friday night, Saturday night, Sunday night, whatever... and he would invite my cousins to come over and stuff. We'd borrow games from my uncles... They taught me how to play. Like, I used to... you know how when you play car games the car moves to the side and stuff? I would go like this with the control [moves arms wildly from side to side simulating holding a game controller as if he were racing]. So... they taught me how to keep still and look.

Although boys most closely identified with games, many of the girls we interviewed said they played games such as Mario Kart, Dance Dance Revolution, and other popular games with their brothers when they were hanging out at home on the weekends or evenings. Other families liked to talk while family members played different games, creating an atmosphere of sociality and communion around new media. (34)

Although gaming and television watching (using Tivo and other DVR devices) were the most pervasive shared family activities, one of the most interesting developments involved families who created digital projects together. In these instances, kids take advantage of the media available at home and get help from their parents with some of the more technical aspects of the devices. Among middle-class families the tools were often digital cameras, video cameras, and other editing software, and parents (typically fathers) often mobilized around their kids by trying to learn about and buy new things. In the case of the Miller family in Silicon Valley (Heather Horst, Silicon Valley Families), the kids used a video camera at a family reunion and took turns helping to edit and sort through the best footage. In such families, parents use new media in their efforts to stay involved with, keep abreast of, and even participate in their kids' interests. This level of involvement was also evident in families with less access to the latest gadgets and software and with less confidence and knowledge of new media.

We also found that kids in many families play an important role as the technology "expert" or "broker," interpreting web sites and other forms of information for their parents. Twelve-year-old Michelle in Lisa Tripp and Becky Herr-Stephenson's study (Los Angeles Middle Schools) says that she taught her mother, a single parent from El Salvador, how to use the computer, send emails, and do other activities. Michelle says that "I taught her how to like... sometimes, she wants to upload pictures from my camera, and I show her, but she doesn't remember, so I have to do it myself. Mostly, I have to do the picture parts. I like doing the pictures." (35) In contrast to the generational tensions that are so often emphasized in the popular media, families do come together around new media to share media and knowledge, play together, and stay involved in each other's lives.

MESSING AROUND

Unlike hanging out, in which the desire is to maintain social connections to friends, messing around represents the beginning of a more intense, mediacentric form of engagement. When messing around, young people begin to take an interest in and focus on the workings and content of the technology and media themselves, tinkering, exploring, and extending their understanding. Some activities that we identify as messing around include looking around, searching for information online, and experimentation and play with gaming and digital media production. Messing around is often a transitional stage between hanging out and more interest-driven participation. It involves experimentation and exploration with relatively low investment, where there are few consequences to trial, error, and even failure.

Messing around with new media requires an interest-driven orientation and is supported by access to online resources, media production resources, and a social context for sharing of media knowledge and interests. Online and digital media provide unique supports for tinkering and self-exploration. When something piques their interest, given access to the Internet, young people can easily look around online. As Eagleton and Dobler, Hargittai, Robinson, and others have noted, the growing availability of information in online spaces has started to transform young people's attitudes toward the availability and accessibility of information. (36) Among our study participants who completed the Digital Kids Questionnaire, 87 percent (284 youth) reported using a search engine at least once per week, varying from Google, Yahoo!, and Wikipedia to other more specialized sites for information. (37)

The youth we spoke to who were deeply invested in specific media practices often described a period in which they discovered their own pathways to relevant information by looking around with the aid of search engines and other forms of online exploration. While the lack of local resources can make some kids feel isolated or in the dark, the increasing availability of search engines and networked publics where they can "lurk" and observe (such as in web forums, chat channels, etc.) effectively lowers the barriers to entry and thus makes it easier to look around and, in some cases, dabble or mess around anonymously. In addition to online information and resources, digital production tools also enable kids to mess around by customizing and tinkering with these digital tools for casual media creation.

Messing around with new media generally involves social exchanges centered on new media and technology. This social context can be the family, friendship-driven networks, interest-driven networks, or educational programs such as computer clubs and youth media centers.



Michelle looking around online (Photo by Lisa Tripp, 2006)

The most important factors are the availability of technical resources and a context that allows for a degree of freedom and autonomy for self-directed learning and

exploration. In contrast to learning that is oriented toward a set, predefined goal, messing around is largely self-directed, and the outcomes of the activity emerge through exploration.

GETTING STARTED

Youth invested in specific media practices often describe a period in which they first began looking around online for some area of interest and eventually discovered a broader palette of resources to experiment with, or an interest-driven online group. For example, Derrick, the 16-year-old teenager who lives in Brooklyn, New York, mentioned previously, also looked to online resources for initial information about how to take apart a computer. He explains to Christo Sims (Rural and Urban Youth) how he first looked around online and did a Google image search for "video card" so he could see what it looked like. After looking at photos of where a video card is situated in a computer, he was able to install his own. He did the same with his sound card. He explains, "I learned a lot on my own that's for computers... Just from searching up on Google and stuff."

In addition to searching online for information of interest, messing around can be initiated by a range of different technology-related activities. Many young people described how they first got started messing around with digital media by capturing, modifying, and sharing personal photos and videos. Interviews with youth who are active online are often peppered with references to digital photos they have taken and shared with family and friends. These photos and videos, taken with friends and shared on sites such as PhotoBucket and MySpace, become an initial entry into digital media production. Similarly, the friendship-driven practices of setting up a MySpace profile provide an initial introduction to web page construction. Sociable hanging out while gaming is also a pathway into messing around with technology as youth get more invested in learning the inner workings and rules underlying a particular game.

These efforts can lead to more sophisticated and engaged forms of media production. For example, Alison, an 18-year-old video creator from Florida of white and Asian descent in Sonja Baumer's study, notes that her personal media creations help her to become reflexive about herself and her own work:

I like watching my own videos after I've made them. I am the kind of person that likes to look back on memories and these videos are memories for me. They show me

the fun times I've had with my friends or the certain emotions I was feeling at that time. Watching my videos makes me feel happy because I like looking back on the past (Sonja Baumer, Self-Production through YouTube).

Although the practices of everyday photo and video making are familiar, the ties to digital distribution and more sophisticated forms of editing and modification open up a new set of possibilities for youth creative production. In other words, digital media help scaffold a transition from hanging out genres to messing around with more creative dimensions of photo and video creation (and vice versa).

Whether it is self-directed searching, taking personal photos and videos, or creating a MySpace profile, what is characteristic of these initial forays into messing around is that youth are pursuing topics of personal interest. Young people who were active digital media creators or deeply involved in other interest-driven groups generally described a moment when they took a personal interest in a topic and pursued it in a self-directed way. (38) This may have been sparked by a school project or a parent, but they eventually took it further on their own initiative. For example, Snafu-Dave, a successful web comics writer whom Mizuko Ito (Anime Fans) interviewed said, "Basically, I had to self-teach myself, even though I was going to school for digital media... school's more valuable for me to have . . . a time frame where I could learn on my own." Similarly, Allison, a 15-year-old white girl from Georgia, describes how she learned to use video tools:

Trial and error, I guess. It's like any—whenever I learn anything with computers, I've taught myself how to use computers, and I consider myself very knowledgeable about them, but I just—I learn everything on my own, just figure it out, and the same with cameras. It's like a cell phone. I just figure out how to do it, and it's pretty quick and easy" (Patricia Lange, YouTube and Video Bloggers).

The media creators we interviewed often reflected this orientation by describing how they were largely self-taught, even though they might also mention the help they received from online and offline resources, peers, parents, and even teachers.

TINKERING AND EXPLORATION

Messing around is an open-ended activity that involves tinkering and exploration that is only loosely goal directed. Often this can transition to more "serious"

engagement in which a young person is trying to perfect a creative work or become a knowledge expert in the genre of geeking out. It is important to recognize, however, that this more exploratory mode of messing around is an important space of experimental forms of learning that open up new possibilities and engagements.

Tinkering often begins with modifying and appropriating accessible forms of media production that are widely distributed in youth culture. For example, Dan Perkel describes the importance of copying and pasting code in the process of MySpace profile creation, a practice in which youth appropriate media and code from other sites to create their individual profiles. This form of creative production, which Perkel calls "copy and paste literacy," may appear purely derivative, but young people see their profiles as expressions of their personal identities. (39) This mode of taking up and modifying found materials has some similarities to the kinds of reframing and remixing that fan artists and fan fiction writers do. For some youth, one of the main draws of MySpace is not only its social dimensions but that it also provides an opportunity to negotiate and display a visual identity because of the customization involved. Ann, an 18-year-old white girl in Heather Horst's Silicon Valley Families study, saw her MySpace profile as a way to portray her personal aesthetic. She designed a MySpace page in her signature colors of pink and brown, the same colors as her bedroom.

Although young people did take time to mess around and modify their profiles, what they ended up posting was usually not the result of planning and careful consideration, but whatever they happened to see while making or revisiting their profiles. For instance, danah boyd (Teen Sociality in Networked Publics) spoke with Shean, a 17-year-old black male from Los Angeles, who said, "I'm not a big fan of changing my background and all that. I would change mine probably every four months or three months. As long as I keep in touch with my friends or whatever, I don't really care about how it looks as long as it's, like, there." This approach toward tinkering and messing around is typical of the process through which profiles are made and modified. Youth who considered online profiles primarily as personal social spaces typically took this casual approach to their profiles, and they tended not to update them with much frequency, or only when they grew tired of one. Nick, a 16-year-old male from Los Angeles who is of black and Native American descent, told danah boyd (Teen Sociality in Networked Publics):

That's the main time I have fun when I'm just putting new pictures and new backgrounds on my page. I do that once every couple of months because sometimes it

gets real boring. I'll be on one page. I'll log on to my profile and see the same picture every time. I'm, man, I'm gonna do something new.

Similarly, youth frequently start engaging with a new web site or blog, or start writing a piece of fan fiction, but eventually discard these experiments. The Internet is full of this evidence of youth experimentation in online expression.

This casual approach to messing around with media is also characteristic of a large proportion of video game play that we observed. Because interactive media allows for a great deal of player-level agency and customization, messing around is a regular part of game play. In the early years of gaming, the ability to do player-level modifications was limited for most games, unless one were a game hacker and coder, or it was a simulation game that was specifically designed for user authoring. Today, players take for granted the ability to modify and customize the parameters of a game. Not only were youth in our study constantly experimenting with the given parameters and settings of a game, they also relied on game modifications and cheats to alter their game play. In Lisa Tripp and Becky Herr-Stephenson's study of Los Angeles Middle Schools, Herr-Stephenson had the opportunity to see how cheat codes operated in the everyday game play of Andres, a 12-year-old Mexican American. In her field notes she describes how Andres pulled out of his pocket a sheet of paper that had game cheat codes written on it. After he used a series of codes to "get the cops off his back," make his character invisible, and get free money, she asked him where he got the codes. He explained that he got them from some older kids. Herr-Stephenson writes: "I don't think he's ever thought about it as cheating (despite calling them "cheat codes") and instead just thinks that such codes are a normal part of game play." Cheat codes are an example of casual messing around with games and experimenting with their rules and boundaries.

Another example of casual messing around with game parameters is players who enjoyed experimenting with the authoring tools embedded in games. Games such as Pokémon or Neopets are designed specifically to allow user authoring and customization of the player experience in the form of personal collections of customized pets. (40) This kind of customization activity is an entry point into messing around with game content and parameters. In Laura Robinson and Heather Horst's study of Neopets, one of Horst's interviewees describes the pleasures of designing and arranging homes in Neopets and Millsberry. She did not want to have to bother with playing games to accrue

Neopoints to make her Neohome and instead preferred the Millsberry site, where it was easier to get money to build and customize a home:

Yeah, you get points easier and get money to buy the house easily [in the Millsbury site]. And I like to do interior design. And so I like to arrange my house and since they have, like, all of this natural stuff, you can make a garden. They have water and you can add water in your house.

Similarly, Emily, a 21-year-old from San Francisco, tells Matteo Bittanti (Game Play): "I played The Sims and built several Wii Miis. I like to personalize things, from my playlists to my games. The only problem is that after I build my characters I have no interest in playing them, and so I walk away from the game."

Whether it is creating a MySpace profile, a blog, or an online avatar, messing around involves tinkering with and exploration of new spaces of possibilities. Most of these activities are abandoned or only occasionally revisited in a lightweight way. Although some view these activities as dead-ends or a waste of time, we see them as a necessary part of self-directed exploration in order to experiment with something that might eventually become a longer-term, abiding interest in creative production. One side effect of this exploration is that youth also learn computer skills they might not have developed otherwise.

SOCIAL CONTEXTS FOR MESSING AROUND

Messing around with digital media is driven by personal interest, but it is supported by a broader social and technical ecology, where the creation and sharing of media is a friendship-driven set of practices. (41) Online sites for storing and circulating personal media are facilitating a growing set of options for sharing. Youth no longer must carry around photo albums to share photos with their friends and families; a MySpace profile or a camera phone will do the trick. Consider the following observation by Dan Perkel (Judd Antin, Christo Sims, and Dan Perkel, The Social Dynamics of Media Production) in an afterschool computer center:

Many of the kids had started to arrive early every day and would use the computers and hang out with each other. While some kids were playing games or doing other things, Shantel and Tiffany (two apparently African American female teenagers roughly 15 to 16 years old from a low-income district in San Francisco) were sitting

at two computers, separated by a third one between them that no one was using. They were both on MySpace. I heard Shantel talking out loud about looking at pictures of her baby nephew on MySpace. I am fairly sure she was showing these pictures to Tiffany. Then, she pulled out her phone and called her sister and started talking about the pictures.

This scene that Perkel describes is an example of the role that photos archived on sites such as MySpace play in the everyday lives of youth. Shantel can pull up her photos from any Internet-connected computer to share casually with her friends, much as youth do with camera phones. (42) That personal photos about one's life are readily available in social contexts means that visual media become more deeply embedded in the everyday communication of young people. The tinkering with MySpace profiles and the attention paid to digital photography are all part of the expectation of an audience of friends that makes the effort worthwhile. Youth look to each other's profiles, photos, videos, and online writing for examples to emulate and avoid in a peer-driven learning context that supports everyday media creation.

In the case of MySpace and other forms of media production that are widely distributed among youth, youth often seek technical support from their local friendship network. For most of the cases that we documented, at least one other person was almost always directly involved in creating kids' profiles. When asked how they learned to share and create their profiles, the common response was that a sibling, a cousin, or a friend showed them how to do it. In their research at an afterschool program, Judd Antin, Christo Sims, and Dan Perkel (The Social Dynamics of Media Production) watched how teens would call out asking for help and others willingly responded and came to help (literally taking the mouse and pushing the buttons) or guided them through the process. In an interview at a different afterschool site, Carlos, a 17-year-old Latino from the East Bay, told Perkel that he had initially found the whole profile-making process "confusing" and that he had used some free time in a Saturday program at school to ask different people to help him. Then later, when he knew what he was doing, he had shown his cousin how to add backgrounds, explaining to her that "you can just look around here and pick whichever you want and just tell me when you're finished and I'll get it for you."

Gamers, too, find support for their messing-around activities in their local social relationships. Among boys, gaming has become a pervasive social activity and a context where they casually share technical and media-related knowledge. For

example, several active fansubbers whom Mizuko Ito interviewed in her Anime Fans study described how they initially met the members of their group through shared gaming experiences. When we had the opportunity to observe teens, particularly boys, in social settings, gaming was a frequent focus of conversation as well as topic of activity that often veered into technical subjects. In Katynka Z. Martínez's Computer Club Kids study, she notes that most of the boys associated with the club are avid gamers. After the computers in the lab became networked (in a moment they called "The Renaissance"), the boys would show up during lunch and even their 15-minute nutrition breaks to play *Halo* and *Counter-Strike* against one another. The hanging out with gaming was part of their participation in a technically sophisticated friendship group that focused on computer-based interests.

In other words, messing around with media is embedded in social contexts where friends and a broader peer group share a media-related interest and social focus. For most youth, they find this context in their local friendship-driven networks, grounded in popular practices such as MySpace profile creation, digital photography, and gaming. When youth transition to more focused interest-driven practices, they will generally reach beyond their local network of technical and media expertise, but the initial activities that characterize messing around are an important starting point for even these youth.

TRANSITIONS AND TRAJECTORIES

Although most forms of messing around start and end with casual tinkering and exploration that tends not to move beyond the context of everyday peer sociability, we have observed a range of cases in which kids transitioned from messing around to the genre we describe as geeking out. We have also seen cases in which messing around has led to the eventual development of technical expertise in tinkering and fixing, which positions youth as local technology or media experts.

For example, 22-year-old Earendil describes the role that gaming played in his growing up and developing an interest in media technology. Earendil was largely home-schooled, and though his parents had strict limits on gaming until he and his brother were in middle school, Earendil describes how they got their "gaming kicks" at the homes of their friends with game consoles. After his parents loosened restrictions on computer time, his first social experiences online, when he was 15,

were in a multiplayer game based on the novel *Ender's Game* and in online chats with fellow fans of Myst and Riven. When he started community college, he fell in with "a group of local geeks, who, like myself, enjoyed playing games, etc." These experiences with online gamers and gamer friends in college provided a social context for messing around with a diverse range of media and technology, and he branched out to different interests such as game modding and video editing. He plans to eventually pursue a career in media making (Mizuko Ito, Anime Fans).

We also encountered a small number of youth who leveraged messing around with media into messing around with small ventures. (43) Toni, a 25-year-old who emigrated from the Dominican Republic as a teen (Mizuko Ito, Anime Fans), describes how he was dependent on libraries and schools for his computer access through most of high school. This did not prevent him from becoming a technology expert, however, and he set up a small business selling Playboy pictures that he printed from library computers to his classmates. Zelan, a 16-year-old youth whom Christo Sims interviewed (Rural and Urban Youth), first learned to mess around with digital media through video game play while his parents prospected for gold. Sims writes:

After getting immersed in the Game Boy he pursued newer and better consoles. As he did so he also learned how they worked. His parents did not like buying him gaming gear so he became resourceful. When his neighbors gave him their broken PlayStation 2, he took it apart, fixed it, and upgraded from his PlayStation 1 in the process. (44)

Driven by economic necessity, Zelan tinkered and learned how to manipulate technology. Eventually he began to market his skills as a technology fixer and now envisions the day when he will start his own business repairing computers or "just about anything computer-wise." In her study of Computer Club Kids, Katynka Martínez also encountered a young entrepreneur who inherited the spirit of tinkering from his father, who is proficient with computers and also likes to refurbish classic Mustangs with his son. Martínez writes about Mac Man, a 17-year-old boy: (...) when he learned that a group of teachers were going to be throwing away their old computers, he asked if he could take them off their hands. Mac Man fixed the computers and put Windows on them. The computer club was started with these computers.

Mac Man still comes to school with a small bag carrying the tools that he uses to work on computers. Teachers and other adults kept giving him computers that

were broken and he had to figure out what to do with them. He fixed them and realized that he could sell them on eBay. He makes \$100 profit for every computer that he sells.(45)

These are not privileged youth who are growing up in the Silicon Valley households of start-up capitalists. Instead, they are working-class kids who embody the street smarts of how to hustle for money. Raised in a context where economic constraints remain part and parcel of childhood and the experience of growing up,(46) they were able to translate their interest in tinkering and messing around into financial ventures that gave them a taste of what it might be like to pursue their own self-directed careers. While these kinds of youths are a small minority among those we encountered, they demonstrate the ways in which messing around can function as a transitional genre that leads to more sustained engagements with media and technology.

GEEKING DUT

The ability to engage with media and technology in an intense, autonomous, and interest-driven way is a unique feature of today's media environment. Particularly for kids with newer technology and high-speed Internet at home, the Internet can provide access to an immense amount of information related to their particular interests, and it can support various forms of "geeking out"—an intense commitment to or engagement with media or technology, often one particular media property, genre, or type of technology. Geeking out involves learning to navigate esoteric domains of knowledge and practice and participating in communities that traffic in these forms of expertise. It is a mode of learning that is peer-driven, but focused on gaining deep knowledge and expertise in specific areas of interest.

Ongoing access to digital media is a requirement of geeking out. Often, however, such access is just part of what makes participation possible. Family, friends, and other peers in on- and offline spaces are particularly important in facilitating access to the technology, knowledge, and social connections required to geek out. Just as in the case of messing around, geeking out requires the time, space, and resources to experiment and follow interests in a self-directed way. Furthermore, it requires access to specialized communities of expertise. Contrary to popular images of the socially isolated geek, almost all geeking out practices we observed are highly social and engaged, although not necessarily

expressed as friendship-driven social practices. Instead, the social worlds center on specialized knowledge networks and communities that are driven by specific interests and a range of social practices for sharing work and opinions. The online world has made these kinds of specialized hobby and knowledge networks more widely available to youth. Although generally considered marginal to both local, school-based friendship networks and to academic achievement, the activities of geeking out provide important spaces of self-directed learning that is driven by passionate interests.

SPECIALIZED KNOWLEDGE NETWORKS

When young people geek out, they are delving into areas of interest that exceed common knowledge; this generally involves seeking expert knowledge networks outside of given friendship-driven networks. Rather than simply messing around with local friends, geeking out involves developing an identity and pride as an expert and seeking fellow experts in far-flung networks. Geeking out is usually supported by interest-based groups, either local or online, or some hybrid of the two, where fellow geeks will both produce and exchange knowledge on their subjects of interest. Rather than purely "consuming" knowledge produced by authoritative sources, geeked out engagement involves accessing as well as producing knowledge to contribute to the knowledge network.

In her study of anime music video (AMV) (47) creators (Anime Fans), Mizuko Ito interviewed Gepetto, an 18-year-old Brazilian fan. He was first introduced to AMVs through a local friend and started messing around creating AMVs on his own. As his skills developed, however, he sought out the online community of AMV creators on animemusicvideos.org to sharpen his skills. Although he managed to interest a few of his local friends in AMV making, none of them took to it to the extent that he did. He relies heavily on the networked community of editors as sources of knowledge and expertise and as models to aspire to. In his local community, he is now known as a video expert by both his peers and adults. After seeing his AMV work, one of his high-school teachers asked him to teach a video workshop to younger students. He jokes that "even though I know nothing," to his local community "I am the Greater God of video editing." In other words, his engagement with the online interest group helped develop his identity and competence as a video editor well beyond what is typical in his local community.

In the geeked-out gaming world, players and game designers now expect that game play will be supported by an online knowledge network that provides tips, cheats, walk-throughs, mods, and reviews that are generated by both fellow players and commercial publishers. Personal knowledge exchange among local gamer friends, as well as this broader knowledge network, is a vital part of more sophisticated forms of game play that are in the geeking out genre of engagement. Although more casual players mess around by accessing cheats and hints online, more geeked out players will consume, debate, and produce this knowledge for other players. Rachel Cody notes that the players in her study of *Final Fantasy* XI routinely used guides produced both commercially and by fellow players. The guides assisted players in streamlining some parts of the game that otherwise took a great deal of time or resources. Cody observed that a few members of the linkshell in her study kept Microsoft Excel files with detailed notes on all their crafting in order to postulate theories on the most efficient ways of producing goods. As Wurlpin, a 26-year-old male from California, told Rachel Cody, the guides are an essential part of playing the game. He commented, "I couldn't imagine [playing while] not knowing how to do half the things, how to go, who to talk to."

INTEREST-BASED COMMUNITIES AND ORGANIZATIONS

Interest-based geeking-out activities can be supported by a wide range of organizations and online infrastructures. Most interest groups surrounding fandom, gaming, and amateur media production are loosely aggregated through online sites such as YouTube, LiveJournal, or DeviantArt, or more specialized sites such as animemusicvideos.org, fanfiction.net, and gaming sites such as Allakhazam or pojo.com. In addition, core participants in specific interest communities will often take a central role in organizing events and administering sites that cater to their hobbies and interests. Fan sites that cater to specific games, game guilds, and media series are proliferating on the Internet, as are specialized networks within larger sites such as LiveJournal or DeviantArt. Real-life meetings such as conventions, competitions, meet-ups, and gaming parties are also part of these kinds of distributed, player- and fan-driven forms of organization that support the ongoing life and social exchange of interest-driven groups.

As part of Mizuko Ito's case study on Anime Fans, she researched the practices of amateur subtitlers, or "fansubbers," who translate and subtitle anime and release it through Internet distribution. In our book *Hanging Out, Messing Around, and*

Geeking Out, we describe some of the ways in which fansubbers form tight-knit work teams with jobs that include translators, timers, editors, typesetters, encoders, quality checkers, and distributors. (48) Fansub groups often work faster and more effectively than professional localization industries, and their work is viewed by millions of anime fans around the world. They often work on tight deadlines, and the fastest groups will turn around an episode within 24 hours of release in Japan. For this, fansubbers receive no monetary rewards, and they say that they pursue this work for the satisfaction of making anime available to fans overseas and for the pleasure they get in working with a close-knit production team that keeps in touch primarily on online chat channels and web forums. Fansubbing is just one example of the many forms of volunteer labor and organizations that are run by fans. In addition to producing a wide range of creative works, fans also organize anime clubs, conventions, web sites, and competitions as part of their interest-driven activities.

The issue of leadership and team organization was a topic that was central to Rachel Cody's study of *Final Fantasy XI*. Cody spent seven months participant-observing in a high-level "linkshell," or guild. Although many purely social linkshells do populate FFXI, Cody's linkshell was an "endgame" linkshell, meaning that the group aimed to defeat the high-level monsters in the game. The participants organized the linkshell in a hierarchical system, with a leader and officers who had decision-making authority, and new members needed to be approved by the officers. Often the process of joining the linkshell involved a formal application and interview, and members were expected to conform to the standards of the group and perform effectively in battle as a team. The linkshell would organize "camps" where sometimes more than 150 people would wait for a high-level monster to appear and then attack with a well-planned battle strategy. Gaming can function as a site for organizing collective action, which can vary from the more lightweight arrangements of kids getting together to play competitively to the more formal arrangements that we see in a group such as Cody's linkshell.

In all of these cases, players are engaging in a complex social organization that operates under different sets of hierarchies and politics than those that occupy them in the offline world. These online groups provide an opportunity for youth to exercise adult-like agency and leadership that is not otherwise available to them. Although the relationships they foster in these settings are initially motivated by media-related interests, these collaborative arrangements and ongoing social exchange often result in deep and lasting friendships with new networks of likeminded peers.

FEEDBACK AND LEARNING

Interest-based communities that support geeking out have important learning properties that are grounded in peer-based sharing and feedback. The mechanisms for getting input on one's work and performance can vary from ongoing exchange on online chat and forums to more formal forms of rankings, critiques, and competition. Unlike what young people experience in school, where they are graded by a teacher in a position of authority, feedback in interest-driven groups is from peers and audiences who have a personal interest in their work and opinions. Among fellow creators and community members, the context is one of peer-based reciprocity, where participants can gain status and reputation but do not hold evaluative authority over one another.

Not all creative groups we examined have a tight-knit community with established standards. YouTube, for example, functions more as an open aggregator of a wide range of video-production genres and communities, and the standards for participation and commentary differ according to the goals of particular video makers and social groups. Critique and feedback can take many forms, including posted comments on a site that displays works, private message exchanges, offers to collaborate, invitations to join other creators' social groups, and promotion from other members of an interest-oriented group. Study participants did not value simple five-star rating schemes as mechanisms for improving their craft, although they considered them useful in boosting ranking and visibility. Fansubbers generally thought that their audience had little understanding of what constituted a quality fansub and would take seriously only the evaluation of fellow producers. Similarly, AMV creators play down rankings and competition results based on "viewer's choice." The perception among creators is that many videos win if they use popular anime as source material, regardless of the merits of the editing. Fan fiction writers also felt that the general readership, while often providing encouragement, offered little in the way of substantive feedback.

In contrast to these attitudes toward audience feedback, a comment from a respected fellow creator carries a great deal of weight. Creators across different communities often described an inspiring moment when they received positive feedback and suggestions from a fellow creator whom they respected. In Dilan Mahendran's study (Hip-Hop Music Production), Edric, a 19-year-old Puerto Rican rapper, described his nervousness at his first recording session and the moment when he stepped out of the booth. "And everyone was like, 'Man, that was nice. I liked that.' And I was like, 'For real?' I was like. 'I appreciate

that.' And ever since then I've just been stuck to writing, developing my style." Receiving positive feedback from peers who shared his interest in hip-hop was tremendously validating and gave him motivation to continue with his interests. Some communities have specific mechanisms for receiving informed feedback from expert peers. Animemusicvideos.org has extended reviewer forms that can be submitted for videos, and it hosts a variety of competitions in which editors can enter their videos. All major anime conventions also have AMV competitions in which the best videos are selected by audiences as well as by fellow editors. Young people participating in online writing communities can get substantive feedback from fellow writers. In fan fiction, critical feedback is provided by "beta readers," who read "fics" before they are published and give suggestions on style, plot, and grammar. Clarissa (17 years old, white), an aspiring writer and one of the participants in C.J. Pascoe's study "Living Digital," participates in an online role-playing board, Faraway Lands (a pseudonym). Aspiring members must write lengthy character descriptions to apply, and these are evaluated by the site administrators. Since receiving glowing reviews of her application, Clarissa has been a regular participant on the site, and she has developed friendships with many of the writers there. She has been doing a joint role play with another participant from Spain, and she has a friend from Oregon who critiques her work and vice versa. She explains how this feedback from fellow writers feels more authentic to her than the evaluations she receives in school. "It's something I can do in my spare time, be creative and write and not have to be graded," because, "you know how in school you're creative, but you're doing it for a grade so it doesn't really count?"(49)

RECOGNITION AND REPUTATION

In addition to providing opportunities for young people to learn and improve their craft, interest-driven groups also offer a way to gain recognition and reputation as well as an audience for creative work. Although participants do not always value audience feedback as the best mechanism for improving their work, most participants in interest-driven communities are nevertheless motivated by knowing that their work will be viewed by others or by being part of an appreciative community.

For example, zalas, a Chinese American in his early 20s and a participant in Mizuko Ito's study of Anime Fans, is an active participant in the anime fandom. zalas is an officer at his university anime club, a frequent presenter at local anime

conventions, and a well-known participant in online anime forums and IRC (Internet Relay Chat), where he is connected to fellow fans 24/7. He will often scour the Japanese anime and game-related sites to get news that English-speaking fans do not have access to. "It's kinda like a race to see who can post the first tidbit about it." He estimates that he spends about eight hours a day online keeping up with his hobby. "I think pretty much all the time that's not school, eating, or sleeping." He is a well-respected expert in the anime scene because of this commitment to pursuing and sharing knowledge.



An image of a MySpace Music profile (Screen shot by Dilan Mahendran, 2006)

Specialized video communities, such as AMVs or live-action "vidding" (50) will often avoid general-purpose video-sharing sites such as YouTube because they are not targeted to audiences who are well informed about their genres of media.

In fact, on one of the forums dedicated to AMVs, any instance of the term "YouTube" is automatically censored. Even within these specialized groups, however, creators do seek visibility. Most major anime conventions now will include an AMV competition in which the winning works are showcased, in addition to venues for fan artists to display and sell their work. The young hip-hop artists Dilan Mahendran spoke to also participated in musical competitions that gave them visibility, particularly if they went home with awards. Even fansubbers who insist that quality and respect among peers are more important than download numbers will admit that they do track the numbers. As one fansubber in Ito's study of Anime Fans put it, "Deep down inside, every fansubber wants to have their work watched, and a high amount of viewers causes them some kind of joy whether they express it or not." Fansub groups generally make their "trackers," which record the number of downloads, public on their sites.

Young people can use large sites such as MySpace and YouTube as ways of disseminating their work to broader audiences. In Dilan Mahendran's Hip-Hop Music Production study, the more ambitious musicians would use a MySpace Music template as a way to develop profiles that situated them as musicians rather than a standard teen personal profile. The style of these kinds of MySpace pages differs fundamentally from the more common profiles that center on social communication and the display of friendships. Similarly, video makers who seek broader audiences gravitate toward YouTube as a site to gain visibility. YouTube creators monitor their play counts and comments for audience feedback. Frank, a white 15-year-old male from Ohio who posts on YouTube, stated, "But then even when you get one good comment, that makes up for 50 mean comments, 'cause it's just the fact of knowing that someone else out there liked your videos and stuff, and it doesn't really matter about everyone else that's criticized you" (Patricia Lange, YouTube and Video Bloggers).

In some cases, young people parlayed their interests into income and even a sustained career. Max, a 14-year-old boy in Patricia Lange's "YouTube and Video Bloggers" study, turned into a YouTube sensation when he recorded his mother, unaware that people around her could hear her and had started to laugh, singing along to the Boyz II Men song playing in her headphones. Max posted the video on YouTube and it attracted the attention of the ABC television show Good Morning America, on which the video eventually aired. In the two years since it was posted, the video received more than 2 million views and more than 5,000 text comments, many of them expressing support. Max's work also attracted attention from another media company, which approached him about the

possibility of buying another of his videos for an online advertisement. We also found cases of hip-hop artists who market their music, fan artists who sell their work at conventions, and youth who freelance as web designers. Among the case studies of anime and Harry Potter fans, a handful of youth successfully capitalized on their creative talents. Becky Herr-Stephenson's study of Harry Potter fans (Harry Potter Fandom) focuses in part on podcasters who comment on the franchise. Although most podcasters are clearly hobbyists, a small number have become celebrities in the fandom who go on tours, perform "Wizard Rock," and in some cases, have gained financial rewards.

By linking niche audiences, (51) online media-sharing sites make amateur- and youth-created content visible to other creators and audiences. Aspiring creators do not need to look exclusively to professional and commercial works for models of how to pursue their craft. Young people can begin by modeling more accessible and amateur forms of creative production. Even if they end there, with practices that never turn toward professionalism, youth can still gain status, validation, and reputation among specific creative communities and smaller audiences. The ability to specialize, tailor one's message and voice, and communicate with small publics is facilitated by the growing availability of diverse and niche networked publics. Gaining reputation as a rapper within the exclusive community of Bay Area Hyphy-genre hip-hop,(52) being recognized as a great character writer on a particular role-playing board, or being known as the best comedic AMV editor for a particular anime series are all examples of fame and reputation within specialized communities of interest. These aspirational trajectories do not necessarily resolve into a vision of "making it big" or becoming famous in established commercial media production. Yet these aspirations still enable young people to gain validation, recognition, and audience for their creative works and to hone their craft within groups of like-minded and expert peers. Gaining recognition in these niche and amateur groups means validation of creative work in the here and now without having to wait for rewards in a far-flung and uncertain future in creative production.

CONCLUSIONS AND IMPLICATIONS

The goal of our project has been to document the everyday lives of youth as they engage with new media and to put forth a paradigm for understanding learning and participation in contemporary networked publics. We have worked to understand youth culture, and to bring this youth-centered perspective into the

debates about digital media and learning. Although youth are often considered early adopters and expert users of new technology, their views on the significance of new media practice are not always taken seriously. Adults who stand on the other side of a generation gap can see these new practices as mystifying and, at times, threatening to existing social norms and educational standards. Although we do not believe that youth hold all the answers, we feel that it is crucial to listen carefully to them and learn from their experiences of growing up in a changing media ecology. In this concluding section, we translate some of what we learned from youth to adult concerns, summarizing the findings of our research in relation to implications for learning, education, and public participation.

PARTICIPATION IN THE DIGITAL AGE MEANS MORE THAN BEING ABLE TO ACCESS "SERIOUS" ONLINE INFORMATION AND CULTURE; IT ALSO MEANS THE ABILITY TO PARTICIPATE IN SOCIAL AND RECREATIONAL ACTIVITIES ONLINE

The notion of networked publics offers a framework for examining diverse forms of participation with new media in a way that is keyed to the broader social relations that structure this participation. In describing new media engagements, we have looked at the ecology of social, technical, and cultural conditions necessary for certain forms of participation. We found that ongoing, lightweight access to digital production tools and the Internet is a precondition for participation in most of the networked publics that are the focus of attention for U.S. teens. Contemporary social media are becoming one of the primary "institutions" of peer culture for U.S. teens, occupying the role that was previously dominated by the informal hanging out spaces of the school, mall, home, or street. Further, much of this engagement is centered on access to social and commercial entertainment content that is generally frowned upon in formal educational settings.

Although public institutions do not necessarily need to play a role in instructing or monitoring kids' use of social media, they can be important sites for enabling participation in these activities and enhancing their scope. Social and recreational online activities are jumping-off points for experimenting with digital media creation and self-expression. Rather than seeing socializing and play as hostile to learning, educational programs could be positioned to step in and support moments when youth are motivated to move from friendship-driven to more interest-driven forms of new media use. This requires a cultural shift and a certain openness to experimentation and social exploration that is generally not

characteristic of educational institutions, though we did see many instances of media production programs and parents supporting these activities.

IN ADDITION TO ECONOMIC BARRIERS, YOUTH ENCOUNTER INSTITUTIONAL, SOCIAL, AND CULTURAL CONSTRAINTS TO ONLINE PARTICIPATION

Fluent and expert use of new media requires more than simple, task-specific access to technology. Youth who engaged in a dynamic range of learning opportunities with new media generally had robust technology access, ample time and autonomy to experiment and explore, and a network of peers who supported their new media interests. Sporadic, monitored access at schools and libraries may provide sufficient access for basic information seeking, but is insufficient for the immersed kind of social engagements with networked publics that are becoming a baseline for participation on both the interestdriven and the friendship-driven sides. Adult lack of appreciation for youth participation in popular culture has created an additional barrier to access for kids who do not have Internet access at home. We are concerned about the lack of a public agenda that recognizes the value of youth participation in social communication and popular culture. When kids lack access to the Internet at home, and public libraries and schools block sites that are central to their social communication, youth are doubly handicapped in their efforts to participate in common culture and sociability.

Although we have not systematically analyzed the relation between gender and socioeconomic status and participation in interest-driven groups, our work indicates a predictable participation gap. Particularly in the case of highly technical interest groups and complex forms of gaming, the genre itself is often defined as a masculine domain. These differences in access are not simply a matter of technology access but represent a more complex structure of cultural identity and social belonging. In other words, girls tend to be stigmatized more if they identify with geeked out practices. Although we may recognize that geeked out participation has valuable learning properties, if these activities equate with low status in friendship-driven networks, many kids are likely to opt out even if they have the technical and social resources at their disposal. The kinds of identities and peer status that accompany certain forms of new media literacy and technical skills (and lack thereof) are an area that deserves more systematic research attention.

NETWORKED PUBLICS PROVIDE A CONTEXT FOR YOUTH TO DEVELOP SOCIAL NORMS IN NEGOTIATION WITH THEIR PEERS

Young people are turning to online networks to participate in a wide range of public activities and developing social norms that their elders may not recognize. On the friendship-driven side, youth see online spaces and communications media as places to hang out with their friends. Given constraints on time and mobility, online sites offer young people the opportunity to casually connect with their friends and engage in private communication that is not monitored by parents and teachers. The ability to browse the profiles and status updates of their extended peer network in sites such as MySpace and Facebook offers youth information about others in an ambient way, without the need for direct communication. On the interest-driven side, youth turn to networked publics to connect with like-minded peers who share knowledge and expertise that may not be available to them locally. By engaging with communities of expertise online in more geeked out practices, youth are exposed to new standards and norms for participation in specialized communities and through collaborative arrangements. These unique affordances of networked publics have altered many of the conditions of socializing and publicity for youth, even as they build on existing youth practices of hanging out, flirting, and pursuing hobbies and interests.

In our work, contrary to fears that social norms are eroding online, we did not find many youth who were engaging in behaviors that were riskier than what they did in offline contexts. Youth online communication is conducted in a context of public scrutiny and structured by shared norms and a sense of reciprocity. At the same time, the actual shape of peer-based communication, and many of its outcomes, are profoundly different from those of an older generation, and are constantly being redefined. We found examples of parents who lacked even rudimentary knowledge of social norms for communicating online or any understanding of all but the most accessible forms of video games. Further, the ability for many youth to be in constant private contact with their peers strengthens the force of peer-based learning, and it can weaken adult participation in these peer environments. A kid who is highly active online, coupled with a parent who is disengaged from these new media, presents the risk of creating an intergenerational wedge. We do not believe that educators and parents need to bear down on kids with complicated rules and restrictions and heavy-handed norms about how they should engage online, particularly if they are not attuned to the norms that do exist among youth. Simple prohibitions, technical barriers, or time limits on use are blunt instruments; youth perceive them as raw and ill-informed exercises of power.

The problem lies not in the volume of access but the quality of participation and learning, and kids and adults should first be on the same page on the normative questions of learning and literacy. Parents should begin with an appreciation of the importance of youth social interactions with their peers, an understanding of their complexities, and a recognition that children are knowledgeable experts on their own peer practices and many domains of online participation. If parents can trust that their own values are being transmitted through their ongoing communication with their children, then new media practices can be sites of shared focus rather than anxiety and tension. We believe that if our efforts to shape new media literacy are keyed to the meaningful contexts of youth participation, then there is an opportunity for productive adult engagement. Many of the norms that we observed online are very much up for negotiation, and we often uncovered divergent perspectives among youth about what was appropriate, even within a particular genre of practice. For example, the issue of how to display social connections and hierarchies on social network sites is a source of social drama and tension, and the ongoing evolution of technical design in this space makes it a challenge for youth to develop shared social norms. Designers of these systems are central participants in defining these social norms, and their interventions are not always geared toward supporting a shared set of practices and values. More robust public debate on these issues that involves both youth and adults could potentially shape the future of online norms in this space in substantive ways.

YOUTH ARE DEVELOPING NEW FORMS OF MEDIA LITERACY THAT ARE KEYED TO NEW MEDIA AND YOUTH-CENTERED SOCIAL AND CUITURAL WORLDS

We have identified a range of different practices that are evidence of youth-defined new media literacies. On the friendship-driven side, youth are developing shared norms for online publicity, including how to represent oneself in online profiles, norms for displaying peer networks online, the ranking of relationships in social network sites, and the development of new genres of written communication such as composed casualness in online messages. On the interest-driven side, youth continue to test the limits of forms of new media literacy and expression. Youth are developing a wide range of more specialized and sometimes exclusionary forms of new media literacies that are defined in opposition to those developed in more mainstream youth practices. In geeked out interest-driven groups, we have seen youth engage in the specialized "elite" vocabularies of gaming and esoteric fan knowledge and develop new

experimental genres that make use of the authoring and editing capabilities of digital media. These include personal and amateur media that are being circulated online, such as photos, video blogs, web comics, and podcasts, as well as derivative works such as fan fiction, fan art, mods, mashups, remixes, and fansubbing.

It is important to understand the diverse genre conventions of youth new media literacy before developing educational programs in this space. Particularly when addressing learning and literacy that grows out of informal, peer-driven practices, we must realize that norms and standards are deeply situated in investments and identities of kids' own cultural and social worlds. For example, authoring of online profiles is an important literacy skill on both the friendship- and interest-driven sides, but one mobilizes a genre of popularity and coolness, and the other a genre of geek cred. Similarly, the "elite" language of committed gamers involves literacies that are of little, and possibly negative, value for boys looking for a romantic partner in their school peer networks. Not only are literacy standards diverse and culturally specific, but they are constantly changing in tandem with technical changes and a rising bar of cultural sophistication. Following from this, it is problematic to develop a standardized or static set of benchmarks to measure kids' levels of new media and technical literacy.

On the interest-driven side, we saw adult leadership in these groups as central to how standards for expertise and literacy are being defined. For example, the heroes of the gaming world include both teens and adults who define the identity and practice of an elite gamer. The same holds for all of the creative production groups that we examined. The leadership in this space, however, is largely cut off from the educators and policymakers who are defining standards for new media literacy in the adult-dominated world. Building more bridges among these different communities of practice could shape awareness on both the in-school and out-of-school sides, if we could respond in a coordinated and mutually respectful way to the quickly evolving norms and expertise of technically sophisticated experimental new media literacies.

PEER-BASED LEARNING HAS UNIQUE PROPERTIES THAT SUGGEST ALTERNATIVES TO FORMAL INSTRUCTION

We see peer-based learning in networked publics in the mainstream friendshipdriven sites like MySpace and Facebook as well as in geeked out interest-driven groups. In these settings, the focus of learning and engagement is not defined by institutional accountabilities but rather emerges from kids' interests and everyday social communication. Although learning in both of these contexts is driven primarily by the peer group, the structure and the focus of the peer group differ substantially, as does the content of the learning and communication. While friendship-driven participation is largely in the mode of hanging out and negotiating issues of status and belonging in local, given peer networks, interestdriven participation happens in more distributed and intentional knowledge networks. In both the friendship-driven and interest-driven networks, however, peers are an important driver of learning. Peer-based learning is characterized by a context of reciprocity, where participants feel they can both produce and evaluate knowledge and culture. Whether it is comments on MySpace or on a fan fiction forum, participants both contribute their own content and comment on the content of others. More expert participants provide models and leadership but do not have authority over fellow participants. When these peer negotiations occur in a context of public scrutiny, youth are motivated to develop their identities and reputations through these peer-based networks, exchanging comments and links and jockeying for visibility. These efforts at gaining recognition are directed at a network of respected peers rather than formal evaluations of teachers or tests. In contrast to what they experience under the guidance of parents and teachers, with peer-based learning we see youth taking on more "grown-up" roles and ownership of their own selfpresentation, learning, and evaluation of others.

In contexts of peer-based learning, adults can still have an important role to play, though it is not a conventionally authoritative one. In friendship-driven practices, direct adult participation is often unwelcome, but in interest-driven groups we found a much stronger role for more experienced participants to play. Unlike instructors in formal educational settings, however, these adults are passionate hobbyists and creators, and youth see them as experienced peers, not as people who have authority over them. These adults exert tremendous influence in setting communal norms and what educators might call "learning goals," though they do not have direct authority over newcomers. The most successful examples we have seen of youth media programs are those based on kids' own passionate interests and allowing plenty of unstructured time for kids to tinker and explore without being dominated by direct instruction. Unlike classroom teachers, these lab teachers and youth-program leaders are not authority figures responsible for assessing kids' competence, but are rather what Dilan Mahendran has called "co-conspirators," much like the adult participants in online interest-driven groups. In this, our research aligns with Chávez and

Soep,(53) who identified a "pedagogy of collegiality" that defines adult-youth collaboration in what they see as successful youth media programs. Kids' participation in networked publics suggests some new ways of thinking about the role of public education. Rather than thinking of public education as a burden that schools must shoulder on their own, what would it mean to think of public education as a responsibility of a more distributed network of people and institutions? And rather than assuming that education is primarily about preparing for jobs and careers, what would it mean to think of education as a process of guiding kids' participation in public life more generally, a public life that includes social, recreational, and civic engagement? And finally, what would it mean to enlist help in this endeavor from an engaged and diverse set of publics that are broader than what we traditionally think of as educational and civic institutions? In addition to publics that are dominated by adult interests, these publics should include those that are relevant and accessible to kids now, where they can find role models, recognition, friends, and collaborators who are co-participants in the journey of growing up in a digital age. We hope that our research has stimulated discussion of these questions.

NOTES



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(16) ITO et AL. Hanging Out
(17) See JOE AUSTIN AND MICHAEL NEVIN WILLARD, eds., Generations of Youth: Youth Cultures and History in Twentieth-Century America, New York, New York University Press, 1998; JULIE BETTIE Women without Class: Girls, Race, and Identity, Berkeley and Los Angeles, CA, University of California Press, 2003; PENELOPE ECKERT Jocks and Burnouts: Social Categories and Identity in the High School, New York, Teachers College, 1989; JONATHON S. EPSTEIN, ed. Youth Culture: Identity in a Postmodern World, Malden, MA, Blackwell Press, 1998; C.J. PASCOE, "Dude, You're a Fag", Masculinity and Sexuality in High School, Berkeley, CA, and Los Angeles, CA, University of California Press, 2007; PAMELA PERRY Shades of White: White Kids and Racial Identities in High School, Durham, NC, Duke University Press, 2002; ROBERT SNOW "Youth, Rock 'n' Roll and Electronic Media", Youth & Society, 18 n° 4 (1987) pp. 326-43; BARRIE THORNE Gender Play: Girls and Boys in School, New Brunswick, NJ. Rutgers University Press, 1993
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(20) ITO "Mobilizing the Imagination"
(21) This and all other parenthetical references are to the Digital Youth Project; a description is provided in Appendix I.
(22) BARON Always On
(23) MISA MATSUDA "Mobile Communication and Selective Sociality", in ITO, OKABE AND MATSUDA Personal, Portable, Pedestrian, pp. 123-42.

(24) MIZUKO ITO AND DAISUKE OKABE "Intimate Connections: Contextualizing Japanese Youth and Mobile Messaging" in <i>Inside the Text: Social, Cultural and Design Perspectives on SMS</i> , eds. Richard Harper, Leysia Palen, and Alex Taylor, New York, Springer, 2005, p. 137
(25) See C.J. PASCOE "Intimacy," in ITO et AL. <i>Hanging Out</i>
(26) Like many teens, Missy wrote using typical social media shorthand. Translated, her comment would read: "Hey, hmm, what to say? I don't know. Laughing out loud. Well I left you a comment You should feel special haha (smiley face)"
(27) "G" is slang for "gangsta," in this case an affectionate term for a friend
(28) We capitalize the term "Friends" when we are referring to the social network site feature for selecting Friends
(29) PASCOE "Intimacy"
(30) DANAH BOYD "Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life", in <i>Buckingham, Youth, Identity, and Digital Media</i> , pp. 119-42; DANAH BOYD "Friendship", in ITO et AL. <i>Hanging Out</i>
(31) Entertainment Software Association, Facts and Research. Top Ten Facts 2007. Retrieved June 28, 2007 (http://www.theesa.com/facts/index.asp">http://www.theesa.com/facts/index.asp); see also REED STEVENS, TOM SATWICZ AND LAURIE MCCARTHY "In-Game, In-Room, In-World: Reconnecting Video Game Play to the Rest of Kids' Lives", in <i>The Ecology of Games: Connecting Youth, Games, and Learning</i> , ed. Katie Salen. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning, Cambridge, MA, The MIT Press, 2007, pp. 41-66
(32) Entertainment Software Association, Facts and Research
(33) HEATHER A. HORST "Families", in ITO et AL. <i>Hanging Out</i> ; MIZUKO ITO AND MATTEO BITTANTI "Gaming", in ITO et AL. <i>Hanging Out</i>
(34) HEATHER A. HORST "The Miller Family: A Portrait of a Silicon Valley Family", in ITO et AL. <i>Hanging Out</i>
(35) LISA TRIPP "Michelle", in ITO et AL. Hanging Out
(36) MAYA B. FAGLETON AND ELIZABETH DOBLER Reading the Web: Strategies for

Internet Inquiry, New York, Guilford Press, 2007; ESZTER HARGITTAI "Do You 'Google'? Understanding Search Engine Popularity Beyond the Hype", First Monday 9 no 3 (2004) retrieved June 28, 2008 (http://firstmonday.org/issues/issue9_3/hargittai/index.html); ESZTER HARGITTAI "The Social, Political, Economic, and Cultural Dimensions of Search Engines: An Introduction", Journal of Computer-Mediated Communication 12 nº 3 (2007), article 1 retrieved June 28, 2008 (http://jcmc.indiana.edu/vol12/issue3/hargittai.html); LAURA ROBINSON "Information the Wiki Way: Cognitive Processes of Information Evaluation in Collaborative Online Venues" (paper, International Communication Association Conference, May 24-28 2007, San Francisco, CA); see also ESZTER HARGITTAI AND AMANDA HINNANT "Toward a Social Framework for Information Seeking", in New Directions in Human Information Behavior, ed. Amanda Spink and Charles Cole, New York: Springer, 2006, pp. 55-70; USC Center for the Digital Future, Ten Years, Ten Trends: The Digital Future Report Surveying the Digital Future, Year Four, Los Angeles, CA, USC Annenberg School Center for the Digital Future, 2004, retrieved June 28, 2008 (http://www.digitalcenter.org/ downloads/DigitalFutureReport-Year4-2004.pdf>) (37) Although a variety of search engines are available to digital youth, across different case studies, there are frequent references to Google. Some youth use various permutations such as "Googling," "Googled," and "Googler" as normative information-seeking language. The ubiquitous nature of Google may indicate that the idea of "Googling" has been normalized into the media ecology of digital youth such that for many Googling may be considered synonymous with information seeking itself (38) See PATRICIA G. LANGE AND MIZUKO ITO "Creative Production", in ITO et AL. Hanging Out (39) DAN PERKEL "Copy and Paste Literacy? Literacy Practices in the Production of a MySpace Profile", in Informal Learning and Digital Media: Constructions, Contexts, Consequences, eds. Kirsten Drotner, Hans Siggard Jensen and Kim Schroeder, Newcastle, UK, Cambridge Scholars Press, 2008 (40) ITO "Mobilizing the Imagination"; MIZUKO ITO AND HEATHER A. HORST "Neopoints and Neo Economies: Emergent Regimes of Value in Kids Peer-to-Peer Networks" (paper, American Anthropological Association Meetings, Noviembre 16, 2006, San Jose, CA), retrieved September 18, 2008 (http://www.itofisher.com/mito/itohorst.neopets.pdf) (41) See BOYD "Friendship"; PASCOE "Intimacy" (42) DAISUKE OKABE AND MIZUKO ITO "Everyday Contexts of Camera Phone Use: Steps

Ethnographic Views, Observations, and Reflections, eds. Joachim Höflich and Maren Hartmann, Berlin, Frank & Timme, 2006, pp. 79–102
(43) MIZUKO ITO "Work", in ITO et AL. Hanging Out
(44) CHRISTO SIMS "Technological Prospecting in Rural Landscapes", in ITO et AL. Hanging Out
(45) KATYNKA Z. MARTÍNEZ "Being More Than 'Just a Banker': DIY Youth Culture and DIY Capitalism in a High-School Computer Club", in ITO et AL. <i>Hanging Out</i>
(46) See ELIZABETH CHIN Purchasing Power: Black Kids and American Consumer Culture Minneapolis, MN, University of Minnesota Press, 2001
(47) Anime music videos (AMVs) are remix fan videos, in which editors combine footage from anime with other soundtracks. Most commonly, editors use popular Euro-American music, but some also edit to movie trailer or TV ad soundtracks or to pieces of dialogue from movies and TV
(48) LANGE AND ITO "Creative Production"
(49) C.J. PASCOE "'You Have Another World to Create': Teens and Online Hangouts", in ITO et AL. Hanging Out
(50) Vidding, like AMVs, is a process of remixing footage from TV shows and movies to soundtracks of an editor's choosing. Unlike AMVs, however, the live-action vidding community has been dominated by women
(51) CHRIS ANDERSON The Long Tail: Why the Future of Business Is Selling Less of More, New York, Hyperion, 2006
(52) Hyphy is a rap genre that originated in the San Francisco Bay Area and is closely associated with the late rapper Marc Dre and with Fabby Davis Junior. Hyphy music is often categorized as rhythmically up-tempo with a focus on eclectic instrumental beat arrangements, and it is also tightly coupled with particular dance styles
(53) CHÁVEZ y SOEP "Youth Radio"



LA ESCUELA EXPANDIDA



http://tv.zemos98.org/La-escuela-expandida
English Subtitles
58' Documentary
Produced by ZEMOS98 & Intermedia Producciones

THE STORY BEHIND AN EXPANDED DOCUMENTARY BY ZEMOS98

When in September 2008 we first got in touch with Platoniq and Juanjo Muñoz (who was then the head of Antonio Domínguez Ortiz High School) to propose a collaboration for the eleventh edition of the ZEMOS98 International Festival, we didn't know how it was going to turn out. For some years we had been closely following Platoniq's work and we really wanted to include them in the festival's programme. The Bank of Common Knowledge (BCK) was an ideal project for the chosen topic that year: Expanded Education (education can take place any time, anywhere). For a long time we had been feeling, and we still do, the need to reach out towards other neighbourhoods that are not in the centre of Seville, in order to redistribute production of contents and to break away from the centralisation of the city's cultural and political agenda.

For us, the combination of Platoniq, an artistic and social collective based in Barcelona, and the Antonio Domínguez Ortiz High School, located right in the middle of a large housing estate in Seville and whose major problem is truancy, was interesting, appealing and necessary. It felt interesting because it proposed a self evaluation of the school and educational institutions in general, appealing as it gave voice to a neighbourhood stigmatized and pointed at by the media, and necessary because it proposed an educational experience based on self learning and on work that has an impact on the community.

Considering all that, to intervene in and depict their reality appeared to be much more than just a challenge. It was an adventure that seemed impossible if we thought about "the complex simplicity of the idea" – as Juanjo said – when it came to explaining how to put into practice our small socioeducational experiment. That's why we called Intermedia. Because we knew that they are much more than a production company. They are people who are strongly committed to the images they use, who understand that telling a story requires its narrators to take on an intermediary role between reality and spectator. It became a challenge only sensitive storytellers could accept.

To be honest, it wasn't easy. If the presence of Platoniq and ZEMOS98 in the school for a week proposing an educational technique based on free exchange of knowledge was unusual in itself, it became more complicated when we added cameras and a sound team. Julio Veiga and his team had to move about in a very sensitive space, trying to be always present but unnoticed, to capture

a story without intervening, being the eyes and ears of those who weren't there

The outcome is the documentary, "Expanded Education". And these words explain and contextualize it within the framework of the 11th edition of the ZEMOS98 International Festival.

If education is everyone's responsibility, then this is a story for everyone. Other learning systems are possible, if we expand our way of thinking. Starting with this story and continuing with yours. All the best!

WHAT IS THE BANK OF COMMON KNOWLEDGE? BY PLATONIO

The Bank of Common Knowledge (BCK), a Platoniq project, was born in 2006 as the testing ground for mutual peer to peer education as a result of the expansion of free software, social networks and P2P file sharing programs. Its objectives are to develop, create and protect areas of exchange and free transmission of knowledge and to find more efficient strategies that lead to new ways of communication, education and citizen participation. BCK is in line with a global movement called Open Knowledge whose aim is to apply the philosophy and methodologies of free software to the group dynamics of learning and mutual education.

These ideas are put into practice with actions and exchange-promoting gatherings called the Market for the Exchange of Free Knowledge. This event first took place in November 2006 in the Barcelona Centre of Contemporary Culture (CCCB). After that, other cities like Cambridge, Barcelona, Girona, Lisbon, Linz, Berlin and Seville held following gatherings in 2007, 2008 and 2009.

Platoniq is a group of cultural producers and free software developers based in Barcelona since 2001. Motivated by diverse networking strategies, their goal is to take the Internet to the streets and spread, create and share other ways of working with information, knowledge and networked culture.

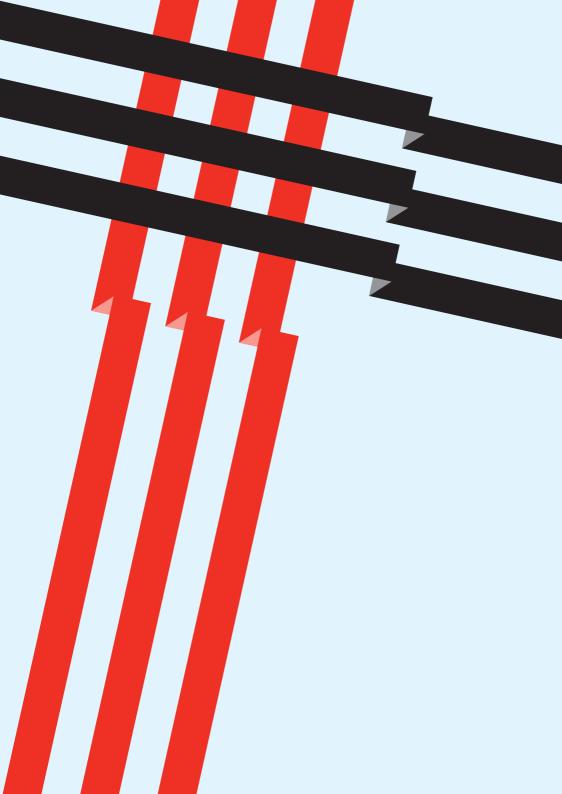
For more information check: www.bancocomun.org

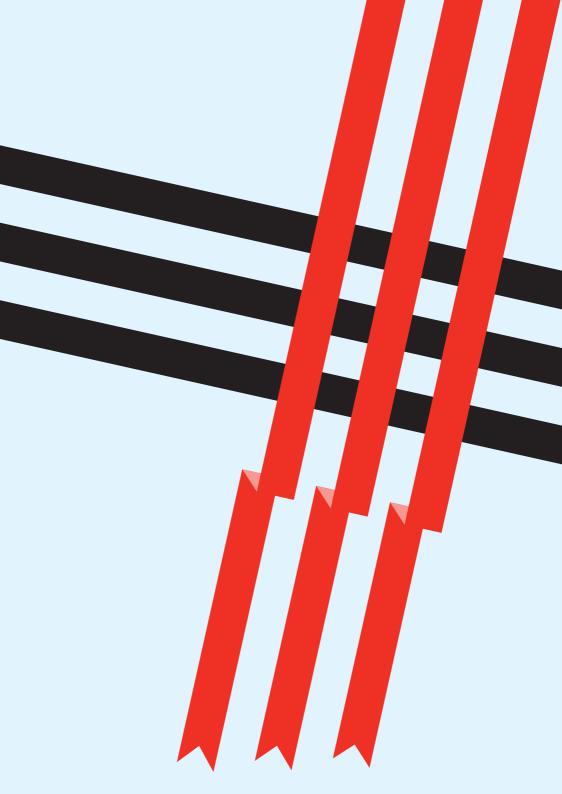
THE LIGHT WITHIN YOUR CORE BY JUANJO MUÑOZ

The experience of the Bank of Common Knowledge in the Antonio Dominguez Ortiz High School has shaken the education system's foundations and has pushed its limits, questioning its range of subjects, its use of space, its curriculum and its teacher-student relationship. It has proved that young students do want to learn, can teach and do have interests. To have been able to do this with the freedom we had proves that education can be more than what we used to see in our educational systems. It provided a whole new experience that does not stop there. It has set up the base to remind us that education can be something profoundly exciting.

Tomorrow's education will have to be expanded or it will not be education.

Juanjo Muñoz, former head of Antonio Domínguez Ortiz High School and philosophy professor.







«EDUCATION CAN HAPPEN ANYTIME AND ANYWHERE»



