School Shootings, Violence, and the Reconstruction of Education: Some Proposals

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In my book *Guys and Guns Amok: Domestic Terrorism and School Shootings from the Oklahoma City Bombings to the Virginia Tech Massacre* (Kellner 2008), I have argued that there are many causes to the rise of school violence and events like the Columbine and Virginia Tech school shootings. Complex historical events like the Iraq invasion or the Virginia Tech and Columbine shootings require a multiperspectivist vision and interpretation of key factors that constitute the constellation from which events can be interpreted, explained, and better understood. Thus addressing the causes of problems like societal violence and school shootings involves a range of apparently disparate things such as critique of male socialization and construction of ultramasculine male identities, the prevalence of gun culture and militarism, and a media culture that promotes violence and retribution, while circulating and sensationalizing media spectacle and a culture of celebrity. Such a constellation helps construct the identities, values, and behavior that helps incite individuals to use violence to resolve their crises of masculinity through creation of an ultramasculine identity and media spectacle, producing guys and guns amok.

Accordingly, solutions that I suggest to the problems of school violence and shootings in *Guys and Guns Amok* range from more robust and rational gun laws, to better school and workplace security with stronger mental health institutions and better communication between legal, medical, and school administrations, to the reconstruction of masculinity and the reconstruction of education for democracy. In addition, we must consider examining better ways of addressing crime and violence than prisons and capital punishment, draconian measures aimed increasingly today at youth and people of color. Today our schools are like prisons, while in a better society schools would become centers of learning and self-developing, while prisons could also be centers of learning, rehabilitation, and job-training and not punitive and dangerous schools for crime and violence.
To grasp the magnitude of societal violence and school shooting requires a critical theory of society focusing on problems of the present age. Escalating violence in schools and other sectors of society today in the United States is a national scandal and serious social problem. Deaths in the U.S. caused by firearms run to about 30,000 per year in which around 12,000 are murders and 17,000 are suicides with the rest accidents. Of the 105,000 guns shops in the U.S., only about 1% are the origins of 60% of the guns that are seized in crimes. As David Olinger notes: “Collectively, U.S. citizens are the most heavily armed in the world. Americans own about 250 million rifles, shotguns and handguns, nearly one per person and at least one-third of the guns in the world.... From 1999 through 2004, according to the U.S. Centers for Disease Control and Prevention, guns killed an average of 80 people a day. Gun homicides averaged 31 a day.”

The massacre at Virginia Tech in 2007 was the 25th school shooting on an American campus since the Columbine school shootings in 1999. That figure represents more than half the number of shootings at schools across in the world in the same time span. Deadly school shootings at a wide range of schools have claimed over four hundred student and faculty lives since Columbine. As publicists for a new edition of Lieberman’s The Shooting Game indicates (2007): “In March and April of 2006, 16 deadly Columbine-style plots were hatched by over 25 students arrested across the U.S.A. from the heartland up to North Pole, Alaska. As the fall semester began, there were more deadly shootings in Montreal, Colorado, Wisconsin and even a tiny Amish school in Pennsylvania.”

In this article, I will suggest some proposals to deal with the escalating problem of school violence and school shooting and will argue for the importance of critical theory and radical pedagogy that proposes new modes of conflict resolution and ways of dealing with bullying, hatred, and violence that emerges in schools.

Beyond the Culture of Male Violence and Rage

Dealing with problems of school and societal violence will require reconstruction of male identities and critique of masculinist socialization and identities. Unfortunately, the media and some gang culture, gun cultures, sports, and military culture produce ultramacho men as an ideal, producing societal problems from violence against women to gang murder (see Katz 2006). As Jackson Katz urges, young
men have to renounce these ideals and behavior and construct alternative notions of masculinity. As Katz concludes, reconstructing masculinity and overcoming aggressive and violent macho behavior and values provides “a vision of manhood that does not depend on putting down others in order to lift itself up. When a man stands up for social justice, non-violence, and basic human rights -- for women as much as for men -- he is acting in the best traditions of our civilization. That makes him not only a better man, but a better human being” (2006, p. 270).

Major sources of violence in U.S. society include cultures of violence caused by poverty; masculinist military, sports, and gun culture; ultramasculine behavior in the corporate and political world; high school bullying and fighting; general societal violence reproduced by media and in the family and everyday life, and in prisons, which are schools for violence. In any of these cases, an ultraviolent masculinity can explode and produce societal violence, and until we have new conceptions of what it means to be a man that include intelligence, independence, sensitivity, and the renunciation of bullying and violence, societal violence will no doubt increase.

As I was concluding this study in July 2007, a striking example of men and guns running amok circulated through the media in stories of how former Virginia Tech football player and NFL star Michael Vick was indicted on dog-fighting charges. It was alleged that Vick and three associates had been actively participating in the illegal sport of dog-fighting for at least six years. The indictment states that Vick’s associates executed eight dogs for performing poorly in the month of April, utilizing methods such as hanging, electrocution, shooting, and physical beatings. The outrage led 90 year old Sen. Robert Byrd to denounce the practice from the Senate floor, declaring it “barbaric, barbaric, barbaric!”

Throughout late July, network newcasts were showing dog-fighting culture all around the US, with claims that there are at least 40,000 sites where dog fights regularly take place. A July 29, 2007 episode of 60 Minutes indicated that a form of extreme fighting that combines boxing, wrestling, street fighting, and martial arts has become one of the most popular sports in the US, and the accompanying montage showed groups of men cheering the most bloody fights and beatings.

Sports culture is thus also a major part of the construction of American masculinity that can take violent forms. In most of the high school shootings of the 1990s,
jocks tormented young teenage boys who took revenge in asserting a hyperviolent masculinity and went on shooting rampages. Larkin (2007: 205ff) provides a detailed analysis of “Football and Toxic High School Environments,” focusing on Columbine. He describes how sports played a primary role in the school environment, how jocks were celebrities, and how they systematically abused outsiders and marginals like Columbine shooters Eric Harris and Dylan Klebold.

The “pattern of sports domination of high schools,” Larkin suggests, “is apparently the norm in America” (206). Larkin notes how football “has become incorporated into a hyper-masculinized subculture that emphasizes physical aggression, domination, sexism, and the celebration of victory. He notes that more “than in any other sport, defeat in football is associated with being physically dominated and humiliated” (208). Further, it is associated with militarism as George Carlin, among others, has noted in his comedy routine:

In football the object is for the quarterback, also known as the field general, to be on target with his aerial assault, riddling the defense by hitting his receivers with deadly accuracy in spite of the blitz, even if he has to use the shotgun. With short bullet passes and long bombs, he marches his troops into enemy territory, balancing this aerial assault with a sustained ground attack that punches holes in the forward wall of the enemy’s defensive line.

In baseball the object is to go home! And to be safe! (Carlin, cited in Larkin 208).

Larkin argues that football culture has “corrupted many high schools,” including Columbine where “the culture of hypermasculinity reigned supreme” (209). Hence, Larkin concludes that: “If we wish to reduce violence in high schools, we have to de-emphasize the power of sports and change the culture of hypermasculinity. Football players cannot be lords of the hallways, bullying their peers with impunity, sometimes encouraged by coaches with adolescent mentalities” (210).

Hypermasculinity in sports is often a cauldron of homophobia and many of the school shooters were taunted about their sexuality and responded ultimately with a berserk affirmation of compensatory violence. Yet hypermasculinity is found throughout sports, military, gun,
gang, and other male subcultures, as well as the corporate and political world, often starting in the family with male socialization by the father, and is reproduced and validated constantly in films, television programs, and other forms of media culture.

There have been educational interventions that address hypermasculinity, violence against women, homophobia, and which provide alternatives to a hegemonic violent masculinity. For example, since 1993 author and activist Jackson Katz and his colleagues have been implementing the Mentors in Violence Prevention (MVP) program, which trains high school, college and professional athletes and other student leaders to speak out and oppose violence against women, gay-bashing, and other forms of domestic and sexual violence. Featuring interactive workshops and training sessions in single-sex and mixed-gender settings, as well as public lectures, MVP has been expanded throughout North America to deal with men's violence in many arenas, from the corporation to politics, police and intelligence agencies, and other institutional arenas where men's violence is a problem.

This is not to say that masculinity per se, or the traits associated with it, are all bad. There are times when being strong, independent, self-reliant, and even aggressive can serve positive goals and resist oppression and injustice. A post-gendered human being would share traits now associated with women and men, so that women could exhibit the traits listed above and men could be more loving, caring, emotional, vulnerable and other traits associated with women. Gender itself should be deconstructed and while we should fight gender oppression and inequality there are reasons to question gender itself in a more emancipated and democratic world in which individuals create their own personalities and lives out of the potential found traditionally in men and women.

Obviously, media culture is full of violence and of the case studies in Chapter 3 in Guys and Guns Amok of violent masculinity, Timothy McVeigh, the two Columbine shooters, and many other school shooters were allegedly deeply influenced by violent media culture. Yet, while media images of violence and specific books, films, TV shows, or artefacts of media culture may provide scripts for violent masculinity that young men act out, it is the broader culture of militarism, gun culture, extreme sports, ultraviolent video and computer games, subcultures of
bullying and violence, and the rewarding of ultramasculinity in the corporate and political worlds that are major factors in constructing a hegemonic violent masculinities. Media culture itself obviously contributes to this ideal of macho masculinity but it is, however, a contested terrain between different conceptions of masculinity and femininity, and between liberal, conservative, and more radical representations and discourses (Kellner 1995).

After dramatic school shootings and incidents of youth violence, there are usually attempts to scapegoat media culture. After the Virginia Tech shootings, the Federal Communication Commission (FCC) issued a report in late April, 2007 on “violent television programming and its impact on children” that call for expanding governmental oversight on broadcast television, but also extending content regulation to cable and satellite channels for the first time and banning some shows from time-slots where children might be watching. FCC Commissioner Jonathan S. Adelstein, who is in favour of the measures, did not hesitate to evoke the Virginia Tech shootings: “particularly in sight of the spasm of unconscionable violence at Virginia Tech, but just as importantly in light of the excessive violent crime that daily affects our nation, there is a basis for appropriate federal action to curb violence in the media.”

In a Los Angeles Times op-ed piece, Nick Gillespie, editor of Reason, noted that the report itself indicated that there was no causal relation between watching TV violence and committing violent acts. Further, Gillespie argued that given the steady drop in incidents of juvenile violence over the last twelve years, reaching a low not seen since at least the 1970s, it is inappropriate to demonize media culture for acts of societal violence. Yet, in my view, the proliferation of media culture and spectacle requires renewed calls for critical media literacy so that people can intelligently analyze and interpret the media and see how they are vehicles for representations of race, class, gender, sexuality, power, and violence.

In the wake of the Columbine shootings, fierce criticism and scapegoating of media and youth culture erupted. Oddly, there was less finger pointing at these targets after the Virginia Tech Massacre—perhaps because the Korean and Asian films upon which Cho modeled his photos and videos were largely unknown in the United States, and
perhaps because conservatives prefer to target jihadists or liberals as nefarious influences on Cho, as I point out in Chapter 1. I want to avoid, however, the extremes of demonizing media and youth culture contrasted to asserting that it is mere entertainment without serious social influence. There is no question but that the media nurture fantasies and influence behavior, sometimes sick and vile ones, and to survive in our culture requires that we are able to critically analyze and dissect media culture and not let it gain power over us. Critical media literacy empowers individuals over media so that they can produce critical and analytical distance from media messages and images. This provides protection from media manipulation and avoids letting the most destructive images of media gain power over one. It also enables more critical, healthy, and active relations with our culture. Media culture will not disappear and it is simply a question of how we will deal with it and if we can develop an adequate pedagogy of critical media literacy to empower our youth.

Unfortunately, there are few media literacy courses offered in schools in the United States from kindergarten through high school. Many other countries such as Canada, Australia, and England have such programs (see Kellner and Share 2007). In the next section, I will suggest that to design schools for the new millennium that meet the challenges posed by student alienation and violence and provide skills that students need for a high-tech economy requires a democratic reconstruction of education. But to address problems of societal violence raised in these studies requires a reconstruction of education and society, and what Herbert Marcuse referred to as “a revolution in values” and a “new sensibility.” The revolution in values involves breaking with values of competition, aggression, greed, and self-interest and cultivating values of equality, peace, harmony, and community. Such a revolution of values “would also make for a new morality, for new relations between the sexes and generations, for a new relation between man and nature” (2001: 198). Harbingers of the revolution in values, Marcuse argued, are found in “a widespread rebellion against the domineering values, of virility, heroism and force, invoking the images of society which may bring about the end of violence” (ibid).

The “new sensibility” in turn would cultivate needs for beauty, love, connections with nature and other people, and more democratic and egalitarian social relations. Marcuse believes that without a change in the sensibility, there can be no real social change, and that education, art, and the
humanities can help cultivate the conditions for a new sensibility. Underlying the theory of the new sensibility is a concept of the active role of the senses in the constitution of experience that rejects the Kantian and other philosophical devaluations of the senses as passive, merely receptive. For Marcuse, our senses are shaped and molded by society, yet constitute in turn our primary experience of the world and provide both imagination and reason with its material. He believes that the senses are currently socially constrained and mutilated and argues that only an emancipation of the senses and a new sensibility can produce liberating social change.

Ultimately, addressing the problem of societal violence requires a democratic reconstruction of education and society, new pedagogical practices, new social relations, values, and forms of learning. In the following section, I want to sketch out aspects of a democratic reconstruction grounded in key ideas of John Dewey, Paulo Freire, Ivan Illich, and Herbert Marcuse.

New Literacies, Democratization, and the Reconstruction of Education

To begin, we need to recognize a systemic crisis of education in the United States in which there is a disconnect between youth’s lives and what they are taught in school. Already in 1964, Marshall McLuhan recognized the discrepancy between kids raised on a fast-paced and multimodal media culture and the linear, book and test-oriented education of the time, where kids sit in a classroom all day. Since then there has been a proliferation of new media and technologies, but education has been retreating to ever more conservative and pedantic goals, most egregiously during the Bush era and its phony “No Child Left Behind” program which is really a front for “teaching for testing.” In this policy, strongly resisted by many states and local school districts, incredible amounts of time are wasted preparing students for tests and teachers, and schools are basically rated according to their test results.

Reconstructing education will involve an expansion of print literacy to a multiplicity of literacies. An expanded multimedia literacy and pedagogy should teach how to read and critically dissect newspapers, film, TV, radio, popular music, the Internet, and other media of news, information, and culture to enable students to become active and engaged democratic citizens. While 1960s cultural studies by the
Birmingham school in England included a focus on critically reading newspapers, TV news and information programs, and the images of politics, much cultural studies of the past decades has focused on media entertainment, consumption, and audience response to specific media programs (see Kellner 1995). This enterprise is valuable and important, but it should not replace or marginalize taking on the system of media news and information as well. A comprehensive cultural studies will interrogate news and entertainment, journalism and information sourcing, and should include media studies as well as textual studies and audience reception studies in part of a reconstruction of education in which critical media literacy is taught from kindergarten through college (see Kellner 1995, 1998 and Kellner and Share 2007).

Critical media literacy needs to engage the “politics of representation” that subjects images and discourses of race, gender, sexuality, class, and other features to scrutiny and analysis, involving critique of violent masculinities, sexism, racism, classism, homophobia, and other hurtful forms of representation. A critical media also positively valorizes more progressive representations of gender, race, class, and sexuality, and notes how many cultural texts are ambiguous and contradictory in their representations.

The Internet and multimedia computer technologies and cultural forms are dramatically transforming the circulation of information, images, and various modes of culture, and the younger generation needs to gain multifaceted technological skills to survive in the high-tech information society. In this situation, students should learn both how to use media and computer culture to do research and gather information, as well as to perceive it as a cultural terrain which contains texts, spectacles, games, and interactive media which require a form of critical computer literacy. Youth subcultural forms range from ‘zines or web-sites that feature an ever-expanding range of video, music, or multimedia texts to sites of political information and organization.9

Moreover, since the 1999 Seattle anti-corporate globalization demonstrations, youth have been using the Internet to inform and debate each other, organize oppositional movements, and generate alternative forms of politics and culture.10 Consequently, at present, computer literacy involves not merely technical skills and knowledge, but the ability to scan information, to interact with a variety of cultural forms and groups, and to intervene in a
creative manner within the emergent computer and political culture.

Whereas youth is excluded for the most part from the dominant media culture, computer and new multimedia culture is a discursive and political location in which youth can intervene, producing their own web-sites and personal pages, engaging in discussion groups, linking with others who share their interests, generating multimedia for cultural dissemination and a diversity of cultural and political projects. Computer culture enables individuals to actively participate in the production of culture, ranging from discussion of public issues to creation of their own cultural forms, enabling those who had been previously excluded from cultural production and mainstream politics to participate in the creation of culture and socio-political activism.

After using the Internet to successfully organize a wide range of anti-corporate globalization demonstrations in Seattle, Washington, Prague, Toronto, and elsewhere, young people played an active role in organizing massive demonstrations against the Bush administration threats against Iraq, creating the basis for a oppositional anti-war and peace movement as the Bush administration threatens an era of perpetual war in the new millennium. Obviously, it is youth that fights and dies in wars that often primarily serve the interests of corrupt economic and political elites. Today’s youth is becoming aware that its survival is at stake and that thus it is necessary to become informed and organized on the crucial issues of war, peace, and the future of democracy and the global economy.

Likewise, groups are organizing to save endangered species, to fight genetically-engineered food, to debate cloning and stem cell research, to advance animal rights, to join struggles over environmental causes like climate change and global warming, and to work for creating a healthier diet and alternative medical systems. The Internet is a virtual treasury of alternative information and cultural forms with young people playing key roles in developing the technology and oppositional culture and using it for creative pedagogical and political purposes. Alternative sites of information and discussion on every conceivable topic can be found on the Internet, including important topics like human rights or environmental education that are often neglected in public schools.

Thus, a postmodern pedagogy requires developing critical forms of print, media, computer, and multiple forms of technoliteracy, all of which are of crucial importance in
the technoculture of the present and fast-approaching future (Kahn and Kellner 2006 and Kellner and Share 2007). Indeed, contemporary culture is marked by a proliferation of image machines that generate a panoply of print, sound, environmental, and diverse aesthetic artifacts within which we wander, trying to make our way through this forest of symbols. And so we need to begin learning how to read these images, these fascinating and seductive cultural forms whose massive impact on our lives we have only begun to understand. Surely, education should attend to the multimedia culture and teach how to read images and narratives as part of media/computer/technoculture literacy.

Such an effort would be linked to a revitalized critical pedagogy that attempts to empower individuals so that they can analyze and criticize the emerging technoculture, as well as participate in producing its cultural and political forums and sites. More than ever, we need philosophical reflection on the ends and purposes of educational technology, and on what we are doing and trying to achieve with it in our educational practices and institutions. In this situation, it may be instructive to return to John Dewey and see the connections between education, technology, and democracy, the need for the reconstruction of education and society, and the value of experimental pedagogy to seek solutions to the problems of education in the present day. A progressive reconstruction of education will urge that it be done in the interests of democratization, ensuring access to information and communication technologies for all, thereby helping to overcome the so-called digital divide and divisions of the haves and have-nots so that education is placed in the service of democracy and social justice (Dewey, 1997 [1916]; Freire (1972, 1978) in light of Ivan Illich’s (1970, 1971, 1973) critiques of the limitations and challenges of education in postindustrial societies. Yet, we should be more aware than Dewey, Freire, and Illich of the obduracy of the divisions of class, gender, and race, and so work self-consciously for multicultural democracy and education. This task suggests that we valorize difference and cultural specificity, as well as equality and shared universal Deweyean values such as freedom, equality, individualism, and participation.

A major challenge for education today is thus to promote computer and media literacy to empower students and citizens to use a wide range of technologies to enhance their lives and create a better culture and society. In particular, this involves developing Internet projects that
articulate with important cultural and political struggles in the contemporary world, developing pedagogies whereby students work together transmitting their technical knowledge to other students and their teachers, and teachers and students work together in developing relevant educational material, projects, and pedagogies in the experimental Deweyean and Freirean mode.

Teachers and students, then, need to develop new pedagogies and modes of learning for new information and multimedia environments. This should involve a democratization and reconstruction of education such as was envisaged by Dewey, Freire, Illich, and Marcuse, in which education is seen as a dialogical, democraticizing, and experimental practice. New information technologies acting along the lines of Illich’s conceptions of “webs of learning” and “tools for conviviality” (1971; 1973) encourage the sort of experimental and collaborative projects proposed by Dewey, and can also involve the more dialogical and non-authoritarian relations between students and teachers that Freire envisaged. In this respect, the re-visioning of education involves the recognition that teachers can learn from students and that often students are ahead of their teachers in a variety of technological literacies and technical abilities. Many of us have learned much of what we know of computers and new media and technologies from our students. We should also recognize the extent to which young people helped to invent the Internet and have grown up in a culture in which they may have readily cultivated technological skills from an early age. Peer-to-peer communication among young people is thus often a highly sophisticated development and democratic pedagogies should build upon and enhance these resources and practices.

One of the challenges of contemporary education is to overcome the separation between students experiences, subjectivities, and interests rooted in the new multimedia technoculture, and the classroom situations grounded in print culture, traditional learning methods and disciplines (Luke and Luke, 2002). The disconnect can be addressed, however, by more actively and collaboratively bringing students into interactive classrooms, or learning situations, in which they are able to transmit their skills and knowledges to fellow students and teachers alike. Such a democratic and interactive reconstruction of education thus provides the resources for a democratic social reconstruction, as well as cultivates the new skills and literacies needed for the global media economy. So far, arguments for restructuring education mostly come from the
hi-tech and corporate sectors who are primarily interested in new media and literacies for the workforce and capitalist profit. But reconstruction can serve the interests of democratization as well as the elite corporate few. Following Dewey, we should accordingly militate for education that aims at producing democratic citizens, even as it provides skills for the work place, social and cultural life.

Both Paulo Freire and Ivan Illich saw that a glaring problem with contemporary educational institutions was that they have become fixed in nomomodal instruction, with homogenized lesson plans, curricula, and pedagogy, and that they neglect to address challenging political, cultural, and ecological problems. The development of convivial tools and radically democratic pedagogies can enable teachers and students to break with these models and engage in a form of Deweyean experimental education. The reconstruction of education can help to create subjects better able to negotiate the complexities of emergent modes of everyday life, labor, and culture, as contemporary life becomes ever more multi-faceted and dangerous. Supportive, dialogical and interactive social relations in critical learning situations can promote cooperation, democracy, and positive social values, as well as fulfill needs for communication, esteem, and politicized learning. Whereas modern mass education has tended to see life in a linear fashion based on print models and has developed pedagogies which have divided experience into discrete moments and behavioral bits, critical pedagogies produce skills that enable individuals to better navigate and synthesize the multiple realms and challenges of contemporary life. Deweyean education focused on problem solving, goal-seeking projects, and the courage to be experimental, while Freire developed critical problem-posing pedagogies of the oppressed aiming at social justice and progressive social transformation, while Illich offered oppositional conceptions of education and alternatives to oppressive institutions. It is exactly this sort of critical spirit and vision, which calls for the reconstruction of education along with society, that can help produce more radicalized pedagogies, tools for social and ecological justice, and utopian possibilities for a better world.

A democratic reconstruction of education will involve producing democratic citizens and empowering the next generation for democracy should be a major goal of the reconstruction of education in the present age. Moreover, as Freire reminds us (1972 and 1998), critical pedagogy comprises the skills of both reading the word and reading
the world. Hence, multiple literacies include not only media and computer literacies, but a diverse range of social and cultural literacies, ranging from ecoliteracy (e.g. understanding the body and environment), to economic and financial literacy to a variety of other competencies that enable us to live well in our social worlds. Education, at its best, provides the symbolic and cultural capital that empowers people to survive and prosper in an increasingly complex and changing world and the resources to produce a more cooperative, democratic, egalitarian, and just society.\textsuperscript{12}

References


Notes

5 Information, publications, films, and other material on the Mentors in Violence Program can be found at http://www.jacksonkatz.com/ (accessed September 26, 2007).
I refer to Katz’s work elsewhere in these studies and thank him for material and ideas that have been valuable for these studies. There is also a book Violence Goes to College: The Authoritative Guide to Prevention and Intervention, (Nicoletti, Spencer-Thomas and Bollinger, 2001) assembled by a group that has yearly conferences on university violence in a multiplicity of forms and develops violence prevention strategies. See their website at http://www.violencegoestocollege.com/ (accessed September 27, 2007).
8 This misplaced pedagogy of teaching for testing did not just originate with the Bush administration, but has long been a feature of pedagogically-challenged schools; see Janet Ewell, “Test-takers, not students,” Los Angeles Times, May 26, 2007: A19. For some compelling criticism of Bush Administration “No Child Left Behind” policies, see the dossier “Correcting Schools,” The Nation, May 21, 2007: 11-21.
11 For instance, Mosaic, Netscape and the first browsers were invented by young computer users, as were many of the first Websites, list-serves, chat rooms, and so on. A hacker culture emerged that was initially conceptualized as a reconfiguring and improving of computer systems, related to design, system and use, before the term became synonymous with theft and mischief, such as setting loose worms and
viruses. On youth and Internet subcultures, see Kahn & Kellner (2003).

12 For my further perspectives on developing a critical theory of education and reconstructing education, see Kellner 2004 and 2006; Kahn and Kellner 2006; and Kellner and Share 2007.