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Another Colonialist Tool?

Aaron Barlow

When I tried taking a Coursera xMOOC on Digital Media in the early part of 2013, two related aspects of it seemed distressingly familiar (aspects that are, I might add, specific to the huge xMOOCs of Coursera, Udacity and edX and not necessarily to the cMOOC, which has different structures of expectation and participation).^{*} One of these aspects was familiar to me through my experiences as a Fulbright scholar and Peace Corps Volunteer in West Africa and relates to the problems of third-world development. The other stems from my own childhood experiences with experiments in education.

First, I remember a group of European professors in Burkina Faso who were sure they knew what would work for students at schools even in remote rural communities. They knew the goals and purposes of education, how it had always been done, and were flexible enough to be able to modify the means of reaching their ends. Yet, the teachers from those African schools, at the university for a summer institute, were horrified at the suggestions of the professors. The Dutch physicists at the University of Ouagadougou, well-meaning and extremely amiable, were hurt by the rejection they experienced. They knew that the schools they wanted to help had few resources—no electricity, no running water and only ancient and tattered textbooks (and not enough of them)—and that the need for assistance was great. They wanted to construct physics lessons that use only locally available materials, and they had developed a number of them, all quite ingenious.

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When they tried to share them with the actual teachers, however, they were shocked by the negativity their projects elicited. Among other things, the teachers accused the professors of harboring colonialist attitudes; they asked them why they were assuming that African students were only worthy of the second rate, of pale imitations of what the European children were getting. The very offering of these tools, the Burkinabe teachers said, was admission that education in the bush could never equal education in the capitals of the developed world. It was a sign not just of neo-colonialism but of acceptance of the widening gap between rich and poor. The xMOOC I experienced, it seemed to me, was a sign of the same attitudes those well-meaning professors from the Netherlands were carrying.

Second, my emotions in response to the xMOOC were exactly those I had one childhood summer when I was thrown headlong among teaching machines and programmed instruction. Almost immediately bored by what was in front of me, I had to be constantly called back to task. A few years later, behavioral psychologist B. F. Skinner, who had been instrumental in the work on teaching machines, would describe almost exactly how I had felt:

Though physically present and looking at a teacher or text, the student does not pay attention. He is hysterically deaf. His mind wanders. He daydreams. Incipient forms of escape appear as restlessness. "Mental fatigue" is usually not a state of exhaustion but an uncontrollable disposition to escape.... A child will spend hours absorbed in play or in watching movies or television who cannot sit still in school for more than a few minutes before escape becomes too strong to be denied. (97-98)

I was bored and felt no connection with what was happening, no control. In both the teaching machine and xMOOC situations, the plans and activities confronting the student seemed to have little to do with me, the actual learner.

How do these two, Africa and Cambridge, connect? Quite simply, the student enrolled in an xMOOC, I believe, is in much the same position as both the student before the teaching machine and the colonized individual. She or he is forced to deal with foreign assumptions having little to do with the reality of the learner or the colonized. Attitudes toward both are quite similar to those parodied by Philip K.

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Dick in his 1963 science-fiction novel *The Man in the High Castle*. In it, Dick presents a passage from *The Grasshopper Lies Heavy*, a “novel” he “quotes” inside his own. It speaks of shipping an

almost witlessly noble flood of cheap one-dollar... television kits to every village and backwater.... And when the kit had been assembled by some gaunt, feverish-minded youth in the village, starved for a chance, of that which the generous Americans held out to him, that tinny little instrument with its built-in power supply no larger than a marble began to receive. And what did it receive? Crouching before the screen, the youths of the village—and often the elders as well—saw words. Instructions.... Overhead, the American artificial moon wheeled, distributing the signal, carrying it everywhere . . . to the waiting, avid masses. (150)

I have referred to this passage numerous times over the past decade, even using it in one of my books. It is prescient, almost a prediction of the xMOOC today as it has been of other attempts, like Nicholas Negroponte’s One Laptop Per Child (OLPC) project, to bring advancement to the needy. Like the attitudes Dick satirizes, those behind both the xMOOCs and OLPC (among other projects) rest on assumptions unquestioned among the rich, powerful and show very little understanding of the situation of the poor, powerless and untutored. As is true even in the best colonial situations, though colonialist intentions can appear to be benign or even positive, their projects as often seem to stem not from the needs of the intended recipients (who most of them really know nothing about) but from those of the creators (themselves).

Looking back, I think the same was true of many of the creators of teaching machines and the theories of programmed instruction—among them my father. My parents’ house was always filled with “teaching tools” and “learning tools.” Where most kids built toy houses out of Lincoln Logs, I used Cuisenaire rods, little colored blocks that are, I understand, also great for teaching kids basic arithmetical concepts. My father, a behavioral psychologist, was a consultant for Field Enterprises; the company was constantly loading him up with samples and prototypes.

We spent the summer of 1961 in Cambridge, MA while my father did something or other with teaching machines at Harvard—and where I, very patiently (after all, they gave me a quarter after each

session), was subjected to a variety of machines that were supposed, I assumed, to somehow increase my knowledge. Or something.

I remember the details of the Harvard Museum much more clearly (it was a wonderful place for a nine-year-old to wander)—along with expeditions to spear (with forks on sticks) half-dead fish in the then-polluted Charles River. I don't even recall the topics of the teaching-machine lessons.

I do remember that I liked the programs and machines when the subjects were trivial and easily mastered. I hated them when I felt I was their captive—and that, unfortunately, was most of the time. Unlike in the museum, where I had complete freedom to explore, I felt coerced—and there was no one I could explain that to. It was worse than the feeling in school where, when bored, I could at least turn to my own fantasies. These machines were so filled with little tasks that I couldn't even find relief in daydreams.

Even Skinner came to understand this, and the place of programmed instruction quickly moved from the center to the side for the classroom: learning cannot be reduced to programs. Most of the other teaching-machine and programmed-instruction people eventually understood this as well... though the public image was that they were training students in the equivalent of Skinner's own "operant chambers." In reality, in their behaviorist "rat labs," the professors were instructing students in "shaping," teaching through approximation and reward, a process heavy on immediate teacher/student interaction. By the end of the 1960s, almost all of these psychologists were working on the assumption, growing from their experiences with "shaping," that programmed instruction and teaching machines could only be part of a much greater learning environment. The same, I am sure, should be true of the MOOC—but few MOOC proponents yet seem to recognize that, or how much personal interaction is going to be needed between instructor and student to make a MOOC work.

Sometimes, when I was working a programmed-instruction device on my own, I would give up on the set-out path and take the thing apart. I remember something called the Cyclo-Teacher which had large paper discs and smaller blank ones to be inserted into a device that allowed you to read a question from the large disc and write an answer on the small. You'd turn a knob, and the next question would appear along with the answer to the previous one. Quickly, I abandoned the device and the sequence, simply taking the large discs and reading

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those parts of them that interested me, forgetting about the program and ignoring the questions. That may be what is going to happen with the MOOCs. Because there is no up-close human interaction, the students will eventually be taking them apart rather than following the prescribed pattern. That is not bad, but it is not the intent.

Also, that is what kids like to do. Like my wanderings in the museum, I could tailor the machines to my own ends. I remember a big machine I sat in front of—well, about all I can remember is the color brown, a chair, and dingy walls. I don't even know what they were putatively trying to teach. I could do nothing but sit and wait for instructions and then do someone else's bidding. Even then, I quickly caught on that my own learning *as an individual* was really just an afterthought.

Compared to that dull room, I recall the museum vividly, its wide staircases, musty smells, dinosaur skeletons, and much more. There, I felt in charge—even in the gift shop where I would often stare, lusting after the wonderful toys and models I could not afford. When I explored the xMOOC, I wished it were more like that.

Perhaps it could be, but that will not happen until the MOOCs, even the xMOOCs, are created from a student perspective and not an administrative one. Not until they include both room for students to explore on their own and for teachers to work individually with the students. Not until they can move away from rigid goals and evaluations.

Like the MOOCs today, the teaching machines of those days weren't wrong for education or improper, they just weren't enough on their own to be the centers of education. They certainly hadn't been developed from specific *student* needs alone but, too often, for the needs of the psychologists (though not Skinner or my father, who both knew better), and students have to be that center if education is to succeed. In Cambridge, I wanted to build and to reach for things others said were beyond my grasp; the machines kept my arms short.

That was my problem: I always wanted more, and wanted to be able to control when I got it and how. That's how I felt about the xMOOC I took as well: it was (like many standard courses, unfortunately) a guided tour, and I felt I could not deviate from the marked path. There's nothing wrong with the xMOOC; it just isn't *enough*. It bored me because it was so meager and even more predictable than a class that does no more than adhere to a textbook.

There are ways of constructing an educational apparatus where the student is given a great deal of control, and the best of the MOOCs might be heading toward that. The danger is, as in colonialism, that the tendency toward centralized control and away from individual initiative and exploration is built into the existing structures of most of them. In other models, such as the Personalized System of Instruction (PSI) model described by behaviorist Fred Keller in his article “Good-bye, Teacher” in the late 1960s, attempts are made to sidestep such traps. In PSI, the teacher becomes something like an architect, while the student is the builder who has an array of tools available for the particular application. One doesn’t use a saw, after all, to drive in a nail. Keller envisions a suite instead of a classroom, a suite including a lecture hall, carrels for individual study, a conference room, and areas for small-group work and conferences. Each space would be outfitted with different devices and scheduled for a variety of events, but the student picks and chooses among them according to his or her present needs, working toward mastery of individual modules. In today’s world, this would be truly multimedia education, with relevant books, images (both moving and still), sounds and much more available to the student amid constant contact with other students, with what Keller calls “proctors” (more advanced students working for the course), and even with the instructor.

In a way, this sound like the xMOOCs, just in physical space and not electronic. But the xMOOC, when I tried it, was nothing like the varied experience of PSI or even, as I said, of the Harvard museum. It felt more like the teaching machines that Keller was already moving beyond fifty years ago. Why? It is in colonialism that we find the answer.

What is the xMOOC lacking that the PSI suite contains? Both can host lectures, both have facilitators, both have room for individual initiative, both have architects, and the pace of both is controlled by the student. The difference is simple: The xMOOC starts with the institution while PSI starts with the student, *exactly* the problem faced in many colonial and neo-colonial situations where leadership and power come from far away. And the results are likely to be just as disappointing.

Why does that initial focus and source of initiative make such a difference?

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Part of it comes from the attitudes of the colonialists/instructional-designers, even the best of them. Peter Buffett, son of investor Warren Buffett, puts it this way, naming what he saw through his work “Philanthropic Colonialism”:

I noticed that a donor had the urge to “save the day” in some fashion. People (including me) who had very little knowledge of a particular place would think that they could solve a local problem. Whether it involved farming methods, education practices, job training or business development, over and over I would hear people discuss transplanting what worked in one setting directly into another with little regard for culture, geography or societal norms.

Just so, the colonial power is also much more interested in the needs of the home country than in the colony, thinking something resembling what has worked one place will work in another. The instructional designer can fall into the same trap. As a result, as Michael Hechter observes, the “peripheral economy is forced into complementary development to the core, and thus becomes dependent on external markets” (33).

Pleasing the course creator can become more important than any actual learning. That is, everything feeds to the center, the top, economic and even cultural structures becoming centralized and, even though in a *de facto* fashion, controlled. Walter Rodney uses the example of African roads and railroads to explain how this works. The roads and railroads built by the colonial powers were useful even to the colonies—but look at their structure:

These had a clear geographical distribution according to the extent to which particular regions needed to be opened up to import-export activities. Where exports were not available, roads and railways had no place. The only slight exception is that certain roads and railways were built to move troops and make conquest and oppression easier (209).

The assumptions behind this, assumptions that blind people from the metropole from seeing the obvious structural deficiencies of the patterns of development (or of what Rodney terms “underdevelopment”), and assumptions that are quite similar to those behind both the xMOOCs and OLPC, are summed up by Michael Hechter:

One of the defining characteristics of the colonial situation is that it must involve the interaction of at least two cultures—that of the conquering metropolitan elite (cosmopolitan culture) and of the indigenes (native culture)—and that the former is promulgated by the colonial authorities as being vastly superior for the realization of universal ends. (73)

The structural paternalism of colonialism, generally unrecognized by the colonialist, is no different from that of the formulators of the xMOOCs. They may claim that they are constructing their digital roads and railroads for the “good” of everyone, but it is their own good that gains most and—as we have seen in the aftermath of colonialism, the “good” for the others often turns out to be no good at all.

The centralized decision-making from the metropole, as Buffett intuited, is never going to work well for those at the periphery. The scholars who moved beyond their teaching-machine and programmed-instruction projects recognized this structural deficiency, having learned that they, too, had been focusing on one point only, on their own goals for learning and not on the spot within the student where learning really begins. Just so, effective development in the third world has to start with the local communities and “on the ground,” not in the universities and think tanks of the metropole.

Keller, recognizing that he needed to move from a teacher-centered to a student-centered model, compares standard attitudes of teacher-centered education to how the teacher should be conceived in a PSI environment:

His public appearances as classroom entertainer, expositor, critic, and debater no longer seem important. His principal job, as Frank Finger (1962) once defined it, is truly “the facilitation of learning in others.” He becomes an educational engineer, a contingency manager, with the responsibility of serving the great majority, rather than the small minority, of young men and women who come to him for schooling in the area of his competence. The teacher of tomorrow will not, I think, continue to be satisfied with a 10% efficiency (at best) which makes him an object of contempt by some, commiseration by others, indifference by many, and love by a few.

No longer will he need to hold his position by the exercise of functions that neither transmit culture, dignify his status, nor encourage respect for learning in others. No longer will he need to live like Ichabod Crane, in a world that increasingly begrudges him room and lodging for a doubtful service to its young. A new kind of teacher is in the making. To the old kind, I, for one, will be glad to say, “Good-bye!” (88-89)

The “superteacher” of the xMOOC, the creator of structures from afar and for the needs of the successful and the rich, can never be the kind of teacher that Keller envisions. That requires constant attention to the individual learner. And it necessitates an unwillingness to accept, unlike the MOOC, a 10% efficiency as sufficient.

Colonialism and its post- and neo-colonial descendants, as Dick implies and Hechter and Rodney argue, is never about the colonies, but about the metropole and its fantasies (though these have changed since the colonial era). I learned this in Peace Corps in Togo, working among the ruins of earlier development projects. Peace Corps was wonderful for me... but was it much good for the Togolese? Similarly, Skinner’s “operant chamber” was never about training rats. It was designed to assist in the teaching of students, to help them understand a learning process (“shaping” or operant conditioning) so they could apply what they learned elsewhere. By the same token, the xMOOC is not designed for students but for the people operating it. It is a system for making money and reputations. True, there are some colonized people who actually have benefitted from colonization. Some of the white rats used in experimental psychology classes have had better lives than they otherwise might have. And a certain percentage of students will be autodidactic enough to make excellent use of the xMOOCs. But these, in all three cases, are small minorities of the whole.

What about the rest?

Some people brush the concern aside, including Nathan Harden, a young Yale graduate and spokesperson for the sorts of attitudes Dick lampoons. He writes that

students themselves are in for a golden age, characterized by near-universal access to the highest quality teaching and scholarship at a minimal cost. The changes ahead will ultimately bring about the most beneficial, most efficient and most equitable access to education that the world has ever

seen. There is much to be gained.... If a faster, cheaper way of sharing information emerges, history shows us that it will quickly supplant what came before. People will not continue to pay tens of thousands of dollars for what technology allows them to get for free.

Shades of *The Grasshopper Lies Heavy!* Access to what the rich of the metropole already have... except for the real motivational guidance and individual interaction that makes education possible. Thus, making this golden age an ersatz, though apparently identical, version of what the rich already have.

In a 2007 article in response to what was initially envisioned for OLPC, Binyavanga Wainaina wrote that

I am sure the One Laptop per Child initiative will bring glory to its architects. The IMF will smile. Mr Negroponte will win a prize or two or ten. There will be key successes in Rwanda; in a village in Cambodia; in a small, groundbreaking initiative in Palestine, where Israeli children and Palestinian children will come together to play minesweeper. There will be many laptops in small, perfect, NGO-funded schools for AIDS orphans in Nairobi, and many earnest expatriates working in Sudan will swear by them.

And there will be many laptops in the homes of homeschooling, goattending parents in North Dakota who wear hemp (another wonderproduct for the developing world). They will fall in love with the idea of this frugal, noble laptop, available for a mere \$100. Me, I would love to buy one. I would carry it with me on trips to remote Kenyan places, where I seek to find myself and live a simpler, earthier life, for two weeks a year.

The OLPC laptop is great for the rich playing poor. When you already have the best, you can slum a bit, secure. OLPC has fizzled, for the most part, but the rich never learn—or, at least, never change. Wainaina could just as easily have been talking about the MOOC, the technological marvel succeeding the laptop as savior of the downtrodden, really proving to be little more than another temporary toy for the secure well-to-do and a chimera for everyone else.

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In his devastating critique of colonialism, *Prospero & Caliban: the Psychology of Colonization*, written during the colonial period, Octave Mannoni points out:

It is of course somewhat arbitrary to compare educational with colonial problems: the colonial peoples are fully adult, and those who think of them as overgrown children may be accused of harboring paternalist motives or at any rate an unconscious paternalist attitude.... We have long been in the habit of speaking of the colonial peoples as being under our guardianship, and the present troubles are largely due to their struggles for emancipation.... To imagine that it is possible to take direct steps to combat the paternalist behaviour of colonial Europeans while the situation persists is to adopt a purely moralistic attitude, refusing to admit the facts and indulging in futile idealism. (166)

Just so, the fact remains that the power in education rests with today's equivalents of the colonial Europeans, the people with access to money from power bases within entrenched educational institutions. Just as any effective solution to colonialism that does not devolve into post- and neo-colonial situations that are tantamount to the same thing (the irony of Caliban's "Has a new master. Get a new man") requires that action originate on the ground, even at the village level, real education reform needs to start with the student. Certainly, that is true in higher education, where paternalistic and colonialistic attitudes are no longer needed, the students, like colonized people everywhere, being quite as capable (believe it or not) as their colonizers and teachers.

Writing in an essay made famous by "underground" reproduction in the 1960s (I once mimeographed copies myself), Jerry Farber argues, making an implicit connection between colonialism and education through equating students and Jim-Crow-days African-Americans, that:

Students, like black people, have immense unused power. They could, theoretically, insist on participating in their own education. They could make academic freedom bilateral. They could teach their teachers to thrive on love and admiration, rather than fear and respect, and to lay down their weapons. Students could discover community. And they could learn to

dance by dancing on the IBM cards. They could make coloring books out of the catalogs and they could put the grading system in a museum. They could raze one set of walls and let life come blowing into the classroom. They could raze another set of walls and let education flow out and flood the streets. They could turn the classroom into where it's at — a “field of action” as Peter Marin describes it. And believe it or not, they could study eagerly and learn prodigiously for the best of all possible reasons — their own reasons.

They haven't done that, though, as the very development of the MOOC shows. Defeating oppression is nigh on impossible, for colonialism builds defeatism into the colonized people—and so it takes generations for success to come even in those few cases with positive outcomes.

We see the continuing results of colonialism all over the world, unceasing poverty for vast majorities and a constant stream of wealth away from formerly colonized lands, but few of us pay attention. We also ignore the fate of the rats once the semester is over (many ending up food for snakes). I think I knew, similarly, when I was a kid playing with teaching machines and programmed-instruction material, that these weren't things meant for me, that I was subject, too—as I later discovered through things like the Farber essay when I was in high school. I suspect most who participate in xMOOCs slowly begin to understand the same thing, which is why the completion rate remains low.

The xMOOC, imagined and created far from the learner, cares as little about the student as the metropole does about the colony—or the professor about the rat. If it is to contribute effectively to learning, it is really going to have to evolve toward the student (and toward student control of the learning) and away from its creators and the hegemonic structures of almost all of contemporary education. Rather than simply creating another tool for dominating educational structures, MOOCs of all types could then become simply one more tool available to students in diverse learning environments such as that Keller proposed for his PSI. After all, the students are the ones all of these should be for.

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