

**CROSSING THE BORDER: INTEGRATING COMMUNITIES
OF TECHNOLOGY, DISCIPLINES, AND CULTURE**

Teaching Design on the Mexican-American Border

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The indigenous philosophies of the Americas remind us that everything is interconnected, all destructive and divisive forces have the same source, and all struggles for the respect of life, in all its variants, lead the same direction. The great project of reform and reconciliation must be, above all, a collaborative one, and all concerned communities must take part in it.¹

— Guillermo Gómez-Peña

Life on the Border

The landscape of southern New Mexico, where I teach at New Mexico State University in Las Cruces, causes one to think about design in new ways. The sky is vast and, on most days, blue. I am surrounded by open space that is flat and endless, punctuated by yucca plants, mesquite, and desert mesa.

The corridor through the Organ Mountains, an extension of the Rocky Mountain chain, leads to Las Cruces, a city with about 75,000 inhabitants, where verdant green farmlands

¹ <http://www.movingpartspress.com/Text/felicia.html>

and groves of shaded pecan trees are supported by ditch irrigation from the Rio Grande Valley. Las Cruces is a university town. Students make up about a third of the population. NMSU, which was founded in 1888 as an agricultural college, the only land-grant institution that is also classified as Hispanic-serving by the federal government and ranked by the Carnegie Foundation as Research-Extensive, the top research category. In the fall of 2003, total enrollment for NMSU main campus and branch campuses was 23,578.

New Mexico State University (NMSU) is cradled to the south by the craggy, igneous peaks of the Organ Mountains that function as a screen between the University and, to the north, the White Sands Missile Range. Not only can one find the sublime beauty of "gypsum white sand as far as the eye can see" at White Sands National Monument Park but also opportunities for work at White Sands Military base. Some of my design students, in fact, land jobs as graphic specialists for military research. (Job requirements: Illustrator to make charts and Final Cut to edit video documentary of missile trajectories.)

From Las Cruces, the desert extends west 6 hours to Tucson, Arizona. Going north, it takes 4 hours to Albuquerque. The land rolls out like a carpet of desert scrub. When invited for a meeting at our AIGA headquarters, my students and I jump in a car around 1 PM and arrive in Santa Fe at about 6 PM, in time for a "AIGA Shoptalk." After the meeting, my students drive back to Las Cruces.

The landscape fuels our imaginations. The desert is boundless and omnipresent. It continues south into Mexico, down to Chihuahua and beyond. I drive one hour East to El Paso to "catch a plane." There, I meet up with the Rio Grande, which passes through El Paso, Texas. What was once a raging river is reduced to a thin brown strip that separates Mexico from the United States. Tall wire fences provide the backdrop for border police and drug-sniffing dogs that pace back and forth. The city of Juarez, with a population of over 2 million people, tightly hugs the border. When you fly into El Paso at night, you can see the lights from the air, a dense mass of glowing fire flies. Ciudad Juárez bases its continuing growth on workers who come north in pursuit of the "American dream." This system of cheap labor is called the *maquiladora*. The *maquiladora* factories are owned largely by non-Mexicans. The materials are temporarily imported to be assembled into finished products by the *maquiladora* and then exported. The word *maquiladora* comes from the word *maquilar*, which means "to submit something to the action of a machine."

The families of some of my students pass through this corridor on a daily basis; others have immigrated to the U.S. permanently. Many of my students were born in Mexico but others were born in Japan or Russia or elsewhere. All speak English. When I look at my roll call for attendance, the Mexican-American names are clearly in the majority. My students taught me, with great courtesy, how to pronounce their names correctly when I first arrived at NMSU two years ago. I felt like the proverbial greenhorn. As I got to know my students, though, I began to feel privileged as they shared with me their Mexican-American heritage. One by one, they started showing me works that interested

them—David Siqueros, José Clemente Orozco, Jose Guadealupe Posada. They chose projects that allowed them to pursue their interests in Aztec civilization and the extremely sophisticated culture of writing and communication.

I started to wonder about my European-centric curriculum. For example, when reading Kate Clair's book "A Typographic Workbook: A Primer to History, Techniques, and Artistry," one could ask, "Where is the chapter on Aztec and Pre-Columbian Civilization?" Such questions are relevant to my students and to me. Dialogues about the future of design education need to consider the implications of the cultural experiences my students have impressed upon my own consciousness.

This paper will emphasize the richness of the border experience, the importance of centralizing Mexican-American artistic achievements within our curriculum, and the lesson educators can learn from communal modes of cultural production. The purpose of this paper is to suggest ways in which "community" can serve as an essential tool to deal with the complexity of issues that confront educators.

Demography is Destiny

Border culture offers incredibly rich perspectives by which to consider the future history of design. Issues confronting educational institutions situated on the U.S. borders forecast future trends of the emerging Hispanic majority and provide first-hand experience of a competitive global economy. Between 1990 and 2003, the U.S. Hispanic market grew by

85%. Population grew from 21.9 million to 40.5 million. Today, more than 1 in 8 people in the U.S. are of Hispanic origin; by 2007, 1 in 5 will be Hispanic. Children of today's Hispanic immigrants promise to be the largest contributing group of the U.S. population growth over the next twenty years. Hispanic household income is growing, with 38% earning over \$40,000 in 1999 vs. 26% in 1994. That reflects over 3.5 million Hispanic households that earn over \$40,000 per year. There are over 12.5 million Hispanic Internet users. Hispanic Internet usage is growing at a pace of 15% to 20% per year. An Internet source notes, "We have now entered the Hispanic Baby Boom."²

The Pew Hispanic Center (<http://www.pewhispanic.org>) published a non-partisan report in June 2004 that reports that Hispanic undergraduates are less likely to complete their bachelor's degrees than other undergraduates. The report finds that the majority of the 200,000 Hispanic students who enroll each year in college are prepared academically to succeed, but they have less chance to succeed at graduation than Caucasian peers who are less qualified. The report states the following:

Latino undergraduates are at a disadvantage in competing for college degrees because of two important factors: many Hispanic undergraduates disproportionately enroll on campuses that have low bachelor's degree completion rates, and they have different experiences than white students even when they enroll on the same campuses.

² <http://www.ahorre.com/hispanicinfo.htm>

The report concludes with this:

Thousands of talented and prepared Hispanic college students are not realizing their potential.

It is not my goal in the context of this conference to answer the questions "Why do Hispanic students have different experiences than their white fellow students?" or "What exactly is this different experience?" But instead, to note: when I read the data, I see reflections of my students. For example, recent data suggests that many more Hispanics complete their degree in five years instead of four. Perhaps my personal experiences NMSU can shed light on these issues.

Students at New Mexico State University

My students remind me of desert flowers. They flourish amidst scarcity.

Many of the aspiring design students attending NMSU represent a new generation of technology-literate, first-generation college graduates. Minority enrollment at the main campus is more than 48 percent (41.7 percent Hispanic, 2.9 percent American Indian, 2.7 percent African-American and 1.3 percent Asian American). My undergraduate and graduate students are ambitious and optimistic. Most have part-time jobs, and there are a surprising number who have full-time jobs

Professional Communities

The school projects my students find to be most engaging are ones that are collaborative and/or that connect with the professional community. Examples of projects are:

- Student-designed "zine" that functions as the departmental newsletter
- Design of the departmental website
- Professional "hands-on" experience in the New Mexico Studio of Design

One of my favorite projects is the institution of an Annual AIGA Portfolio Review program. My first year in New Mexico marked the start-up year of the Santa Fe AIGA chapter. Before I moved to New Mexico, the AIGA Fifth Avenue, NY Chapter, suggested that I call Fred Cisneros and Joel Nakamura of the Santa Fe AIGA Chapter. This connection has proved to be one of the most valuable assets provided to me as a new junior faculty member. The success of the NMSU Annual AIGA Portfolio Review program is due largely to the generous spirits of both Fred Cisneros (owner, Cisneros Design) and Eric Griego (art director, Cisneros Design). My students have expressed great admiration for these individuals, particularly because they both studied at New Mexico State University. Eric Griego, a graduate of the design program, is a compelling role model. The event has grown in magnitude and scope. Activities now envelope the community at large: day-long portfolio reviews, an afternoon session with the community college design students, hands-on demo's of letterpress, an evening "shop talk," and a fun-filled dinner the students' favorite restaurant *Si Signor Restaurant*. This year, 5 AIGA

designers attended the event. Cranberry Press was on-hand to provide letterpress demonstrations. Students thrived on the challenges offered to them. This talented AIGA team has truly influenced the next generation of aspiring designers. Each team member demonstrated a willingness to invest time and energy in NMSU's design program. Fred Cisneros made a concerted effort to bring professionals to function as role models across the spectra of race, gender, and media specialty (i.e. photographer, illustrator, etc.). The remarkable success of this year's event points to the critical need for educators to create partnerships within the professional community.

Integrating Technology

Classified by the Carnegie Foundation for the Advancement of Teaching as a Doctoral/Research University - Extensive, NMSU had research and public service expenditures exceeding \$152 million in 2001-2002. The art department has about 220 majors, and roughly 100 are design majors.

Upon my arrival at NMSU, I found a bunch of G3 computers piled up in the middle of a small classroom. There was no computer lab, no server, and no software.

Now, 2 years later, we have a server, G4 and G5 computers, upgraded Adobe CS, a 5500 laser printer, a Epson 7500 and 9500 for large-format printing, a digital projector for the classroom, wireless for laptops, and facilities for video production. The administration has been extremely creative about coming up with funds. Resources are limited at all

State Universities these days. The big issue for a design educator will continue to be: How do we overcome the challenges of the technology, the need for daily tech support, and constant "gerbil-wheel" need for upgrades?

The most important alliance Design has developed at NMSU is with the Information and Communication Technologies (ICT) department. By pooling resources and knowledge, together we built the design computer lab. We split the cost of software licenses and shared resources. ICT helped integrate Design's technological systems with the overall infrastructure. More important, ICT functions as a gateway to the community of the University. ICT's area of responsibilities crosses over to all the other departments, and it channels information back to us to help find new resources and funds.

In a university where there is high-level research, "dumpster diving" can yield big-ticket items such as a digital projector or even a new computer. This spring, ICT notified me about a dozen castaway 500 MHz G4's. These computers come from the Physical Sciences Lab, where they combine military with civilian research. The computers were probably used on projects that involved Unmanned Air Vehicles and Long Duration Balloon Projects. (Planes that will someday fly your mail across the continent unmanned.) Some of these machines are used to create documentary footage of rocket launches. Stripped of hard drives and any kind of memory device, these computers (with new drives and memory) will finally allow us to upgrade to System X.

The Importance of Design Traditions

New technology needs to go hand in hand with the preservation of traditions. As part of an effort to improve the students' sensibilities to typography and to get them away from the computer, we renovated the Vandercook letterpress at New Mexico State University. This will allow us to teach foundation typography courses using the letterpress.

As we move forward with the "digital marching orders" to prepare and train our students for the professional rigors of the job market, it is important to remain connected with the traditional culture of design. Conceptual and historical frameworks ground us as we move into the future.

There are many ways to talk about the history of printing. In this paper, I would like to mention the story of hegemony and globalization. The ruling class systematically dominates communication technologies in relation to the struggle of counter-hegemonic independent media producers. The Egyptian Pharaohs trained a class of scribes from youth to be a part of an elite class that held power over communications. The scribes possessed such power that they were publicly mythologized to be the ones to write the name of those deceased in the "Book of the Dead." Shifts in power structures go hand in hand with changes in media technologies. The Medieval Catholic Church depended on monks to produce elegant manuscripts to support their vast enterprise. When Martin Luther appeared on the scene in the 1450s, as the "content" producer behind the Protestant Reformation, he achieved infamy when he utilized the new technology of

moveable type and block-print technology in a way that appealed to the masses. The translated Bible was a bestseller, not only because it relied on woodcut imagery for the illiterate, but also it was translated from Latin to German. In effect it provided content to the masses. This is similar to the implications of the 1984 Super Bowl TV advertisement announcing the release of the Apple Computer. Like Gutenberg's printing press, the Mac changed the course of graphic design history.

For the last part of this paper, I would like to mention just a few examples from design history—knowledge and experiences of media producers that are clearly relevant to the interests of my students. These are the stories that need to be told in the classroom, ones we do not find in our textbooks. For example, what about Mexican traditional printing technologies and the use of Amatl paper? Amatl is beautiful, suede-like paper made from the inner white bark of both the fig tree and another tree called Anacauite (*Cordia boissieri*). The Aztecs printed many of their important codices on this paper which resided in the capital of Tenochtitlán. The Catholic Church banned this paper during the colonial period.

I like to refer my students to the *Codex Espangliensis from Columbus to the Border Patrol* by Enrique Chagoya, Guillermo Gómez-Peña, and Felica Rice.

Chagoya employs pre-Columbian graphic art juxtaposed with American pop culture. Guillermo weaves together poems written in Spanish, English, and Spanglish. Text and image share consistent themes: "the commodification and trivialization of culture, the

tragi-comedy of life on the fringes of contemporary society," states Felicia Rice. The book is letter-press printed with Amatl paper by Rice in what became a monumental sculptural project. Rice says, "I wrapped, stretched, distorted and tortured type into an expressive visual component that interacts with the imagery, and with the hand-drawn lettering and the fonts pre-existing within the artwork." Chagoya describes how living between the U.S. and Mexican border has produced work in which he "is most interested in non-alphabetic writing, as is demonstrated in pre-Columbian books." Chagoya reminds us: "History, it has been said, is written by those who win the wars." ³

The need to develop a curriculum that offers both Western and non-Western perspectives in regard to the history of design is well expressed in the following passage:

Very few books survived the bonfires of the conquistadors. Today only twenty-two pre-Hispanic codex books remain, along with fifty-four others written right after the conquest war by indigenous book artists who were witness to the destruction of their world. The twenty-two surviving books are Mixtec-Zapotec (Oaxaca area), Mayan (Yucatan peninsula/Central America) and Nahua, some of these of Aztec origin (the Aztecs are one among many Nahua groups in central Mexico). The most tragic story is told by Fernando de Alba Ixtlilxochitl, a baptized Aztec noble, in which he describes the destruction of the Texcoco library built by King Nezahualcoyotl, the poet/architect king who opposed human sacrifice.

³ <http://www.movingpartspress.com/Text/codex.html>

King Neza built the library in the second half of the fifteenth century, a few decades before Columbus arrived in the Caribbean islands. The library of Texcoco was housed in a very large building with dozens of rooms filled with thousands of books of religious, poetic/artistic, medical, calendarial and historic information as well as accounts of yearly, monthly and daily events in the lives of the Aztec people and surrounding cultures.⁴

Crossing Disciplines

Students from other areas of the department come to the design area looking for digital resources to help them with printmaking, sculpture, photography, and ceramics. I've worked with a jewelry student and a sculpture student on video installation and with a ceramist and jewelry student on how to incorporate typography and imagery within their media.

It is important for students to be able to create their own "space" for experimentation, and freedom to explore their own interests in curriculum. To meet my student's needs, I constantly try to envision the future classroom. I invite you to cross this border with me.

⁴ Martínez, José Luis, Nezahualcoyotl, *Lecturas Mexicanas #39* (México: Fondo de Cultura Económica, 1984), p. 296. Also see Portilla, Miguel León F.C.E., Los Antiguos Mexicanos, *Lecturas Mexicanas #3* (México: Fondo de Cultura Económica, 1983), p. 60-75.

Close your eyes. As you enter this creative space, there is a freedom to cross disciplines, to experiment, and to learn from all around you. Students work on projects that involve identity, gender, history, and narrative. The area is buzzing with activity. As students get past a creative hurdle, they gain new knowledge and share it the other students. A new community emerges.

Integrating Cultures

Here in southern New Mexico, the border is omnipresent, from the Mexican-American street market, overwhelmingly bold and colorful, to the landscape and economy marked by scarcity, to a traditional community that is adaptive and innovative.

There is a wide spectrum of cultural enterprise involved in collective works. To name a few: Cinco Punto Press, Border Book Festival, the Border Arts Residency. For the remainder of this paper, I wish to focus on the visual ephemera that one can find on the street. I wish to focus my comments on the *rotulista* and the *muralista*.

The *rotulista* is a sign painter. The environment of the border is enriched by the profundity of this art form. In the context of the border, similar to Enrique Chagoya's work, "visual, non-verbal symbolism precedes text." Symbols translate currencies between the cross-border experience. Dollar signs and images of food become icons for interaction at the border between the literal and the non-literal. Enrique Chagoya writes:

*In today's world we rely on non-verbal and non-alphabetical languages in many important fields. In music, mathematics, traffic signs and maps, text is an accessory to the visual model because alphabetical/verbal language is not enough to communicate the complexity of the subject matter.*⁵

The craft of hand lettering is admirable, precise, and exceptional. Examples of such work are by Pablo Diaz who owns the restaurant El Chumpas in El Paso. He not only does all the lettering on the building of his restaurant but decorates the inside of the restaurant with his own murals. He did not have art training, but he tells me a story that I hear again and again in my interviews with various artisans. As a young boy, he would clip out pictures from magazines to sketch and copy products. I ask him how he came to be so skilled in his craft. His answer: "necessity."

The border is full of pastiche and replicas. It is probably cheaper to hire a highly skilled *rutolista* to create the familiar image of a Coca-Cola soda can then to pay for a billboard. The border is poised between this dichotomy of the monolithic corporate image versus that which is hand made or *manualidades*. The images are beautiful, precious in an age of photo-mechanical and digital reproduction.

Another sign painter and muralist is Francisco Rodriguez. His murals adorn many of the schools in the area. He is responsible for many of the signs on Doniphan Avenue in El

⁵ Enrique Chagoya, <http://www.movingpartspress.com/Text/enrique.html>

Paso. The work of muralist Lorenzo Guel at La Mujer Obrera in El Paso's South-Central neighborhood is transcendent. It marks the struggle of social justice in a neighborhood that has experienced the exodus of a once vibrant textile industry. Factories have flocked elsewhere due to the North American Free Trade (NAFTA). The La Mujer Obrera revitalization project is designed to create for a self-sustaining economy. Projects involve a technology center, a market, daycare, and restaurant. The market, Mercado Mayapan, becomes a vibrant network to renew the community's ancestral customs and culture and works as a bridge by providing hope and training to unemployed workers.

The murals that adorn the walls of the market celebrate the cultural heritage of the displaced workers. During my interview with La Mujer Obrera, I learned that Lorenzo is planning to apply to an undergraduate design program at a local university. Jena, Lorenzo's wife, explained that Lorenzo does not have a standard portfolio and is a "non-traditional" student. I have already seen the extraordinary examples of his work on the "canvas" of buildings and within the context of retail space. I encouraged him to apply. As for so many of these non-traditional students who show up at my office door, I hope he does not lose his enthusiasm and self-confidence within the context of the University. I hope the University will embrace the exuberant talents and cultural values this student brings to the academic community.

Summary

The "border" is an effective metaphor to understand the challenges that face design educators: creating curriculum for students with multi-ethnic backgrounds, nurturing a sense of professionalism and passion for the field, investing pride and ownership in the traditions, combining traditional mediums with new digital practices, integrating disciplines amidst shrinking state resources, and building alliances with design professionals.

Epilogue

As for me, I hope to find time, a respite from the rigors of tenure-track academia, to attend one of La Mujer Obrera's "co-learning" language programs. This school teaches two languages simultaneously. The classroom encourages dual language acquisition. Within that community setting, I am already in the future classroom of co-learning. I'll be studying Spanish while my classmates are learning English.