

Chapter 11

Digital Literacy Instruction in Afghanistan

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ABSTRACT

This chapter uses the American military's purchase of a \$5.6 million contract to supply the National Military Academy of Afghanistan with laptop computers as the occasion to investigate the complex and overdetermined intersections of digital, administrative, and literacy technologies. These intersections and the challenges they produced for the author as a Western mentor working with Afghan postsecondary instructors in ESL and digital literacies reveal the problematic homogenizing Western economic and cultural assumptions and the intense naturalization of administrative technologies that accompany the denaturalized use of digital and textual technologies in global contexts. The connections of those challenges to recent scholarship in rhetoric and composition highlight the limitations of that scholarship's conception of political economy in a global digital context and also offers new possibilities for imagining hybrid multilingual digital literacies on a global scale.

INTRODUCTION

When I was preparing to deploy to Afghanistan, one of my West Point English Department officer colleagues trained me up on the required protective gear and body armor. Another officer, a Lieutenant Colonel from Physics and Nuclear Engineer-

ing, briefed me on the benefits I would receive, to include what the Army calls danger pay. "It's good money," he said. "But it's not worth your life." He was right: there is an incommensurability there. For the Afghan instructors I worked with, their jobs were in some way worth their lives: it took considerable bravery for them to allow other Afghans to know they worked with Americans. It took considerable bravery for a female medical student to go to school at the National Military

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Academy of Afghanistan (NMAA) when she knew she risked being sprayed in the face with acid, or for a female interpreter to work with the NMAA mentor team after being called a “whore for Americans” by students from the far provinces. What, then, is an income or an education worth?

A second way to ask that question: in Kabul, after a series of back-and-forth emails, the academic advisors, the training branch, the contracting officers, and the education contractors arranged a face-to-face meeting at Camp Eggers. The Afghans who stood to benefit from the projects discussed in the meeting were not included. For the most part, Afghans seldom do business by email. The Western mentor team held the meeting on the second floor of a building constructed out of transmodal shipping containers. We sat in a semicircle in plastic chairs and discussed the relative merits of the various graduate programs the Afghan instructors might attend, as well as the English-language literacy programs, and how much it might cost, and we talked about funding TOEFL prep programs. TOEFL, the Test of English as a Foreign Language, is one of the primary assessment tools for Afghan literacy instructors. We discussed the debate over using literacy in English as an L2 or second language bridge language rather than performing L1 native language literacy education in Dari or Pashto and then moving to L2 literacy. We performed the immaterial labor of putting together literacy education contracts without involving any of the Afghans in the administrative apparatus that we were planning for them.

This chapter examines how that administrative apparatus formed and forms a significant but often invisible component of digital literacy instruction, and how its constituent technologies when taken in conjunction with the inextricable technologies of language literacy and digital literacy are deeply imbricated in the cultural, religious, and economic systems of local cultures even as those cultures are linked to or alienated from global cultures by those very technologies. Computers

as technological objects, through their links to administrative technologies and technologies of literacy, can serve to reveal those often previously invisible links as points of disruption.

BACKGROUND

In 2011, I was a civilian assistant professor at the United States Military Academy at West Point. I deployed to Afghanistan in January and returned in June of that year, as a member of an advisor team with the mission of helping the Afghans to build their postsecondary National Military Academy (NMAA) into what President Karzai has called in public appearances the “crown jewel” of higher education in Afghanistan. While I understand that anecdotes are not equivalent to evidence, part of my method in this chapter is to use the particularities of individual experience in order to attempt to avoid the totalizing essentialisms and reductive binaries often enacted by Western scholars engaging other cultures (see, e.g., Hofstede, 2001). Our advisor team was constituted under the National Training Mission—Afghanistan (NTM—A) as a part of the International Security Assistance Force (ISAF). We stayed at a base on the ISAF military side of Kabul International Airport, again in those steel shipping containers—my shared room was 9 feet wide by 17 feet long, with a window on one end and a door opening into a hallway on the other. To get to NMAA, the team would take two soft-skinned vans and two up-armored SUVs and drive for about 20 minutes around the perimeter of the airfield over to the Afghan military side, and would pass through four guarded security checkpoints in order to arrive at the complex that formerly served as the Soviet-built Air Academy. Those security checkpoints were guarded either by ISAF forces—Belgians when I was there—or by Afghan National Army soldiers. However, ISAF does much of its work by contracting Afghan and foreign vendors to provide nation-building and security services, and in fact, the ISAF presence

distorts the local economy: the best-paying jobs go to the English- and computer-literate Afghans who can work as interpreters with the ISAF forces, to the point where government interpreters earn about \$665 per month, while government doctors¹ earn about \$220 per month. Many of Kabul's remaining professional corps—doctors, programmers, librarians, professors, lawyers, engineers—who can speak English are working as interpreters, engaging in the immaterial labor of language use. Furthermore, according to my colleagues in the ISAF contracting office, the largest dollar-value contract in Afghanistan was not for providing gasoline for military vehicles, or for building roads, or for equipment maintenance. The largest dollar-value contract in Afghanistan was for literacy instruction.

Afghanistan has a deeply communal and tribal culture, and a deeply religious culture, and Afghan economics is deeply influenced by Islam and by the tribal and social nature of the culture. Afghans generally believe that God is just, and that life is often a matter of chance, dependent on God's will rather than on individual self-determination. Understanding the tribal and group-oriented nature of the culture is essential to working with Afghans. In Afghan students, I saw the same considerable cultural resistance to Western notions of autonomous individualism that has been described by many scholars working in the area of second-language literacy learning. Many Afghan men I encountered were highly skilled orators, but tended to be uninterested in the abstract principles of rational argumentation, instead privileging the reliance on performance and rhetorical commonplaces characteristic of a residual oral culture. It took me a long time in working with Afghan faculty to understand that many face-to-face meetings and interactions were for phatic rather than transactional purposes, for maintaining bonds or reinforcing relationships rather than accomplishing tasks or moving the mission forward, and so required rhetorics entirely different from those privileged by the Western tradition.

According to the CIA World Factbook (2012), more than a third of the population of Afghanistan is unemployed, more than a third of the population lives below the poverty line, and about three-quarters of the population is illiterate. The World Bank (2012) estimates the average per capita income to be \$470 per year. In the modern era, the nation has seen various levels of conflict and war in the 30-odd years since December 1979. Electricity in downtown Kabul is intermittent. Most Afghans are polylingual, with at least some proficiency in Dari and Pashto, the two official languages. Balochi, Urdu, Nuristani, and Uzbek are not uncommon. Residual oral cultures like that of Afghanistan place a great deal of importance on memorization, and in Afghanistan there are many Dari and Pashto speakers who memorize the Quran without knowing the Arabic that they memorize. Very few Afghans speak Arabic. A significant number of Afghans speak English.

According to Lieutenant General William Caldwell (January–February 2011), who was commander of NTM-A at the time of my deployment there, English served an important military function as a bridge language among Afghanistan's many dialects and also served as “the accepted language for the international aviation community” (p. 25), and so many Afghans were trained in English literacies. Military and police literacy training in Afghanistan employed over 1000 instructors across the country, and additional civilian literacy instruction programs worked to educate between 300,000 and 400,000 Afghans per year between 2002 and 2007 (Caldwell 2011, p. 25). At the time of my deployment, approximately 85% of NMAA cadets studied English as their required foreign language, using the unfortunately dated Defense Language Institute (DLI) American Language Course (ALC) curriculum. This decades-old curriculum was designed to be administered intensively in daily six-hour blocks of classes, with each book in the course taking 30 hours or roughly one week to complete. The books are poorly written and incoherent, and in the hands of inexperienced instructors often served as

impediments to learning: I frequently consulted with instructors and offered them guidance to correct errors, unclear points, and obsolete idiomatic expressions in the books. Furthermore, adapting an intensive language curriculum to a semester-long 45-lesson course teaching two books per semester offered its own difficulties in pacing and in ensuring students received adequate learning reinforcement. As it was designed in 2011, the NMAA adaptation of the ALC curriculum required faculty to assign more work outside of class than they or students were willing to undertake, and its outcomes in terms of the pace and consistency of improving language competence suffered as a consequence. That language competency was a necessary component of the technological competency we were also working with the Afghans to promote.

The World Bank estimates that 30% of Afghans have access to electricity. In 2006, according to the most recent United Nations statistics available (2012), Afghanistan had 0.39 computers per 100 people, the third lowest ratio in the world, more than only Rwanda and Cambodia (UNData). Statistics about internet access differ slightly: according to the CIA World Factbook entry for Afghanistan, in 2009, 1 million out of the nation's estimated 30.4 million population, or roughly 3.2 percent, had internet access; according to Afghanistan Internet Usage and Telecommunications Reports, about 4.2 percent of households in 2011 had access to the internet. Afghan students are very different from the privileged undergraduates described by Berry, Hawisher, and Selfe (2012) who "have known little of a world devoid of communication networks" ("Digital literacies, technological diffusion, and globalization"). My own internet access through Afghan Wireless, a major ISP in Kabul where access is common and reliable enough to be relatively inexpensive, cost \$88 USD per month, a significant sum even when compared to the monthly salaries of the relatively well-paid interpreters.

In addition to the material economic concerns that promoting literacy (digital and otherwise) in Afghanistan presented, I would also present concerns relating to what some theorists have characterized as immaterial economic concerns. Michael Hardt and Antonio Negri (2000) defined immaterial labor as "labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication" (p. 290). For Hardt and Negri, "analytical and symbolic tasks" and "the production and manipulation of affect" (p. 293) are varieties of immaterial labor. The immaterial labor students perform in language and literacy learning, whether L1 or L2, constitutes economically valuable work, but not necessarily valuable in the conventional market-oriented capitalist way we think of value for exchange. During his tenure as the NATO International Security Assistance Force (ISAF) commander, General David Petraeus repeatedly asserted that literacy is both a necessary component of security in Afghanistan and a significant component of the infrastructure ISAF attempted to build over there. There are significant challenges in promoting post-print literacy education in a largely residual oral culture. ISAF's massive nation-building effort was in many ways an educational effort, especially in the focus that General Caldwell, Commander of the subordinate NATO Training Mission—Afghanistan (NTM-A), brought to the project. Caldwell (13 Sep. 2010) wrote that literacy "is a matter of life and death in Afghanistan," and that it additionally serves as "the essential enabler that addresses not only life and death issues, but. . . the ability to enforce accountability, the opportunity to attend professional. . . education, particularly specialized skills taught in technical schools and continued education, and the knowledge to combat corruption."

What happens if we think about literacy education as immaterial labor in relation to General Caldwell's note that in September 2010, "the NATO training mission ha[d] about 27,000 recruits from the Afghan army and police in. . . literacy pro-

grams at any given time,” and that “[t]hat number [would] grow to. . . 100,000 by June of [2011]”? Can we consider so-called stability operations to be a form of immaterial labor, and if so, what do we consider to be the product—the economic output—of stability operations in Afghanistan?

It depends on how far in the future one looks for the positive economic effects of having a stable government, one might well reply. But economic activity does not exist as economic activity solely because it has an outcome that can at some future point be exchanged on the market for cash value. Economic value must be understood beyond the exclusively market-based perspective we too often rely on in discussing functional and digital literacies in economic globalization, because it forms a significant component of the overdetermined interrelationships among digital technologies, administrative technologies, and literacy technologies in Afghanistan.

PROBLEMS

Digital Technologies

One of the initiatives that the American mentor team undertook in Afghanistan was to provide the Afghan students at NMAA with laptops in order to promote the learning of sustainable digital literacies. This was a \$5.6 million dollar contract. The Americans who wrote that contract seemed to have not thought much beyond simply directing technological resources at the problem they perceived: they bought 17 pallets of laptops for the students, apparently believing that the Afghans would easily and swiftly internalize the years of aggregated experience Americans have had in our own technological culture, and failing to see any need for instruction in computer use.

In response to this problem, I led an initiative to integrate computers into NMAA’s curriculum and day-to-day administration, classroom instruction, and student classwork and homework. This

initiative built upon the scholarship of Cynthia Selfe (1999) and Patricia Fitzsimmons-Hunter and Charles Moran (1998) that demonstrated the need to attend as much to instructor training and education as to the technology itself. I first developed a survey instrument to poll NMAA faculty and incoming first-year students about their experiences with computers and shared my findings with the American Special Advisor for Computers and Automation Training and Education to the Afghan Minister of Defense, with the intent that we would use those findings to design an education program to instruct faculty in using computers before the students receive theirs. My hope was that the program would ensure that the computers would not go unused, damaged, or sold—a genuine and potentially expensive risk in Afghanistan’s education- and resource-poor society.

The instrument surveyed both faculty (almost all of whom responded) and students (about 30% of whom responded). The surveys were administered anonymously in Dari, and included an informed consent notice and space for respondents to sign indicating either their consent or their refusal for their responses to be published in an academic context studying computer use in Afghanistan.² The questions asked both faculty and students about their skill levels with computers (Table 1), their use of computers at school or work (Table 2), their use of computers outside school or work (Table 3), and the purposes for which they used computers (Table 4).

Table 1. How skilled are you with computers?

How Skilled are Uou with Computers?	Faculty (N=134)	Students (N=162)
Expert	11	0
Highly skilled	31	6
Somewhat skilled	80	61
A little skilled	9	52
Not skilled	3	43

Table 2. How much have you used computers for work or education?

How Much Have You Used Computers for Work or Education?	Faculty (N=134)	Students (N=162)
Very extensively	57	4
Regularly	44	2
Some	25	20
A little	7	32
Very little or none	0	104

Table 3. How much have you used computers outside of work or school, at home, with friends, or on your own?

How Much Have You Used Computers Outside of Work or School, at Home, with Friends, or on Your Own?	Faculty (N=134)	Students (N=162)
Very extensively	27	20
Regularly	36	18
Some	46	38
A little	13	41
Very little or none	8	45

As the responses indicate, all faculty reported having used computers, and roughly 91 percent of faculty reported having at least some skill with computers. However, I later discovered from one of the translators that faculty who reported having done software or network development mistakenly believed those terms referred to simply using software or networks.

The responses also indicate 26 percent of students had negligible experience with computers, and 84 percent of students had negligible formal schooling with computers. Again, I later found out that first-year cadets take an information technology familiarization course, and this

Table 4. What have you used computers for?

What Have You Used Computers For?	Faculty (N=134)	Students (N=162)
Email	90	31
Web browsing/ internet	87	39
Word processing	81	38
Presentations	70	25
Movies/music	60	66
Software development / programming	46	62
Network/web development	36	15
Database	36	15
Games	32	70
Spreadsheet/ financial	30	5
Graphics/video editing	26	22
I have not used computers	0	39

circumstance was the source of the high incidence of “programming” responses to the fourth question: difficulties in translating relatively unfamiliar terms associated with digital literacies contributed to an initial misrecognition of the level of student skill with computers.

In coordination with the American Special Advisor for Computers and Automation Training and Education for the Afghan Minister of Defense, I used those findings to design an education program to train Afghan faculty in using computers before the \$5.6 million procurement contract was to take effect upon distribution of the laptops to students. We developed a plan for training 26 Afghan instructors, to include at least two instructors from each academic department, who would then be able to train their colleagues. We secured a computer laboratory with 26 working and up-to-date computers, with 2 additional computer classrooms available with about 20 seats

each, and requested a site survey to help determine whether those additional labs and seats were available for training. Afghan academic instructors were scheduled for training in the afternoons from 24 July (the end of classes and beginning of exams) until 17 October (the day before classes would start), for a total of almost 12 weeks, 2–3 hours per afternoon, Saturday–Wednesday. Our ideal outcome was to have teachers who were sufficiently trained in using computers to be able to help the cadets use their laptops every day in class and every day for homework. The program also sought to ensure long-term affordability for the Afghans by relying on widely-adopted and UNESCO-recommended free and open source courseware and learning management systems.

However, we encountered difficulties with administrative technologies that prevented the timely implementation of the plan before my departure. While we received and stored the computers in a warehouse in April 2011, waiting for the move to the more reliable sustainable power supply and broadband wireless at the new campus in Qargah, that move was postponed by the failure of American logisticians to anticipate that the multi-ton wind turbines that would provide the sustainable power supply required roads far better than those in Kabul, and the failure of those American logisticians to adequately communicate with the Afghan government.

Administrative Technologies

At the National Military Academy of Afghanistan, there are no clocks on the walls. The beginnings and endings of classes are marked by a soldier who stands in a central courtyard and blows a bugle. He tends to blow the bugle anywhere from four to twelve minutes before the classes are actually scheduled to end, and anywhere from three to nine minutes after classes are scheduled to begin. So a 55-minute class can be 34 to 48 minutes

long, which has problematic implications for pedagogy, and for eventual regional institutional accreditation.

The Afghan bugler stands as one example of an administrative technology—timekeeping and its relation to the Carnegie credit and student hour—typically invisible to American educational contexts. Another would be NMAA's use of a homeroom system wherein instructors rather than students shift between classrooms, because of worries about students' lack of familiarity with schooling practices. The Academy required those mobile English instructors to be tested for proficiency, and the speaking comprehension portion of the tests used materials (including audio recordings) published in 1972 by the Defense Language Institute in Lackland, Texas. When I tried to acquire more up-to-date supplemental materials for the Afghan instructors with the assistance of American educational publishers, I was initially prohibited from doing so by copyright and foreign export restrictions imposed by those educational publishers. We then sought the aid of the British contingent in ISAF, who were willing to provide British English instructional materials, as long as they were given input as to what sort of English was taught as a second language at NMAA, a debate itself complicated by the fact that some Afghan instructors had been taught colonial English in graduate schools in India and Pakistan. ISAF would not fund such regional graduate instruction for newer instructors, however, so we developed a plan for distance learning graduate education via the internet, only to face resistance from the instructors who pointed out quite correctly that the unreliability of electricity and internet access in Kabul would make such education a challenging prospect. These circumstances demonstrate how administrative technologies intersect with computer technologies and literacy technologies in complex and overdetermined ways in global contexts.

Literacy Technologies

The literacy campaign in Afghanistan was a drumbeat from higher command: General William Caldwell noted (January–February 2011) that when he took command of NTM–A, “the overall literacy rate of the Afghan National Security Forces stood at about 14 percent” and “as we assessed training programs for the army and police, it was immediately evident that illiteracy was affecting the speed and depth of instruction. All training has to be hands-on; each skill has to be demonstrated” (p. 23). That drumbeat had material effects: in the Task Order Request associated with literacy training at NMAA, the estimated payroll cost of instruction for teacher salaries for one semester of English literacy training for 842 students was \$109,980.00. Four years of English instruction is expected to get students to ninth grade level proficiency at a total cost of \$1044.94 per student, not including instructional materials.

As noted before, many of those instructional materials were antiquated and culture-specific, and our attempts to overcome those barriers presented new challenges. The team went into negotiations with the British forces and the Joint Command’s training branch to provide copies of a British series military-oriented English language textbooks for the cadets. Debates over how to fund what were effectively foreign military purchases required considerable negotiations with all parties concerned, including the academic publishers.

However, my smaller-scale efforts to help the Afghans build an English language professional development library collection owned and used by Afghan faculty to support pedagogical best practices in the areas of teaching developmental reading and writing and second-language literacy instruction and classroom practice met with more success, because of their smaller scale. The team and the Afghan instructors were able to partner with publishers and with other institutions in the United States to enable the Afghan faculty to continue expanding that professional development

library on their own, and such ad hoc non-contract, non-capitalist, non-market solutions seemed to present the greatest possibility for sustainability.

THEORIZING SOLUTIONS

Recent scholarship on language difference in the global influence of composition has offered a strong critique of the hegemonic role of technology-driven transnational “fast capitalism” in that influence. Such scholarship acknowledges the challenges associated with ethnic difference and usefully analyzes the complications associated with language difference within and outside the U.S. in its critique of what Min-Zhan Lu (2004) has characterized as “a world ordered by global capital, ... where all forms of intra- and international exchanges in all areas of life are increasingly under pressure to involve English” (p. 16). However, that scholarship fails to acknowledge the implications of economic difference: there is more than one form of economic activity, and much economic activity is non-capitalist or alternative-capitalist. The current situation in Afghanistan makes visible the ways that market-based economic transactions exist in a broader context of feudal, theft, independent, slave, gift, and other forms of transactions and institutions of value.

The ISAF project in Afghanistan carries value in economic contexts beyond the market. Classical economic perspectives identified land, labor, and capital as the three primary economic inputs to the production of value, and examined how those economic inputs could be combined and transformed into other economic outputs. Today, in the information economy’s context of immaterial production, the new inputs consist of material-technological capital (mostly computers in their various forms, which have replaced land as the new scene of economic production), immaterial labor, and immaterial capital (often understood as the intellectual property associated with the texts and songs and books and computer

software that immaterial labor produces and that gets aggregated itself and reproduced into new forms of immaterial capital or embedded in forms of material-technological capital).

Furthermore, the value produced from those three inputs changes form via three fundamental economic problems.

1. **The Substitution Problem:** Labor can change its value depending upon who performs it, and depending upon who appropriates that value, and at what point in the cycle of production, distribution, use, and re-production. Economist Duncan Ironmonger (1999) detailed the functioning of the substitution problem as manifested in the mis-measure of household labor when calculating Gross Domestic Product: despite the fact that household labor clearly has value inasmuch as we sometimes pay people to do it, we do not include estimations of the value of all the beds made, bathrooms scrubbed, floors mopped, and laundry washed in our calculations of Gross Domestic Product. Why not?
2. **The Transformation Problem:** We know that labor can become capital, and thereby take new forms in its contribution to the cycle of production, distribution, use, and re-production. Consider the person-hours the Afghans have contributed to building and developing NMAA in years past. Some economists would point to the ways their use of two of the factors of production—labor, in the form of their hours of work, and capital, in the forms of the buildings and computers and networks they used—were transformed into a product—the NMAA curriculum—that is itself used as a form of capital and an input absolutely fundamental to the production of the Afghan nation. How does that transformation happen?

3. **The Aggregation Problem:** We know that economists make assertions about how individuals act in ways that we generally characterize as economic, and we also know that economists make assertions about how large groups made up of individuals also act in ways that we generally characterize as economic. The Cambridge Capital Controversy of the 1960s demonstrated that generalizing from one to the other—from the individual to the group—is always going to be problematic, because one winds up comparing many different items (curricula, graduates, literacies) and aggregating them all together as capital. The same phenomenon occurs with labor. Aggregation necessarily implies mis-measurement and bad calculations because in macroeconomic theorizing one will always be lumping together curricula, graduates, and literacies (not to mention beds made, bathrooms scrubbed, floors mopped, and laundry washed, some of which were contributing preconditions to the production of curricula, graduates, and literacies). What happens when we know we cannot accurately use individual behavior to talk about group behavior?

While these three terms and problems are complicated in their own right, they become more so when we examine them in an Afghan context, partly because of the way that culture shapes economy. American economic activity, while diverse, often takes place in a market-based context, whereas the Afghan economic activity outside of the major cities takes place in a largely material-agricultural and often feudal context. In this instance, contra Marx, cultural difference would seem to drive technological and economic difference. Immaterial production as understood in America consists largely of (1) the informatized production of material goods and (2) the market-based production of immaterial goods.

Immaterial production as understood in Afghanistan is very different and involves—to a large degree—the circulation of cultural commonplaces with the purpose of maintaining familial, tribal, and intertribal bonds. Cash-based alternative capitalist transactions such as bribery and graft often function to reinforce tribal and intertribal bonds. Afghanistan usefully illustrates to us the ways that economy often serves cultural purposes rather than the other way around, suggesting that Min Zhan Lu's (2004) concerns with the assumed all-consuming nature of technology-driven global capitalism are problematically exaggerated: the economic activity of immaterial production, like so many other things in Afghanistan, does not align with our expectations.

In all of these challenges, we see deeply material problems compounded by cyclical short-sightedness: we know that literacy itself constitutes infrastructure, as well as the material things like electricity and roads. And a nation requires a literate population to enact the infrastructural changes that Americans tend to associate with prosperity and modernity. My work with the mentor team was built on the expectation was that digital technologies, as material-technological inputs to the process of immaterial production, would provide increased value and increased efficiencies in learning to the Afghan students in the ways that computers substitute capital-intensive processes for labor-intensive processes. But one needs the affordances offered by a material and administrative infrastructure to support the needs of a literate population. The complex and overdetermined local networks of digital, administrative, and literacy technologies exist in a cyclical and temporal cycle of production, distribution, use, and re-production.

ENACTING SOLUTIONS

The mentor team's efforts in literacy and computer literacy education can be seen as ways to jump-start the process of aggregating immaterial knowledge production at NMAA, and to make that

process ultimately self-sustaining. We wanted to make ourselves obsolete. But the Afghans' need for computer literacy should remind us that scribal literacy and print literacy are themselves technologies that transform, substitute, and aggregate value in ways that do not always align across cultures, and in ways that are not always in the service of market-based exchange: those modes of aggregation long predate post-industrial capitalism, and can be seen in the contexts of mercantile economics, feudal economics, and Islamic economics. As Richard Ohmann (1985) pointed out long ago, "this age of technology, this age of computers, will change very little in the social relations. . . of which literacy is an inextricable part" (p. 687). Even if the Afghans' material-technological inputs begin to approach Western levels, they will engage the process of production with culturally different forms of immaterial labor and immaterial capital. Some of our expectations and approaches were incommensurable.

The abstract principles of rational argumentation are a form of commensurability in the way we suppose them to transcend context in the interest of transacting. Commensurability is the essence of market capitalism: money dissolves difference in market transactions, and it's too easy to make the mistake of seeing English as a sort of global currency, as something that erases difference by rendering all things commensurable. There exists a deep conceptual link between seeing the market transactions we identify with capitalism as beyond question and seeing notions of a global "standard English" as beyond question. Westerners from developed nations too easily identify all economic concerns as market concerns, ignoring the enormous diverse economy constituted by communal and feudal and independent and gift and alternative capitalist practices, and thereby assuming that far too many language practices are utilitarian and pragmatic and commensurable. Horner, Lu, Trimbur, and Royster (2011) have contended that "notions of the 'standard English speaker' and 'Standard Written English' are bankrupt concepts. All speakers of English speak many variations of

English, every one of them accented, and all of them subject to change as they intermingle with other varieties of English and other languages” (p. 305), pointing toward the importance of acknowledging the incommensurability of language.

At the same time, in Afghanistan’s tribal culture, there is a need for commensurability. As Lu (2006) noted, “English is being used in multilingual countries... as a ‘link language’ for collective struggle against long and complex histories of intra- and international injustices along lines of race, ethnicity, gender, and class” (p. 612). Those injustices have long existed in the ethnic prejudices that privilege Tajiks over Hazaras and reinforce pervasive misogyny, and play out in any number of social effects, from individually and group-enacted violence to economic discrimination, as well as the pervasive corruption described by Sarah Chayes (2007). One hopes that the “translingual fluency” Horner et al. (2011) described “as deftness in deploying a broad and diverse repertoire of language resources, and responsiveness to the diverse range of readers’ social positions and ideological perspectives” (p. 308) might help in working against those intracultural injustices and toward self-determination.

In order to work toward such self-determination, Suresh Canagarajah (2006) has argued, “[s]tudents must be trained to make grammatical choices based on many discursive concerns: their intentions, the context, and the assumptions of readers and writers” (p. 610). He noted that “multilingual students will resist [standard English] from the inside by inserting their codes within the existing conventions. This activity serves to infuse not only new codes, but also new knowledge and values, into dominant texts” (Canagarajah, p. 611). In Afghanistan, such activity—what Canagarajah has called “code meshing” (p. 598)—happens not only among students and Afghan instructors but among expert dominant-language users like the multinational workers who would incorporate “Salaam” or “Sobh ba khayr” or “Tashakor” or other Dari and Pashto phrases

into their emails to me. The Afghan translators I worked with used computers supplied by NTM—A running Windows Vista, which did not support Dari or Pashto. In day-to-day work, they used English as their display language and most used a hot-key combination to toggle back and forth between using the Arabic alphabet (to type in Dari or Pashto) and English as the input language. Material constraint, administrative technologies, and digital and global literacies overdetermined a rich and complex array of language practices. Similarly, some Afghans would indicate their linguistic self-determination via such code-meshing in digital communications with their Afghan and multinational counterparts, as well, engaging in Facebook exchanges and emails that interspersed phoneticized Roman-alphabet Dari and Pashto, Arabic characters transliterating Dari and Pashto, and English.

We should understand as well that the bugler-as-timekeeper and the schedule of classes constitute an administrative technology that is part of the deeply complex and overdetermined networks of objects and practices that underpin the work of teaching and that we largely take for granted, but that my experience in Afghanistan made freshly visible to me. To again borrow a formulation from Ohmann, digital literacy “embeds social relations within it” (p. 685), and those social relations look profoundly different across cultures. Those deeply complex and overdetermined networks of objects and practices function in the intersections of technologies, economics and composition, and more specifically in the intersections of composition’s process-based attention to work over time and the Marxian attention to labor performed over time and the aggregation and transformation and appropriation of its value. My attention to time, labor, and aggregation here is anti-teleological, though, because it seeks to superimpose a time-based economic model that functions cyclically rather than linearly over those networks. These complex and overdetermined networks of objects and practices, of people, cultures, histories, prob-

lems, resources, and technologies all provide the context in which the economic cycle takes place and its accompanying problems of aggregation, substitution, and transformation.

IMPLICATIONS

In the early stages of my work in Afghanistan, I found myself focused on the technologies associated with literacies and computers, because they were familiar to me as objects of study. My cultural unfamiliarity with my Afghan counterparts allowed me to initially see the administrative technologies, as well, but I was still seeing only the technologies: my answer to Bill Hart-Davidson's 2004 question—"Are we so focused on the technology itself that we fail to see the people involved?" (p.148)—would have been a guilty "yes."

One of the books I took with me on the week-long trip from Fort Benning, Georgia to the Ali Al-Salem military air base in Kuwait to Bagram airfield to Kabul was Sarah Chayes' 2007 account of the problems with corruption in Afghanistan after the fall of the Taliban. Chayes used the work of Near Eastern Studies Professor Michael Barry to observe that during times of conflict "leadership among Pashtuns is acquired by a pretender's ability to extract wealth from a lowland power in one of those three familiar forms—plunder or tribute or subsidy—and distribute it among his men" (p. 101), and this use of "plunder or tribute or subsidy" ought to highlight the existence of alternative economic systems in Afghanistan. It would be a fundamental economic mistake to attempt to apply the economics of one space or context to another, and I would argue that Afghanistan currently exists as a technological third space (Bhabha, 1994) in its deployment of digital, administrative, and literate technologies, and in the ways those technologies function within its space.

When I arrived in Afghanistan, I moved freely from my office overlooking the airfield to various classrooms and offices to mentor and observe

the Afghan instructors, though that freedom of movement was circumscribed by the boundaries of the small campus, fenced on all sides, accessible only through checkpoints with gates, crew-served weapons, and armed guards. We drove past the airfield to get there: on one side the civilian Kabul International Airport that the Ariana and Kam and Safi jets fly out of with the few wealthy enough to travel on them, and on the other the helicopters and cargo planes of the Afghan Air Force.

I see similarities to the technology-enabled large-scale mobility of the multinational military presence there—the helicopters and cargo planes, flying missions and materiel and personnel beyond, within, and across Afghanistan—in the critique Horner and Lu (2009) offered of the formulation by which "success... is imagined in terms of the extra-territorial mobility achieved: the ability of the few across the world to constantly move, untied by emotion or responsibility to any one territory, identity, or career" (p. 122). Transnational and transterritorial mobility is a marker of privilege, much as in Hawisher, Selfe, Kisa, and Ahmed's deployment (2010) of "the term transnational... to signify a growing group of students who are at home in more than one culture... These students typically speak multiple languages, often including varieties of English from outside the United States, and maintain networks of friends, family members, and other contacts around the globe" (p. 56). Such privilege is embodied as well by what Berry, Hawisher, and Selfe (2012) have characterized as "the linguistic imperialism of English" ("Global digital divide: From Nigeria and the People's Republic of China"). This assumed privilege of mobility (including digital mobility) associated with the American fetish for cars and planes and so-called footloose capital is far different from the tribally and socially connected nature of Afghanistan's deeply local culture.

Some soldiers at the airfield never went outside the gate: the only Afghans they saw were the KBR and Sodexo service workers and the merchants at the bazaar. The provincial reconstruction teams

were able to get out and work closely among the Afghans, but that experience was rare, and many kept to their own enclaves, providing security against perceived threats rather than working with local communities, moving from place to place in armored vehicles, extraterritorial in the way they seldom engaged the people who populate and constitute the territory. Borders are by definition local phenomena, and extraterritorial mobility transcends the local in the worst way: by possessing the privilege and the outward security—the technological armor—to ignore it.

Fetishizing that sort of extraterritorial mobility and idealizing globalizations' ability to move across and transcend local borders both strike me as problematic. In my work mentoring faculty and helping the Afghans to develop their own curriculum and pedagogy, I was most productive having tea with Afghan teachers in a tiny, overpacked group office with overflowing bookshelves, battered metal desks, discarded and broken computer monitors and CPUs, and walls badly needing paint. What's important is not the crossing but the places crossed; not the privileged transcendence of mobility that homogenizes space for the traveler but the inability to transcend—the down-in-it-ness—at the borders between heterogeneous technological spaces.

The “translingual approach” advocated by Horner, Lu, Royster, and Trimbur (2011) isn't translingual at all: it does not pass by or transcend borders, but builds a nuanced understanding of how the borders work in their intersections and hybridity. Such an understanding must take the form of a sort of rooted hybridity, and won't necessarily be gained by those wearing body armor and traveling between bases in sealed armored vehicles who like the digital interfaces Selfe and Selfe (1994) have described “enact small but continuous gestures of domination and colonialism” (p. 486). It's understood and made visible on foot, at the gates and borders and crossings between one place and the next. We might well heed Nick Carbone's 2004 observation that “[t]

echnologies become invisible quickly” (Hart-Davidson & Krause, p.148), but that invisibility can only happen when they exist as a component of a complex of already-naturalized technologies: changes in one technology disrupt the adaptation or visibility of another.

While one implication of the obstacles and challenges I encountered in Afghanistan would be to direct renewed attention to clearly unresolved issues associated with the global digital divide, another would be to reject the narrative of all-consuming teleological Western economic development as applicable to non-Western economies, and to investigate how practices associated with Islamic economics and other alternative economic spaces might align with global digital literacies. So, too, might the hybrid practices associated with Afghanistan's third-space digital, administrative, and literate technologies illuminate possibilities for border digital literacy initiatives.

CONCLUSION

Much of the American-produced curriculum and materials I initially tried to transport to my Afghan context simply did not work. The workbooks and listening comprehension tests associated with the Defense Language Institute's American Language Course were far too idiosyncratic for Afghan students, and what worked instead were day-to-day observations and interactions and one-on-one mentoring. The ISAF command sought a decontextualized too-easy cross-cultural mobility and commensurability through its enormous market-based Western capitalist expenditures on resources that the Afghans don't currently have the infrastructure to maintain.

The Afghan context I have examined here complicates the privileging of concepts—technology, commensurability, and mobility—central to many of the ways we think about global digital literacies. As I've suggested, I think rhetoric and composition as field has begun to do good work

engaging with linguistic heterogeneity in that global context. According to Canagarajah (2006), global Internet users are demonstrating

the mixing of not only different varieties of English but also of totally different languages. To be literate on the Internet, for example, requires competence in multiple registers, discourses, and languages, in addition to different modalities of communication (sound, speech, video, photographs) and different symbol systems (icons, images, and spatial organization). To capture these changes for textual processing and production, scholars have now started using the term multiliteracies... These changes in text construction make it easy to envision that different varieties of English may find a 'natural' place in the evolving shape of the text. (p. 612)

Canagarajah's argument was in reference to the work of Stuart Selber (2004), who has used the term multiliteracies in relation to computers as encompassing a "functional literacy" representing "computers as tools" and "students as effective users of technology;" a "critical literacy" representing "computers as cultural artifacts" and "students as informed questioners of technology;" and a "rhetorical literacy" representing "computers as hypertextual media" and students as "reflective producers of technology" (Contents). My experience with a largely residual oral culture in Afghanistan, and with students and soldiers for whom print literacy was in many cases a relatively unfamiliar technology, showed me that substituting the word "writing" for Selber's "computers" leads to interesting revisions of functional, critical, and rhetorical literacies.

Writing and computers are both technologies that aggregate and naturalize labor-intensive processes (language acquisition and mastery; document production and distribution) into capital-intensive processes (Google Translate; the Web distribution of hybrid Dari-English video mashups), and in doing so call into question the

notion of expertise. It's impossible for Afghans and Americans to be sufficiently polyglot autodidacts in their interactions, so our mutual understanding was necessarily partial, provisional, and in process: the productive aggregation and transformation of knowledge is ongoing in the ways the Afghans are literally inventing the university and reinventing their nation. My mentoring work with the teachers, and the ongoing teaching practica I developed in conjunction with the Afghan English teachers are always acts of code-meshing, and never settled or static or authoritative.

However, many of the arguments scholars in rhetoric and composition make about the presumed Western and capitalocentric economics of globalization rhetorically shut down the possibility of economic agency and self-determination. In so doing, they ascribe to an imagined technology-driven global capitalism a market-based homogeneity it does not possess. The languages we speak extend and carry value beyond the marketplace, beyond the bazaar, and tracing how they do so is absolutely essential to any hope of promoting the life-and-death matter of literacy instruction in Afghanistan. Performing that tracing can illustrate for our field how the privileged rhetorics of technology, commensurability, and mobility are themselves contingent and necessarily dependent upon cultural and economic context in ways that we might otherwise fail to recognize or value.

I've tried here to offer an examination of digital literacy instruction in Afghanistan as an object or product of the often invisible network of processes that surround it. The various economic problems I've defined—transformation, substitution, aggregation—occur at various stages in that economic cycle of production, distribution, use, and re-production, wherein the economic inputs of immaterial labor (the work of Afghan English instructors), immaterial capital (schedules of classes and timekeeping practices), and material-technological capital (the computers in the warehouse waiting for Qargah) form a complex and overdetermined network that transforms over time.

Computers transform labor-intensive processes into capital-intensive processes, and that's part of my point: immaterial labor and the immaterial capital it produces transform and aggregate over time, so that transistors plus code become computers, and computers plus code become networks, and networks plus administrative technologies plus computers plus the aggregated weight of thousands of years of scholarship and pedagogy become institutions and institutional practices that shape and inform our everyday teaching, and that require our attention.

Lieutenant Colonel John Hartke, a professor in West Point's Department of Physics and Nuclear Engineering, was the sole remaining American mentor to work with NMAA. In Fall 2012, NMAA completed the move from Kabul International Airport to the new National Defense University site at Qargha.

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KEY TERMS AND DEFINITIONS

Administrative Technologies: The processes, know-how, techniques, procedures, and systems of use that accompany a culture's deployment of technological objects and artifacts: rather than computers, automobiles, and photocopiers, think typing skills, driver testing and licensing, and filing systems.

Diverse Economy: The notion from J. K. Gibson-Graham (2006) that our contemporary economy is constituted not only by market-based capitalist transactions and institutions, but by those that would be considered feudal, alternative capitalist, gift, slave, or independent forms of economic activity.

Immaterial Capital: In today's information economy, the counterpart to the classical economists' conception of material capital (factories, heavy machinery) as one of the three inputs (in addition to raw materials) of economic activity: software, intellectual property.

Immaterial Labor: In today's information economy, the counterpart to the classical economists' conception of physical, material labor (assembly-line work, operating heavy machinery and tools) as one of the three inputs (in addition to raw materials) of economic activity: data entry, education, online communication. From Hardt & Negri (2000).

Material-Technological Capital: In today's information economy, the counterpart to the classical economists' conception of land as the site of production and therefore as one of the three inputs (in addition to raw materials) of economic activity: computers and other technological data-processing devices.

ENDNOTES

- ¹ This information came from an interpreter and former medical doctor who worked with the NMAA team. As for all Afghan sources with whom I spoke directly, I have left him anonymous out of concern for his safety.
- ² Neither NMAA, NTM-A, nor Afghanistan's Ministries of Education or Defense currently have Institutional Review Boards or protocols associated with human subjects research. Signed documents indicating informed consent are available.