FCJ-013 It's New Media: But is it Art Education?

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There is a crisis in new media arts education. Yet there has been surprisingly little debate about it until recently, despite the widespread emergence of new media arts programs and massive student interest all throughout the North American university landscape. The current crisis is only now starting to get widespread acknowledgment from new media educators in the United States, Finland, Switzerland, Germany, Australia and beyond. Fields of conflict range from undergraduate students exclusively demanding vocational training, to the lack of advanced debate about new media artwork, and the media-specific orientation of departments. Once beyond the certainty of technical instruction new media arts educators on many campuses experience a crisis due to the unbearable lightness of their topical orientation. In addition, it is an almost impossible challenge for a single human being to keep up with all technological advances. And last but not least, there is the quest for the education of artists, whether or not their preferred media are digital.

Other pertinent issues are the introduction of open source software in the classroom, the professional future of graduates of new media arts programs, the contestation of the definition of art in a new media context, and the breaking out of the isolation of the university lab to connect students with the real life world. State budget cuts in Europe and the United States have led to the emergence of many "anti-universities," and teach-yourself-institutions.

A conference at the Department of Media Study, The State University of New York at Buffalo, reflected on educational models in new media arts education (nmae) and the negotiation of the ground rules for collaboration. In April 2004, 150 artists and academics arrived in Buffalo to discuss anti-universities, the notion of free cooperation, radio experiments, collaborative performance projects, distributed authorship, self-organised educational initiatives, collaborations between artists and scientists, peer-to-peer porn, networked virtual reality, collaboration in the open source movement, and participatory networked art. Many of these topics were discussed on a preparatory mailing list and selected postings were included in a free conference publication.

Amsterdam-based media critic Geert Lovink and I organised this international conference. In the context of a report about the "Free Cooperation" conference, this essay examines critical issues in new media arts education and makes proposals to overcome its current crisis. I will present creative models of online collaboration and briefly address the organising of this conference questioning traditional academic formats such as "panelism." [1]

Networked collaboration

The topic of (online) collaboration may appear marginally academic to some. But from cell phones to email, multiplayer online games, mailing lists, weblogs, and wikis our everyday lives are increasingly enmeshed with technology. [2, 3] Much of the politics of the everyday is connected to issues that are on some level involved with technology. This is true at least for societies benefiting from the globalisation of the information order, which is limited and partial by all means. The necessity to examine the ways in which we collaborate in the technological channels through which we communicate will soon become more apparent.

We invited the Bremen-based media critic Christoph Spehr to the Free Cooperation conference. Spehr coined the term 'free cooperation' in his essay 'Gleicher als andere' (2003). Most of Spehr's writings are not yet translated into English and this conference was an opportunity to introduce his ideas into Anglophone media discourses (Spehr, 2004). Spehr's writings use references to 1960s sci-fi movies to think about contemporary cooperation. They insist on the option of refusal, the right of withdrawal from cooperation, independence, negotiation and re-negotiation with corporate or state 'monsters.'

We asked: how could these ideas of equality and freedom be made useful for alternative networks of learning and the university?

On collaboration

For media artists, collaboration and consultation are increasingly inevitable, since technology-based artwork requires increasingly deeper levels of specialisation in the process of bringing together technological and conceptual components. In business contexts "groupware" has become more and more important and recent versions of proprietary software such as Macromedia's

Dreamweaver focus increasingly on the development of file-sharing and issues of permissions in co-authoring. Networked collaborators are alerted to changes other team members have made to a document and can decide if they choose to overwrite them or merge their contribution with that of others. Permissions here refer to the ability of team members to alter documents created by others. How can Spehr's notions of 'free cooperation,' developed in the context of Social Democratic Germany, become more relevant in countries such as the United States with its iron grip on student loans and credit reports unsupported by safety nets like state grants or unemployment benefits? In the US there are no social nets to fall down into when trying to live the politics of refusal and independence. Yet there are a number of examples of free cooperation already at work within the Northern American context.

10 In the urban United States, Critical Mass and Reclaim the Streets are promising and productive cooperative group models. During the anti-war protests of 2003, hundreds of cyclists in San Francisco, California, blocked major urban intersections and highways as part of a Critical Mass initiative. This began with a leafleting campaign advertising times and dates of such actions, yet the campaign took place without any central leadership. In a similar vein, Reclaim the Streets uses a decentralised model to reclaim the public sphere.

11 Other examples of decentralised, community-organising efforts include; broadcasting free radio, graffiti, and street parties. The Green Movement exemplifies a type of temporary alliance that chooses no one particular subject position (e.g. class, gender, race) in pursuit of a shared goal (Laclau and Mouffe). Another example is Paper Tiger TV. Founded in 1981, Paper Tiger TV presents a consequential model of collaboration to create and distribute collectively produced activist video works that critique the media. And the New York City-based chamber orchestra, Orpheus, works without a conductor and rotates all of its functions among the musicians. These are examples of horizontal, leaderless social structures.

The ABCs of collaboration

12 According to the Cambridge Dictionary the term collaboration assumes that two or more people work together to create or achieve the same thing. Participants in the Free Cooperation conference suggested that each collaborator needs to be given authority over her task. Collaborators should get to know each other as people and should find out about each other's agency and professional needs. Collaboration demands genuine dialogue, and a human encounter. This requires the skills of receptivity and responsiveness. At times, the dedication to the other person can be a bit scary; collaboration does not work for everybody. The ABC's of collaboration demand that needs are addressed and lines of communication kept open. Collaborations need to constantly change and question their work and goals, or they will get trapped by their own definition. Collective leadership is a critical issue. Leadership needs to rotate. Leaders are defined and designated by commitment of time, energy, resources and intellectual contributions. Commonly, the person who contributes the most to a project has the most say, but this dynamic endangers the cooperation as it marginalises silent or withdrawn group members.

13 In the context of situations of learning, a wireless tool developed at The University of California San Diego is relevant here: "ActiveClass" employs wireless technology in an attempt to encourage disembodied classroom participation via Personal Data Assistants (PDAs) and laptop computers from students who might otherwise not participate. "ActiveClass" permits students to "silently" ask questions, answer questions, and provide other types of feedback. The results are aggregated and then broadcast to all students and the teacher, facilitating verbal discussion. [4]

What is 'free cooperation'?

14 We are always already collaborating on a face-to-face or networked basis. From cross-cultural, and cross-disciplinary, to cross-professional exchanges, cooperation is evident. It is nothing new, nor is it something we actively choose. Extending beyond the focus on internal group dynamics (and the relationships of different individuals), we asked at the Free Cooperation conference what really happens when the many collaborate. Conference participants with as much as twenty years of experience said that collaborations should start with the building of trust and testing out the compatibility of values and interests instead of immediately focusing on the project goals. Social resources including trust, mutual respect, tolerance, and shared values make it easier for people to work together on a project. With trust, true communication can take place. In "free cooperation"

everyone stands to benefit and anyone can leave at any time. If there are disagreements, the cooperation must remain workable. There is no ideal cooperation; there always are elements of compromise.

15 Online and off, there is the risk of involuntary altruism caused by the possibility of freeloaders in the collective process. We must ask: whose labor becomes invisible and which type of labor steps to the front stage? Issues of accreditation are more developed in theatre, dance, architecture, music and film, where each person receives credit for her individual contribution. [5] Some members of the Open Source movement suggest a 'tit-for-tat' strategy based on exchanges of effort– one gives a bit of code and then receives a bit (Baldwin and Clark). Comparably, jazz musicians and dancers who improvise study the moves of the others and take turns leading. However, as Dave Brubeck suggests, improvisational freedom needs to be guided by discipline. At best, collaborations can playfully spark off one another, with a "third body" resulting from a chorus. [6] The free development of each individual is the condition for the free development of all although, commonly, self-sacrifice and the absence of personal gain, rather than freedom, are associated with collaborative work (Marx and Engels).

16 How do the art market and the idea of free cooperation work together? According to the logic of the art market the artist is produced as exemplary sufferer and genius, not as somebody who is in control of her work. The logic of the art world and that of technology-based art are opposed to each other. The art world focuses on the romanticised idea of an author who creates an art object that can be distributed by many institutions. Technology-based art is variable, often ephemeral, discursive, concept-based, existent in many copies. It is collaboratively authored, and can be distributed online (Manovich). Artists have taken the internet on as a context for their work since its emergence, de-emphasising individual authorship and responding to Bertolt Brecht's demand for an apparatus that goes beyond distribution and allows communication (Brecht). Early projects aiming at collaborative authorship include Robert Adrian X's Die Welt in 24 Stunden (1983), Douglas Davis' The World's First Collaborative Sentence (1994) and the project 'Epreuves d'ecritures' as part of the exhibition 'Les Immatrieux' that was conceived by Jean-Francois Lyotard (1985). Yet art institutions have for the very most part been neither interested in, nor supportive of free cooperation.

17 Many of these artworks were discussed at the Free Cooperation conference. Before I'll talk more about new media arts education I'll now make some comments on the organisation of conferences. People love conferences because they provide new opportunities for collaboration. They are venues where you can reflect, meet future collaborators, debate your ideas and artworks, party intensely, get inspired, provoked, learn, make new friends, and then occasionally carry on the debate in the sauna. Conferences offer an opportunity for people who cannot meet otherwise to spend a few days together away from their obligations, zooming-in on ideas. For practitioners whose geographic location and financial situation makes access to these venues impossible, technologies such as video conferencing and the AccessGrid allow for remote participation. [7]

18 I have always looked for a conference without lectures and panels. It is challenging not to read from notes, to be brief and to leave ample time for questions, and to focus on the points raised by the chairperson of a particular session. The rigid structure of panels and the non-communicative form of the keynote speaker feed into the celebrity system, reinforcing hegemonic paradigms that get in the way of genuine dialogue and of other voices being heard. In the ideal setting, participants can read each other's papers or presentations before they arrive at the venue. At the event itself a presenter would only have to give short reminders of their work and the focus could move to discussion. This works best with participants who are open to present what they have to say in a few minutes and are interested in debate. Specific software could make it easier for participants to find each other more easily (ie. recognise the person you wanted to meet in large conference crowds). Technology that enables this is still too expensive to integrate it in media arts conference but business contexts already see similar location aware networks. Here, nametags contain information that makes the person locatable in a close proximity area network. A possible project that could be brought into use for this is WiFi.Bedouin. [8]

19 The Free Cooperation conference of 2004 took place on a university campus but the atmosphere was theatrical rather than academic. We modeled the scenario of the event after a Brechtian play. For example, there was a talk show in which participants impersonated sci-fi filmmakers,

scientists, and “flexible personalities,” accompanied by musical intermezzos on the phonarmonica. Remote guests commented via internet Relay Chat. We also set up a ‘talkathon’ (one room, two speakers, eight people in the audience), a few dialogues, a video conference, a weekend conference game (about games), streamed net radio lectures, brainstorming sessions, film screenings, a small exhibition, several workshops, a turntablist collaboration, and one monologue. There were no keynote speakers and no panels, which worked well because the topic was itself collaboration. We explicitly asked participants not to deliver long lectures aiming for a more dialogical format. The rooms were organised with seating in circular shapes.

20 Large gatherings such as this one are good opportunities for students to create their own networks – relationships that may become fruitful for them in the future. Encounters with other students, artist friends or cultural critics may in the end even turn out to be more formative than regimented course work. The people who teach may stay in the particular research institution but students will have to leave. It is essential for them to make linkages not only in the city where they study but also (inter)nationally. It is these networks that will give an important context to their work once they have graduated.

21 These outside arenas are as much places of learning as classes. At the Free Cooperation conference, a session focused on self-organised educational initiatives, free universities, and anti-universities. Massive attendance demonstrated a great deal of urgency. The organisation of this session was inspired by a debate that developed in October 2003 when I posted some thoughts and observations about new media arts education on the mailing list (Scholz, 2003b). There were many responses on the Rhizome mailing list, the collaborative weblog Discordia (Scholz, 2003a), as well as dozens of emails to me. [9] The responses ranged from enthusiastic support to uneasiness. This text was predominantly concerned with the boredom, apathy and anti-intellectualism encountered in American undergraduate new media classrooms, the role of the teacher and some issues to engage with beyond the teaching of “just-in-time-knowledge.”

22 I studied in Dresden, London, and New York City and have taught undergraduate and graduate students in several research institutions including The Bauhaus University, The University of Arizona in Tucson and currently The State University of New York at Buffalo. Reading many of these list responses I realised that there were big differences between those who have the actual human experience of the here-and-now-ness of teaching in the classroom and others who approach teaching with the there-and-then-ness of ideas that they have not had the chance to test-drive with students. Part of the purpose of writing this essay is to reflect upon this debate.

23 Universities throughout the United States are increasingly restructured to fit the imperatives of corporate business logic. Bill Readings in The University in Ruins elaborates on the replacement of culture by the discourse of excellence as the University’s response to 1968. Undergraduate students may conceive of themselves as consumers who conveniently make a down payment on education and with next to no effort (like shopping) graduate into the good life. It would, however, be elitist to blame students for the system that socialised them and now puts a tremendous weight on them. Undergraduate students in the US are under tremendous pressure to find a job. This pressure is both self-imposed and created by their peers and parents. It is the task of the faculty to outline clearly what the interests of the department are and where the education provided here will get the students professionally. In addition, In the United States 45 million people are uninsured, and Medicare premiums are the highest they have ever been... (Gore). Amy Alexander, who is a media artist and faculty at the University of California San Diego, points out that: ‘Unemployment payments and food stamps don’t go very far; neither do paychecks from WalMart.‘ She adds: ‘...once you work full-time, for a while, you’ll realise how amazingly unfulfilling jobs are, and that you’ll want an engagement with culture outside of your employment.‘ [10] In the United States a person can only receive welfare benefits for 5 years in their entire life. Students in new media art programs in the US rarely have the hopes that their counterparts in European universities held – especially during the more prosperous 1980s. There the aspiration was to belong to the 1- 2% that could make a living with their work in the art market (Bauer: 22). In the United States, especially for young technologists, this art market does not exist anyway and sustaining grants are basically unavailable. This is highlighted by a comparison to Nordic countries where artists may manage to go from one grant to the next or be supported by unemployment benefits. [11]

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The increase in bureaucratic demands and duties in many universities diminishes the time of artists who are also teachers, and therefore both teach and remain actively engaged with contemporary cultural production and its discourses. In addition, it is an almost impossible challenge for one human being to constantly keep up with the developments in technologies. There has been much written about the turning of the university into a for-profit knowledge factory (Bok; Slaugher and Leslie; Aranowitz; Johnson, Kavanagh and Mattson) but few alternatives or positive counter-examples have been offered. Throughout new media art departments globally there is widespread disagreement, if not disconnection, between undergraduate students and faculty members. Students do not aspire to become artists but are often exclusively focused on gaining vocational skills for their future in the "industry." They may smirk dismissively at media archeology, and all that theory and political context material that belongs to the unfashionable past. But to which industry do they refer? In reality, there is no such thing as one stable new media industry and the required skill sets are constantly shifting. A fixed identity of the artist as it may have been possible for filmmakers, for example, is no longer possible. In new media job opportunities drift from the VJ turntable, VR lab, and the local non-profit organisation to the theatre stage. Skills that are up to industry-standard may also be better provided by higher training than higher education. In Steal this University Ana Marie Cox talks of the corporate desire for "'just-in-time-knowledge"; that is, skills necessary for the job at hand, rather than basic broader skills.' She continues: '...the state of Washington granted a baccalaureate of science in "Real Time Interactive Simulation," and this new higher education institution is run by the Nintendo Corporation. A journalist points out that in such institutions students take no humanities or social science courses whatsoever. That's because those things are superfluous for the needs of the Nintendo corporation' (Cox: 12). It is exactly the focus on the novelty involved that is the most fickle of all companions in an educational context. Young new media artists should not be seduced by the idea of novelty of creation but rather locate their practice in an historical context.

25 What is in the best long-term interest of the student may not be immediately apparent to her and it takes courage on the part of the instructor to insist on her vision. What will students fall back to if their first job choice does not come through straight away? Most faculty members have a desire to educate students instead of preparing them for cognitive Taylorism in an HTML factory camouflaged as start up office. Independent and difficult courses will provide longer lasting skills, more than the teaching of "just-in-time-knowledge" and run-of-the-mill software applications. In addition, a consumer approach to education often comes with anti-intellectualism, which manifests itself in the classroom by not reading assignments, not contributing to class discussions, complaining about high workloads, or by dispassionately condemning intellectual debate as "boring." Bill Readings describes undergraduate students in North America as having a widespread sense of being "parked" at the University: taking courses, acquiring credits, waiting to graduate. In a sense this is their reaction to the fact that nothing in their education encourages them to think of themselves as the heroes of the story of liberal education... (Readings: 138).

26 Like public broadcasting, education should not be afraid of low ratings or small profits. But mainly adjunct and untenured faculty's academic careers rely heavily on student evaluations, which is where the system is itself problematic.

The Future of Critical New Media Arts Education: Suggestions for the Morning After

27 I am a media artist teaching within the system of a research university and my suggestions come from this difficult place. The rhetoric of resistance to the corporatisation of the university rarely leads to concrete proposals. We do not need more manifestos. They rarely offer concrete suggestions for the morning after. What are ways in which we can escape the business logic of the "university of excellence" (Readings) that is fundamentally at odds with responsible education? What is the professional future of students graduating from new media arts programs in the post-dotbomb era? Today, media arts programs that directly sent their graduates into dotcom companies like Razorfish in the mid and late 1990s have to adjust their focus in a time of dwindling resources. What is the professional future of students graduating from new media arts programs in the post-dotbomb era? What are innovative structures for learning contexts in critical new media arts education? In the context of the post-welfare state, what are examples of self-organised educational projects that respond to the soaring cost of education? Has the time come when we can replace all proprietary software with open source or free software applications?

Which tools can we easily use to network student groups, departments, and universities? How can we introduce wireless technologies for teaching? How can theory and production be brought together in a meaningful way? Between technophobia, hyped techno-optimism, and Futurist discourses of progress that make us blind to the clumsy reality of computers, how do we think about and live with technology? What about professors professing their politics in the classroom? Some may argue that there is no room for the personal politics of the professor in the classroom. I disagree. The Greek word "professore" means "to proclaim." It does not mean to look the way when thousands die in Iraq, when our civil liberties vanish under the Patriot Act, academic freedom of speech is questioned (or when the International Monetary Fund ruins yet another Jamaica). Teaching involves questioning, the development of an educated position on world politics. Participants in class are not necessarily to agree, but they are urged to search out their own position. Which topics are urgent and which readings are relevant and lasting? I want to turn to a number of concrete proposals for a critical new media education, some of which are drawn from models already at work.

Theme-based rather than media-based

28 Rather than developing traditional media-oriented departments, universities should develop theme-based work groups (departments) around issues such as "Cooperative Technologies," "Media Art and Politics," or "The Knowledge Commons." This theme-based research would enable cross-disciplinarity beyond the set boundaries of even the most progressive media-based departments. As feasible, teams would use and teach Open Source software to facilitate this theme-based research. The theme-based structure is applied in universities such as the Design Academy Eindhoven where each theme-based group works with an organisation or a company. This model is more flexible and requires less administrative effort.

29 If fewer classes were mandatory we might be able to encourage a more informal, individualised learning process. Learning and teaching could take place in a way in which the transmission of knowledge through authority can be questioned. All involved in the learning and teaching process should follow the logic of educational responsibility and accountability that is at odds with the logic of accounting. Teaching should not be reduced to the training of technocrats without ever questioning the purpose and function of that training. If we would allow for less efficiency, more play, and more experimentation in education we would be undaunted by the prospect of failure. More attention should be paid to the building of friendships, relationships among peers, and interpersonal/ soft skills. Ergonomic chairs and healthy food (rare to find on US campuses) would also contribute to a good learning environment. Participants should be motivated towards self-learning, self-directed time and the use of social software for intellectual exchange. [12] Modeled after the Freie Klasse participants should organise courses in which they teach each other, write their own curriculum and invite speakers of their choice. Within the context of the theme-based department they should have the autonomy to decide what and how they want to learn. Self-reflexivity is encouraged and no grades are given. Exchanges with local tech-businesses are enabled in creative ways. A creative and thoughtful attempt to involve students in local manufacturing facilities is the Howstuffismade project. [13] Here students produce photo essays about the creation of products and get involved with local businesses, which could aid in a more organic movement of artists into non-art contexts. Similar connections are facilitated by the Hypermedia Research Centre at Westminster University, London. [14]

30 Bell Hooks, in Teaching to Transgress describes her struggle to counter 'the overwhelming boredom, disinterest, and apathy' in her classroom (1994, see also 2003). Hooks claims teaching as a site for resistance, a place where the teacher must practice being vulnerable, and fully present. I agree with her that the teacher can become a conflictual site in the classroom encouraging students to develop a similarly genuine expression of their position, free of sarcasm and false irony. This approach is more about learning than teaching. It is a process of productive conflict in which the teacher is also transformed. The teacher should simply be an older student who has devoted more time to a subject. She should be an amateur in the sense that she loves her work and takes risks. She should be a good listener, concise, patient, creative, explain her thinking, ask for feedback, apologise, admit if she does not know the answer, do her homework, teach to distrust authority, teach to break the rules... Get worried if there was no conflict in class. Risk

taking involves acknowledging failure as part of the teaching process, self-criticism for both teachers and students, and increasing de-specialisation.

Diversity and alternative histories

31 Students might begin to learn that the conquistadors of new media art do not only produce in New York, Buffalo, Berlin and London but also in Riga, Singapore and Delhi. International student exchanges facilitated through personal contacts rather than long administrative processes allow for this understanding to be introduced into the context of the Western classroom. Networked international events of like-minded departments and colleagues are useful to achieve this opening of horizons as well. Locally, the university is an agglomeration of people of different ages, classes, genders, sexualities, and ethnicities. Yet, the benches of new media arts classrooms in the urban United States are often filled with young Caucasian males. One reason for this is that most teachers are themselves white and male. For the most part, it will take minority teachers who will attract minority students. Focused recruitment in high schools is another possible approach to end this imbalance. The best suited participant in a new media arts program would be self-motivated, would present independence of thought, and an interest in programming and cultural theory. She should have a degree of cultural competence, openness, and curiosity and be at least partially invested in teamwork.

Teach-yourself-education

32 In the Paris of 1968 a student uprising started that lead to general strike, and the occupation of universities, and libraries. At the same time George Maciunas designed Fluxus charts that argued for an experimental educational laboratory, student-run seminars, and an optional non-degree program for independent study. The United States witnessed massive university dropouts not much later. Today, in the context of state budget cuts self-organised DIY educational projects such as the Commune des Arts, Freie Klasse and School for Missing Studies offer inspiring approaches. The Munich-based art historian, journalist, and artist Stefan Römer describes the Commune des Arts as non-hierarchical, self-organised by participants with a commitment to social engagement, no curriculum or formal instruction, and no emphasis on the production of objects. While the base budget is covered by the German state, participants raise money for projects in collaboration with museums, libraries, universities, and agencies.

33 In the same trajectory, in Freie Klasse (free class) in Vienna and Berlin, participants are students enrolled in the academy and responsible for the content and collective organisational structures. The curriculum is based on artistic practice, reflection on the ability to act politically, and intensive study in contemporary art history and theory. The self-organisational pattern prepares them for a future that demands them to be self-motivated, discursive media artists and organisers. Participants learn to evaluate their own work and gain self-confidence. An assembly of students of the Freie Klasse decides about admissions. The danger, to which several European critics point, is that student-motivated, self-organised courses are seen by institutions as a way to decrease funding and delegate responsibility.

34 The School of Missing Studies [SMS] provides a flexible educational platform for international study and exchange on cultural issues related to the urban environment in cities marked by or currently undergoing political, social, and cultural transition. [15] SMS provides productive research and project opportunities for young professionals in architecture and art who are struggling with what is “missing” in their studies with regard to processes of local urban change.

35 The University of Openess (sic) is a framework in which individuals and organisations can pursue their shared interest in emerging forms of cultural production and critical reflection such as Unix, cartography, physical and collaborative research. [16]

Approaching teachnology

36 New media arts curriculum should be concept-driven rather than media-defined. In a time when the idea of craft skills is changing away to computer literacy, networking, and organisational skills, we should not focus on teaching technical skills alone. This kind of cybertriumphalism that leads to ‘an exclusive emphasis on software programs is extremely problematic as it leaves out the history of the tools we use, the politics of these very machines and the all permeating social context’ says Amy Alexander who is faculty at the Department of Visual Arts, University of California at San

Diego. 'The pure application of software programs creates the most boring people…' thinks John Hopkins, University of Colorado at Boulder '… It's like amateur photo-club members comparing the length of their telephoto lenses' (in Lovink: 169).

37 I advocate for an educational project that avoids both technophobia and technophilia. New media cultures should be demonstrated as part of our culture that don't come out of the computational blue. They should be demonstrated in their social context and not as an escape from it. This idea locates itself in the tradition of the Black Mountain College that had at its core the idea that education needs to be consistent inside and outside of the classroom. In My First Recession Lovink points to Simon Penny who argued for a transition from a technical to a cultural agenda. This takes into account that increasingly cultural practices drive technical developments. The Sydney-based media philosopher Anna Munster argues that the notion that art can be defined according to the medium through which it is realised stands firmly within the discourse of modernism. She refers to Clement Greenberg who argued that what was unique to a particular art coincided with what was unique about the medium it deployed. 'The concentration on technology per se, whether it features as part of the content, the development of a kind of digital style or the emphasis on computational processes, thus draws so much of this "cutting edge" digital artwork back within the discourse of modernism. The machines are not reducible to a set of technical parameters nor can the digital be considered solely in terms of the formal qualities. The content and ideas expressed through digital art should be addressed over and above the technology that supports them.' [17]

The knowledge commons and tools for cooperative learning

38 For those teaching in new media departments it seems especially obvious and logical to use available networked communication tools. Over the last few years the term 'tool' for these software applications became widely used in academia. Currently, there is an explosive growth of a variety of new web-based tools for collaborative cultural practices. How do contemporary forms of cultural production make use of newly available collaborative applications to subvert corporate models of forced cooperation and foster self-organised, independent modes of cultural production and dissemination? Collaboration means, to work together to achieve the same goal that we could not achieve as individuals, to contribute to something larger than themselves. Cooperation suggests that people assist each other.

39 While the cost for education is on the increase, independent networks and online environments provide free parallel projects. Students devise situations of learning for themselves that escape rigidities and inadequacies. Over the past number of years, technologies such as web cams (ie. polycom or iSight), iChat, internet Relay Chat (IRC), Instant Messaging (IM) and video streaming became widely used in teaching. According to educators who experiment within this area, video streaming and video conferencing technologies work best when used in between universities in the United States. When working internationally often technical problems occur. I can attest to this from collaborations with student groups in South Africa, Germany, and Israel.

40 Natalie Jeremijenko, artist, engineer and faculty at the University at California at San Diego, states in an email interview that it is 'the main challenge to teach the use of web-based resources, not for convenience, but for restructuring of participation, and for engaging students in the primary role of the academy: to produce, underwrite and validate the information commons.' [18]

41 The software designer and media theorist Warren Sack of the University of California at Santa Cruz wrote in an email interview that in the last year, since the advent of the Apple's iSight he began to invite colleagues from the east coast and Europe to 'attend' the end-of-the semester critiques. 'This worked surprisingly well: students get one-on-one, or two-on-one crits with the virtual visitors via two-way web cam.' For Sack, iSight is the first web cam that 'works well enough to support this kind of extended, distributed dialogue.' He thinks it would be interesting to extend this practice so that all of us across the country (and beyond) teaching these kinds of classes might become regular visitors to each others' studios.

42 Online businesses such as Friendster or LinkedIn offer many-to-many communications systems (multi-participant virtual worlds) and forums for interaction, which are already used by students outside of the classroom. Such electronic environments are new pedagogical spaces which can further educational goals. In Smart Mobs Howard Rheingold advanced the idea that many-to-many venues are not only a new form of communication but a potential revolution in social organisation

based on 'communities of shared interest' (Rheingold: 157). Free textbooks, for example, are put online at Wikibooks and many complimentary texts can be found at the Gutenberg Project. MITOpenCourseWare is a free and open educational resource for faculty, students, and self-learners around the world. [19] The project Opentheory applies ideas of free software to the development of texts as users of the site improve on each other's text submissions. [20] Wikiversity facilitates learning through the Wiki-real-time logging format. [21] A Wiki is a type of server application that allows people to create and edit web page content using web browsers. Wiki supports an open editing approach in which users can modify the organisation of contributions in addition to the content itself. The open submission online encyclopedia Wikipedia will eventually become more comprehensive than traditional encyclopedias. Here chunks of content can be searched for in new kinds of micro-content "browsers" enabling new kinds of navigation and browsing. Despite the fact that these tools were welcomed with hyped enthusiasm and are fairly easy to use, many still find it too much of a burden to give these tools a try in their daily life.

43 Nevertheless, the aforementioned open content formats introduce a new production paradigm, offering editorial opportunities and a potential for broad participation in the knowledge commons- from collection, and re-combination, to the distribution of knowledge. In my opinion, these tools will succeed alongside face-to-face meetings. This necessity is underlined by the research of the University of Toronto sociologist Barry Wellman who shows that apart from online communication, people maintain their geographically diverse social network through email, as well as telephone, cars, train, air travel, face-to-face meetings and letters.

Education goes Open Source

44 Computer-based teaching demands introduces an overhead of required upgrades, equipment, and technical and administrative support. New media departments could immediately cut the escalating and (pointless) IT costs by moving away from spiraling license costs and move to Linux and Open Source software. It is no magic pixie dust installed by midnight elves as there are still costs relating to maintenance, services, and training. However, these costs are investments in our own intellectual assets. Linux and the use of Free Software allows schools and universities to become independent from the dominance of global economic players such as Microsoft and Apple. The Open Source technologies that have evolved over the past years now offer Linux, Apache, mysql, python, perl and php– to name just a few. Largely useful applications include Openoffice and Gimp. [22, 23] Open source refers to source code of software that can be read on the internet, modified and re-distributed: it evolves. Free Software are several kinds of software that can be legally copied and given free of charge to other users (you should think of "free speech," not "free beer"). Linux is a freely distributed operating system for PCs and a number of other processors. The use of Free Software allows for the education of wider groups of people and gives an opportunity for students to install the software that they use in the university also at home, at no charge. To switch to Linux and Open Source software courses is a concrete goal that should be considered by new media departments. Rather than constantly lagging behind industry standards and paying for updates this will give students a set of skills that they can bring to the local business that may employ them. This, of course, is a difficult negotiation with students who may come to the university with expectations to learn proprietary software. In a recent email interview Ralf Homann, artist and professor at Bauhaus University, Weimar stated: 'We use software to organise group work, to set up collaborations. We try to use Open Source software for all applications but it is not always possible. We can't ignore the fact that we educate students for their professional future, and if outside the university there is no professional application of Open Source, then we can't teach it inside the university either' (in Scholz, 2004). However, there is rapid movement to Linux and Open Source. The French government announced its switch to Open Source and the city of Munich (Germany) did the same. In North America, The University at Buffalo passed a resolution to move to open source. [24]

The uneasy connection between theory and practice

45 Many in the programming communities are distrustful of the humanities because, in their view, they have little to contribute to their field. Computer Science and Informatics departments may not even be aware of humanities or other technology departments on their own campus. In my

experience American undergraduate students find it often challenging to overcome the initial hindrances that are needed to make discourse vivid and engaging. But despite widespread misconceptions knowledge is nothing innate, nothing we are born with or which we inherited. In the United States undergraduate students often find it challenging to overcome the obstacles to make discourse vivid and engaging. The widespread delegitimisation of reading and print culture maybe at the heart of this problem. It also can be traced back to a popular culture that glorifies triviality and mindlessness. On the other hand faculty needs to resonate with students, pick them up from where they are — conditioned, in part, by reality TV, consumer culture, and first person shooter games. This is also the theatre into which theory is introduced. That is why entertainment is a valid part of the performance of theory in the classroom.

46 > Wouldn't it be wonderful to see a dance piece where in the first half dancers danced, and in the second they would show the audience how to dance? Augusto Boal, from Games for Actors and Non-Actors

47 Augusto Boal's exercises for non-actors such as "ideological warm-up" could be used to perform theory in a way, which physically engages student's bodies. This involves the staged reading of articles.

48 Once beyond the certainty of technical instruction new media arts educators on many campuses experience a crisis due to the unbearable lightness of their topical orientation. What should be read in a new media context that (luckily) does not have much of an established canon? To the theorists like Michel Foucault, Paul Virilio, Vannevar Bush and Jacques Derrida, we can add, for example, the rich collection that Noah Wardip-Fruin and Nick Montfort's New Media Reader offers. Readings should be socially relevant and need to have meaning outside the institution in which they are taught. Once beyond the certainty of technical instruction new media arts educators on many campuses experience a crisis due to the unbearable lightness of their topical orientation. I will give here a few thematic suggestions in the form of keywords, which can, of course, only be spotty hints guiding relevant discourses.

49 The merging of theory and production is not easily implemented in the classroom. The practice of writing curriculum in this field is quite similar to pursuing an event-based cultural practice. One is prompted to find sources and make connections to other institutions, peers teaching in the same fields, linkages between discourses in emerging media, film, activism, and pedagogy. What do we hope to teach? What are we unable to teach? Can art be taught? What is the relationship between teaching art and student "success?" Anna Harding, former director of the curatorial program at Goldsmiths College in London, points to these questions. First and foremost education in critical new media culture should focus on educating artists. Whether their preferred media are digital or not.

50 There is a difficulty in finding faculty that is equally discursive and technically advanced, artists who have in-depth knowledge of theory and programming for example. Web-based open content tools, which enable the sharing of resources are one step to finding adequate responses to this. Co-teaching is another possibility. In any case, teachers need to constantly learn, and build on their own technical and theoretical skills.

The Distributed Learning Project

51 Dedicated new media arts educators have to work harder than many of their colleagues in other departments due to the fast-paced changes in the field. Instructors spend much time looking for relevant texts, art works that use specific technologies, and good technical tutorials. They spend days searching the web for each others syllabi and often re-invent the wheel. For these reasons Tom Leonhardt and I developed The Distributed Learning Project, DLP. [25] It is a situated tool for learning communities to create, find, edit, re-use and share content in new media. The DLP is a web-based, collaborative, educational project that is accessible twenty-four hours seven days a week for anyone with an internet connection. It is an experimental network supporting collective research in new media. It links knowledge from the audio sound lab, the non-profit organisation, the new media art studio, the independent media initiative, the small new media company, cultural new media organisations, the design studio, the club scene and the many departments and disciplines within universities internationally.

52

This easy to use tool for teaching and research interconnects chunks of knowledge from different departments, disciplines, universities, cultures and professions to aid new media arts education.

53 The DLP cohesively links blocks of knowledge from fields of inquiry as diverse as conceptual art, film, literature, computer science, political science, social science and cultural theory. We may ask: How did ideas in literature or music relate to or precede notions in programming? Modules about loops in programming may link to others on John Cage, Steve Reich or an entry about expanded cinema. The DLP encourages free distribution of research materials. Sharing research saves time, resources and improves teaching. The DLP offers up-to-date, real-time available resources needed in a fast changing field. The DLP questions the creation of curriculum as lone cowboy in a university lab – it is an alternative to traditional modes of teaching. It challenges the way knowledge is created, developed, and distributed to a public. The project enables inter-authorship. Rather than the single-author-to-one-text relationship here collaborative inter-authorship appears within groups of researchers, industry professionals, students, media critics, VJs, media artists, musicians, and educators.

54 Cross-connections within the DLP are enabled when the content in two modules is similar. Words within the module link the participant to relevant other modules based on topic maps and connections made through the semantic web. [26, 27] The DLP offers an area in which participants can assemble modules for use in class, focal points for disseminating research such as lectures, annotated presentations and more. Semantic associations enable cross-disciplinarity in the creation of syllabi. Courses, lecture series or research material can be aggregated in the project stage of this web-based application. The project's approach actively encourages Open Source software and open content. [28]

55 The DLP is the first project of the Institute for Distributed Creativity that I founded in May 2004. The research of the Institute for Distributed Creativity (iDC) focuses on collaboration in media art, technology, and theory with an emphasis on social contexts. [29] In the spring of 2005 the iDC will start a series of events and web cam luncheons about issues in new media arts education. [30]

56 Educational concepts from the Bauhaus to Paulo Freire's notions of informal, non-hierarchical teaching and proposals for new collaborative models by contemporary media critics like Christoph Spehr should be introduced into the practice of critical new media arts pedagogy. The Free Cooperation conference was one of the venues in which the discussion about education in new media culture started. We should protect the discomfort we feel with our situation. We should insist on the University as a framework for critical activity, production of knowledge, negotiation, experiments, failure, and possibilities of refusal. Many discussions hopefully will follow. How can we invent our own future? We need more independent learning projects that orient themselves towards radically new configurations of communities based on sharing and cooperation.

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https://molodiez.org

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Notes

[1] The networks, art, and collaboration conference, a.k.a. Free Cooperation conference, took place in April 2004 at the Department of Media Study, The State University of New York at Buffalo. The conference was organised by Trebor Scholz (New York/ Buffalo) and Geert Lovink (Brisbane/ Amsterdam), assisted (in more-or-less-free-cooperation) by Dorothee Gestrich (now Banff Centre) and Orkan Telhan (Ankara/ Buffalo), Tom Leonhardt (Toronto/ Buffalo) and Arzu Telhan (Ankara/ Buffalo). https://freecooperation.org

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[2] Weblog: a weblog, or simply a blog, is a web application, which contains periodic, reverse chronologically ordered posts on a common webpage. Such a Web site would typically be

accessible to any internet user. Part of the reason “blog” was coined and commonly accepted into use is the fact that in saying “blog,” confusion with server log is avoided. https://en.wikipedia.org/wiki/Weblog

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[3] Wiki: A Wiki or wiki (pronounced “wicky” or “weeky” or “viki”) is a website (or other hypertext document collection) that allows any user to add content, as on an internet forum, but also allows that content to be edited by any other user. The term can also refer to the collaborative software used to create such a website. https://en.wikipedia.org/wiki/WikiWiki

[4] ActiveCampus: The ActiveCampus project aims to provide location-based services for educational networks and understand how such systems are used. activeclass enables collaboration between students and professors by serving as a visual moderator for classroom interaction. ActiveCampus Explorer uses a person’s context, like location, to help engage them in campus life. ActiveCampus– explorations in community-oriented ubiquitous computing. https://activecampus.ucsd.edu/

Also see: Active Class: https://activecampus.ucsd.edu/info/activeclass/ActiveClassIntroduction.htm

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[5] The film Sky Captain and the World of Tomorrow (2004) uses extremely developed accreditation. In the credits of the film even the most minor contribution is listed, something that was not the case ten years ago.

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[6] The notion of the third body was developed by Charles Green in his book The Third Hand. There the third body emerges out of true collaboration.

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[7] Access Grid: the Access Grid is an ensemble of resources including multimedia large-format displays, presentation and interactive environments, and interfaces to support group-to-group interactions across the Grid. The AccessGrid Project: https://accessgrid.org

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[8] WiFi.Bedouin: WiFi.Bedouin is a wearable, mobile 802.11b node disconnected from the global internet. See TechKwonDo. TechKwonDo__WiFiBedouin. (2004) Available: https://www.techkwondo.com/projects/bedouin/

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[9] For these responses, see: https://www.discordia.us/scoop/story/2003/10/6/0332/15602

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[10] Email interview with Amy Alexander, August 2004.

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[11] The fact that many artists in Nordic countries can make a living off state grants is not statistical but anecdotal knowledge drawn from many conversations with artists from Finland, Denmark, and Sweden.

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[12] Social software is any software that supports group communications. The dynamics of social software are significantly different from traditional interactions. https://en.wikipedia.org/wiki/Social_software

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[13] HowStuffisMade is an encyclopedia of manufacturing processes and labor conditions involved in the production of contemporary products. This information is often hard to obtain and little of this material exists on the web. The encyclopedia is an independent academic web-based Twiki publication that uses primarily visual documentation. The entries are summative (short) photo essays produced primarily by students guided by faculty who ensure the standards of evidence. The project is set in contrast to the HowStuffisMade.com resource, which excludes any information on manufacturing and labor. For more discussion see: https://xdesign.eng.yale.edu/howstuffismade

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[14] Hypermedia Research Centre at Westminster University: https://www.hrc.wmin.ac.uk/

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[15] School of Missing Studies: https://www.schoolofmissingstudies.net/

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[16] University of Openess: https://twenteenthcentury.com/uo/index.php/AboutUo

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[17] Email interview with Anna Munster, August 2004.

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[18] Email interview with Natalie Jeremijenko, August 2004.

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[19] MitOpenCourseWare: MIT's OpenCourseWare is a free and open educational resource for faculty, students, and self-learners around the world. OCW supports MIT's mission to advance knowledge and education, and serve the world in the 21st century: https://ocw.mit.edu/index.html

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[20] Opentheory (in German): https://opentheory.org

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[21] Wikiversity: Wikiversity, a free, open learning environment and research community. Online courses are being created as a form of co-operative and interactive exchange of knowledge.https://wikiversity.org

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[22] OpenOffice: OpenOffice's mission is to create, as a community, the leading international office suite that will run on all major platforms and provide access to all functionality and data through open-component based APIs and an XML-based file format. https://OpenOffice.org

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[23] Gimp: Gimp is the open source equivalent of Photoshop: https://gimp.org

[24] 'France goes open': https://www.teledyn.com/node/500 ... 'Munich goes with Open Source Software' 'The city council of Munich, Germany, announced that they plan to move 14,000 PCs and 16,000 users from Windows to Linux, in a move to make Linux their standard desktop operating system environment'

(https://www.desktoplinux.com/news/NS3199247984.html) ... 'University of Buffalo faculty goes for open source': https://www.canopener.ca/article.php?story=98

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[25] Distributed Learning Project (Trebor Scholz, Tom Leonhardt): Through topic maps and the semantic web the DLP cohesively links blocks of knowledge from fields of inquiry as diverse as art history (ie. conceptual art), film, literature, political science, social sciences or cultural theory. How did ideas in these areas precede, inspire or parallel developments in programming for the arts or machine culture in general? How do these works relate chronologically to each other? The DLP is a knowledge network aiding research and teaching in the fields of new media art, cultural theory, and programming in their social context.

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[26] Topic Maps: Topic maps address the information overload that we are faced with. Book indexes basically perform a similar function. Topic Maps are the online equivalent of printed indexes– they are made up of multiple links. Knowledge is described and associated in more complex ways. Topics are grouped in classes of topic types. Topics maps are about optimisation of navigation. They are "connection hubs" between the modules. Information is accessed through a semantically associated list terms that offers all entries that semantically relate to the search term (for example "employment" would be associated with "employee" and "employer". This method is more effective than the alphabetical arrangement of keywords. This is made possible by XML technology. The navigation allows you to visualise connections between concepts, code, theory, and art. Module A module is a self-contained component of a system, which has a well-defined

interface to the other components; something is modular if it is constructed so as to facilitate easy assembly, flexible arrangement, and/or repair of the components. We refer to modules here as knowledge chunks.

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[27] Semantic Web: The Semantic Web is a project that intends to create a universal medium for information exchange by giving meaning, in a manner understandable by machines, to the content of documents on the Web. Currently under the direction of its creator, Tim Berners-Lee of the World Wide Web Consortium, the Semantic Web extends the ability of the World Wide Web through the use of standards, markup languages and related processing tools: https://www.semanticweb.org/

[28] For an introduction to open content debates see Stalder and Wark.

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[29] Institute for Distributed Creativity (iDC): The research of the Institute for Distributed Creativity (iDC) focuses on collaboration in media art, technology, and theory with an emphasis on social contexts. The iDC, founded by Trebor Scholz in May 2004, is an international network with a participatory and flexible institutional structure that combines advanced creative production, research, events, and documentation. While the iDC makes appropriate use of emerging low-cost and free social software it balances these activities with regular face-to-face meetings: https://distributedcreativity.org

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[30] See https://newmediaeducation.org

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