

Chapter 10

The Critical Challenge of Networked Learning: Using Information Technologies in the Service of Humanity

Peter McLaren and Petar Jandrić

Peter McLaren is one of the most prominent critical educators of today. Wikipedia calls him “one of the leading architects of critical pedagogy” (Wikipedia, 2014a, b). Shirley Steinberg calls him “a teacher of all teachers” (2005, p. xiii), Paulo Freire calls him an “intellectual relative” (Freire, 1995, p. x). Peter has audited courses with Michel Foucault and Umberto Eco, actively worked on the project of critical education with Paulo Freire, and more recently has been working in support of Venezuela’s Bolivarian revolution after meeting the late President Hugo Chavez in Miraflores Palace in 2006. He has authored and edited 45 books and hundreds of scholarly articles and chapters, and his writings have been translated into more than 20 languages. Peter has received numerous awards and several honorary doctorates. His work has inspired the foundation for several institutions, including *Instituto McLaren de Pedagogía Crítica* in Mexico and *La Cátedra Peter McLaren* at the *Bolivarian University* in Caracas. Peter actively blends his academic engagement with political activism.

As a fresh graduate of English literature, Peter spent 5 years as elementary teacher in suburban Toronto housing projects. In 1980, he wrote one of Canada’s top-selling nonfiction books of the year *Cries from the Corridor*—later on, he was to expand it into the classic textbook of critical education, *Life in Schools: An Introduction to Critical Pedagogy in the Foundations of Education* (2014). After this success, he decided to leave elementary teaching and pursue an academic

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career. Peter took his Ph.D. in education in Canada. After unsuccessful attempts at finding a university professorship in his native Canada, Peter moved to the USA where he worked with Henry Giroux at *Miami University's School of Education and Allied Professions* for the next 8 years. Finally, Peter settled at the *Graduate School of Education and Information Studies* at *University of California, Los Angeles*, where he worked for 20 years before moving to *Chapman University's College of Educational Studies* in 2014, where he is Distinguished Professor in Critical Studies and Co-director of the *Paulo Freire Democratic Project* where he also serves as International Ambassador for Global Ethics and Social Justice.

In this conversation, Peter's ideas about the wide spectrum of questions concerning the relationships between critical revolutionary pedagogy and virtuality are collected and challenged by a colleague from the other part of the world. Petar Jandrić is an educator, researcher, and activist. He authored two books, several dozens of scholarly articles and chapters, and numerous popular articles. Petar's books have been translated into English and Serbian. He regularly participates in national and international networked learning projects and policy initiatives. Petar worked at *Croatian Academic and Research Network*, the *University of Edinburgh*, *Glasgow School of Art*, and the *University of East London*. At present, he works as a senior lecturer at the *Polytechnic of Zagreb*.

Petar's first love was physics. However, his infatuation with mathematical descriptions of human reality was soon pushed aside by a growing interest in sociology and philosophy. During his studies at *Moray House School of Education* at the *University of Edinburgh*, Petar was introduced to critical pedagogy. Finally, he reconciled those interests at the intersections between technologies, pedagogies, and the society. In order to find its place under the sun, Petar's research took up the official label of "information and communication science." However, he strongly rejects borders between traditional academic disciplines and believes that, while our research methods may still be grounded locally, "our eyes should be directed high into the blue skies of a unified explanatory framework for education and technologies" (Jandrić, 2014a, p. 168).

Critical Learning in Digital Networks

Petar Jandrić: Peter, it is a great pleasure to engage in this conversation with you. Back in 2011, when we first met at *The First International Conference on Critical Education* in Athens, we immediately agreed that education and virtuality live in a contested love-hate relationship. There is no doubt that information and communication technologies can be used as powerful means to good ends. More often than not, however, their educational implementations aim directly opposite: as excuses for commodification, market orientation, McDonaldisation, and other evils produced by global neoliberal capitalism. A years later, we met at another conference and arrived to the conclusion that our discussions regarding critical education and technologies might benefit from a more structured approach. Therefore, we decided

to produce a written account of our conversations, which was completed through a vivid exchange of e-mails between 2012 and 2014.

Please allow me to kick off the discussion with a brief journey into the recent past. During the 1970s, the relationships between technologies, education, and society attracted a combination of positive curiosity and awe from important critical theorists such as Ivan Illich (1971, 1973) and Everett Reimer (1971). Kahn and Kellner situate economic development through technological modernization processes as the “fourth major platform of the Freirean program”—alongside literacy, radical democracy, and critical consciousness (2007, p. 434). Back in 2000, you wrote:

The globalization of capital, the move toward post-Fordist economic arrangements of flexible specialization, and the consolidation of neoliberal educational policies demand not only a vigorous and ongoing engagement with Freire’s work, but also a reinvention of Freire in the context of current debates over information technologies and learning, global economic restructuring, and the effort to develop new modes of revolutionary struggle. (2000, p. 15)

Thirteen years later, do you think that information and communication technologies are adequately represented in the contemporary discourse of critical education? More generally, what are the basic prerequisites for reinvention of critical education in the context of information and communication technologies?

Peter McLaren: I wouldn’t describe capitalism in the same post-Fordist language today, preferring the concept by David Harvey of “accumulation by dispossession” and Marxist analyses of finance capitalism and the transnational capitalist class and transnational capitalist state by William I. Robinson. Schooling in most Western countries has been successful to the extent that it has refused to examine itself outside of the hive of capitalist ideology and its cloistered elitism and cold calculus of exploitation—its precepts, concepts, its epistemicides, and its various literacies of power through which ideas become slurred over time and actions on their behalf are guaranteed to remain as dissipated as a roistering fisherman lost at sea. It has accepted the fact that answers will remain predesigned before questions can even be formulated. The vision of democracy is inevitably preformed and must be engraved on the minds of its citizens through ideological state apparatuses such as schools (Althusser, 2008). As long as the ideas of the ruling class rule us, and they can certainly rule us with the help of new information technologies, we will be hapless apprentices to the anguish of the oppressed, and ideas will be guaranteed to remain vacant, hidden in a thicket of “feel-good” bourgeois aesthetics whose complicity with inequality bulks as large as its opposition to it, making it an appropriate ideological form for late capitalist society. Such ideas will be guaranteed not to transgress the “comfort zone” of those who tenaciously cling to the belief that with hard work and a steel-tempered will, we will reap the rewards of the American Dream—regardless our geographical location. The question for me is, therefore, what role do the new information technologies play in critical education? Do they enhance the mystification and control of dominant Western culture and its ruling factions or do they enable us to further penetrate such mystification and take action that is both necessary and sufficient to create a different kind of society—a socialist society that is not based on labor’s value form?

I don't think that this question has been sufficiently addressed by critical educators. I believe that with a focused imagination, and the courage to suspend at least temporarily our faith in all that we hold dearly as immutable fact, that we can come to see how we see, that we can come to understand how we understand, that we can come to experience how we experience. That we can come to realize that our experiences are not transparent, they are not self-evident, and that they are, in fact, the effects of a constellation of economic, political, and social relationships. We read the world conjuncturally, and relationally, and according to the lexicons that are available to us and which we fight to make available, critical vernaculars and systems of intelligibility that have been stamped with the imprimatur of sociability and consent and those that have been deemed oppositional and counter-hegemonic/contestatory/revolutionary. But with a critical lexicon, borne in blood-soaked struggles by those who have over centuries fought against the forces of domination and exploitation through poetry, art, philosophy, literature, politics, science, technology, and a search for justice and equality, we can envision and create a new world. And finally, we can see those things which interdict a learner's ability to read the word and the world critically (Freire, 2000). The fulcrum of our exigency is cultivating critical consciousness and a categorical obligation to treat others as ends in themselves and not as a means to something else. Can the new information technologies help us to read the word and the world more critically? Can they become one of the new critical lexicons that can assist the current generation in creating a world less infused with the injustices that are evident everywhere that we look?

As Zygmunt Bauman (2007, 2012) and others have argued, vulnerability and uncertainty is the foundation of all political power. The protective functions of the state were once directed towards mitigating the extent that citizens were at the mercy of the vulnerability and uncertainty of the market but in the era of asset capitalism those protections for the unemployable were brutally rescinded by Thatcher and Reagan as the welfare state was systematically dismantled. Government restraints upon market forces and business activities were removed. The market regained its omniscience. Market generated insecurity which the state could no longer shield its citizens against had to be replaced by something more ominous—the zombies of the underclass—those who were not able to participate in the market. Into incarceration, the school-to-prison pipeline, or shot on the streets by policemen recruited into highly militarized law enforcement agencies. Entrenched and indomitable structures of privilege and power were no longer acknowledged as the poor and powerless were now held responsible for their own immiseration. They were no longer to be protected but instead had to be criminalized for the sake of order-building. Those who were unable to participate successfully in the market were held responsible for their own failure instead of being benevolently assisted as personalized solutions were now expected to challenge the systemic contradictions of the capitalist marketplace. The uncomplaisant and increasingly belligerent state had to augment the insecurity of the market by intensifying it, transferring its legitimacy to its ability to protect the public from terrorists through preemptive wars and drone assassinations, etc. and a profligacy of heinous acts justified as protecting its citizenry and its interests. Any state devoted to abolishing terror must itself inspire terror and in fact become more

terrifying that the terrorists whom it purports to be fighting. However, this crisis has been able to demonstrate to many that egalitarian justice can only be achieved against capitalism, that justice for all cannot be achieved within the framework of a capitalist market economy. For me, the question is—do new information and communication technologies help us or hinder us (or both) in our search for a democratic socialist world outside of the value form of labor?

P.J.: For some people, the Internet has brought dematerialization and deterritorialization of labor—for instance, I am writing this text on a beautiful terrace overlooking the Adriatic Sea in ancient Croatian city of Split—while you are, as my Facebook suggests this morning, just about to give keynote talk in Ensenada, Mexico. However, while the Internet provides us—two white male university teachers—with the opportunity to share ideas from restaurants and cafes throughout the world, people who serve our coffees and lunches (who, by the way, also make the majority of contemporary workforce) are still strongly tied to their kitchens and dining halls. Indeed, Peter, it is really hard not to notice strong ties between technology-driven changes in structure of employment and traditional sources of inequality including but not limited to class, race, and gender.

Similarly, the dominating discourse of e-learning does not seem to offer its main promise in increased quality, or personalized content, or creating virtual communities, or whatever information and communication technologies could actually contribute to critical education (in most cases, the contested notion of “quality” is nothing but a smokescreen for marketization of education). Instead, e-learning is usually advertised as “flexible,” “suitable for various lifestyles,” and “independent of time and space.” Given that the majority of e-learners are still white and well-off—at least those enrolled in official accredited programs—it is just as hard not to notice traditional sources of inequality (Jandrić & Boras, 2012). However, let us take one step at a time. What are the leading ideas behind educational changes driven by contemporary information and communication technologies? Which gospel do they preach?

P.M.: The USA is, with good reason, counting on technology to serve as an ideological weapon of death by soft power, death by a thousand cuts across the digitalized brain. For State Department officials and the Pentagon, technology serves as a form of high-tech imperialism, a means to reshape the world’s people geopolitically, to transform other populations and nations into likenesses of itself and these Washington warmongers turned imperial geeks who control the world’s informational supply chain get themselves into a state of abject bewilderment when some of those peoples (usually those with darker complexions) refuse to take on the values and practices of the world’s dominant superpower. The mind-makeover that technology has given us is really death by digital lobotomy because what consumer technology has done has removed the imagination and replaced it with the artificial dreamscape of Google-run-trend analysis—social network profiled—consumer fantasies and heralded it as open democracy. It has firewalled the self, interposing technologies of surveillance between “us” and “them” attempting to turn “them” into “us.” It has replaced the struggle for critical citizenship with consumer

citizenship and rebranded it as “progress” and, furthermore, labeled any of the world’s refuseniks of the American vision of world government as potential terrorists.

Here, I am modifying somewhat Tony Smith’s four positions in the globalization debate: the Social-State, Neoliberal, Catalytic-State, Democratic-Cosmopolitan, and Marxist models of globalization (Smith, 2009). However, I am not arguing, as Smith does, that a market socialism is the way to go, since I have my doubts about whether the market can be democratized. Those that cannot be integrated into the economy, those who have neither the opportunity nor the means to sell their labor power nor to distribute knowledge, those who are permanently excluded from participation in the market and deemed redundant, are criminalized and made productive in the privatized prison system, becoming the guinea pigs for state experiments on spatial and racial apartheid, and technologies of discipline, control, and punishment, preparing the future for totalitarian regimes of which there will be no escape because they will be premised on epistemicide, the destruction of alternative languages of being and becoming the forced disappearance of indigenous ecologies of the mind. There will be no space outside the “what is.” There will be no subjunctive mode of consciousness, no “what if?” There will only be the past of the future of the past – that which “will be” will already have come “to pass.” We will all be living with an ideological version of Moebius syndrome.

The key concern for me is the monopoly–oligopoly control of the mass media through the ownership of the means of communication. Those who own the means of communication are obviously associated with other powerful interest groups that are linked to banks and investment firms, hedge funds, etc. Has the mass media ever sided with labor over capital, with the poor over the rich, with the popular majorities over the banks in any major way? The corporate media dominate the flow and access of information, and select what is viewed by the public and in what light. Have you ever seen the corporate media critique capitalism or the “free market?” Critical pedagogy provides a countervailing power of ideological critique and class-based organization and struggle. That’s what we need for the struggle ahead for a socialist alternative to capitalism. When the term “robot” entered the English language a few years after the release of Czech playwright, Karel Čapek’s *R.U.R. (Rosumovi Univerzální Roboti or Rossum’s Universal Robots)* in 1920, a fear was spawned that humans would become the servants of artificial intelligence. That fear was not unfounded.

P.J.: At the end of the day, obviously, what matters most is who owns the technology. However, Peter, ownership can take various forms. For instance, animal lovers know very well that cats and dogs relate with their human “owners” in very different ways—and those differences are built into the very nature of their species. Information and communication technologies are significantly different from their analog predecessors. In one of my favorite descriptions of the dialectical relationships between information and communication technologies and the network society, Manuel Castells asserts that

The Internet is the fabric of our lives. If information technology is the present-day equivalent of electricity in the industrial era, in our age the Internet could both be linked to the

electrical grid and the electric engine because of its ability to distribute the power of information throughout the entire realm of human activity. (2001, p. 1)

On that basis, it seems reasonable to ask: What happens to ownership over technologies during the transition from the mass society to the network society? How does it relate to wider issues such as democracy, global economy, and the concept of the state?

P.M.: We have clearly entered into a knowledge-based society and are the unwilling servants of a knowledge-based economy. The free flow of information has certainly been hijacked by neoliberal capitalism in its development of informational restructuring of capital. There is a distinct concentration of corporate power and much of this is related, obviously, to the growth of Internet access and informatics. But, as Julian Assange put it recently: “The Internet, our greatest tool of emancipation, has been transformed into the most dangerous facilitator of totalitarianism we have ever seen” (Assange, Appelbaum, Müller-Maguhn, & Zimmermann, 2012, p. 1).

In *Cypherpunks: Freedom and the Future of the Internet* (Assange et al., 2012) described as a series of interview transcripts originally broadcast on Russian state-controlled TV channel RT, Assange puts forward an unambiguous—and I dare say poetic—indictment of government and corporate surveillance, anti-file sharing legislation and the social media phenomenon that has seen users willingly collaborate with sites such as *Google*, *Facebook*, and *Twitter* who wish to collect their personal data. Assange famously described the Internet as similar to “having a tank in your bedroom” (Assange et al., 2012, p. 33), and wrote that a mobile phone serves merely as a “tracking device that also makes calls” (Assange et al., 2012, p. 49). To me that sounded like early critics of television who said that television programs are just filler for the advertisements (which is essentially true today, perhaps even more so than in the past). Assange continues with the ominous prediction that “the universality of the Internet will merge global humanity into one giant grid of mass surveillance and mass control” (Assange et al., 2012, p. 6). Resistance must therefore include encrypting your online activity, so that it will be possible to create an information network that the state will not be able to decipher.

I am in agreement with Assange, essentially, that we are moving very quickly towards a transnational dystopia, in particular, a postmodern surveillance dystopia. Initially Assange was hopeful “that the nature of states, which are defined by how people exchange information, economic value, and force, would also change” (Assange et al., 2012, p. 2). There certainly was, at the dawn of the information society, the possibility that “the merger between existing state structures and the Internet created an opening to change the nature of states” (Assange et al., 2012, p. 2). That is, there appeared for a short time the possibility of rebuilding the state from the bottom up through the use of information technologies which would help to produce more participatory and direct forms of democracy.

Assange is clear about the violence brewing just below the surface of the state. He notes: “Most of the time we are not even aware of how close to violence we are, because we all grant concessions to avoid it. Like sailors smelling the breeze, we rarely contemplate how our surface world is propped up from below by darkness” (Assange et al., 2012, p. 3). He juxtaposes the platonic realm of the Internet to the

fascist designs of the state—designs given force by the seizure of the physical infrastructure that makes the global Internet culture possible—fiber optic cables, satellites and their ground stations, computer servers. We are no longer safe within Plato’s cave. Everything produced inside the cave has been hijacked, stored in secret warehouses the size of small cities, and freighted by a cornucopia of codes and security firewalls vomited up by computer geeks who watch *Revenge of the Nerds* and *American Pie* in their spare time. Creating a frightening imbalance of power between computer users and those that have the power to sort through and control the information generated in networked world. The only force that Assange sees capable of saving democracy is the creation of a “cryptographic veil” to hide the location of our cybernetic platonic caves and to continue to use our knowledge to redefine the state.

So what are the costs of being part of social media networks? We give away our habits, our preferences, our demographics, our purchasing habits, and our cyber-history. Do we go the route of nanopayments—some kind of democratic remuneration for our intellectual and biometric property, for information we currently give away for free, in our attempt to remuneration create a humanistic and egalitarian information economy as Jaron Lanier suggests in his influential book *You are not a gadget* (2011), or do we take other forms of resistance?

So, I am certainly convinced that information technologies have certainly facilitated a global reorganization of the market, but to what ends? Markets have been reorganized but they still betray a global division of labor. Are we not still dealing with a relation of exploitation in which workers, separated from the means of production, are compelled to sell their living labor-power from which the capitalist extracts surplus value? And is not the laboring subject still the key protagonist force with the greatest potential to bring down capital?

P.J.: Obviously, technologies have positive and negative impacts to our everyday lives and the society at large. Before moving on to its positive aspects, could you please briefly examine the dark side of technology?

P.M.: Erica Etelson has recently published a wonderful short piece on the perils of technology that I like very much, perils that include economic crisis, war, pandemic disease, and ecological collapse. While clearly technology has helped to sustain seven billion people on our planet, it is unlikely to be able to do so for much longer, even with anticipated innovations. Her point, of course, is that “modern communication technologies may have reached a tipped point where what is authentically created and shared is overshadowed by market-driven, corporate-generated content that is sold or imposed” (2014). I think by her definition I might be considered a neo-Luddite—a tradesman or artisan engaged in class protest against “all Machinery hurtful to Commonality”—or what Etelson (2014) describes as “forms of mechanization that damaged people and uprooted communities by forcing skilled workers to become wage slaves in factories.”

Firstly, she argues forcefully that technology makes us less resilient, as we are “utterly dependent on the seamless functioning of a fabulously complex global superstructure with millions of impersonal moving parts, none of which most of us

have even passing acquaintance with.” To illustrate that point, she cites the history of the Arctic Ihalmiut who lost the ability to hunt with bow and arrow after they acquired rifles. Secondly, she also notes that as techno-literacy expands, eco-literacy contracts. The more tech-savvy we become, the more eco-ignorant we become, as we now know more and more about less and less. Etelson also argues that environmental degradation created by technology spawns hubris, as we prefer our techno-nannies to care for us over human community and solidarity. She argues that technology fuels hyper-consumption, as products become cheaper and it diverts our focus “from natural to human-made wonders.”

Thirdly, Etelson argues that “the wicked knot of inertia, corruption and hubris” in which we are inextricably trapped, which is part and parcel of our “techno-topian delusion” accelerates environmental ruin, resource depletion, and resource wars. We are at the cusp of the sixth mass extinction. Our nonrenewable resources are being depleted, atmospheric carbon is at the tipping point, and renewable resources like forests, aquifers, and fisheries are being stripped faster than they are being regenerated. World conflicts now center around natural gas, water, oil, minerals, metals, and food. Fourthly, she argues that technology carries very frightening risks. We can’t presume products are safe until proven harmful. Etelson uses the example of cell phones and Wi-Fi, widely adopted despite 75 % of non-industry sponsored studies that claim that cell phones damage our DNA. Brain cancer in children has increased 1 % a year for the past 20 years. If the cleaning up of Fukushima goes amiss (this kind of cleanup has never occurred before), the entire West Coast of the USA might have to be evacuated, not to mention what will happen in Japan itself. And then there is hydrofracking and the endless contamination of our water sources.

Fifthly, Etelson argues that technology often diminishes rather than enriches our quality of life. We turn to machines rather than to people. Etelson’s sixth point is that technology erodes our privacy—do we need to go further here than the revelations of Julian Assange and Edward Snowden? Seventh, technology deepens inequality. The US manufacturing worker productivity has increased more than eightfold since 1947, thanks to robotics, etc. But we haven’t seen higher wages for workers. Or shorter working hours. Corporations own 46 % of global wealth. Even if we had a democratic socialist utopia, Etelson argues that too much productivity—even if the profits were shared more equitably—would lead to more pollution. Technology-induced unemployment is a serious problem. It would take five planet earths to enable everyone to have the same standard of living that we have in North America.

We already have most of the technologies we need to live comfortably and we don’t need more unnecessary technologies. Etelson offers some strategies such as stripping corporations of constitutional personhood, replacing the Gross Domestic Product indicator with the Genuine Progress Indicator (which takes stock of the risk factors of technology) and she has some other suggestions, of course. But Petar, the situation is dire, our world is shattering, imploding, and crying out to us to stop!

P.J.: The question concerning technology inevitably brings us to the classic Marxist theme—the dichotomy between capital and labor—thus fully supporting your critique of postmodernism explored in the first part of this conversation

(McLaren & Jandrić, 2014). Having said that, let us not forget that traditional Marxism is also strongly based on substantive critique of technologies. Marx's attitudes towards technology are often generally outlined by the famous quote from *The Poverty of Philosophy—Answer to the Philosophy of Poverty by M. Proudhon*: “The windmill gives you society with the feudal lord; the steam mill, society with the industrial capitalist” (Marx, 1955). In order to reinvent his critique in the network society, therefore, it is reasonable to ask: What do information and communication technologies give us regarding the contemporary relationship between capital and labor?

P.M.: Capital's political command over labor-power is the central antagonism facing capitalist societies worldwide. I agree with some of the autonomist Marxists that capitalism does use technological renovation as a weapon to defeat the working class and that this certainly helps to explain capital's tendency to expand the proportion of dead or “constant” capital as against living or “variable” capital involved in the production process. The proliferation of information and communication technologies has to be understood in the context of the struggle between capital and labor. But capital still remains dependent on collective labor as the source of surplus value. So capitalism has to constantly reorganize itself through a recomposition of the state—today we find this as an inexorable push towards social fascism—and to recompose the workforce—whether under the umbrella of lifelong learning strategies, telecommunications, flexible labor policies, a growth of the service economy, and the criminalization of those who cannot complete in the workforce and then privatizing the prisons and turning them into sites of surplus value production.

Clearly, the world could be headed towards the type of informatics dystopia dominated by the guardians of the security state, as Assange notes. But that of course does not rule out entirely the use of information and communication technology to create sites of resistance and transformation. As technological innovation becomes a permanent feature of capitalist relations of production within the new network society, production becomes intensified around cultivating new consumers by producing “transhumans” with new needs, as countries in the global periphery are turned into a giant factory and others are turned into giant fortresses of consumption. Network society is trapped within structured inequalities and there is strong evidence that information and communication technology is further entrenching such structured inequality rather than abating it.

As long as capital governs technology (and not the other way around) in its attempts to commodify every niche of the lifeworld, technology will perilously serve as an instrument of converting all aspects of nature into commodity-form, and rupturing and turning into raw materials whatever planetary metabolism remains life-sustaining. The technoscientific agenda of capital is ominous and has resulted in epistemicide and the destruction of many indigenous approaches to the relationship between humans and planetary ecosystems. While there are efforts to create counter knowledge that take into account self-reflexivity and recursive interactions between nature and technology, how can they be de-linked from capitalist appropriation of social knowledge in all of its forms? Marx talked about the possibility of machines becoming organs of participation in nature. But capital will always hijack

this process which is why we need to create a social universe that is not ruled by the sovereignty of labor's value form.

The violently wielded dominative power of machine technology cannot be contested through the creation of a noncapitalist commonwealth based on democratic principles. We can't turn our intellectual activity into intellectual capital so that it becomes an appropriated commodity form by universities or other corporatized entities. The same with online teaching in virtual learning factories where what cannot be digitalized loses value and significance.

P.J.: What happens to human beings in the contemporary struggle between capital and labor?

P.M.: Petar, we have a responsibility for our personal role in history, and we need to know how it contributes, wittingly or unwittingly, to the oppression of the poor and the powerless. In our work we cannot romanticize the proletariat, and divide the world into some kind of brute, simplified Manichean divide—on the one side we have the good socialists and revolutionaries and on the other side we have the evil capitalists most of whom reside in the western democracies. Why? Because socialists and revolutionaries have woven into the tapestry of their subjectivity, their agency, capitalist desires. We are as contaminated by capitalism and imbued with the spirit of the bourgeoisie as much as the waters bathing the fuel rods from the storage pool at the Fukushima Daiichi nuclear power plant are saturated by radiation.

Revolutionaries can win by means of a seizure of power through protest—look what happened in Egypt, for example—but this is not enough since what often happens is that such an assault on power reproduces in greater proportions the logic of fascism and militarism that the revolution was intended to eliminate. Nor do I subscribe to the notion that before we engage in revolutionary struggle, we must undergo some kind of quasi-religious conversion to socialism, for that is merely a recipe for the indefinite postponement of the revolution. We are all accomplices to capitalism; we are bathed in the fetid and putrid waters of commercialism and imbibe the vapors of consumerism. Even if we are able to expropriate from the expropriators, what good will this do if we still are subjectively capital as Glenn Rikowski and others have noted? We have become capital! We are the enfleshment of capital!

We don't want to re-establish the bourgeois oppression we carry within ourselves, as both victim and victimizer. We must root out our desire for personal gain—founded on the illusion that we are guided by “self-interest” or personal gain—but that is not easy. What distinguishes us from self-interested animals is our obligation to serve others less fortunate, to treat all human beings as ends and not as a means for something else, to treat everyone with dignity. Witness so many revolutions that have turned into their opposite. This requires the development of a philosophy of praxis. Right now in the USA we are experiencing the slaying in cold blood of black men with impunity by the police. This to me cannot be resolved by simply examining our values or attitudes and trying to understand how racism is constructed by the media and throughout our everyday lives—although this is certainly an important task.

I want here to share some ideas summarized by the eminent sociologist William I. Robinson (2014). Robinson identifies three distinct types of racist structures—structures that scaffold relations between dominant and minority groups. He refers to the first structure as “middle men minorities,” the second as “super-exploitation/disorganization of the working class” and the third as “appropriation of natural resources.” He is writing about these in relation to the current global war economy we are living amidst, what he refers to as “militarized accumulation to control and contain the downtrodden and marginalized and to sustain accumulation in the face of crisis” which Robinson believes are giving rise to fascist political tendencies and to a pre-genocidal politics. In the first racist structure,

the minority group has a relationship of mediation between the dominant and the subordinate groups. This was historically the experience of Chinese overseas traders in Asia, Lebanese and Syrians in West Africa, Indians in East Africa, Coloureds in South Africa, and Jews in Europe. When “middle men minorities” lose their function as structures change they can be absorbed into the new order or can become subject to scapegoating and even genocide.

With respect to the second type of racist structure—“super-exploitation/disorganization of the working class”—we see the racially subordinate and oppressed sector within the exploited class occupying the lowest rungs of the particular economy and society within a racially or ethnically stratified working class. Robinson (2014) expands on this idea as follows:

What is key here is that the labor of the subordinate group—that is, their bodies, their existence—is needed by the dominant system even if the group experiences cultural and social marginalization and political disenfranchisement. This was the historical post-slavery experience of African-Americans in the United States, as well as that of the Irish in Britain, Latinos/as currently in the United States, Mayan Indians in Guatemala, Africans in South Africa under apartheid, and so on. These groups are often subordinated socially, culturally and politically, either *de facto* or *de jure*. They represent the super-exploited and discriminated sector of racially and ethnically divided working and popular classes.

The third racist structure summarized by Robinson is exclusion and appropriation of natural resources. Here, the dominant system needs the resources of the subordinate group but not their labor—that is, their physical existence is not useful or needed. Robinson identifies this structure as the one most likely to lead to genocide. Robinson (2014) writes:

It was the experience of Native Americans in North America. Dominant groups needed their land, but not their labor or their bodies—since African slaves and European immigrants provided the labor needed for the new system—and so they experienced genocide. It has been the experience of the indigenous groups in Amazonia—vast new mineral and energy resources have been discovered on their lands, yet their bodies stand in the way of access to these resources by transnational capital, literally, and are not needed, hence there are today genocidal pressures in Amazonia.

This is the more recent condition that African-Americans face in the United States. Many African-Americans went from being the super-exploited sector of the working class to being marginalized as employers switched from drawing on black labor to Latino/a immigrant labor as a super-exploited workforce. As African-Americans have become structurally marginalized in significant number, they are subject to heightened disenfranchisement,

criminalization, a bogus “war on drugs,” mass incarceration and police and state terror, seen by the system as necessary to control a superfluous and potentially rebellious population.

So here, you see, the African Americans are no longer needed for their labor. They have been replaced. They are superfluous and expendable. They are put in the school-to-prison pipeline. They serve as cheap labor in the prisons, that’s all. The Palestinians are now superfluous populations in Israel, their labor has been replaced by African, Asian, and other migrants. Here in the USA, when you have an expendable population, it doesn’t resort to genocide as we normally think of it, because the political and ideological conditions are not present, but perhaps we are in a kind of pre-genocidal state. What I am calling for is a philosophy of praxis grounded in the concrete and historical and its contemporary applicability. Julian Assange recently called Google the privatized arm of the NSA. How can we marshal a philosophy of praxis in the service of twenty-first century socialism in the face of twenty-first century fascism?

We Need to Stop Being Academics and Start Becoming Activists

P.J.: *The First International Conference on Critical Education* was held in Athens at the beginning of July 2011—during the short period of peace between two violent anti-government demonstrations. You, Dave Hill, Kostas Skordoulis, me, and few other comrades sat at a small terrace on Exarcheia square in Athens. The night was hot, and the square was full of broken glass. While we slowly sipped our drinks and discussed the political situation in the western Balkans, I remember looking down at my comfy flip-flops, then to your robust Dr. Martens boots, then again at my flip-flops, and feeling embarrassed: if the police arrive, how am I gonna run in those shoes?

During the past years, we have seen an upsurge in usage of information and communication technologies for social change in movements from Latin America to Arab Spring. Considering that the majority of physical Internet infrastructure lies in firm grasp of the establishment, how do you see the potentials of information and communication technologies for contemporary social struggles? Can they be compared to open flip-flops, comfy but too gentle for revolutionary activities, or to robust military boots, heavy but always ready for action?

P.M.: I like your use of metaphor! You capture the situation well. In the main, I would say that we need to strive for cooperative, freely associated labor that is not value-producing. We need to look to the new social movements and uprisings throughout the world for new organizational forms, including those of non-Western peoples. Socialism is not an inevitability, despite what teleologically driven Marxists might tell you. Right now capitalism is reorganizing itself and attempting to reconstitute the working class by criminalizing it and disaggregating its revolutionary potential through new information and communication technologies.

Can democracy survive this historical self-immolation? I would say, no, not without the rise of social fascism. And then what kind of democracy would that be? A democracy in name only—which is not far from what we already have in the USA at the moment. We are not assisted in our struggle by academicians, whether they are technical utilitarians, naturalist skeptics, ill-tempered empiricists or post-modern anti-foundationalists unless they are prepared to argue that ethical judgments comprise the fundamental condition of possibility for scientific reasoning of all sorts.

Let me rehearse a bit of what I said earlier on before I get into the potential of information and communication technologies to usher in some kind of meaningful alternative to capitalism. Clearly, immaterial labor does not escape circuits of capitalist exploitation and control. Reorganization of our lives through better self-management is not the answer because we need transnational movements of resistance. We can all now shop at second-hand stores and be bohemians and look cool and create blogs but so what? Working-class resistance is continually being undermined through information and communication technology. Immaterial production is not the production of ideas that float through space but the production of a class relation, the reproduction of a specific division of labor and we know who is winning the class war and it is not the working class.

Digitalized globalization has redivided labor on a transnational scale. We cannot make history through our own volition, that is, without the co-operation of the social world, which is the crucible in which our human will is forged. We are produced, let's face it, as market relations, objectified social relations, as commodity formations, and thus are *de facto* proletariats; we exist as human capital, as formations of bourgeois subjectivity, even if we prefer to (mistakenly) think of ourselves as cognitariats who work in realms autonomous or partially autonomous from capital. This notion that because we operate in collective decision-making networks that are supposedly free from the snares of capital, that we actually are free from the snares, is keenly wrong-headed. We have already consented to the rule of capital, even as we supposedly make “free” democratic choices in our exchanges and activities. We are not really free to make free exchanges although we mistake them as free exchanges because we do not see the objectified and impersonal forces that underlie such exchanges—we can resist capital only because we are constituted by it even as we caterwaul against it.

Glenn Rikowski notes that labor-power has a reality only within the person and “is generally under the sway of a potentially hostile will” (McLaren, 2006; McLaren & Rikowski, 2000). We are talking about labor-power here as socially average labor power that uniquely constitutes value—this is the foundation of the abstract labor that forms value. Human labor-power at the socially average constitutes value; concrete labor does not constitute value. No matter what the level of technological development, without human labor-power there is no value and no capital. However, as we undergo the process of schooling, we are being transformed into a new life form: capital. But our social existence as labor places limits on our existence as capital, making us a living contradiction in the social universe of capital—these are

the contingencies of consciousness and protagonistic action. We are in a process of becoming, and we have the capacity to struggle against that which society has made of us that we no longer want to be. We do this, Rikowski reminds us, by abolishing the social relations and forces that nurture and sustain capital and capitalist society. Rikowski makes the important point that technologies are concrete expressions of the social production of labor-power and the generation of value and the increase of relative surplus value in the labor process. We can fight for free expression of our productive capacities and free association with other workers in productive works. We need to use our labor capacity outside and beyond capitalist production relations. This is what critical pedagogy is all about—that is why it is often called revolutionary.

Of course capital has colonized spheres of circulation and reproduction as the social conditions for generating corporate profit have proliferated and intensified with the advent of the information society. I think much of the discussion of issues such as the economic wage versus the social wage, productive versus reproductive labor, and the factory versus the knowledge industry is useful, especially in the context of discussions of sexism and racism and how they are reconfigured within the new social factory and knowledge economy. And of course, we know that in order to fight back, social movements need to fight in global, regional, national, and transnational struggles—and the challenge is how to articulate them in our struggles against the global economy, multilateral financial institutions such as the *WTO* and the *IMF*, non-state actors such as corporations, and the transnational capitalist class.

P.J.: Contemporary media are packed with examples of various social movements powered by information and communication technologies... Perhaps that is the way to go?

P.M.: Yes, I know that the popular Korean boy band, *Dong Ban Shin Ki*, sparked a nationwide protest over the purchase of meat produced in the USA during fears of a “mad cow disease” epidemic, and almost destroyed the presidency of South Korea’s Lee Myung-bak. That is true. And there are many other examples of Internet protest carrying tremendous power and force, but the truth is that just as in the case of analog media you need a break to get access to public attention in the digital media. Sure, you can publish all the time, and there are plenty of people out there who are worth listening to (we have what Clay Shirky (2011) calls “cognitive surplus”) but who is going to listen to you unless you are already a celebrity or somebody that has some credibility? So do we get sports figures explaining the relationship between inequality and racism or Miley Cyrus showing us the path to socialism? We know that you need leverage to get a wide audience and not everybody will be able to affect such leverage, as Mathew Battles (2011) points out, because the transmedia conglomerates are more successful leveraging their power in the world media of scarcity. Basically, they dominate the traffic, as Battles puts it.

P.J.: Your example hits the nail on the head. Obviously, the problem is much deeper than simple instrumental inquiry into the possible ways of using technology in order

to produce this or that social outcome. In this place, it is worthwhile to revisit a famous passage from Martin Heidegger's book *The Question Concerning Technology*:

Likewise, the essence of technology is by no means anything technological. Thus we shall never experience our relationship to the essence of technology so long as we merely conceive and push forward the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral; for this conception of it, to which today we particularly like to do homage, makes us utterly blind to the essence of technology. (Heidegger, 1977, p. 4)

Information and communication technologies are dialectically chained to our reality and cannot be either dismissed or idealized. Therefore, the only remaining option is to try and position them appropriately in the wider fabric of our everyday praxis. On such basis, please allow me to reformulate my question and ask more broadly: What happens next with revolutionary critical pedagogy in the context of the network society?

P.M.: My goal is to develop transnational interactions from below—from the exploited and the excluded—and this may be called a counter-hegemonic globalization process if you want. These are local struggles that need to be globalized—and we know what they are. Boaventura de Sousa Santos has listed some of these as transnational solidarity networks, new labor internationalism, international networks of alternative legal aid, transnational human rights organizations, feminist movements, indigenous movements, ecological movements, alternative development movements and associations, literary, artistic, and scientific movements on the periphery of the world system in search of non-imperialist, anti-hegemonic cultural and educational values (Dalea & Robertson, 2004). As to the issue of how to struggle and how information technologies could help, let me repeat some recent comments I made with respect to my trip to Turkey in 2013 (McLaren & Fassbinder, 2013).

For one thing, all of the movements that I have witnessed of late—the Occupy Movement, the uprising in Greece, protests of university students in Mexico, the Indignados, etc.—are making more than minor demands. They are struggling for an entirely different kind of future, and the originality and creativity of their protests speak to that future. They are not just about negating the present but about reclaiming space—parks, public squares, university buildings, and other spaces, where they can enact a new, more horizontal form of governance and decision-making. They are moving beyond narrow sectarian interests and seeking to put participatory democracy into practice as an alternative to vertical forms of organization favored by liberal, representative democracy. And, of course, they are fighting state authoritarianism. They are seeking to challenge consumer citizens to become critical citizens again, as many citizens strove to become before the era of asset capitalism, or neoliberal capitalism.

But the movement goes beyond nostalgia for the past—since most of the youth have only known neoliberal capitalism all of their lives. The youth have also figured out that parliamentary forms of representation can no longer suffice in creating democracy in a social universe of asset or finance capitalism which requires a

neo-fascist reorganization of the state in order to preserve massive profits for the transnational capitalist class. Youth protesters today are struggling for participatory forms of association using new social media and new convergent media production as digital tools, as technological literacies to educate themselves and their comrades to link their experiences of struggle to goal-directed actions. They are struggling for different forms of social life through their protests against neo-extractivism, unequal ecological exchange rates, high tuition fees in education and the chaos the capitalist class has decreed into law by treating rabid corporations as people.

P.J.: You said that most of the youth have only known neoliberal capitalism all of their lives—and I would add that most of the youth have only known information and communication technologies all of their lives. Those observations deeply resonate with the shared experience of my generation in Croatia—we had the “privilege” to live in communism and capitalism, in the world of analog television and in the world of broadband Internet, in the world sharply divided between two major blocs and in the globalized world of today, in the mass society, and in the network society. However, not everyone has had the opportunity to experience various political systems and technologies. Actually, Eastern Europe seems to be an exception. Most countries such as the USA, Cuba, France, or China have only experienced one political system; the majority of world’s population is still on the non-privileged side of the digital divide and has never seen a computer.

Based on biological age at which information and communication technologies have been introduced into people’s lives, in the seminal article *Digital Natives, Digital Immigrants* (2001) Marc Prensky divides contemporary population in two distinct categories. Digital natives are people who were born into the world of information and communication technologies—for them, using computers, i-thingsies, and touch screens comes as naturally as acquisition of mother tongue. Digital immigrants are people who encountered information and communication technologies later in their lives, and had to put conscious effort in order to learn how to use them—therefore, their command of digital artifacts will always bear traces of pre-digital ways of thinking. Certainly, this is a principled rather than analytic distinction, which has recently provoked a lot of debate (i.e., Bayne & Ross, 2011)—the global South is populated by hundreds of millions of underage digital immigrants, while the global North sports a smaller but equally impressive number of digital natives in their 20s and 30s. Despite theoretical imprecision, however, Prensky’s distinction opens several interesting questions. What are the main strategies of using information and communication technologies in contemporary social movements? Are they digitally native or digitally immigrant?

P.M.: In contemporary youth social movements, the digital media do not become ends in themselves but augment or supplement real-world experiences of struggle for popular sovereignty—and in the case of the Zapatistas in Chiapas or the Purépecha nation in Cherán, Mexico, an autonomous community within the state. As a result of these struggles, these tools become more integrated as part of an effort to create a collective intelligence with multiple visions of a socially just or at least fairer world. As Greek scholar and activist, Panagiotis Sotiris, wrote recently,

contrary to the supposedly post-modern tendency towards virtual communities digitally connecting fragmented individuals, as expressed in various cyberspace trends, but also in the whole concept of a potential ‘online ‘democracy’ and ‘consultation,’ nothing can beat the appeal and the power of people meeting in the street, joining forces, creating communities of struggle and resistance. (Sotiris, 2013)

According to the semiofficial Anadolu Agency news service, during a recent protest in Izmir, police have arrested 25 people on accusations of using social media networks such as Twitter to spread false details about the anti-government protests and police reaction to them. Many youth can see that the survival of neoliberal capitalism requires the state to reorganize itself in more fascist formations—and this is no less true of the youth in Turkey, where many secular young people are fearful of the intolerance of criticism and diverse lifestyles by the Islamist-rooted government. Again, as Panagiotis Sotiris lucidly proclaims:

The importance of youth in all these movements should not lead us to treat them as student or youth movements. Rather, youth who are at the epicentre of the current capitalist attempt to change the balance of forces in favor of capital, and are being treated in some cases as a ‘lost generation,’ and almost always as the generation that will receive the full blow of capitalist restructuring, act like the vanguard of more generalized and deeper forms of discontent. This has to do with the particular quality of youth as potential labor power. Contemporary youth are more educated, more skilled and at the same time face precarization and the consequences of the economic crisis. However, they have the communication skills to make their discontent more evident than ever and are in a position to create networks of struggle and solidarity, thus making themselves more than instrumental for the creation of new public spaces, both real and virtual. (Sotiris, 2013)

I strongly agree with this observation of Sotiris and with his conviction that these movements are also productive sites of knowledge and potentially counter-hegemonic projects. He makes profound sense when he argues, additionally, that the left needs to be more proactive in helping to transform such movements from spontaneous uprisings to historical blocs in the Gramscian sense that involve

combinations between social forces, new forms of political organization and new social configurations as alternative narratives that do not simply repeat historical left-wing projects, but actually attempt to think how to move beyond neoliberal capitalism...from the current ‘age of insurrections’ to a new ‘age of revolutions.’ (Sotiris, 2013)

That said, I do believe there is an ongoing danger of communitarian popular fronts. Think of Poland and Iran in 1979–1981. Mass movements in these countries were taken over by Catholic reactionaries in the former and Islamic fundamentalists in the latter, and both movements had progressive elements such as women’s movements and workers’ councils. Political parties have a history of taking over various forms of spontaneous movements. I think popular-frontism could become reified as the ‘lost generation’ versus the bankers and hedge fund profiteers (Sotiris, 2013). We have to be wary of the struggle becoming the ‘good capitalists’ who are against monopolies, etc. versus the unproductive parasites in the finance sector who accumulate their fortunes on the shoulders of others who are forced to sell their labor power for a wage. We must begin to wage a struggle for an alternative to capitalism based on the creation of real wealth rather than the value form of labor.

Who Wants to Be Downloaded?

P.J.: A bit earlier, you briefly mentioned that education is opposed to schooling—and I simply could not let this passing remark unnoticed. Radical thinkers have always heavily despised schools. Schools have been accused—and completely rightfully—for many evils such as social reproduction, indoctrination, failing to respect individual needs of their patrons, stupefying... In order to fight against those evils, radical educators have developed an impressive body of educational alternatives which have replaced institutionalized schools by less formal approaches. However, only the rare have dared to challenge the very essence of the concept of schooling.

Far on the fringes of educational praxis, much further than “regular” radicals who oppose traditional schools because they inculcate the wrong ideas or fail to respect pupils’ personality, there is a small stream of educators which wants to completely abandon the concept of schooling. Those people agree that education is an intrinsic part of human nature: we all learn and unlearn from cradle to grave. However, they point out that schooling is an institutionalized process of meeting certain educational outcomes. They are not against education: they merely claim that the process of education is completely detached from the process of schooling, and that schools should be replaced in favor of more efficient educational processes. In the recent study, Joseph Todd describes the project of deschooling as follows: “Anarchists and deschoolers, as well as educational theorists, argue for the creation of networks, as opposed to institutions, that are temporary, autonomous, and non-hierarchical, and facilitate a variety of diverse models of learning and community interaction” (Todd, 2012, p. 78).

The genesis of argument against schooling can be traced in several major works such as Everett Reimer’s *School is Dead* (1971), Paul Goodman’s *Compulsory Miseducation* (1973) and Matt Hern’s *Deschooling our Lives* (1998). Back in the 1971, however, the small book called *Deschooling Society* has provoked wide worldwide debates about the future of schooling and has placed Ivan Illich on the unofficial throne of the project of deschooling. Such positioning of Illich’s work has not arrived from thin air. According to Atasay, “what distinguishes Illich’s work from other critiques of industrial everyday life (...) is that Illich offers us alternatives, tools that can influence power and offer individuals and communal settings the potential for alternative vernacular practices to emerge in culture” (2013, p. 58). In order to replace traditional schools, Illich proposes creating large-scale noninstitutional educational infrastructure which consists of a set of four interlocking educational networks: reference services to educational objects, skill exchanges, peer-matching, and reference services to educators-at-large (1971).

Based on that proposition, Hart concludes that “it is not too far-fetched to assert that Illich predicted the World Wide Web” (2001, p. 72). In my recent work, I have thoroughly analyzed various features of contemporary information and communication technologies and concluded that they provide adequate technical infrastructure for Illich’s educational networks (Jandrić, 2011; Jandrić & Boras, 2012, pp. 72–74, Jandrić, 2014b). During a recent conversation, your former student Tyson Marsh told me that you extensively used Illich’s work during doctoral

seminars. Another former student of yours, Richard Kahn, has recently founded *The International Journal of Illich Studies* (Jandrić, 2014b). Could you please evaluate contemporary potentials of deschooling for critical revolutionary pedagogy?

P.M.: Here perhaps I have more questions for you than answers. I have been blessed with former students like Tyson and Richard. We obviously are all invested pedagogically in the following question: How can we help students teetering on the precipice of despair? A well-tempered chorus of answers has been forthcoming from a variety of perspectives, as we all know. But my questions are as follows: Can the technological infrastructure of which you speak realize the goal of Illich's deschooling society such that the youth of today are not simply left to generate individual solutions to problems produced by and enmeshed within the structural inequalities wrought by capitalism? How can you avoid such infrastructure remaining tethered to capitalism without first creating spaces in which capitalist relations of production and consumption are not reproduced? Can the Internet help produce such spaces? Do they exist, and where? If the subjectivities produced in your Illich-inspired infrastructure remain trapped in the thrall of the value form of labor, then the pedagogical imperative guiding the construction of such an infrastructure cannot remain consistent with its own principles since it will remain hospitable with the view that social justice is possible within a capitalist society; so how can your infrastructure remain autonomous from capital? There is no solution on the horizon that commands uncontested authority, I admit, so that we must continue to experiment. We cannot prevent the future by banning a priori the admissibility that another form of education is possible, perhaps a new digital humanism can be created through forms of post-symbolic communication which breach the prescribed boundaries between bodies and minds, but are such forms possible only within infuriatingly rare niche "online" communities? And what would the environmental costs be of the manufacturing of your infrastructure? Would it perhaps prolong adolescence, as Jaron Lanier (2011) warns?

Illich wrote in *Deschooling Society* (1971) that "Man now defines himself as the furnace which burns up the values produced by his tools. And there is no limit to his capacity. His is the act of Prometheus carried to an extreme." Is network society another Promethean fallacy? Near the end of *Deschooling Society*, he again writes:

The Pythia of Delphi has now been replaced by a computer which hovers above the panels and punch cards. The hexameters of the oracle have given way to 16-bit codes of instructions. Man the helmsman has turned the rudder over to the cybernetic machine. The ultimate machine emerges to direct our destinies. (*Illich, 1971*)

If humankind is the helmsman then who builds the ship? And in *Tools for Conviviality* Illich writes:

Honesty requires that we each recognize the need to limit procreation, consumption and waste, but equally we must radically reduce our expectations that machines will do our work for us or that therapists can make us learned or healthy. The only solution to the environmental crisis is the shared insight of people that they would be happier if they could work together and care for each other. Such an inversion of the current world view requires intellectual courage, for it exposes us to the unenlightened yet painful criticism of being not only anti-people and against economic progress, but equally against liberal education and scientific and technological advance. We must face the fact that the imbalance between man

and the environment is just one of several mutually reinforcing stresses, each distorting the balance of life in a different dimension. In this view, overpopulation is the result of a distortion in the balance of learning, dependence on affluence is the result of a radical monopoly of institutional over personal values, and faulty technology is inexorably consequent upon a transformation of means into ends. (Illich, 1973)

P.J.: You touched upon a very interesting and urgent matter: the relationships between online and offline public spheres, between online and off-line participation in the society ...

P.M.: Here is the problem, as I see it. The Internet and social media provide a kind of limbic cave, a space of refuge for us to vent our emotions, reactivate our most torpid memories, and quiet our most primal fears, and eventually to focus our rage on everything and everyone we hate. We find people who share our beliefs and who resent the same people and situations and we communicate with them on a daily basis, and given that the Internet is so vast, we can tap into a considerable number of like-minded people. We can shut out opposing groups, and not be called upon to debate and defend our ideas. We isolate ourselves in a fiber optic cocoon; we form our own hive, where we protect ourselves from being accountable for our opinions. We are uncomfortable going out into the real world because suddenly we are being asked uncomfortable questions that we really don't know how to answer. We feel threatened by the real world of public participation because we have just been living this rage through our self-confirming, self-affirming group of Internet companions. This has a polarizing effect on the national culture. People are drawn into camps and barricade themselves from participating in the public sphere. People think they are participating, but they are merely communicating in an echo chamber with people who reflect their own ideas. Even when people do debate real issues, they do so in formats where their ideas are reduced to sound bytes. I was once on a TV talk show, where the producer asked me to overturn a table in anger. I refused to do it. And I refused to let the host set the terms of the discussion. The show was never aired. So what does this tell us about public participation in reinvigorating the public sphere?

P.J.: During the hippie revolution, computers had been developed and used primarily in isolated basements of scientific institutes (more often than not, with strong military presence dating at least from World War II and Alan Turing's hacking of *Enigma*). During college days of 1970s and 1980s, they slowly gained commercial applications in large-scale industry and service sector institutions such as banks and insurance companies. Finally, sometime during 1990s, marriage between the personal computer and broadband Internet has inspired numerous applications in the broadest field of education from informal language courses to accredited university degrees. At the brink of millennia, the next big thing in education had been called numerous names such as "multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), Internet-based training (IBT), web-based training (WBT), online education, virtual education, virtual learning environments (VLE) (which are also called learning platforms), m-learning, and digital educational collaboration" (this list is purposefully taken from (Wikipedia, 2014b), which seems to reflect the latest changes in the field).

The “new” approaches to education have seemed to offer a lot of promise regarding optimization of educational processes. However, the past few decades have brought a growing body of research which has explored the dark side of the marriage between education and information and communication technologies. In their Foucauldian analysis of education, Fejes and Nicoll have succinctly summarized its main problems in the conclusion that “discourses of e-learning have tended largely to construct the area of study as about the mechanics of its implementation (the appropriate use of technology in education, the effective delivery of educational messages, the efficient systems for materials production and so on)” (2008, p. 174).

Rooted deeply within the framework of critical theory, this book reaches far beyond the level of application which is usually associated with the aforementioned concepts and explores critical approaches to networked learning defined as “learning in which information and communication technology is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources” (Goodyear, Banks, Hodgson, & McConnell, 2004, p. 1). As our Call for Chapters says,

Complex and rapid transformations of contemporary educational systems are dialectically intertwined with information and communication technologies and, more generally, with wide social changes commonly known as globalisation. Those transformations equally affect all levels of educational praxis including, but not limited to, theory, practice, policy and politics of teaching and learning, social roles of contemporary educational systems, private lives of teachers and students and the very understanding of the process of education. During the past few decades, therefore, understanding of the complex relationships between education, globalisation and information and communication technologies has become prerequisite for critical engagement in wide range of activities such as primary, secondary and tertiary education, staff development in public and private enterprises, policy making, education research and development.

In this conceptual framework, let me finally ask the common question: What about online education?

P.M.: Many of my colleagues in various universities who have fallen prey to digital settlers are out there creating new learning management systems for all of us, professors, to jump on board and become part of the new techno-utopia of e-learning. I don’t think cybernetic systems of information are the best way to apprehend reality and I don’t buy into the cyber-armed-don-cataclysm eschatology that humans will become obsolete when machines get more sophisticated and we are run by non-human or meta-human nanorobots. Call me “old school” if you wish.

Developments in information and communication technologies and the creation of cyberinfrastructures certainly effect the production and dissemination of knowledge—knowledge flows, and new modalities of teaching and learning—Open Learning and Open Innovation, E-learning and Cyberlearning, user-generated and user-created media, networked learning, etc. provides opportunities for more customized and individualized learning. This is all good and exciting as far as our imagination is concerned. Social networks like Facebook, LinkedIn, Flickr, Second Life, World of Warcraft, Wikipedia, Ning, and YouTube and Peer-to-Peer (P2P) networks are part of the new wave of knowledge production and consumption. Some would herald this as the new communism in the sense that the rhizomatic network has

replaced the isolated individual as the unit of analysis and has the potential to bring about new ecologies of participation and meaning-making and perhaps a new digital socialism for the twenty-first century. My concern is that it will bring about new formations of ideological production in which each process of our identity formation will be re-territorialized and re-wired to the initiatives and interests of the state.

I like what Brian McKenna says in his recent wide-ranging article on this topic. In *The Predatory Pedagogy of Online Education*, McKenna (2013) quotes the author of *Digital Diploma Mills*, David Noble, who writes:

Once faculty and courses go online, administrators gain much greater direct control over faculty performance and course content than ever before and the potential for administrative scrutiny, supervision, regimentation, discipline and even censorship increase dramatically. At the same time, the use of the technology entails an inevitable extension of working time and an intensification of work as faculty struggle at all hours of the day and night to stay on top of the technology and respond, via chat rooms, virtual office hours, and e-mail, to both students and administrators to whom they have now become instantly and continuously accessible. The technology also allows for much more careful administrative monitoring of faculty availability, activities, and responsiveness. (Noble, 1998)

In support of Noble's comment, McKenna (2013) makes the following lucid observation: "With the introduction of advanced corporate learning platforms many teachers will watch what they say in class. There are topics and dialogic digressions that many will not want recorded and made available for administrators to scrutinize." McKenna also cites Richard Sennett (2012), who makes a case for face-to-face interaction, drawing from the work of Saul Alinsky and Jane Addams. Sennett writes that "modern society is 'deskilling' people in practicing cooperation" (2012, p. 8). In other words, "people are losing skills to deal with intractable differences as material inequality isolates them, short-term labor makes their social contacts more superficial and activates anxiety about the Other" (Sennett, 2012, p. 9). For McKenna, online education offers capital another avenue for appropriating the process of knowledge production. He is worth quoting at length:

A rereading of Harry Braverman's classic, *Labor and Monopoly Capital* (1974: 1998) is necessary. Braverman conducted an ethnographic analysis of the labor process and revealed how capital (1) appropriates all historical knowledge from the craftsmen, (2) separate conception from execution and (3) employs the new found monopoly of knowledge to control every step of the labor process and hire unskilled workers who are interchangeable and cheap. It's called Taylorization, or scientific management. The new technology makes this amazingly simple. Joanne Bujes points out one aspect of this invasion: "they will pick 100 teachers and get them on tape for e-learning. And then professors will be reduced to grad students leading a discussion section once a week. Are people going to go into debt half their lives for this?" (McKenna, 2013)

P.J.: This dark note resonates with many important topics such as literacy, morality, and self-realization...

P.M.: I agree with Barry Sanders in his book, *A Is for Ox* (1995), that orality, the precursor to literacy and abstract thinking, demands human interaction, and was often nurtured by storytelling mothers and this helped develop the imagination so necessary to reading readiness; now, however, the development of vernacular language is being replaced by video games and Internet culture and Silicon Valley dreams, and youth today are less likely to engage in print literacy through

books—which contributes mightily to violence in today’s society. Sanders, a student of Ivan Illich, is, of course, on to something important when he argues that we are seeing among our youth the disappearance of self-literacy through an engagement with reading books and the creation of the inner space of morality. Reading books provides the foundation for self-reflexive moral choices and that foundation has been eroded through Internet culture. I have always supported critical media literacy in schools, and of course, teacher education programs. Of course, we can argue that students acquire multiple literacies today via Internet culture and social networking—in their formation as transhumans within the metaverse of the Internet—but we have to keep examining how these multiple literacies fare in creating the foundations of moral reasoning, as distinct from engaging in print literacy—all of which takes me back to my days in Canada listening to Marshall McLuhan. He was the first choice for my outside reader for my dissertation but he had a stroke and I switched my focus to comparative symbology and the study of rituals.

My own take is quite similar to Sanders in many respects, however, as I do feel what makes us human through our social interactions—creating a “haptic” sense of life—is slowly dying. Sanders links the rise of humanity’s disembodiment to the industrial revolution, and he draws our attention, for instance, to the technology-enabled slaughter of the American Civil War and the First World War. Sanders makes the claim that modernity and the enlightenment confronted the disappearance of human beings and their commodification. Postmodernity only produced a more tragic state. What began to connect us—the telephone, the telegraph, fax machines, and the Internet—can now be seen in hindsight as the formation of a world, where we became more connected but in ways that actually produced more isolation from our humanity—something Sherry Turkle has noted in her new book, *Alone Together* (2012). As we fall prey to the all-pervasive influence of corporations and their attempts to re-create us into a desiring-machine (desiring what the corporations have to sell us), we have become a less mindful, less vigilant citizenry, watching passively as civil life becomes swallowed up by the logic of capital, consumption, and corporatism. People no longer want to become actors—they want to become celebrities.

Our rhizomatic culture has become corralled by capital, so that it appears as if we are autonomous and in a constant state of self-actualization but in reality we are making ourselves more vulnerable to the crippling control of *Big Brother*. But of course it is easy to sink into a dystopian malaise and to be so fearful of the future than we end up in the thrall of paralysis. For me, technologies are not something to be feared for the electric age has brought us wonderful treasures. The problem is how they have been harnessed by capital, and how we have been harnessed along with them, how we have been capitalized, how we have become capital and how these technologies have helped in that process.

Recently the *New York Times* carried a front page story by Claire Cain Miller on the rise of the robot work force. The article mentions how so-called experts maintain the view that technology has made human beings more productive—i.e., making office workers more productive through word processing, or making surgeons more productive through robotics in the operating room; and the argument is always that new jobs unheard of today will be made possible by the technology of tomorrow. Other experts are not so sure. The article highlights how machines today are beginning

to be able to learn rather than follow instructions—for instance, some of them are now able to respond to human language and movement. We have self-driving vehicles that could eventually put truck drivers and taxi drivers out of work. Sales agents and pilots will decline as flying is more automated and as software does most of the selling and placing search ads. Telemarketers are also at risk. Even recreational therapists are at risk by machines that recognize and correct a person's movements. Machines are learning children's expressions and estimating their pain levels. The Thai government has a robot that tastes Thai food and estimates where it tastes sufficiently 'authentic.' The computer system called Watson advises military veterans on where to live and which insurance to buy. It also creates new recipes for chefs. A third of a panel of leading economists admitted that technology is centrally implicated in the stagnation of median wages. And all of this weak wage growth is occurring amidst surging corporate profits. The US government continually weakens what few safeguards there are left to help regulate the market and prevent the kind of savage inequality we are experiencing from getting exponentially worse. The photo that accompanied the article in the *Times* shows a robotic bellhop delivering an order of fresh towels to a room at Aloft Cupertino, which is a technologically advanced hotel in Silicon Valley. Are we entering the age of *Bladerunner*, among the most famous, perhaps of the dystopian films. I think that is the trajectory we are on. How far we will go depends upon social movements being about to intervene into and replace transnational capitalism with a socialist alternative.

P.J.: As far as I am aware, Peter, this is the first writing focused to the relationships between education and virtuality in your rich bibliography—I am sincerely honored by the opportunity to engage in such an important project! Could you please conclude this conversation with your last thoughts?

P.M.: As I have written elsewhere, capitalism as a discourse is self-validating and self-perpetuating and as a social relation works as a self-fuelling engine whose capacity to travel around the globe and devour everything in its path is expanding exponentially. As a discourse and social practice that in its current neoliberal incarnation shatters collective experience into monadic bits and pieces, bifurcating students' relationship to their bodies, brutally taxonomizing human behavior into mind and body, into manual and mental labor, capitalism is a colossus that bestrides the world, wreaking havoc. It possesses a terrible power of psychologizing entrenched and dependent hierarchies of power and privilege and reformulating them into homogeneous and private individual experiences. So the 99 % of the world are made to feel responsible for their plight.

To fight this juggernaut of cruelty that would profit from the tears of the poor if it knew how to market them effectively, critical pedagogy flouts the frontier between scholarship and activism and, as such, works to create a counterpublic sphere. We are askew to traditional academia and are not enmortgaged to its status and do not represent the ivory tower. We want to mediate human needs and social relations in publicly discussable form, so as to create a transnational social movement of aggressively oppositional power. However, critical pedagogy is not yet in a position to play a substantial role in the struggle for a socialist future. A more productive role for critical pedagogy needs to be discovered so that educators can become better

political functionaries and agents of revolutionary transformation. We need to move from a pedagogy of insurrection to a pedagogy of revolution.

The history of technology is that of a lost horizon, a forgotten future. Today, where we have seen our humanity swept away like a child's sigh in a tornado, we know that we—as humans—will reemerge again. We will reappear on the horizon again, one that is being reclaimed today in the smouldering haze of tear gas and struggle. A new revolutionary consciousness is being born that seeks to use technology in the service of humanity—to fight disease, to feed the poor, to eliminate poverty, to save the biosphere, to reclaim dignity for all of us. If you can silence your mind for a moment, take your eyes off your computer screen, and turn off your cell phone, you will hear it. In the darkness of an eclipsed moon, in the unfamiliar air of things-to-come, you will hear the gasp of a new humanity. Let us not dull our senses so much by extending them electronically such that we do not hear it. Let us listen with our imagination, remembering always that thought is spirit.

Note

Due to large amount of gathered material, this conversation is published in two complementary parts. The other part of the conversation is published in: McLaren, P., & Jandrić, P. (2014). Critical revolutionary pedagogy is made by walking—In a world where many worlds coexist. *Policy Futures in Education*, 12(6).

Sources

P.J.: This conversation is closely linked to both authors' previous research. On my side,

- Exposition of the dialectic between technologies and the society and elaboration of the main differences between education and schooling are expanded and significantly revised from: Jandrić, P. (2014). Deschooling virtuality. *Open Review of Educational Research*, 1(1). I want to thank Iva Rinčić, Michael Hayes, Sarah Hayes, and Shane J. Ralston for their valuable criticisms and suggestions on earlier versions of that paper.
- Several analyses and descriptions, including the interpretation of Marc Prensky's *Digital natives, digital immigrants* (2001), are loosely based on: Jandrić, P., & Boras, D. (2012). *Critical e-learning: Struggle for power and meaning in the network society*. Zagreb: FF Press/The Polytechnic of Zagreb.

P.M.: On my side, Petar, I have used the following previous publications:

- Overview of the relationships between contemporary social movements and information and communication technologies is expanded from: McLaren, P., & Fassbinder, S. (2013). His work, his visit to Turkey and ongoing popular struggles: Interview with Peter McLaren. *CounterPunch*.

- My path towards revolutionary critical pedagogy is revised and expanded from: McLaren, P. (2010). Revolutionary critical pedagogy. *InterActions: UCLA Journal of Education and Information Studies*, 6(2) and Sandlin, J. A., & McLaren, P. (Eds.). (2010). *Critical pedagogies of consumption: Living and learning in the shadow of the “shopocalypse”*. New York: Routledge.

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