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Blended Learning, Blended Lives: School One-to-One Programs, Control Societies, and Late Capitalist Subjectivity

Sarah Nolan
Butler University

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CONTRIBUTOR/ADD MY WORK: 

Signature __________________________ Date ______________

Printed Name Sarah J. Nolan

BUTLER UNIVERSITY:

Signature __________________________ Date ______________

DO NOT ADD MY WORK:

Signature __________________________ Date ______________

Printed Name
Name of Candidate:

Sarah Nolan

Oral Examination:

Date: April 27, 2015

Committee:

[Signatures]

Chairman

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In his 2011 article “Florida Reformers Got It Right,” William Mattox uses his son Richard as an example of the benefits of hybrid education, or blended learning, which allows students to combine traditional classroom-based instruction with online schooling. Mattox only briefly praises the benefits of his son’s opportunity for customized instruction, and he never tells his reader about the types of classes his son took, or how those classes helped his son reach greater achievements in college. Instead, he focuses his attention and (and about half his word count) on the network of acquaintances his son was able to develop by choosing a hybrid schooling option, in turn celebrating how those social relationships helped his son succeed in a voter-based talent contest, where the person with the most “likes” wins the award. Hybrid schooling might provide an excellent, customized education for its students, but its more significant feature, according to Mattox, seems to be the way it allows students to create a network where they can tap into a diverse group of markets to leverage the value of their personalities to become successful. While the hybrid schooling experience of Richard Maddox is not typical of most students, the importance of one’s personal network and popularity as a form of social currency are typical of students in contemporary classrooms.

Students in school today are learning much more than the standard reading, writing, and arithmetic, and they are learning it in different ways. Gone are the days of the distinct public and private spheres where school, work, and home were each given clearly defined spaces. Since the early 1990s, the home has been increasingly intruded upon as technological innovation and the continued growth of the internet have allowed employees and students to work from places other than the office or school (most notably, the home), redefining not only the location, but also the time of work. Work does not need to end at five o’clock, or school at 3:30, because employees and students can complete their work at whatever time is most appropriate to them.
Now, more than twenty years after these mobile technologies began their assault on the home, the insulated and separate spheres of home, work, and school are almost completely obliterated. Gilles Deleuze predicted this breakdown in his 1995 "Postscript on Control Societies" in which he asserted that we would welcome the "ultrarapid forms of free-floating control" (178) that have developed to replace those clearly defined spaces. One-to-one programs and instructional models which put a computer or tablet in the hands of every child in a classroom are radically changing the fundamental structures of pedagogy and the roles of educators and students alike in twenty-first century classrooms. These classrooms not only reveal a shift in the way knowledge is transferred and acquired, they reveal a complete transformation in the society for which those pupils are being prepared. The specific closed spaces of Michel Foucault's disciplinary society, each with its individual rules and roles, have evolved into one of greater openness. The shift from the classroom as a closed space to an open, networked place replicates this shift in the larger society of global capitalism. These changes seem to indicate a freer environment that requires less work from the teacher and less concentration from the students, but it actually creates a more controlled environment where more is required of both teachers and students inside of the classroom and out. However, though these increased requirements are perhaps the most obvious outcome of this shift, they are not the only outcome. More significantly, this emerging system of education allows for the development of a new type of student—one who accepts that the creation of her subjectivity is not limited to the classroom, and who actually becomes involved in the formation of that subjectivity through her conflated roles as consumer and producer. Technology is not just opening the classroom. It is repurposing the classroom so that the students' personalities and subjectivities become subsumed in the process of education in preparation for their adult professional lives.
Blended Learning – The Changing Nature of Education

The fact is, the majority of individuals involved in education have accepted the inclusion (or what some would consider the intrusion) of technology into the classroom. At some point within the past few years, people seemingly realized that computers, laptops, tablets, and even mobile phones are not going anywhere, and that fighting to keep them out of classrooms was a battle doomed to failure. In 2008’s “How Do We Transform Our Schools?” Clayton M. Christensen and Michael B. Horn argued that technology’s inclusion in education would operate on a “disruptive innovation” theory, in which a new technology enters the market not by attempting to compete with older, established products, but by selling a product to “people who, for one reason or another, are unable to consume the original product, so-called non-consumers” (Christensen and Horn). In education, the “original product” was what people would typically picture as the essential elements of education—textbooks, desks, and chalkboards. And throughout the 1990s and early 2000s, technology tried to compete with these older and more established products with minimal success. But by 2008, though almost every school in the United States had computers available for student and teacher use, education still looked essentially the same as it had for 100 years. The authors claim that for education to be transformed by technology, technology would have to find non-consumers, people who had not already adopted technology and integrated it into the existing structures of education. But teachers, administrators, and students alike had already integrated computers and the internet in a non-disruptive fashion, folding them into the traditional practices and methods of education. Because they were already a part of the extant system, those technologies had no hope of being transformative, because they were not disruptive.
Since then, disruption has happened.

In 2010, when Dale Mezzacappa wrote about Philadelphia’s School of the Future in *Education Next*, the questions about technology’s ability to disrupt education still existed in the realm of “will this work?” His subtitle, “*Can Philadelphia’s School of the Future live up to its name?*” reveals the uncertainty of the school’s experiment with education, and though his article does not draw any specific conclusions about the effectiveness of technology in education, it does reveal many concerns. At this time, questions like “Can students learn with these new methods?” and “Can we keep them from being distracted?” both seemed to be answered with a clear “No.” He follows this response with the claim that traditionally-educated students “weren’t prepared to take control of their own learning” and an example of a teacher who spent “30 or 60 minutes of a period deleting games from the computer” (Mezzacappa). Four years ago, people were aware that education needed to be fixed, but the technological solution was still uncertain and controversial.\(^1\) In fact, a year later, the same journal published two more articles addressing this issue of technology’s usefulness in education. Guido Schwerdt and Amelie C. Wuppermann defended lecture-style teaching, citing their study which showed that students who received lecture-based instruction scored higher on standardized tests, while Jonathan Schorr and Deborah McGriff presented success stories of blended learning in five schools across the country. The inclusion of two such wildly different perspectives side-by-side in the same publication reveals the uncertainty about the path of education as recently as 2011.

Despite this uncertainty, increasing numbers of schools have implemented one-to-one programs, even though some educators still view them in an unfavorable light. Traditionalists, teachers who do not support this new model, argue that they cannot see what students are doing and cannot tell when students are not paying attention. No one is surprised that an iPad is more
entertaining than a lecture about the Ottoman Empire, and teachers who teach primarily through lecture realize that students will likely be distracted by the devices in front of them, whether they are playing games, messaging friends, or browsing the internet. Many of these teachers also see the inclusion of technology as a form of capitulation. By giving in to the demands of spoiled, distracted students who refuse to put away their cell phones and focus on a specific task or object, schools have given up and handed the asylum’s keys to its inmates. And though they may acknowledge that students have ‘always’ found methods of not paying attention—doodling, passing notes, staring out the window—the teacher was more easily able to catch them in these activities and direct their attention back to the lecture. Internet-enabled devices offer endless options for students, and according to this argument, those options should be forbidden.

These teachers are functioning in a model in which the teacher is the sole keeper and distributor of knowledge and if students are not listening intently to whatever he or she says, they will fail not only the test, but their entire lives. This traditional method does not propose that adult success hinges on a person’s detailed knowledge of the events of The Odyssey, but it does assume that the ability to sit, listen, take notes, and focus on one task for an extended period of time is crucial to professional success. Placing a laptop between the student and the teacher undermines the educational goals of preparing students for the future, because those laptops encourage distraction and keep students from learning those crucial skills.

Adopters, or teachers who favor blended learning, highlight the desired outcome of education, which is to prepare students for the world they will, some day, inhabit. The world of factory and traditional office work is increasingly rare in the United States, and thus the behaviors and skills that lead to success there are not as vital as they were thirty years ago. Many educators acknowledge that they are not sure what companies will need from workers in the next
fifteen or twenty years; however, they do know that twenty-first century learners need to be creative and collaborative. Adopters argue that if students are adaptive and innovative they will have the ability to function in the capacity their employer desires, and that what students are taught is not nearly as important as how they are taught. Sure, students still need to know how to read and write, but those students will also need to know how to do those things in personally meaningful ways. The adopters’ argument says that bringing these devices into the classroom will assist students in learning, because it will allow students to learn in ways that are applicable to their lives and individual learning styles, allowing for a truly personalized education.

All of this underscores the transition taking place in American schools; a transition which has many feeling uneasy. A 2013 study claimed that 44% of K-12 schools in the UK and the United States had adopted some sort of one-to-one program (Holeywell). Increasing numbers of students enter the classroom with a device that is not merely tolerated, but encouraged. It follows that articles and essays published about technology in education have become increasingly about how to effectively manage the inclusion of these devices in the classroom, not if they should be allowed in at all.²

Technology in education is a foregone conclusion, it seems. But the changes in educational pedagogy are just one aspect of a larger epistemic shift that reflects the movement from disciplinary to control society, and the accompanying transition from material labor to immaterial labor. Giving students an iPad or laptop reflects the way the outside world functions in a much more fundamental way—both in terms of how we perceive ourselves in relation to the structures of power that surround us and in how we perceive of our roles as workers and subjects. The changes in education are not just about work, and they are not just about pedagogy. They are
about how we construct capitalist subjects, and how this new form of subjectivity reflects the society in which those subjects function.

The Extended Reach of Control

In *Discipline and Punish* Michel Foucault states that “discipline creates . . . docile bodies” and he defines docile bodies as those which “may be subjected, used, transformed and improved” (136, 138). The disciplinary society of the eighteenth and nineteenth centuries developed and perfected both the necessary procedures and spaces for the creation of docile bodies and the structures of power that created and sustained a “relation that . . . makes [the subject] more obedient as it becomes more useful” (138). Discipline created obedient bodies, because obedient bodies were necessary for the types of labor and subjectivity necessary for the Industrial Revolution. Although Foucault performs much of his analysis using prisons and soldiers in *Discipline & Punish*, the claims he makes can be extended and applied to education. He states quite clearly that many of the processes “were at work in secondary education at a very early date” (138) and many of those same processes still exist in educational systems today, even though the world of business has largely abandoned those disciplinary models of work. As disciplinary societies have given way to control societies, specific, closed spaces with specific rules have opened up into spaces that bleed together and combine into continuous, open plains. Michael Hardt and Antonio Negri provide a succinct explanation of the differences between disciplinary and control societies in *Empire*: “Disciplinary society is that society in which social command is constructed through a diffuse network of dispo"tifs or apparatuses that produce and regulate customs, habits, and productive practices . . . . We should understand the society of control, in contrast, as that society in which mechanisms of command become ever more
‘democratic,’ ever more immanent to the social field, distributed throughout the brains and bodies of the citizens” (23).

Modern education, which emerged around the same time as the Industrial Revolution, is built on a factory model. In 2008, at a lecture at the Royal Society of Arts in London, Sir Ken Robinson explained that “we have a system of education that is modelled on the interests of industrialism and in the image of it. Schools are still pretty much organised on factory lines; ringing bells, separate facilities; specialised into separate subjects. We still educate children by batches. We put them through the system by age group. It is like the most important thing about them is their date of manufacture” (13). Robinson is not the only person saying these things; many in education see the system as flawed and out of sync with the current demands of society. However, what is interesting is Robinson’s assumption and acceptance of education as something that is designed for creating a certain type of person for a specific type of work. At another point in his talk, Robinson acknowledges the “economic judgment that is made in the structure of the school curriculum” (5). The factory model is aligned with an industrial model which incorporates the role that most subjects would fulfill—cogs in a machine. Children were stripped of individuality and autonomy as a means of preparation for the life that lay ahead of them, and as such, became Foucault’s “disciplined mass.”

That schools took on a material form which mirrored the way its products were created is certainly not a new realization. Louis Althusser’s thesis of the Ideological State Apparatus (ISA) positions the school alongside the church, the family, the law, and culture as “the dominant ideological State apparatus in capitalist social formations [because] it takes children from every class at infant-school age, and . . . practically [provides them] with the ideology which suits the role [they have] to fulfill in class society (154-55). Regardless of the level of education an
individual receives, she is prepared with (what Althusser calls) "know-how" for her role in the productive process. More importantly, however, she has been inculcated with the ideology of the ruling class. If we accept that education is the dominant ISA, then we must accept two other things: First, that it is not a neutral space. The shifts and changes in education, even its conception (both temporally and materially) are products of the economic system in which it operates. Second, that the manner in which students are educated reflects and produces that system. To create the Model-T, Henry Ford not only needed a design and the factory line, but also the subjects who would both build and purchase those cars. In any society, citizens accept the ideology of that system as natural, and so as the structure of society changes, so must the ISAs which interpellate subjects into ideology. Education will evolve as our society does.

In disciplinary societies, obedience is orchestrated and maintained through visibility, and the power of visibility becomes "the perfect disciplinary apparatus [which] would make it possible for a single gaze to see everything constantly . . . a perfect eye that nothing would escape and centre towards which all gazes would be turned" (Foucault 173). Traditional classrooms are a clear embodiment of this ideal. The teacher stands at the front of the room with the students arranged neatly in rows before her where she can see each of them at any given moment, but where they can only look at her. The teacher knows who is paying attention and who is not, because a gaze that was focused anywhere except on her or on the pupil’s own desk is off task and easily remedied. The teacher is the keeper and dispenser of knowledge, a position of power not only by means of that knowledge, but also by means of her physical placement in the room. The power dynamics of these classrooms made the hierarchies which awaited the students in the outside world very obvious. There were hierarchies of power in every facet of their lives, from the structure of their future employment to the structure of the governments that
wielded and controlled power. Those docile bodies were manufactured and came out the other end of the conveyor belt at the appropriate time, and then their useful bodies were put to work.

In this classroom model, the students control themselves because they know the teacher is watching, and they can see her. She is absolutely visible to them at all times. But disciplinary society relies on the internalization of surveillance. Of course the teacher at the front of the room is watching; these arrangements assume that students behave because the teacher is there. Internalized surveillance is not exemplified in the traditional classroom, standard surveillance is. Internalized surveillance is exemplified in the Panopticon.\(^3\) Foucault describes the major effect of the Panopticon as “to induce in the inmate [or student] a state of consciousness and permanent visibility that assures the automatic functioning of power” (201). Students do not know when they are being watched, and so they must assume that they are always being watched, or that the gaze of the observer could turn to them at any moment. This internalization of power appeared in very small ways in the pre-iPad classroom, like when teachers sat behind their students during tests so students never knew when they were in the teacher’s gaze. However, teachers are still often advised to move unruly students closer to where the teacher normally stands during class, and most teachers remain unwilling to leave students unattended because this potential visibility is not completely internalized by students. They know that when the teacher leaves, they are unobserved.

Interestingly, the inclusion of iPads and computers in schools has allowed for a more Panoptic level of control. Because a teacher cannot see what is on a student’s screen from the front of the classroom, teachers are told to circulate throughout the room so that students never know when they might be observed. Students discipline themselves, because they never know when the teacher will walk up behind them and see them playing a game or catching up on their
Twitter feeds. This is closer to a Panoptic model, but it is not completely internalized. A better Panoptic model exists in the school network used by students for internet access. Because of that ID, school administration can theoretically access any student's usage at any given moment. Students know that they are probably not being observed, but the possibility that they could be observed facilitates an internalized level of obedience that has not existed in schools to this point. Schools also have options for other, more concrete forms of surveillance, like software that allows the teacher to monitor each student's screen or see when any student leaves a lesson. Though the last two are exceptions, they are the most obviously Panoptic, because the student must assume that the teacher is looking at everyone at any given moment. While increasing numbers of schools adopt these one-to-one models each year, most schools have not, and so they are still using pre-Panoptic methods of surveillance that have not translated into internalization among their students.

However, despite the lack of updates in the form of observation within the classroom, the integrated model does indicate a tighter level of control on teachers and students, both in and out of the classroom. Foucault claimed that surveillance "may throw off its physical weight; it tends to the non-corporeal; and, the more it approaches this limit, the more constant, profound and permanent are its effects" (203). The most effective surveillance is that which, because it is so constant and complete, becomes absolutely internalized and permanent in the surveilled. Foucault's theory does not take us beyond the disciplinary society, but the allusions he makes to the "constant, profound, [and] permanent" are fully realized by Deleuze in his argument that "in the midst of a general breakdown of all sites of confinement... control societies are taking over from disciplinary societies" (178). The classroom, once a site of confinement, is open in almost every school, even those that do not put devices in the hands of students, because students bring
their own devices. This acceptance is also echoed outside of the school building, as people bemoan the loss of family dinner to each family member’s disruptive cell phone. And if the home has been conquered by technology, the classroom does not stand a chance. In their discussions of managing distractions rather than eliminating them, teachers tacitly acknowledge this inability to completely close the space of the classroom.

These sites of confinement have been in the process of breaking down since the 1990s when the corporate world adopted technologies developed by Cisco Systems and Sun Microsystems to “extend the scope of the ‘work day’ outside of its temporal and spatial limitations” (Swenson 106). These capabilities allowed people to work from home, but also allowed the corporations which utilized them to become a presence in the homes of their workers. Company-provided laptops and cell phones ensure a continuous link between employer and employee, extending not only the work day, but also the possible areas of influence. Deleuze expressed the difference this way: “Disciplinary man produced energy in discrete amounts, while control man undulates, moving among a continuous range of different orbits” (180). Disciplinary students also produced energy in discrete amounts, within the closed space of each classroom and the school overall. Homework was likely assigned (and so we can see that school has never been a completely closed spaced), but a barrier did exist between school and home, mimicking the barrier between home and work.

Today those barriers are gone. Giving a student an iPad or laptop is not really any different than giving an employee a laptop. We do not want barriers in education, because there are no barriers in the world of work, and despite the changes that have occurred in education, its role as an ISA has not changed. Just as a laptop given to an employee ‘frees’ her from the constraints of working in the office during office hours, the student’s device ‘frees’ her to access
her schoolwork at any time that is convenient. However, that same laptop creates a constant flow of information between the student and school. In the flipped classroom model, the teacher can provide individualized instruction to each student in class after they have watched the lesson at home. This is the opposite of the disciplinary model—students are ‘free’ to learn at their own pace, but lose any portion of their lives that are free from school. They are responsible for their own learning, watching a video as many times as necessary to understand something. If they do not understand, it is their fault for not watching the video enough, or not paying enough attention when they did watch it. In this way, responsibility is transferred to the subject.

This apparent freedom is underscored by students’ access to the internet in schools. Restricting access to the internet assumes the level of taboo because it runs counter to the ethos of connectedness. As Deleuze predicted, “The digital language of control is made up of codes indicating whether access to some information should be allowed or denied, [and] . . . it doesn’t depend on the barrier but on the computer making sure everyone is in a permissible place” (Deleuze 182). Schools with one-to-one programs do not need to create a barrier that keeps students from accessing the internet, because accessing the school’s network requires a username and password which is given only to individuals associated with the school, and those codes ensure that only those with permission can gain access. As a result, education becomes the movement form one ‘password’ to another. The barriers still exist, but they keep the ‘right’ people in and the wrong people out, without actually closing the space. Those who have been granted access are able to maintain that access from any location. This freedom of access is tempered by Panoptic monitoring, and seems to present something of a hybrid disciplinary-control system, because traditional schools are still materially disciplinary. Students are still
expected to arrive at school by a certain time, and they are guaranteed that it will end by a certain time.

The (perhaps) obvious extension of this control society is that the control goes in all directions, to students and teachers alike. This, like everything else, has been a gradual shift. Teaching has always been somewhat biopolitical in nature because it has always had some level of intrusion into the private sphere. Teaching is often conceived of as a calling, not simply a career, and most teachers accept that extra level of commitment that society expects from them, but concern for students' wellbeing and grading a few papers in the evening has transformed into a complete identity. The point here is not to bemoan the extra work teachers are expected to perform, but to underscore the destruction of public and private spheres that has happened at all levels. Let us consider this idea with an illustration: Originally, homework was assigned in class, probably orally, but most likely written down as well—perhaps on the chalkboard. Then, writing it on the chalkboard became an expectation, an unspoken requirement. Later, as schools began to supply each student with a planner in which they were encouraged to keep track of assignments, teachers were encouraged to check students' planners to ensure that a student had written down any assignments. A few years later, schools built websites and administrators encouraged (perhaps requested or even required) teachers to post their homework on the website so it was available for students who were absent, who did not write it down, or parents who wanted to make sure their child was doing all their work. Today, teachers tweet or text homework reminders to students. None of the previous iterations has disappeared—students can still find homework assignments written on the chalkboard, many schools still provide planners, but it is also safe to assume that any teacher utilizing such methods also has a website where information is posted.
Like students, teachers are expected to perform a different kind of work, and at first it appears as more freedom for teachers. The reminders can decrease the number of “I forgot we had homework” conversations, and teachers can even change or cancel the homework if necessary. Teachers can still assign homework if they forgot to mention it in class. But just as students never really leave school, neither do teachers. Deleuze anticipated the emphasis on continuous new knowledge with his claim that “school has been replaced by continuing education . . . in control societies you never finish anything” (179). Teachers are never finished, because knowledge is no longer enough. Teachers are expected to continually find new ways to share their knowledge with students, which means finding new apps and programs, and then figuring out ways to integrate them into that teacher’s specific subject and grade level. Lessons must be continually changed and updated as student needs and demands evolve.

And this demand for continued evolution makes sense, because the world in which teachers live, and the one they are preparing their students for is also constantly evolving. Fredric Jameson describes this evolving world as a “network of power and control . . . [that] has finally succeeded in transcending the capacities of the individual human body to locate itself, to organize its immediate surroundings perceptually, and cognitively to map its position in a mappable external world” (38, 44). Where power structures of the disciplinary society were clear and comprehensible, those of the control society are not. A network has no center and no clear edge, and so, as individuals caught in a network of power and control, we are unable to locate ourselves in it with any certainty. Jameson calls the attempt do to so “cognitive mapping” (51), and though we do not have the capacity to map this network, we must learn, at the very least, means of successfully navigating it without a map. Teachers, more than just being distributors of knowledge, become guides who model appropriate survival strategies to the subjects before us.
We take these ideological positions of education as a “lifelong process” and transform them from facts into values, which, according to Mark Fisher, is what makes ideologies successful. Students see teachers who “[work] from home” and “[home] from work” because we value education and we value their success (Fisher 22). We are navigators, feeling our way in an uncharted territory, which is both terrifying and difficult, but because teachers, as the representatives of the ISA that is Education, model this behavior as something ‘normal,’ our subjects naturalize it (as we do), and become, in turn, successful navigators of the network.

**New Forms of Subjectivity**

In its 2010 *Global Chief Executive Study*, IBM noted that CEOs “operate in a world that is increasingly volatile, uncertain and complex” (2) and they “rely less on the old hierarchical style of leadership . . . [they] tend to persuade and influence rather than to command and control” (4). In this limited respect, teachers are the CEOs of their classrooms, and they are following the models provided by business CEOs because the subjects produced by those teachers will end up working for this new type of CEO. Before, subjectivity was formed, “when the boss hails you on the shop floor . . . the place of the production of subjectivity is no long defined in the same way” (Hardt and Negri 195-6). But subjectivity is no longer produced exclusively in the school or at work. Biopolitical power, in which “the creation of wealth [comes from] the production of social life itself, in which the economic, the political, and the cultural increasingly overlap and invest one another” (Hardt and Negri xiii) ensures that subjectivity is created in all places at all times. Instead of students learning so that they could go become subjects, they learn and become subjects at the same time.
Control is limitless, and its sphere of influence is perpetually open. Jameson describes postmodern reality as one of disorientation, with no center and no edge. If there is no boundary, then nothing is off limits, and the previously clearly outlined spheres and spaces of life disappear, leaving an unending plane of life where each space blends together, overlaps, and eventually becomes one. Ultimately, Maurizio Lazzarato best summarized the impact of this reality that “threatens to be even more totalitarian than the earlier rigid division between mental and manual labor . . . because capitalism seeks to involve even the worker’s personality and subjectivity within the production of value . . . and the foreman’s role is redefined into that of a facilitator” (136). In the education systems of control society, the student’s personality and subjectivity become subsumed in the process of education just as the teacher’s role becomes that of a facilitator.

The social reality of the twenty-first century is one of not only control societies, but also of what Lazzarato calls immaterial labor, which he defines as “the labor that produces the informational and cultural content of the commodity” which “involves a series of activities that are not normally recognized as ‘work’ . . . the kinds of activities involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, public opinion” (133). If students are not separated from the control society of the world outside of the school building, they are also not exempt from the expectation to perform immaterial labor while in school. Putting iPads in the hands of students does not turn them into dutiful subjects of immaterial labor by itself, but it is an important component of training them for that type of subjectivity, a subjectivity without which postmodern capitalism cannot survive.

In schools, immaterial labor reveals itself in a variety of ways. Because school is no longer a closed space, it means that the labor of school is not necessarily confined to the school
in any way. The bulk of schoolwork can happen outside of the school day and the school building, and the work of students, rather than gaining knowledge, becomes redefined as “the capacity to activate and manage productive cooperation . . . to become ‘active subjects’ in the coordination of the various functions . . . instead of being subjected to it as a simple command” (Lazzarato 135). The most successful classrooms, those that exemplify student engagement, encourage this “active and productive cooperation.” Lectures and worksheets are discouraged because they facilitate memorization, but not active learning. More importantly, they do not foster communication, and they do not make students into active subjects. Active learners are merely a variation of the “active subject” Lazzarato identified, and the most successful classrooms require students to perform the greatest amount of immaterial labor.

Horizontal and vertical communication are no longer issues either. Students have almost unfettered access to other students as well as their teachers. Between instant messaging, Twitter, Facebook, email, and Skype, students have a myriad of ways to contact each other, and they use all of them. Additionally, students have access to teachers at a previously unfathomable level. In the past, perhaps a student could find a teacher’s phone number in a school directory or from an involved parent, but use of that number was intrusive and reserved for the most extreme situations. Today, students email teachers regularly, and thought some questions are a nuisance (mostly because the desired information is available in other places) others are encouraged and valued. Educators also tout this as preparation for college and the real world, where students will be expected to communicate with professors or bosses, and it gives them the opportunity to learn the unwritten rules of these exchanges in a low-risk environment.

And while students learn these unwritten rules, they participate in Lazzarato’s other facet of immaterial labor, the “cultural content” that has become a natural extension of the student’s
life. For these students, the work of creating cultural content fills every action. Everything a student does on his or her iPad, whether in or out of school, whether related to schoolwork or not, creates, recreates, and reinforces the culture they are learning every minute. This could be a #ThrowbackThursday post on Instagram or a retweet of a their school’s latest athletic success. It could be the new iPad cover they find on WaNeLo and then pin on Pinterest. The free app they download for their Spanish homework, or the $.99 they spend on a comic book app for a history project. Any and all of these actions constitute cultural content, because students are creating and defining “cultural and artistic standards” (Lazzarato 133). And because they all contribute to the same end, it does not matter which ones are performed at what times—the only important thing is that they are all performed at some point. This creation of cultural content overlaps with biopolitical production because it creates wealth and conflates the student’s personality with his or her role as a consumer. It prepares students for the integration of personality and worker when they enter the work force.

The presence of immaterial labor in the classroom is only part of the process of forming and reinforcing subjectivities. In “The Ambivalence of Disenchantment,” Paolo Virno claims that laborers in the post-Fordist era are required to embody social characteristics and talents that allow for flexibility and adaptability, rather than a specific set of knowledge or skills that are essential for a specific job. His list of qualities demanded of workers could easily be confused with a list of outcomes on a lesson plan for a group project: “habitual mobility, the ability to keep pace with extremely rapid conversions . . . flexibility in moving from one group to another, aptitude for both banal and omnilateral linguistic interaction, command of the flow of information” (13). This is the “modulation” that Deleuze characterized as a “self-transmuting molding continually changing from one moment to the next” (178-9). Control societies require a
different type of laborer, one whose labor is immaterial but also the result of “a socialization that has its center of gravity outside of the workplace, a socialization punctuated by discontinuous and modular experiences” (Virno 14). This laborer must “undulate” between and among an unending array of situations and requirements, and his skills must necessarily be fluid and malleable. Those skills which enable him to successfully “[effect] a universal modulation” are not the lessons we teach in schools. They are what Virno calls the “generically social talents—as well as the habit of developing no durable habits at all—that function as true and proper ‘tools of the trade’ once work is found” (13).

Or they used to be. Now, those are exactly the lessons we teach in schools. When Virno’s essay was published in 1996, his claims about socialization as “a formation of subjectivity that is essentially completed outside of the workplace” (17) was radical because subjectivity had traditionally been seen as something put upon someone by an outside force (a boss, priest, teacher, warden, etc), and Virno saw these workers actively producing their own subjectivity outside of the sphere of work but still for the sphere of work. Workers were cultivating the skills that would make them more productive subjects outside of their work hours, a significant departure from the closed work space of Foucault’s disciplinary society. The idea that personal activities would influence professional activities becomes coupled with the fact that these personal activities were necessary for success. Those forms of subjectivity are practically a foregone conclusion in the connected, social media infused world of 2015. Students’ online personalities and personae are an integral part of their identities, because they are never disconnected from them.

The internet of 1996, when Virno was writing, is only marginally similar to the internet we know today. The small number of Americans who had internet access spent less than an hour
a month online, and Yahoo’s directory was catalogued by human employees who evaluated and catalogued each website individually (Manjoo). Facebook didn’t exist. Myspace didn’t exist. Nor YouTube or Wikipedia. Work, home, leisure, and school were still necessarily separated because none of those spaces could be opened as completely as they can be today.

Today, students who come to school with a device are an entirely new type of subject. Rather than create a subjectivity outside of work that enables them to succeed in the world of work, for these students, the creation of that subjectivity is their work. The traits that are necessary to be a good worker in Virno’s world of 1996 are the same qualities that are necessary for students to navigate the world of social media and self-directed subjectivity:

Models of social knowledge do not equate the various activities of labor, but rather present themselves as the “immediate forces of production.” They are not units of measure, but they constitute the immeasurability presupposed by heterogeneous operative possibilities. They are not “species” existing outside of the “individuals” who belong to them, but axiomatic rules whose validity does not depend on what they represent. Measuring and representing nothing, these technico-specific codes and paradigms manifest themselves as constructive principles. (22)

Though Virno’s essay predates social media, the above passage could be written as an explanation for how it functions in the lives of students today, and putting an iPad in their hands during the school day not only invites those behaviors, it validates them. The permeation of social media into the lives of students is not a new development. Education is not doing anything new—it is finally catching up. Students’ “models of social knowledge” include how many filters are acceptable on Instagram and what types of videos get watched on YouTube. This is not
work—it is fun. They are producing the communicative capital that generates income for companies, and they are doing it for free. They are producing the material that recreates their subjectivity by creating trends and fashions, which they in turn consume. There is no distinction between the “species” they present online and the “individual” self of their daily lives. These are not actors donning a persona; they are their own personas.

Students understand and accept that they are producers as well as consumers, and they feel little discomfort with the conflation of those two roles. They are savvy enough to understand the unstated rules of these systems: Don’t post to Instagram more than once a day. It is impolite to screenshot a Snapchat. Your Twitter ratio⁵ should be about 1:1, but if it is not equal, it is better to have a higher number of followers. Always reblog on Tumblr—reposting is plagiarism. Unless you’re a celebrity, you better follow back. And most importantly, if you want likes, you have to give likes. This is the Golden Rule of Social Media, and people who don’t figure it out quickly suffer the consequences. These actions are a form of work. The students produce content that makes money for Facebook or Twitter, not for themselves, and as such “the intellectual activity of mass culture, no longer reducible to ‘simple labor,’ [becomes] the pure expenditure of time and energy” (Virno 21). They do not mind that their labor makes money for someone else.

In a 2013 article entitled “Primitive Digital Accumulation: Privacy, Social Networks, and Biopolitical Exploitation,” Brian A. Brown asserts that these “products of intimately subjective form of voluntary labor” which generate wealth for “Web 2.0 owners” are a form of biopolitical exploitation, and he is absolutely right. But these students do not care that they are being exploited, and that their labor is producing wealth for someone else. It is as natural to them as the exploitation of the laborer is for any other citizen of a capitalist society.
But now, time and energy spent on this type of labor are not limited to the hours outside of the classroom. These skills are adopted and redirected into the actual process of learning. Lazzarato borrows the term “interface” to describe the workers these schools are aiming to produce, where “the worker’s personality and subjectivity have to be made susceptible to organization and command . . . workers are expected to become ‘active subjects’ in the coordination of various functions of production, instead of being subjected to it as a simple command” (133-4). We expect students to become active subjects in their own learning, and as students were once expected to sit quietly at a desk, take in the information given to them, and reproduce it in a way that showed a satisfactory level of comprehension, now we require them to bring every part of themselves to the process. Their value, then, as students, comes from their ability to navigate the social interactions that, though not comprised of any specific skill set, are fluid and mobile in a way that allow students to adapt them to any situation. We model this by customizing their education to fit their personality, which, in turn, reinforces the necessity of bringing their personality into all the work they do.

Blended Lives

In February of 2014, PBS aired a Frontline documentary titled “Generation Like” which explored the motivations behind contemporary teenagers’ interest in and concern with “Likes,” the currency of social media. While the psychological reasons for these behaviors are fairly straightforward, what is really interesting about this episode is how corporations are using the data gathered from social interactions. Perhaps interesting is not the correct word. Expected is probably closer. According to Douglass Rushkoff, the writer and correspondent, “Major corporations have long spent billions trying to get kids to engage with their products and brands.
Now that the way kids consume media has changed, the companies that want to reach them know they need to change, too.” And many of these corporations have changed. Instead of spending money selling their products to teens, trying to adopt the right angle so that teens will see their products as “cool,” they have an entire labor force willing to do the work of promoting their products for free.

The show interviewed a young woman from New York who admitted to spending four or five hours a night promoting *The Hunger Games: Catching Fire* in order to accumulate points in the ultimate pursuit of being crowned *The Hunger Games*’ biggest fan. She tweeted, retweeted, liked, and tumbled to promote a movie, essentially performing the duties of a full-time marketing strategist for free. This is the ultimate in communicative capital and immaterial labor, because her reward for achieving the title of “biggest fan” was simply that—a title. She did not win tickets to a screening or the chance to meet part of the cast; she only received a title. Another Generation Like-er featured on the show was a twenty-something YouTube vlogger who has leveraged his personality and individual interests into endorsements with Pepsi and Taco Bell. He is not selling a commodity. He is selling his personality, and that personality happens to be “really into” Taco Bell. He started a campaign to convince Taco Bell to create a new product, which they did, embodying Lazzarato’s claim that “immaterial labor . . . gives form to and materializes . . . consumer tastes . . . and these products . . . become powerful producers of needs, images, and tastes” (138). From 1946 – 2013, Americans survived without the Cool Ranch Doritos Locos Taco, until this young man produced the consumer taste and need for it. Taco Bell was only happy to oblige.

These are the exceptions, obviously; most teenagers are not YouTube celebrities or unpaid freelance marketing experts. But they do all the same activities, and they are creating
capital through their online presences. Facebook became a multi-billion dollar company by placing ads along the sides of its users' newsfeeds, and those ads are generated based on the identities those users present online. Capital wants our affect, not our skills, labor, or knowledge.

On the inside hem of the Starbucks Green Apron is the phrase “we create inspired moments in each customer's day” followed by four words: anticipate, connect, personalize, own. This rhetoric is not about making coffee. Employees (or, partners, as they are called) are given this green apron and these ideals before they learn to brew coffee, blend a Frappuccino, or steam milk, because Starbucks wants the affect of their “partners,” not their skills. They can teach the skills required to make drinks and serve pastries, but the mobile skills that individuals bring with them to their employment are learned elsewhere, in the socialization that occurs at school, at home, and among their peers. The charge to “create inspired moments” ranks higher than the instruction to create good coffee because the affect of connectedness creates repeat customers. These types of commodities—the affect of inspired moments and the communicative capital generated through likes do not “produce the physical capacity of labor power; instead [they transform] the person who uses it” (Lazzarato 138). The Millennials who constitute this Culture of Like create value through their social relationships and are in turn valorized by these relationships. They become more valuable as producers through the act of consumption, and as their value as consumers increases, they produce more value for the corporations exploiting them. This is not all that different from a traditional labor model in which a worker who gains more experience as a producer is able to produce more, and thus has more value as a producer, but those laborers were being compensated for their labor. Contemporary producers of communicative capital are producing both value and revenue for free, and more importantly, they are doing it for fun. They are not perfecting these skills to garner more success in the work
force, they are working as their fun. We cannot distinguish their work time from leisure time, as Lazzarato predicted, not because they are inseparable, but because they are indistinguishable.

William Mattox was right to celebrate his son’s “chutzpah” and the “diversity of his hybrid-schooling life” because those factors allowed for something more important than academic success: a personal network. We will never know how Richard Mattox scored on his AP exams or what his cumulative GPA was when he graduated. Those numbers are not as important as his ability to create and sustain a personal network; that ability—not his academic success—is more predictive of his success as an immaterial laborer and producer of communicative capital.
1 There are a multitude of essays and articles on this topic, but of those referenced here, Christiansen and Horn, "How Do We Transform Our Schools?"; Diaz and Brown, "Blended Learning, a Report on the ELI Focus Session"; Mezzacappa, "High School 2.0"; Nagel, "Meta-Analysis: Is Blended Learning Most Effective?"; Prensky, "Listen to the Natives"; Rosen, "Rewired: Understanding The iGeneration And The Way They Learn"; and Yang, "ICT in English schools: transforming education?" offer varying perspectives on the appropriateness and efficacy of technology-infused pedagogical models.

2 More recent articles by Armstrong, Holeywell, and Horn reveal this shift toward an attitude of inevitability regarding technology in the classroom. In their 2013 article in the *Harvard Educational Review*, teachers Thomas M. Philip and Antero D. Garcia outline the important factors to consider in attempting to build or create a program that utilizes student devices in education after conducting an unsuccessful pilot program using cell phones as learning tools. Rather than claiming that one-to-one programs do not work, they encourage schools to implement these programs with care and planning, because they assume that schools will implement these programs and that these programs are worth implementing. Similarly, another essay from the *British Journal of Educational Technology* in presents "Five psychological challenges facing mobile learning" not as reasons to avoid mobile learning, but rather areas of consideration as schools commence using mobile learning.

3 Foucault gives the following description of the Panopticon in *Discipline and Punish*: "at the periphery, an annular building; at the centre, a tower; this tower is pierced with wide windows that open into the inner side of the ring; the peripheric building is divided into cells, each of which extends the whole width of the building; they have two windows, one on the inside, corresponding to the windows of the tower; the other, on the outside, allows the light to cross the cell from one end to the other. All that is needed, then, is to place a supervisor in a central tower and to shut up in each cell a madman, a patient, a condemned man, a worker or a schoolboy. By the effect of backlighting, one can observe from the tower, standing out precisely against the light, the small captive shadows in the cells of the periphery. They are like so many cages, so many small theatres, in which each actor is alone, perfectly individualized and constantly visible. The panoptic mechanism arranges spatial unities that make it possible to see contantly and to recognize immediately" (200).

4 Hardt and Negri define biopolitical power as "a form of power that regulates social life from its interior, following it, interpreting it, absorbing it, and rearticulating it." (24). While their definition is perhaps more extreme than what I refer to above, it nonetheless captures the idea that the job of teaching has always had an identity attached to it.

5 A Twitter ratio is the number of a user’s followers vs. the number of people who follow her.
Works Cited


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