Visible language 44.2

Special issue

GLOBAL INTERACTION IN DESIGN

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SPECIAL ISSUE: *Global Interaction in Design*

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Global interaction in design

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abstract

Based on a virtual conference, Glide'08 (Global Interaction in Design Education), that brought international design scholars together online, this special issue expands on the topics of cross-cultural communication and design and the technological affordances that support such interaction. The author discusses the need for global interaction in design and its impact on design education and research. Authors in this issue are introduced.

Audrey Bennett teaches and conducts research in graphics at Rensselaer Polytechnic Institute. Her research is on theory development in graphics that explains the phenomenon of collaborative visual design. Over the past three years she's been developing this theory on interdisciplinary research projects in technical communication, social robotics, literacy and ethnomathematics with funding from the National Science Foundation, The American Institute of Graphic Arts (AIGA), and Louise & Hortense Rubin Foundation Community Fellows Program; the work is published in the *Journal of Design Research*, *Visible Language*, *Design Issues*, *The Journal of Graphic Design*, *American Anthropologist* among others. She organizes GLIDE—a biennial, virtual conference that disseminates research on interaction between designers and underserved, global communities and directs baohouse.org, a virtual design studio for research on socially conscious graphics.

introduction

Research occurs worldwide, and the scholarly dissemination of any new knowledge that its processes might reap usually quick starts with a conference presentation. Attending an international conference used to mean traveling by car, train or airplane to a hotel or university situated remotely in another part of the world, to deliver a verbal and visual presentation about one's work. Today, however, a conference presentation can mean something more eco-friendly and democratically accessible. The development of technologies for low- and high-bandwidth contexts and synchronous and asynchronous communication has created opportunities to bridge geographic divides in conferencing and enable virtual presentations—even global collaboration in the classroom.

GLIDE (Global Interaction in Design Education) is a biennial, virtual conference that I organize through the AIGA, the professional association for design. GLIDE aims to bring new voices to the discourse in design research and contribute new knowledge to the discipline's body of work on the technical and cross-cultural facilitation of global interaction in design. Using existing technologies for asynchronous and synchronous communication, GLIDE disseminates the research of scholars from anywhere in the world whose proposals are accepted after a peer-review process. One of GLIDE's goals is to reduce the carbon footprint created by conferences around the world each year through the primary use of a virtual format. Virtual conferences, like GLIDE, democratize the dissemination of new knowledge by providing low-cost (void of transportation and accommodation expenses) venues for refereed scholarly presentation and open-access to published scholarship. Participants who might have been prevented from attending because of low-income, lack of institutional support, physical disability, visa restrictions, parenting situations and elder care now have greater access. Thus, virtual conferences have the potential to become invaluable resources for future generations of scholars interested in the conference's interrelated topics.

The virtual format for conferences has precedence within design and other disciplines (e.g. art). For instance, in an email message to the doctoral listserv of the Design Research Society, Australian design researcher Ken Friedman states:

> "...This is in essence the model that David Durling and I pursued at La Clusaz...In the run-up to the face-to-face conference, Chris [Rust] and I whipped up an informal and highly successful on-line debate. At one point, I wrote something on whether Picasso could have earned a Ph.D. Chris grabbed that idea and channeled the spirit of Zeke Conran to put forward some

stimulating ideas. I responded by nailing some theses on doctoral education to the digital doors of the old DRS list. I challenged people to a debate and we were off. The debate lasted from April 2000 through the end of June 2000, just before the conference. In 2003, PhD-Design hosted a more formal on-line conference on Design in the University. We started by looking at plans for a new design school at University of California Irvine, and the conference ran with formal contributions, responses, and debate from 14 November to 18 December. In 2006, Chris and the Sheffield group took on-line conferences to the next level with a conference connected to their UK Arts and Humanities Research Council project reviewing practice-led research. This took place on a dedicated JISCMAIL list, it last[ed] three weeks with weekends off. The format was carefully defined with requests for word limits and cogent summaries. Just last month, Oguzhan Ozcan and the *Leonardo* journal group hosted a highly successful on-line conference on PhDs in art on Leonardo's Yasmin list" (K. Friedman, personal communication, April 7, 2008).

In contrast to the virtual conferences that Friedman describes, GLIDE contributes to the development of virtual conferences through both its form *and* content. That is, GLIDE is a virtual conference about virtual conferencing in design education and research that addresses the technological, cultural and pedagogical challenges involved in global collaborations and the outcomes of global research agendas and pedagogy. GLIDE'08, the first of the biennial series, brought together, virtually, an international mix of scholars to share first-rate experiences teaching and conducting collaborative research globally. Holistically, their presentations:

- → disseminated new contributions to our broad understanding of the benefits of design research to society on a global level and
- → disclosed pedagogical and technical strategies and models for global interaction and collaboration.

This special issue continues the dialogue in the intellectual arena of refereed, scholarly discourse—the peer-review journal.

glide'08

GLIDE'08 streamed via Adobe Connect on October 22, 2008 from 9 AM until 4 PM. There were thirty-three conference registrants from around the world. The advantage of an online conference like GLIDE'08 is the plethora of online, software applications available to facilitate communication and exchange of different types

of information between remote participants. Prior to the conference, the submission and peer review processes occurred via email. Since all of the members of the conference committee were located remotely from each other—even the members that were in the same state were at least two and a half hours apart—CollectiveX.com (aka Groupsite.com), Skype, telephone conferencing and email were used to manage the conference and keep key constituents updated on the goings-on of the conference. Social networking (an important part of face-to-face conferences) occurred via an online application. That is, after registering for the conference via Eventbrite.com, registrants were directed to EventVue.com to socialize and network prior to streaming as well as to a password-protected, conference wiki (glide.pbwiki.com) for log-in instructions for the actual conference and to review presenters' papers and biographies before the conference. After the conference, a survey for the Best Paper Award was conducted using SurveyMonkey.com.

On the day of the conference, attendees signed into the wiki for log-in instructions and/or proceeded to Adobe Connect streamed from Rensselaer's Multimedia Services' server in a distance-education studio. Although the studio could accommodate up to 25 local attendees, none opted to attend in person—they all chose the virtual interaction. On the day of the conference, attendees had access to the following types of content formats: Adobe Connect's webcasts (consisting of Powerpoint or Acrobat formatted presentations with voiceovers) and downloadable pdf files. Interaction between registrants was facilitated via synchronous Q&A sessions (via the webcast), telephone conferences and asynchronous blogs and wikis.

Overall, these technologies for remote communication marketed, managed and/or facilitated the virtual conference. Table 1 shows a comparison of these technologies in terms of their modes, purposes and nature of contact and exchange. Marketing the conference required the use only of text and images within an asynchronous communication context with no interaction to limited, one-way interaction (e.g., a hyperlink that takes you from an email message to the conference website). Whereas, managing the conference required all different modes of communication, asynchronous and synchronous contact with no interaction to more deeply immersive, two-way interaction. For instance, I used messaging—a form of two-way, synchronous communication—to troubleshoot technical issues that conference attendees had connecting to Adobe Connect. Once those issues were resolved, Adobe Connect led the way to facilitate the conference through the use of text, image and voice modes; synchronous contact; and immersive two-way, interactive exchanges.

TECHNOLOGY	MODE			NATURE OF CONTACT		NATURE OF EXCHANGE			PURPOSE		
	Text	Image	Voice	Synchronous	Asynchronous	Interactive	1-way	2-Way	Market	Manage	Facilitate
EMAIL	●	●			●		●		●	●	●
MESSAGING	●			●		●		●		●	
SKYPE	●		●	●				●		●	
TELEPHONE			●	●				●		●	●
POSTCARD	●	●			●		●		●		
WWW:											
Adobe Connect	●	●	●	●		●		●			●
EventVue	●				●	●	●		●		
EventBrite	●	●			●	●	●			●	
CollectiveX	●	●			●	●	●			●	
SurveyMonkey	●	●			●	●	●				●
Blog	●	●			●	●	●				●
Wiki	●	●			●	●	●		●	●	●
GLIDE website	●	●			●	●	●		●		●

Table 1: Comparison of GLIDE 2008's technologies for remote communication and their modes, purposes and natures of contact and exchange.

Like traditional face-to-face conferences, there was some time devoted to testing the technology and assessing needs. Whereas, with non-virtual conferences, this kind of technical briefing occurs during the conference (e.g., on the day of the presentation), GLIDE'08's technical briefing occurred around a month in advance of the conference. Still, there were a few technical difficulties—for instance, one keynote presenter in Italy, at first, had difficulty connecting with the phone line. However, despite this minor technical glitch, based on the comments and questions posted by attendees during and after the conference, they enjoyed the experience. They generally expressed delight in not having to leave their homes (or offices) to deliver their presentations and/or participate. The following are some of their comments:

→ ...excellent work on the Global Interaction in Design Education Web Conference. The live streaming brought together a diverse group of international design educators to share their work and ideas. The presentations were each exceptional and profoundly interesting on many levels. The successful technical production alone was noteworthy and compelling.

→ Thanks for running the GLIDE'08 conference, I thought it went very smooth overall and was a ground breaking event in design education. I was glad to be part of the first one and look forward to being part of the next one...

→ What was important about GLIDE'08 from my perspective? It got a few Americans acquainted with a few people from Australia, Italy, etc. I think the American design community is rather xenophobic and they don't realize that interesting work, technological applications, educational innovations [...] are happening worldwide. I think they need to wake up.

the social need for global interaction in design

A conference like GLIDE that disseminates research on design collaboration with first-, third- and fourth-world communities implies that there is a dire need for this type of interaction within the discipline and society at large. If that statement conjures doubt in one's mind, then one need only consider the design disasters that occur through a poorly formatted election ballot or culturally inappropriate imagery in our own nation (see Lausen, 2007; Heller 2005; Ford, 2001). Then, multiply those problems ten-fold for such problems on an international scale, like the acts of violence that erupted after the publication of caricatures of the Prophet Muhammad in the West (Arson and Death Threats as Muhammad Caricature Controversy Escalates," 2006). Then, one might readily agree that the world is indeed in need of collaboratively designed solutions to a wide variety of old and emerging social problems that have global relevance, scale and reach. If not, then consider costly and environmentally-detrimental transportation systems that depend on limited foreign oil. As perennial global problems—like HIV/AIDS, poverty, hunger and homelessness—become more encompassing; and emerging problems—like global warming, terrorism, oil and water—threaten the future sustenance of mankind, no longer can design be solely about attaining aesthetic appeal or arbitrary functionality. The need for design outcomes to address or alleviate social problems comes from the afore-mentioned issues that threaten the future of humanity on a global level. Design must respond to this need, move beyond market needs and "[meet] social needs [...including] the needs of developing countries (Margolin and Margolin, 2002)." In order to do so, however, design today has to come from a process that integrates research methodology and collaboration with multidisciplinary experts (Poggenpohl and Sato, 2009).

The good news is that designers from around the world are crossing disciplinary and geographic borders, overcoming language barriers and technological hindrances

to collaborate in order to change the world for the better. They have pooled resources to pen manifestos, form new organizations, revamp old pedagogy to urge the next generation of designers "to think more about the broader historical, political, cultural and social issues concerning the things they design (Bennett, 2006)" and to change the way they design to include, for instance, soy-based inks, recyclable paper, eco-friendly materials, "cradle-to-cradle (rather than cradle-to-grave) life-cycles for design concepts" (McDonough and Braungart, 2002), and socially-conscious perspectives, among other things. A new design movement has fully emerged that is grounded in social-consciousness and—social advocacy. This socially-conscious design movement strives for outcomes that define good design differently than many of the modernist movements that preceded it (for example, the Bauhaus emphasis on making design compatible with mass-production). Today, some designers might respond to the question of what constitutes good design with a design outcome that has undergone a research-oriented and collaborative process—internationally.

The participation of today's graphic designer, in innovating design solutions to social problems on a global scale is a phenomenon spawned from the systematic re-emergence of empirical and user research methods to the discipline (see Frascara, 1997; Laurel, 2003; Bennett, 2006; Poggenpohl and Sato, 2009). Historically, graphic designers have contributed to society primarily by visually translating a client's message. They've intuitively made over print and digital interfaces by applying proven visual treatments and creative strategies (e.g., choosing appropriate typefaces, colors and other graphics) that make corporate information accessible, readable and memorable. However, persistent prodding from the first and second publications of the First Things First Manifesto of 1964 and 2000 (Barnbrook, 1999), and a growing literature on design ethics and social responsibility has helped graphic design shift paradigms. It has evolved from a practice that helps businesses prosper to include research that aims to change the world for the better. Graphic designers no longer rely solely on their intuition to visually translate verbal messages or even a client to give them work. Today, graphic designers might secure their own funding to author and visually translate their own information to their own target audience. In this new role, many of them use interdisciplinary qualitative research methods (e.g., ethnography) and lead collaborative design processes (e.g., participatory design) to understand complex social problems that span multiple disciplines and audiences from cultures different than their own. In essence, graphic designers read, write and conduct research globally; this special issue highlights some of the fruits of their labor.

In the first paper, titled How print culture came to be indigenous, US-based designer Stuart McKee contributes a historical perspective on 'global interaction in design.' He uses discourse analysis to highlight and clarify the contributions of indigenous culture to the history of print design. Instead of speaking of indigenous communities and their contributions to design as a new frontier, not yet discovered, this paper posits the opposite. McKee discloses that indigenous consciousness has always been a part of Western design sensibilities and has helped to define its print history—though with little acknowledgement. By looking through the rear view mirror at our past interactions with indigenous people, we can learn how to move forward in our future interactions with these communities worldwide.

In the second paper, titled Navigating cross-cultures, curriculum, and confrontation: Addressing ethics and stereotypes in design education, US-based design educator Audra Buck-Coleman describes how requiring design students to stereotype each other can have pedagogical and social value. Buck-Coleman's Sticks+Stones study has the same confrontational ethos as Tibor Kalman's Race issue of *Colors* magazine. The effectiveness of Sticks+Stones can be measured not only by the aesthetic worth of the outcomes, but also by the changes in attitude of the students toward tolerance in regard to race, religion and culture.

In the third paper, titled Beyond borders: Participatory design research and the changing role of design, US-based design educator Adream Blair-Early gives her perspective on the state of design education and its growth potential. She posits that design education is more collaborative today due to technological innovation and cross-cultural pedagogical initiatives (e.g., multidisciplinary research centers). The influx of social networking and Web 2.0 interactivity, for instance, allows students to broaden the scope of their work to include others anywhere in the world. As cross-cultural collaborations in design pedagogy become more global, Blair-Early encourages the use of an action research approach in order to address the cultural issues that will likely emerge in the cross-cultural, communication process.

In the fourth paper, titled Virtual conferencing in global design education: Dreams and realities, US-based graphic designer Judith Moldenhauer confirms that the discipline of design has a paradigm shift underway from independent designing to "interdisciplinarity and collaboration" that warrants virtual conferencing. She then engages us in a frank discussion of the "dreams and realities" of virtual conferencing in design education. Her paper introduces the concept of "presence" to represent an ideal state of seamless communication and interaction between remote participants in a global collaboration—a dream state that has not yet been attained as evidenced by the three virtual conferencing exemplars in design education that she analyzes. One of

the exemplars is her own pedagogical study. However, as she observes, "with graphic and industrial design embracing technology since the Industrial Age," we will, most likely, move forward towards fulfilling the dream of presence through persistent and systematic modification of our technological infrastructures.

The special issue ends emphatically with a collaborative project that epitomizes 'global interaction in design' in which a design educator, working side by side with laypeople, nurtures the creative agency of the laypeople and guides the professionalization of their marketing efforts. In the final paper, titled The New School collaborates: Organization and communication in immersive international field programs with artisan communities, US-based designer Cynthia Lawson provides a model for the management and technical facilitation of global collaboration and grapples with the issues that emerge from this type of interaction. She describes a collaboration between her institution in New York City and groups of Mayan artisan women in Guatemala that aim to engender economic autonomy in a Guatemalan community by working with the Mayan artisan women to create a lucrative market for their crafts.

conclusion

One can garner from this special issue that in order to generate effective global interaction, as graphic designers, we need to accomplish a couple of major milestones. First, we need to innovate new technology, improve existing technologies for distance collaboration or communication and develop a protocol for the most effective use of existing technologies. Second, we need to theorize appropriate visual and verbal etiquette for communicating across cultures within the classroom and by way of virtual conferences. As we move towards refining the technological infrastructures of our global interactions, it might behoove us to adopt a Sankofan framework (pertaining to Sankofa, the West African concept graphically symbolized as a bird flying forward by looking backward) and look back at the accomplishments of other disciplines and regions of the world in order to progress towards the future.

acknowledgements

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visible language 44.2

How print culture came to be indigenous

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abstract

Western historians working in the first half of the twentieth century established a scheme for writing design history that continues to influence the global histories of today. The historians Douglas McMurtrie, Lucien Febvre, Henri-Jean Martin and Lawrence Wroth believed that the modern history of visual communication began with the advent and spread of typographic printing in fifteenth-century Europe. Within their historical narratives, printing leaves Europe to reappear in other parts of the world as a benign instrument of cultural conversion. These scholars used their histories to assert the privileges of European expansion, and they viewed indigenous design as any form of communication technology practiced outside of Europe after the export of printing. They clung to the notion that American peoples were destined to develop cultural histories that duplicated the European historical trajectory. In their eyes, the history of print culture belonged to Europe, and their histories today read as attempts to silence the "strangeness" of non-Western cultural difference. In this article, I examine design histories of the Americas from the first three centuries of New World settlement and describe the ways that Western historians have misrepresented indigenous

American cultures by suppressing local forms of visual language and communication technology. In opposition to the dominant strand of Western design historiography, I present evidence that local meanings and values migrated with the products that colonial administrators printed overseas for European audiences. I question the degree to which design historians of the Americas have positioned indigenous peoples as subordinate subjects of print culture rather than as agents of cultural difference and productive assimilation. The primary significance of this contribution to this special issue is to contest the worldview of graphic design history as a singular and unified field of representation, and to encourage greater engagement with indigenous design histories in the contemporary movement toward cross-cultural design research and collaboration.

Stuart McKee is active as a design educator, researcher and writer. He serves as an assistant professor of Design at the University of San Francisco, where he is also chair of the Department of Art + Architecture. His publication record includes papers for the journals *Inform*, *Visible Language* and the *AIGA Journal of Graphic Design*, and research articles for the magazines *Print*, *Eye* and *Emigre*.

bringing knowledge to the natives

The Franciscan imperative to Christianize the Nahua people of the Americas inspired Diego Valadés to write and illustrate the *Rhetorica christiana*, one of the first representations of the Old World establishment's attempts to educate a vastly different New World people. In 1571, forty-three years after the Franciscans established the mission of San José de los Naturales within the indigenous city-state of Tenochtitlán, Father Valadés ended his many years of service teaching Catholic doctrine to the Nahuas. Valadés superiors had requested that he leave San José to serve his order in Europe, where he devoted the next eight years to composing the *Rhetorica christiana* as an illustrated instruction manual for Franciscans preparing to teach at Tenochtitlán themselves. The text of the *Rhetorica christiana,* a blend of European knowledge and Nahua description, details how Valadés and his fellow missionaries used classical rhetoric to lessen the Castilian/Nahuatl language barrier while preaching to the natives. Valadés believed in the rhetorical power of both text and imagery, and his complex engraving of San José's *atrio,* or open-air church, mixes realism with the spiritual to reveal what the experience of bringing European knowledge to the natives might have been like.

At the center of Valadés's *atrio* (*figure 1*), God and two angels watch from the heavens while a procession of Franciscan monks carry a platform cathedral upon their shoulders. Nine scenes of instruction surround them, each with a single Franciscan teacher speaking to an attentive group of natives. Near one end of the courtyard, two teachers stand with pointers in front of illustrated screen-like *lienzos*. On the left, Valadés mentor, Pedro de Gante, directs his students through a sequence of icons depicting Western forms of labor. On the right, another teacher introduces a different group of students to a pivotal scene from the world's creation. Across the courtyard, two Franciscans seated with books translate portions of the catechism to the natives kneeling before them, while another, pen and parchment ready, demonstrates the European practice of signing one's name. In each of these scenes, the work of spreading knowledge happens in a single direction: the Franciscans dominate the lessons, keeping their media to themselves and out of native hands. Although we can only guess as to whether Valadés stretched the truth for rhetorical advantage, we can be certain that he created this particular representation to exemplify Old World attitudes about the spread of European knowledge.

Valadés's engraving encapsulates the perspective that would come to dominate Western historians' descriptions of the arrival of European print culture into the Americas for the next four centuries: Spanish and English colonists brought

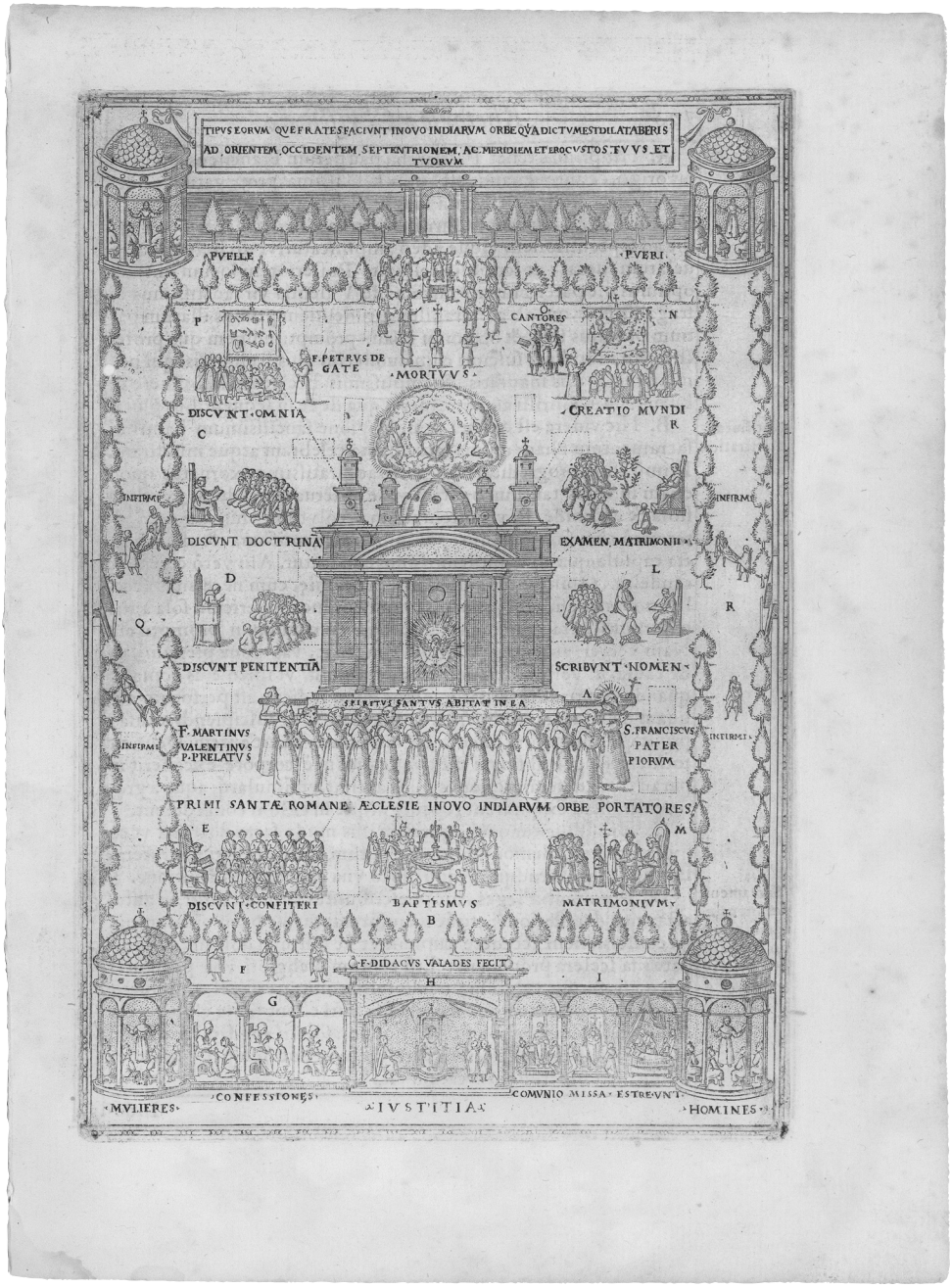


Figure 1: An untitled engraving showing the mission *atrio* at San José de los Naturales Publication Title: *Rhetorica christiana ad concionandi, et orandi usum accommodata…* Artist/Author: Diego Valadés. Publisher: Pietro Giacopo Petrucci, Perugia. Publication Date: 1579. Medium: Engraving. Courtesy of the John Carter Brown Library at Brown University.

printing, typography and the book to the illiterate peoples living in the New World, who had little to offer in return. Western historians have characterized the spread of printing and typography as a watershed in the history of visual communication because these technologies revolutionized the manner with which European intellectuals produced and shared knowledge at home. Yet the seemingly dramatic movement of these technologies across Europe during the final forty years of the fifteenth century also established the cultural precedent that Europeans would emulate to impose their knowledge into a wide range of civilizations overseas. Viewed within the context of New World settlement, the celebrated spread of printing and the religious conversion of the world's indigenous peoples are different ways of writing about the process of Christian imperialism. Native forms of visual communication remain absent from histories that describe the introduction of print culture into the Americas, leaving the uninformed reader to believe that indigenous peoples did not have writing systems of their own and that their ways of speaking and writing had no effect on the Europeans.

print culture's colonial provenance

With more than one hundred published regional histories, bibliographies and editorial reprints to his name by the time of his death in 1944, Douglas McMurtrie remains the most productive historian of North American printing and typography to date. McMurtrie's collective body of work demonstrates that colonial assumptions about American print culture's European ancestry prevailed well into the twentieth century. Right from the beginning of his comprehensive history titled *The Book: The Story of Printing and Bookmaking,* McMurtrie announces the ethnocentric disposition that will serve as this history's foundation. "The most cursory reflection," he writes, "will make it clear beyond doubt that books are a primary necessity of life in any civilized community" (1938, xxv). Following nineteenth-century historical convention, McMurtrie constructed his history of the book by uniting a series of discrete cultural inventions and triumphs from different civilizations into a single narrative chronology, reinforcing the now common worldview of visual communication history as a global field of representation. McMurtrie begins his history by describing "primitive" humankind's numerous experiments with pictographic writing. Diminishing the breadth of his history, he then transitions to the Phoenician and early Greek societies of the Mediterranean to introduce the origins of the Western alphabet. Following a cursory synopsis of the beginnings of

xylographic printing and experimental printing types in the Far East, McMurtrie narrows his scope further to arrive at the meat of his history, the invention and development of printing and modern bookmaking in late fifteenth-century Europe. The printed book would now be ready for its disjointed yet enterprising advance into virgin territory thousands of miles distant:

> The spread of printing throughout the enormous areas of the two Americas presents a picture altogether different from that of the propagation of the art in Europe. In the Old World, printing developed and spread in communities which had each its background of centuries of culture. Across the Atlantic, on the other hand, printing became one of the implements of implanting and fostering the cultural heritage of European civilization in environments that were utterly new and strange. In the Americas the press accompanied the cross and the sword, the ax and the plow, in the world's most magnificent pioneering adventure (McMurtrie, 1938, 435).

In contrast with McMurtrie, the French historians Lucien Febvre and Henri-Jean Martin believed that the printed book came into being as the product of a uniquely European intellectual awakening. Febvre and Martin's influential *L'apparition du Livre* from 1958 (translated into English as *The Coming of the Book)* begins with descriptions of the technologies that led to the discovery of letterpress printing in Germany in the 1440s. This representation of the book's history concentrates on printing's progress into the present-day boundaries of Switzerland, Italy, France, Holland, Belgium, Spain and England during the next three-hundred years. *L'apparition du Livre* has popularized what Febvre and Martin called Renaissance Europe's "little world of the book" and the ways in which the continent's expanding hunger for learning was shaping the culture of its metropoles (1997, 128). The printers, publishers and readers of the late fifteenth and early sixteenth centuries were multilingual scholars who surrounded themselves with the newly published writings of ancient and contemporary authors, promoting the traffic of new ideas and sharing in what the historian Elizabeth Eisenstein later identified as a "knowledge industry" (Eisenstein, 1980, 301). Under the patronage of these men, the technology of the book, in Febvre and Martin's estimation, reached a state of maturity remarkably quickly between the years 1500 and 1510 (1997, 262), only fifty to sixty years after printing begins and at about the same time that it takes a significant geographic departure. Nothing would appear to be out of place when that company of men who founded the "little" world of the book first pondered the bigger world beyond the Atlantic Ocean:

> Almost contemporary with the invention of the printing-press, that is during the last fifty years of the 15th century and even more during the very first years of the 16th century, other great 'discoveries' rapidly enlarged the horizons of the world known to Western man. These discoveries were geographical and with them a new epoch began in European history, as Europeans struggled to master the expanses of land and sea which opened up in front of them. They entered into relations with worlds previously unknown to them, or only glimpsed through more or less legendary accounts. The epoch which begins with these discoveries has yet to come to an end, and throughout it Western civilisation has acted to transform the rest of the world. In this process of transformation the printing-press has had its own role to play (Febvre and Martin, 1997, 207).

The preceding passage introduces the section of Febvre and Martin's history titled Printing Conquers the World (1997, 198), matching McMurtrie's strategic alignment of the printing press with the cross and the sword. Both histories present the New World at the time of its European discovery as a blank cultural palette. By "opening up" in front of Europe, Febvre and Martin cast the Americas as the happily submissive subject of their incipient colonial masters. In both histories, the printed book enters the New World as the gift of knowledge to indigenous peoples and the primary tool that would secure the natives' conquest. Under the cover of Europe's expanding intellectual horizons, printers, publishers and typographers participated in the project of appropriating indigenous knowledge away from the New World and fashioning it as European knowledge for the markets back home. Together, McMurtrie's and Febvre and Martin's histories reveal that the new epoch that colonial printing engendered would, while consuming the strangeness of the Americas, nevertheless seem markedly familiar. McMurtrie and Febvre and Martin erase native culture from their histories and make it the destiny of indigenous peoples to experience printing and typography as if reliving the European history themselves from its beginnings.

Contemporary historians of North and South American indigenous peoples have begun to reveal that many of the interactions between New World natives and their colonizers were significantly more complex than what earlier historians have allowed. Evidence demonstrates that natives and Europeans worked together to meet both independent and shared objectives, and these historians have moved away from describing colonial interactions as "conquests" in favor of the more neutral term "encounter" (Miguel Leon-Portilla, cited in Gray, 2000, 1; Hall, 2000, 13–25). Returning to the example of the Valadés engraving, much more information traveled from the natives to the missionaries than Valadés would have us believe.

Donald Abbott, a scholar of the *Rhetorica christiana,* has observed that the priests who worked with natives throughout the first century of settlement in New Spain learned to speak Nahuatl and committed the language to an alphabet so that indigenous converts could learn to read and write in their own tongue (1996, 42, 48). These priests worked directly with printers to design and publish devotional materials, dictionaries and grammars in polyglot formats, with Nahuatl appearing alongside the Castilian or Latin languages. The process of learning native languages and "reducing" them into alphabetic form could not have happened without the sustained—and sometimes forced—collaboration of native linguists and intellectuals (Axtell, 2000, 41–42). James Lockhart, who has studied Nahua culture extensively, demonstrates that the Nahuas were no strangers to writing:

> That the Spaniards had paper and ink and used them for recordkeeping caused the Nahuas no surprise or puzzlement, for following a centuries-old Mesoamerican practice they had long been doing the same thing, and they quickly made the identification between the two traditions (1992, 326).

From the time of their arrival into Tenochtitlán, the Franciscans had been adapting the Nahua pictographic tradition for use within their own teaching materials in hopes of making their lessons less foreign and more inviting. Many of their illustrated *lienzos* departed from European convention by featuring rebus-like strings of colorful symbols (*figure 2*) similar to those shown within the hand-painted Mixtec codices (Abbott, 1996, 48–49). Within other engravings of the *Rhetorica christiana,* Valadés juxtaposed Nahua pictograms alongside letters of the Roman alphabet as an incentive for the Nahuas to commit the exotic European characters to memory.

Abbott's research reveals that Diego Valadés contradicts his own representation of the Nahuas as passive recipients of European learning (1996, 42–45). Valadés's father was a member of the nobility in New Spain and his mother was a native resident of Tlaxcala. Because of his father's rank, Valadés was able to attend a school for the education of elite native children. As a young man, Valadés joined the Franciscan order before church fathers began to prohibit native membership in the year 1555. Abbott believes that Valadés furthered his studies at the Franciscan Colegio de Santa Cruz de Tlaltelolco, which he describes as "…the first European institution of higher education" in the Americas (Abbott, 1996, 43). At the Colegio de Santa Cruz, Valadés and his fellow students would have participated in an integrated curriculum, reading Aristotle and Erasmus while studying indigenous

Figure 2: An example of Mixtec writing from a Mesoamerican manuscript book Publication Title: *Codex Selden*. Publication Date: c. 1556. Courtesy of the Bodleian Library, University of Oxford, M.S. Arch. Selden. A. 2. fol. 11r.

forms of medicine. Abbott writes that the *Rhetorica christiana* was the first book by an indigenous American author to be published in Europe, and the first "comprehensive rhetoric" to make sense of the process of educating indigenous peoples by allowing for their cultural differences (Abbott, 1996, 41–42). Yet nowhere within the *Rhetorica christiana* does Valadés disclose his mixed Spanish-Nahua ethnicity and he does not identify with the native experience in his writing (Abbott, 1996, 44–45).

From the time of Valadés right into the twentieth century, anyone who published a history about the early American colonial experience needed to identify and describe the indigenous societies that the early colonists encountered. Western

historians have popularized ethnocentric definitions of indigenous peoples and their cultures in narratives that associate native identity with specific cultural attitudes or practices. The contemporary anthropologist Héctor Díaz Polanco has used the term "indigenism" to describe the range of representational positions upheld by state governments and indigenous peoples alike throughout the colonial period of South American history to both contest and defend indigenous claims for cultural autonomy (1997, 23–24). Following Polanco, I will use the term "indigenism" throughout this article to describe the historical practice of representing "nativeness" as a definitive type of cultural identity. Historians of printing, typography and the book have used the term "indigenous" and the related terms "native" and "vernacular" not simply to identify a New World peoples' isolation and independence from the people of Europe, but to publicize national and imperial attitudes about the collective deficiency of the American peoples' cultures. As a result, New World societies like the Nahua along with many others to follow have *become* indigenous through the process of writing colonial history.

the question of native ingenuity

Within a decade after the first Franciscans arrived in New Spain another group of Franciscans traveled to South America to establish the *reducciones guaraníticas,* the Guaraní missionary settlements of Old Paraguay. The Franciscans became the first evangelists to work with indigenous populations in the Spanish Viceroyalty of Río de la Plata, a region that today comprises parts of Paraguay, Argentina, Uruguay, Bolivia and Brazil. A group of Jesuit missionaries followed closely behind the Franciscans, arriving at the *reducciones* themselves in the first few years of the seventeenth century, and they maintained the stronger colonial presence there until the time of their expulsion from South America in the year 1767. The representation of the Jesuit introduction of print culture to the Guaraní people has been a standout for many historians of South American printing. Hensley Woodbridge and Lawrence Thompson describe the Jesuit/Guaraní encounter as a "remarkable" tale of printing history (Woodbridge and Thompson, 1976, 52) and Julie Greer Johnson identifies it as the most "dramatic" of the New World histories of Christian evangelism (1988, 73).

Going against the directives of the colonial administration, an early Jesuit leader of the *reducciones,* Father Antonio Ruiz de Montoya, began to learn the Guaraní language while living in the Jesuit seat of Córdoba, Argentina and became what Johnson calls a native language "specialist" (1988, 73). Montoya wrote religious

primers for the Guaranís using an alphabet he customized himself and requested that the administration send him a printer and the necessary equipment to begin his own printing operation. His request was denied, and Montoya ended up shipping his early manuscripts to printers in Spain despite the considerable production lag and his concern that European type founders would not be able to reproduce his new alphabet faithfully without supervision.

Accepting the typefounders' inability to have Montoya's manuscripts printed quickly and easily, the Jesuits decided to teach the Guaranís to copy, by hand, the volumes held within their mission library. What appears to inspire the awe of printing historians was the Guaraní ability to reproduce any European writing hand or printing type with exquisite attention to accuracy. The historians Hensley Woodbridge, Lawrence Thompson, Guillermo Furlong and Lawrence Wroth cite the testimony of Father Francisco Jarque (for Wroth, "Xarque") who, writing his *Insignes Misioneros,* declared the Guaranís to be such proficient craftsmen that he was not able to distinguish a native manuscript from a missal printed in Antwerp (Woodbridge and Thompson, 1976, 53; Furlong, 1953, 50; Wroth, 1926, 275–276). Furlong provides additional affirmation from Father José Peramás, who described the Guaranís' "ingenious" skill at mimicking even "the most elegant printed book" or "ornamental printing" (1953, 50). Furlong notes that this was no singular or anomalous skill, writing that as many as thirty *indígenas* collaborated to reproduce the many hundreds of pages of Nicolás del Techo's *Decadas* (1953, 54). Peramás himself was so impressed that he shipped a selection of Guaraní manuscripts back to the continent to inspire the admiration of European readers (1953, 50).

Montoya died in 1652 and his followers Father Juan Baptista Neumann and Father José Serrano received permission to begin a letterpress operation around the year 1700. Typography did not make its way into the *reducciones* as an imported technology, however, and once again, it is the Guaranís' aptitude for duplicating European culture that gives printing historians pause. Neumann and Serrano were unable to acquire printing equipment or materials from Europe; the natives, "...under the instruction of the Jesuit fathers," as John Clyde Oswald describes it (1937, 548), fabricated a printing press, constructed a foundry and crafted the technology to cut and cast their own printing types and print their own books (*figure 3*). From here opinions vary as to the amount of historical recognition the Guaranís should receive for their work with Neumann and Serrano. Furlong begins his account by giving the natives considerable credit: he believes that the Guaranís built much of the facility themselves using wood from the Paraguayan jungles, and that they helped Neumann and Serrano to devise an unconventional alloy for

their foundry by mining local sources of lead and tin (1953, 56–57). Yet Furlong cites a letter in which Serrano himself removes credit from the natives, describing the Guaraní accomplishment as "work from the finger of God, an achievement so much more admirable when the instruments are these poor *indios,* new to our faith, and lacking the guidance of European masters" (1953, 67–68; author's translation). Furlong later concedes: "In truth, it is nothing short of amazing, that those natives, even though *tamed* by the missionaries, gained the capacity to make such sizeable progress in the art of the foundry" (1953, 68; author's translation and italics). Furlong, Oswald and Wroth offer the recollections of the visiting Father Labbé, who arrived at the Río de la Plata in the year 1711. As Labbé describes the Guaranís:

> These Indians have no inventive genius; however, they are able to mimic whatever works they see with admirable dexterity. I have seen them produce, by hand, beautiful paintings, printed books, delicate writings, organs and all kinds of musical instruments which are very common there. They make pocket watches, draw plans, and engrave geographic maps, and, in the end, they are excellent in all handcrafted works provided that they have a pattern or model in front of them (Furlong, 1953, 70–71, author's translation; Oswald, 1937, 548–49; Wroth, 1926, 276).

Woodbridge and Thompson suggest that Neumann and Serrano alone created the press and foundry letters, honoring them as "the first to establish a printing press…and to produce the first Argentine books" (Woodbridge and Thompson, 1976, 54). Wroth too, in a dismissive tone, places sole credit with the Jesuits:

> No one who has smelt printer's ink can be indifferent to the reproductions here shown of this crude example of the typographical art, executed by savages in the heart of the South American wilderness. The "finger of God" which guided them to this end was the patience, the industry and the zeal for souls of the Jesuit missionaries (Wroth, 1926, 283).

Furlong, Oswald and Wroth define the Guaranís as an indigenous people by representing their craftsmanship as a native limitation. They discount the Guaranís not simply because of their skill at mimicking European culture, but because that mimicry cannot be performed without reference to an exemplar. By representing the practice of mimicry as an activity that is innocent of ambition and lacking in intellectual substance, Furlong, Oswald and Wroth identify indigenous peoples as a subset of humanity that has been isolated from culture. A people which lacks culture also lacks artifice and remain closer to nature, reinforcing the characterization of indigenous peoples as simplified and purified by that supposed proximity. In

Para saber si se puede usar en semejantes oraciones de Relat. tengase esta regla que diceu dió el P. Simon Bandini.

Quando el caso obliquo mudado en Nominar. queda la oracion con el mesmo sentido, se puede usar de dicho relat. Pero si mudando el caso obliquo en Nomin. no queda el mesmo sentido, esforçoso, usar de reciproco. E. G. decia la primera oracion: Pedro esta enfermo del estomago (Peru haçĩ ypĩape) muda se aora el Abl. en Nom. desta suerte (Peru pĩa haçĩ) dice el estomago de Pedro está enfermo, resiene el mesmo sentido. la canoa se quebró en la popa (huguape *l.* huguarupi ỹga oyeca) y mudando el caso obliquo en Nom. dira (ỹgarugua oyeca) la popa de la canoa se quebró, que es lo mesmo. Pues todas las vezes que hecha essa mudança la proposicion que saliere equivaliere á la otra, se puede usar de relat. Al contrario está oracion (Peru haçĩ ocotĩpe) Pedro está enfermo en su aposento, no se puede decir, (ycotĩpe) por que si se hiziera la dicha mudança diciendo (Peru cotĩ haçĩ) no quedará el mesmo sentido que antes, sino que dixera: el aposento de Pedro está enfermo y assi se há de decir forçosamente (ocotĩpe) por recip. sino es que este enfermo, no en su proprio aposento, si no en el aposento de otro, que es otra su posicion.

Excepcion 2. El modo de hablar siguiente mas parece avia de ser relat. que recip. y los Indios lo usan por reciproco E. G. (amoĩ opẽmo *l.* equĩcebo) puse lo de esquinar (opẽbo) de plano (oĩquebo) de lado (emoĩ guaquabo *l.* guapuabo) pon lo de punta &c. y desta manera ex-

explican la poſtura de las coſas, que ſe haze poniendo el reciproco (o) vel (G) antes del nombre. y luego la particula (bo) breve. que con narigales es (mõ) y talqual con relativo, como luego veremos.

En ſentido de eſtar, caer, andar &c. uſanlo de la miſma manera, y con mas conformidad á la regla de los reciprocos ut (opibo roicoemè) no eſtè en cueros, deſnudo (opĭbo oá) caio, ò nacio de pies (oacâmo oá oubo) de cabeça vino caiendo (Gueñĭpĭamo oho oicobo) anda de rodillas (Guaguebo. *l.* oyurubo, Gueçabo &c. oyequaaoſna) haſta á la mitad, ò haſta á la boca, ò haſta á los ojos ſe ve, dixera ſe de uno metido en un rio &c. y á eſtos ſe pueden reducir los primeros porque diciendo (oquĭcebo amoſ) lo puſe de eſquina, dice lo puſe haziendo que eſtubieſſe de eſquina (opebo) que eſtubieſſe de plano. &c.

Los otros, que apunta el P. Ruiz, ſon,

Guacapèbo)	de barriga	Oỹbabo)	atraveſsado.
Guebibo)	de nalgas	Opèbo)	de manos.
Gueñĭbângâmo)	de codo	Oporiábo)	de pecho.
Guopĭtabo)	por el cuento ò teſtero	Opucubo)	por lo largo.
Oruçupèbo)	de eſpaldas	Gupibo)	idem.
Oayubo)	de cuello		

A los quales ſe pueden añadir.

Guapĭpebo)	de reves	Guetebo)	Entero, *l.*
Guañỹcamo)	de quixadas	(oábo *l.* oábari	
Gueçapĭcâmo)	de cejas	*l.* nanibari)	
Guendaguendaguebo)	de aqui por allis		

Figure 3: Two pages showing the foundry types developed by Neumann, Serrano and the Guaraní people. Publication Title: *Arte de la lengua guarani.* Author: Antonio Ruiz de Montoya. Publication Date: 1724. Medium: Letterpress printing. Courtesy of the John Carter Brown Library at Brown University.

his *Marvelous Possessions: The Wonder of the New World,* Stephen Greenblatt has questioned many of the "documentary" observations made by the first European explorers, who were themselves trying to make sense of the New World peoples' incomprehensible languages:

> On the one hand, there is a tendency to imagine the Indians as virtual blanks—wild, unformed creatures, as naked in culture as they are in body. On the other hand, there is a tendency to imagine the Indians as virtual doubles, fully conversant with the language and culture of the Europeans. These tendencies seem like opposites, but they are in fact versions of one another...one moment the Indians have no culture; the next moment they have ours (Greenblatt, 1991, 95).

To complicate Greenblatt's paradox, the empty linguistic signs that the Guaranís made their own originally came into European culture as the products of machine technology, placing the Guaranís' accomplishment one developmental step further still from nature. What may be the affront to Furlong, Oswald and Wroth is that the Guaraní people make printing seem surprisingly human, challenging that which, for them, made letterpress printing both modern and historic. By accentuating the making of copies within the Guaraní histories, Furlong, Oswald and Wroth suggest that European culture itself is being repeated, allowing European history to maintain its continuity within South America. By suppressing evidence of the Guaranís' own cultural ingenuity, indigenous peoples remain safely within a remote if not backward evolutionary state that European cultures had long since surpassed. The Guaranís' culture makes history by appearing as an *absence,* a lack of communication technology and indigenism becomes modernism's pre-existing condition, alternately pre-Christian, pre-literate, pre-industrial or pre-historic.

native identity and difference

In what ways did indigenous peoples' encounters with printing and typography diminish evidence of native cultural identity in other New World histories? In what ways did it encourage the portrayal of such disparities? The Puritan minister John Eliot, who came to be known as the "Apostle to the Indians," shared the conviction of his contemporaries in the Río de la Plata that the American peoples should be able to read a Bible for themselves. Eliot was recognized in his day for translating the complete scriptures into a native language and printing them for native use.

Isaiah Thomas, Douglas McMurtrie, John Clyde Oswald, Lawrence Wroth, David D. Hall and Hugh Amory have all described Eliot's arduous undertaking within their colonial histories, yet each presents a somewhat different account depending upon what he believes to be the significance of Eliot's project for North American printing's beginnings.

There are many details of John Eliot's life and work that receive general historical agreement. While presiding over his Roxbury congregation in the Massachusetts Bay Colony of the 1630s, Eliot began to live among various tribes of the Massachusett Indians and, within a few years' time, was able to preach to them in their shared language. As Eliot's experience with native culture increased, he requested that the English Parliament provide him the funds to create a "society" for "propagating the Gospel among the Indians of New England" (Thomas, 1810, 393). Eliot's request was approved in 1649 and the Society (sometimes identified as the "Corporation") enabled Eliot to build native churches and a charity school for the education of Indian youths within the missionary community he called Natick, upstream from Boston on the Charles River.

Around 1650, Eliot completed an alphabet for the Massachusett language and used this alphabet to author his first missionary work, the *Primer or Catechism,* in 1654. Eliot informed the Society that he wanted his publications to be printed in the Colonies so that he could assist with the production. The society approved of his request, giving Eliot little choice but to work with the inexperienced printer Samuel Green in the only North American printing workshop of the time, Cambridge's Harvard College Press. Green printed Eliot's *Primer* as well as two subsequent translations, *The Book of Genesis* and *The Gospel of Matthew,* within the following year. Green, now benefiting from the expertise of the expatriate printer Marmaduke Johnson, began to print Eliot's translation of the New Testament as a unique edition in 1661, and finalized the 1,000-copy edition of the complete Bible, titled *Mamusse Wunneetupanatamwe Up-Biblum God,* in the year 1663 (*figure 4*).

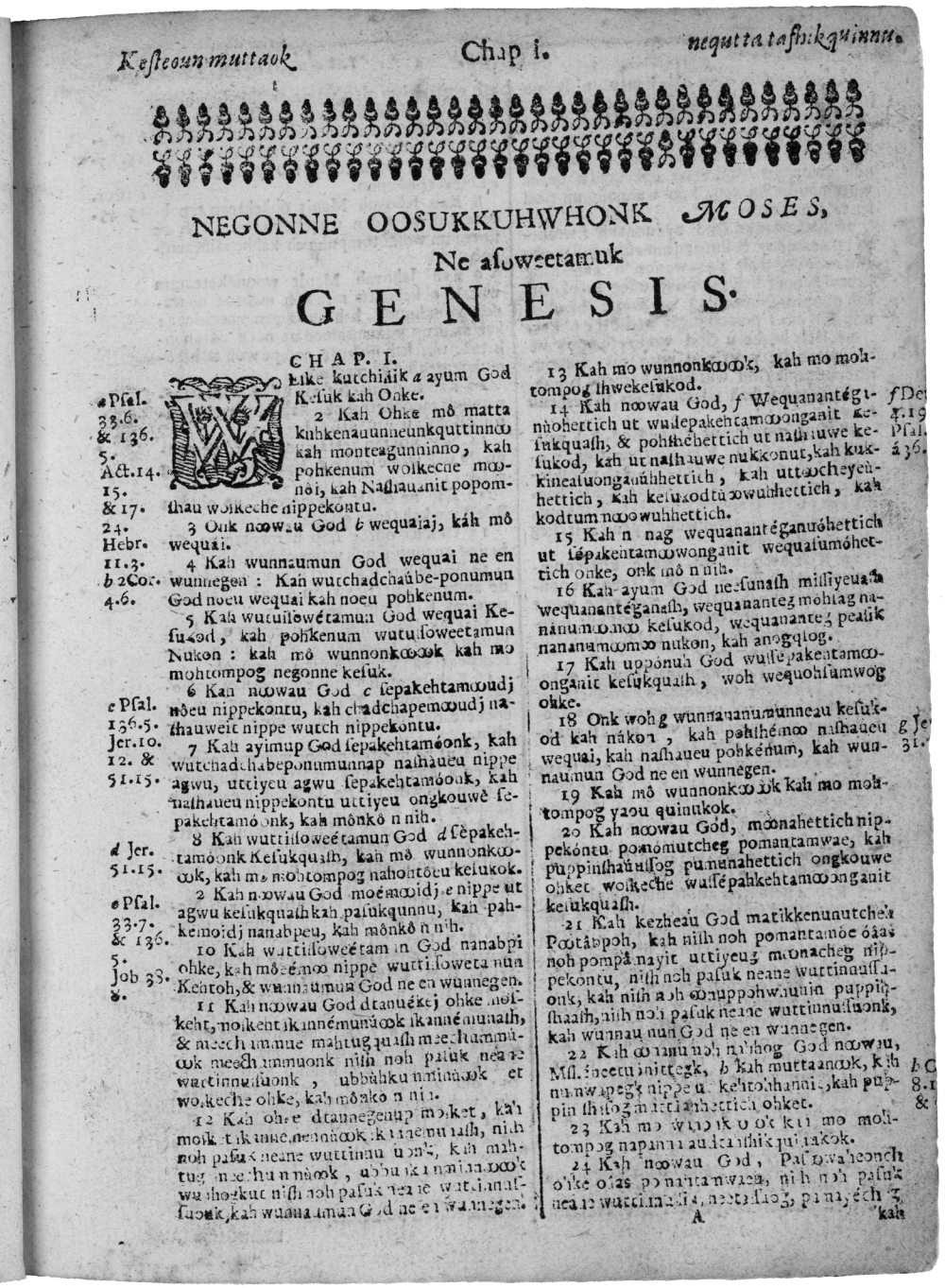
From here the details differ as each historian decides whether Eliot's history is exceptional as the first printing of a North American Bible or as a beginning of indigenous peoples' participation in Western cultural history. For Isaiah Thomas, Eliot's story stands out as a native accomplishment. Thomas, who wrote and printed *The History of Printing in America* in the year 1810, identifies Eliot's project as the *Indian Bible,* and he offers much information about a key participant in the project, the indigenous James Printer. According to Thomas, James was born within one of the "principal" native families in the Indian village of Hossanamesitt (1810, 290) and he attended Eliot's Indian school. Samuel Green hired James as an apprentice

Booke Weſuongaſh ut Bibleut konamuk ohtagiſh, kah wutteaſh Chapterſaſh niſhnoh Bookuts.

Geneſis	50	Proverbs	31
Exodus	40	Eccleſiaſtes	12
Levitieus	27	Solomons Song	8
Numbers	36	Iſaiah	66
Deuteronomie	34	Jeremiah	52
Joshua	24	Lamentations	5
Judges	21	Ezekiel	48
Ruth	4	Daniel	12
I. Samuel	31	Hoſea	14
II. Samuel	24	Joel	3
I. Kings	22	Amos	9
II. Kings	24	Obadiah	1
I. Chronicles	29	Jonah	4
II. Chronicles	36	Micah	7
Ezra	10	Nahum	3
Nehemiah	13	Habakkuk	3
Eſther	10	Zephaniah	3
Job	42	Haggai	2
Pſalmes	150	Zechariah 14 Malachi	4

Wusku Teſtamente Bookaſh.

Matthew	28	II. Theſſalonians	3
Mark	16	I. Timothy	6
Luke	24	II. Timothy	4
John	21	Titus	3
Acts	28	Philemon	1
Romans	16	Hebrews	13
I. Corinthians	16	James	5
II. Corinthians	13	I. Peter	5
Galatians	6	II. Peter	3
Epheſians	6	I. John	5
Philippians	4	II. John	1
Coloſſians	4	III. John	1
I. Theſſalonians	5	Jude 1 Revelation	22



Kesteoun muttaok Chap I. nequttatashkquinnu.

NEGONNE OOSUKKUHWHONK *MOSES*,

Ne asoweetamuk

GENESIS.

CHAP. I.

Nike kutchiâlik *a* ayum God Kesuk kah Onke.

2 Kah Onke mô matta kuhkenauunneunkquttinnoo kah monteagunninno, kah pohkenum woskeche moonôi, kah Nashauanit popomthau woskeche nippekontu.

3 Onk noowau God *b* wequaiaj, kâh mô wequai.

4 Kah wunnaumun God wequai ne en wunnegen : Kah wutchadchaûbe-ponumun God noeu wequai kah noeu pohkenum.

5 Kah wutuisoweétamun God wequai Kesukod, kah pohkenum wutuisoweetamun Nukon : kah mô wunnonkoook kah mo mohtompog negonne kesuk.

6 Kah noowau God *c* sepakehtamoodj nôeu nippekontu, kah chadchapemoodj nathauweit nippe wutch nippekontu.

7 Kah ayimup God sepakehtamóonk, kah wutchadchabeponumunnap nashâueu nippe agwu, uttiyeu agwu sepakehtamóonk, kah nashaueu nippekontu uttiyeu ongkouwè sepakehtamóonk, kah mônkô n nih.

8 Kah wuttiisoweétamun God *d* sepakehtamóonk Kesukquash, kah mô wunnonkoook, kah mo mohtompog nahohtôeu kesukok.

2 Kah noowau God moemoodj e nippe ut agwu kesukquash kah pasukqunnu, kah pahkemoidj nanabpeu, kah mônkô n nih.

10 Kah wuttiisoweétamun God nanabpi ohke, kah môeémoo nippe wuttiisoweta nun Kehtoh, & wunnaumun God ne en wunnegen.

11 Kah noowau God *d* tanuékej ohke mosskeht, noskentikinnémunôook ikannémunash, & meechimmue mahtuquash meechummôook meechimmuonk nish noh pasuk neane wuttinnuisuonk, ubbahkuninnôook et woskeche ohke, kah môako n nih.

12 Kah ohke dtannegenup moiket, kah moiketikinnemunôook ikinnemunash, nish noh pasuk neane wuttinnu uonk, kah mahtuq meechunnôook, ubbunkinnimunoook wushogkuc nish noh pasuk neane wuttiinnuisuonk, kah wunnaumun God ne en wunnegen.

13 Kah mo wunnonkoook, kah mo mohtompog shwekesukod.

14 Kah noowau God, *f* Wequanantéganôhettich ut wusepakehtamoonganit kesukquash, & pohshehettich ut nashauwe kesukod, kah ut nashauwe nukkonut, kah kukkineatuonganûhhettich, kah uttoocheyeuhettich, kah kesukodtûowuhhettich, kah kodtumnoowuhhettich.

15 Kah n nag wequanantéganuóhettich ut sepakehtamoowonganit wequasumóhettich onke, onk mô n nih.

16 Kah ayum God neesunash missiyeuash wequanantéganash, wequanantéganash mohtag nanânumoomoo kesukod, wequanantéganash peasik nananumoomoo nukon, kah anogqtog.

17 Kah upponuh God wusepakehtamoonganit kesukquash, woh wequohsumwog ohke.

18 Onk woh g wunnananumunneau kesukod kah nâkon, kah pohshémoo nashaueu wequai, kah nashaueu pohkénum, kah wunnaumun God ne en wunnegen.

19 Kah mô wunnonkoook kah mo mohtompog yaou quinukok.

20 Kah noowau God, moonahettich nippekóntu pomomutcheg pomantamwae, kah puppinshaûussog pumunahettich ongkouwe ohket woskeche wusepahkehtamoonganit kesukquash.

21 Kah kezheau God matikkenunutcheu Poottâppoh, kah nish noh pomantamôe ôâas noh pompânayit uttiyeug moonacheg nippekontu, nish noh pasuk neane wuttinnussuonk, kah nish noh pomppohwunnin puppinshaash, nish noh pasuk neane wuttinnusuonk, kah wunnaunun God ne en wunnegen.

22 Kah noonnu noh nishog God noowau, Missineetu inittegk, *b* kah muttanook, kah nunwapegk nippeu kehtohhanni, kah puppin shushog muttiashettich ohket.

23 Kah mo wunnonkoook, kah mo mohtompog napanna audanihikquinukok.

24 Kah noowau God, Pasuwaheonch ohke ohas pomantamwaeg, nish noh pasuk neane wuttinnuisu, neetashog, pannyéch g

kah

A

a Psal. 33.6. & 136. 5. Act. 14. 15. & 17. 24. Hebr. 11.3. *b* 2 Cor. 4.6.

c Psal. 136.5. Jer. 10. 12. & 51.15.

d Jer. 51.15.

e Psal. 33.7. & 136. 5. Job 38. 8.

f Deu 4.19 Psal. 136.

g Je 31.

b C 8.1 &

Figure 4: The first page of Genesis from *Mamusse wunneetupanatamwe Up-Biblum God...* Publisher: John Eliot. Publication Date: 1663. Medium: Letterpress printing. Courtesy of the John Carter Brown Library at Brown University.

in the year 1659, assigning him the surname "Printer" (1810, 291), the family name that James would eventually give to his children; Thomas adds that James also went by the alias "James the Printer" (1810, 290). James lived with Green and apprenticed to him for several years, operating Green's presses, composing his typography and editing the press sheets for Eliot's publications. According to Thomas, James was "well known" among the various indigenous populations who lived within the Bay Colony, and one of Eliot's motives for working with James was to "excite the greater attention" of other native readers (1810, 293). James left Green's employment to fight for native interests in King Philip's War but returned to Cambridge to help Eliot and Green publish the second edition of *Up-Biblum God* in the year 1680 (1810, 292). Thomas quotes Eliot's assigning to James definitive credit for much of the work: "I desire to see it done before I die, and I am so deep in years, that I cannot expect to live long; besides, we have but one man, viz. the Indian Printer, that is able to compose the Sheets, and correct the Press with understanding" (1810, 292).

In his contrasting account within *Printing in the Americas,* John Clyde Oswald titles his brief chapter on Eliot's project "First American Printing of the Bible" (Oswald, 1937, 15) and uses his history to tell the stories behind the next three North American Bible printings. Yet Oswald is also clear about Eliot's indigenous influences. Oswald confirms that *Up-Biblum God* appeared in what he calls the "Indian language" and he identifies it as a "truly American" edition because it was "printed in the language of America's original inhabitants." Oswald credits James as the first native printer in America and mentions his participation in printing the Bible, without significant detail, as part of a separate biographical passage. As did Thomas, Oswald recognizes Eliot as the Bible's translator, stressing only the minister's difficulties in finding native equivalents for several of the scriptural passages.

Although the contemporary historian David D. Hall doesn't add much detail to the Eliot story within his introduction to *The Colonial Book in the Atlantic World* from 2000, he is the only writer to shed light on Eliot's translation process. According to Hall, Eliot learned the Massachusett language with help from three native "teachers and interpreters," a Montauk named Cockenoe and two Massachusett natives named John Sassamon and Job Nesutan (Hall, 2000, 18).

Lawrence Wroth and Douglas McMurtrie penned their histories by leaving out what they must have known about Eliot and Green's work with indigenous peoples. Wroth offers nothing within his patriotic *The Colonial Printer* from 1938 to support native recognition, even though a great many missionary publications were produced during the "colonial" period of United States history. Despite Wroth's

identification of Isaiah Thomas's history as one of his three primary references, he describes Eliot's work as "the culmination of a courageous effort on the part of the translator and printers" (1938, 17), placing all the credit with Eliot, Green and Johnson. Wroth doesn't set the record straight until his later essay "British Influence on American Printing," in which he identifies *Up-Biblum God* as a book "composed and printed under pioneer conditions in a barbarous tongue" (1949, 33). Like Oswald, McMurtrie identifies Eliot's project as "the first edition of the Scriptures in any language to be printed in North America" (McMurtrie, 1938, 407), and, like Wroth, he does not mention native participation anywhere throughout his global history of the book.

Do any of the aforementioned histories provide evidence that the Massachusett people identified with or benefited from the translated scriptures? We have nothing in the way of reactions from the Massachusett people themselves, understandably. Isaiah Thomas cites the Corporation's notice that Eliot's *Catechismes* were "much wanting amongst the Indians" (1810, 243), and he quotes Eliot as encouraging funding for the second edition of *Up-Biblum God* by describing the natives' "constant use" of the first edition (1810, x). With no other evidence that the Massachusett people welcomed Eliot's civilizing motives, we encounter conceptual difficulties if we identify projects like Eliot's as "indigenous." The online *Oxford English Dictionary* identifies one sense of the term *indigenous* as something "of, pertaining to, or intended for the natives" (second edition, 1989). In other words, that which is labeled as "indigenous" can gain its identity through an act of cultural production. The products that a historian can rightfully attribute to being "of the natives" would be the products of a peoples' own making, including the manifestations of their spoken and written language. John Eliot effectively appropriated and transformed the Massachusett language to create *Up-Biblum God* as an object "of" the colonial power structure that was "intended for" native use. The Eliot histories demonstrate the ways that historians of the Americas characterize native languages not as autonomous cultural entities but as secondary linguistic vernaculars, languages that owe their print identities to imperial typographic models. Through the process of vernacularization, native languages come into history as linguistic symbols of colonial authority and control; in Eliot's case, by following the English typographic tradition. The formal durability and portability of mechanically reproducible alphabets ensured that traveling printers could reproduce European writing systems with accuracy and consistency across great spans of distance, thereby reinforcing what were quickly becoming international standards of cultural "sameness." We can therefore view *Up-Biblum God* not simply as a product "intended for" native use but

also as something to excite the interest of European audiences and appeal to their pride. As Isaiah Thomas puts it, *Up-Biblum God* was "a work of so much consequence as to arrest the attention of the nobility and gentry of England, as well as that of king Charles [II], to whom it was dedicated" (1810, 241).

Despite the recognition that James Printer has received as an exceptional figure in printing history, his historians largely deny the hybrid nature of his identity, and James *himself* becomes a product of Western culture. Hugh Amory notes that James Printer used the name James Wowhaus before working with Samuel Green (2000, 89), and Thomas informs us that James had two brothers named Anaweakin and Tarkuppawillin (1810, 290), yet we never learn James' birth name. Identifying James with the surname "Printer" not only conceals his native subjectivity but also makes his "otherness" palpable and mysterious through a naming abnormality. James "Printer" appears within colonial histories and imprint bibliographies not as an indigenous man, but as a representative worker of the missionary service industry. By disregarding James as a native benefactor of typography's European heritage, historians promote the illusion of colonial conformity, and close off the possibility that James's presswork might reveal something unique about his hybrid subjectivity.

making indigenism modern

As the timeframe for North and South America's colonial histories comes to a close, the representation of indigenism becomes more complex as historians encounter the need to distinguish the New World's emerging national identities from the established colonial and indigenous ones. In the beginning, North America's printers could not help but to reproduce the cultures from which they came. It is the consensus of Lawrence Wroth and John Clyde Oswald that the English printing of the seventeenth century exhibits a salient aesthetic mediocrity, and that the early North American printers, especially those departing from England's provincial printing establishments, carry this unremarkable tradition to North America with them. In his essay "British Influence on American Printing," Wroth counts "innumerable" editions reflecting the "haste, ignorance and tastelessness" of the English printers of the time (1949, 33), and he introduces the "colonial printer" into his eponymous history by writing: "If these generalizations concerning the characteristic features of his time be allowed, they place the colonial printer in a class from which we should expect little that is pleasing in typographical form" (1938, xv). As Oswald confirms at the outset of his *Printing in the Americas:* "It is

therefore not surprising that the printers who came to the western shore of the Atlantic Ocean were not of outstanding ability; they were but representative of the class from which they sprang" (1937, 1).

Yet when the contemporary historians Hugh Amory and David D. Hall assert the "continuity" of the printed matter moving back and forth within what they call "the Atlantic World," it is difficult not to reconsider America's supposed equality with England as the representation of a cultural power struggle. From the outset of their collaborative history, theirs, they claim, "is a history of beginnings" (Amory and Hall, 2000, 1). Amory and Hall criticize what they call the "enterprise of favoring American originality and difference" (2000, 7) as a faulty research objective given the dependency of the original thirteen North American colonies on England's culture and economy:

> Eschewing, we trust, a perspective that values any book printed in America more highly than those imported from overseas, we use the term "colonial" deliberately in order to emphasize the continuing dependence of the book trade in the mainland colonies on its European (chiefly British) sources of supply for paper, type and presses, as well as for books, texts, and wider cultural practices. Within cultural and social history, the colonial situation meant that the colonists were minor figures in a commercial and intellectual traffic that originated within cosmopolitan centers on the other side of the Atlantic (2000, 8).

When one reads deeper into Wroth and Oswald's histories, one discovers similar contradictions. The ill-printed English and North American books of the colonial period were equally poor, while the best North American books of the period could not match the quality of the finest English editions, and the typical printer working within the colonies, so Wroth says, made no special effort to produce anything out of the ordinary (1938, 280). Wroth, in one example describing the typographic output of the Harvard College Press, writes: "Its average work was little worse after the first few years than the common run of English printing of its day, but it must be added that its best was well below the standard of the best London production" (1949, 33).

There is, in fact, much evidence to suggest that North American printers did not easily retain the high standards of their English counterparts. On the American side of the Atlantic, there was little opportunity for novice printers to train with experienced professionals and limited outlets for purchasing the printing presses, type fonts, inks and paper that were readily available overseas. If an American printer wanted to order type or paper through an English supplier, in spite of

the non-importation agreements, he or she would need to deal with shipping delays and unexpected cost increases; the impending war further disabled timely deliveries. Finally, when the Revolution prevented importation entirely, North America's printers began working to improve the quality of their local equipment and materials. Yet many printers continued using their deteriorating presses and worn-out printing types because American craftsmen would not come to equal England's manufacturing standards until some time after the new country became independent.

The American printers' ability to sacrifice optimum conditions for print production and accept insufficient typographic quality becomes a mechanism that historians use to express American culture as a "pioneer" virtue. The term "native" becomes an attribute of the publications and printing types that come about through local sources of production. This introduces a sense of indigenism as a discursive *return* to nativeness. What I call "Creole indigenism" appears in printing history as that which second-generation settlers and revolutionaries are making for themselves as first-generation American "natives." Creole indigenism comes about because of the need for American historians to construct and promote an ideological foundation to represent their newly emerging nation as independent of England. In his essay "The Origins of Typefounding in North and South America," Lawrence Wroth designates Abel Buell and his long-primer font of 1769 as the first successful instance of North American typefounding because Buell's letters were molded from "native-made" punches and matrices rather than "foreign-made" ones. As the American frontier expands outward from the Eastern seaboard, the location for "native" American culture moves with it. Indigenism is once again the representation of difference between a worldly and an isolated society, yet now the "center" shifts away from London and moves into the American printing centers of Boston, New York and Philadelphia. The typographic historian Rollo Silver writes that Elihu White expanded out of his Boston shop to start the Cincinnati Type Foundry in 1820 as an "indigenous" enterprise (1967, 67), given the city's position as an up-and-coming economic center in the United States' "new" West, and the residents' interest in keeping their money out of the eastern states.

In contrast to the nineteenth-century models of history as a chronicle of human progress, Creole indigenism takes a developmental step backwards and is represented as a cultural slippage. In contrast to the Guaraní encounter with the Jesuit missionaries, historians define North American colonial printers as "indigenous" not through their successes in duplicating the European technology, but through their prideful inability to equal it. Indigenism becomes a badge of

acceptance that demonstrates the subject people's developmental deficiency and hence their difference from European culture. In this way, historians' conceptions of printing, typography and the book's "beginnings" in the United States become reiterations of European printing's early hardships. What a historian happens to identify within United States history as a "pioneering" methodology or publishing genre may simply be that person's attempt to preserve the established historical continuum within a novel environment. This model of indigenism becomes a repeating one throughout the Americas as many different nations and peoples work independently to emulate the countries of Europe and to position themselves within printing history's expanding global trajectory, while bringing about a truly modern and misleading sense of what it means to be "indigenous."

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visible language 44.2

Navigating cross-cultures, curriculum and confrontation

Addressing ethics and stereotypes in design education

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abstract

Graphic design's messages can reach across streets and across the globe; they can bring together countries, communities and strangers for a common cause; they can also serve to divide otherwise amenable neighbors. Design students must fully understand this potential reach and thus the responsibility they have to create tolerant, informed messages. The need to understand how personal beliefs of race, religion, socio-economic class and other differences influence visual messages is an ethical component of the graphic designer's professional duties. For if these differences and the potentially skewed perspectives are not recognized, then slippage between accurate and faulty messages will seep into graphic compositions. Sticks+Stones deliberately composes a highly diverse "classroom" of students in an effort for students to learn from each other as well as the curriculum. Studies show that students who learn in a diverse curriculum not only gain a broader perspective and appreciation for other cultures, but they also develop better thinking skills. Sticks+Stones collaborators aim to propagate knowledgeable, culture-savvy future designers who have learned first-hand from an extraordinarily diverse group of peers about the insulting and potentially

harmful effects of image misuse. The innovative curriculum requires ethnic profiling and stereotyping as well as reflection, conversation and collaborative design on the way to multicultural understanding.

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introduction

As the Museum of Tolerance in Los Angeles makes visitors pointedly aware, we are all prejudiced, no matter how much we might deny it. Using stereotypes and categorizing others is our natural tendency, although not always to a negative effect. For example, we use stereotyping to help in understanding the known and unknown. Stereotypes also help connect us to others and foster a sense of instant community with strangers. However, a problem lies in situations when we are not aware of our prejudices or when we allow those prejudices to prevent us from seeing characterizations of a person or group that do not fit into our preconceived notions of who they are. Moreover, when the cultural norms of one community are used to compare that of another, the gap between accurate and inaccurate interpretations of the other widens (Hofstede and Pedersen, 2002, 20).

Perhaps it is easy to dismiss the need to educate students about racism, diversity and stereotypes as redundant or unnecessary. After all, we entered a new millennium with a climate of ultra political correctness; the United States elected a black President, and today's Internet has given us the ability to communicate with our world neighbors in real time. Many whites believed Barack Obama's successful election signaled a post-racism era. Unfortunately, Blacks, Asians, Hispanics and other US minorities report that although Barack Obama's current job title is a step in the right direction, racism is far from over in the United States and around the world. Further, expectations of mended—if not healed—racial wounds and renewed tolerant outlooks are dashed yet again with activities in 2009: the U.S. Holocaust Museum shooting in Washington, DC by a White Supremacist; China's riots and nearly two-hundred deaths as a result of the Han Chinese and Uighur ethnic conflict; the increased abuse, racial profiling and mistreatment of Latino workers in the US South; and according to the Southern Poverty Law Center's report, the increase in US domestic terrorism and hate groups since the Obama election. Unfortunately, the conversation about stereotypes and racism is not over. We have begun to breakdown the prominent racial and prejudicial forces, but there is still much work to be done.

One solution to reduce the violence and hatred associated with prejudice is to begin an open dialogue and confront the issue directly. In February last year, US Attorney General Eric Holder incited much debate and criticism about his effort to raise awareness about the lack of discussion regarding race when he said that the United States, despite its claim to being a welcoming, inclusive melting pot, is instead a "nation of cowards" (US Department of Justice, 2009). Most Americans, he

contends, prefer to ignore race and racism rather than address these issues through open, honest dialogue (US Department of Justice, 2009).

The need to understand how personal beliefs of race, religion, socio-economic class and other differences impact visual messages is an ethical component of the graphic designer's and graphic design educator's professional duties. According to the Association of American Colleges and Universities, all curricula should address the diversity of "truths" students hold of themselves and others so as to form a holistic vision of their communities (1995, 4). The need for graphic designers is more urgent: for if these differences and the potentially skewed perspectives are not recognized, then slippage between accurate and faulty messages will occur within graphic compositions that can potentially influence the greater population. Sticks+Stones, a collaborative visual communication project, finds its inception at this critical point.

gathering disparate voices

As a pedagogical experiment, Sticks+Stones aims to engage student participants each term in conversations about race as well as religion, culture, class, sexual orientation and categorizations that otherwise stand to separate and bifurcate us. The curriculum deliberately challenges students to evaluate their beliefs, recognize the limitations of their knowledge and the need to research and understand how preconceptions manifest in their design work. Sticks+Stones gathers these student participants from diverse geographical regions to explore their similarities and differences, to reveal their perceptions and misconceptions of the "other," and to create a greater understanding of their responsibilities as creators of visual messages. Sticks+Stones' learning outcome is aligned with the teaching philosophy of the Association of American Colleges and Universities in that it allows students to grapple with "...conflictual, uncongenial forms of human dissent" (1995, 23) in order to understand their ethical responsibility to bettering society. Sticks+Stones' primary goal is to get to the heart of miscommunication and unintended use of stereotypes and instill ethical values in these future design professionals. Graphic design's messages can reach across streets and across the globe; they can bring together countries, communities and strangers for a common cause; they can also serve to divide otherwise amenable neighbors. Sticks+Stones deliberately composes a highly diverse classroom of students in an effort for students to learn from each other as well as the curriculum. Students who learn in a diverse curriculum not only

gain a broader perspective and appreciation for other cultures, but they also develop a higher level of critical thinking skills (Gurin, 2002).

College campuses tout their diversity for good reason: it is a necessary environment from which students can excel and it is typically not an environment that has been available to them before, particularly in the United States. Students often arrive on college campuses with false information about "other" groups that has come not from their own first-hand experiences, but instead rumors and exaggerated secondhand information. The media, parents and social circles have contributed to these stereotypes and misperceptions that often impede students' genuine understanding of their heterogeneous peers (Tatum, 2003).

As distance between home expands, so too, does the occurrence of stereotyping and profiling. Stereotypes are further reinforced by accepted social customs and education systems. Stereotypes and prejudice are not easily overcome as they have been ingrained in us from an early age and from a place of security and comfort: home. With this, the challenge to recognize and dispel our prejudices begins with the individual (Trepagnier, 2006). Engaging in difficult dialogues about race, racism, prejudices, religion, xenophobia and other controversial topics is unsettling but necessary.

Faculty collaborators believe design students must fully understand this potential reach and thus the responsibility they have to create tolerant, informed messages. Sticks+Stones faculty collaborators aim to propagate knowledgeable, culture-savvy future designers who have learned first-hand from an extraordinarily diverse group of peers about the insulting and potentially harmful effects of image misuse. Their innovative curriculum requires ethnic profiling and stereotyping as well as reflection, conversation and collaborative design as a means to multicultural understanding. They provide not only concrete examples of conscientious social action, but also craft assignments that require complex thinking and action on the part of students, to move them closer to regular participation in their professional design career.

the pilot study

From 2005 to 2006, Sticks+Stones brought together more than seventy-five students from distant locations within the continental United States. Faculty focused curriculum on the different stereotypes the students held of one another. Graphic design students at the participating universities—University of Alabama

at Birmingham; Weber State University in Ogden, Utah; Northeastern University in Boston; and San Francisco State University—represented diverse religious, ethnic, sexually orientated and socioeconomic demographics of the United States. Participating students embodied twenty-two ethnic backgrounds, thirteen religious affiliations and eight countries including Iran, El Salvador, Spain, the Philippines, Japan and Columbia.

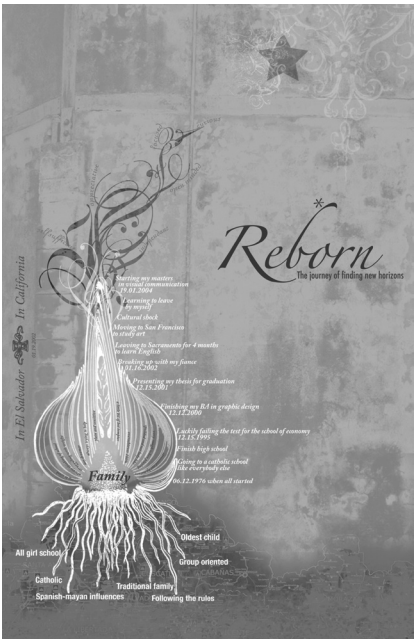
In the spring of 2005, US design educators, Pamela Beverly at Weber State University in Ogden, Utah, and Audra Buck-Coleman at the University of Alabama at Birmingham, took their graphic design students through the first Sticks+Stones curriculum. Inherent in the Alabama–Utah pairing was the common intensity of each region's religious devotion and their dissimilar ethnic environments. These educators were curious to expose their students to the disparities place brings to design work: How does the design work produced differ from a designer in another region, beyond the "fashion trends" of visual styles? Included with this pedagogical question was the intent to broaden perspectives and increase awareness of the unacknowledged limited view students had of their fellow US Americans. Sticks+Stones also purports to ingrain social responsibility as well as responsible image making into students. Design students have been drawn to a creative communicative field; channeling their talent to further meaningful causes can be rewarding. Countless professional designers, writers and educators including James Victore, Bruce Mau, Marlene McCarty, Mark Randall, Seymour Chwast, Chaz Maviyane-Davies and Luba Lukova weave the threads of tolerance, anti-racism and ethical awareness into the fabric of their professional work, and over the course of time, we have witnessed what good graphic design can do, from Project M to peace propaganda posters to the work of Tibor Kalman and Gran Fury. We have also witnessed the ill effects of powerful graphic design through the Nazi propaganda posters, fear-inducing propaganda from post 9/11 and the false rhetoric of anti-immigration groups. Design educators need to instill these ethical values in their students to help create knowledgeable, responsible professionals.

The 2006 curriculum, an expanded version of the previous year's offering, was composed of five projects: a stereotype postcard, that asked students to create stereotype imagery from limited information; a self-portrait that would be stereotyped; a workshop at the Museum of Tolerance in Los Angeles; a community-based reaction piece; and an interactive exhibit with corresponding summary catalog. The exhibit and catalog were a compilation of the previous four phases, intended to confront social intolerance and challenge a wider audience to reconsider closely guarded stereotypes and the ramifications of their beliefs.

Along with five distinct projects, the curriculum included the following readings: on social psychology (*Stereotyping: The Politics of Representation* and *Images that Injure)*, giving detailed accounts of the roots of, damage done by and perpetuations of stereotypes; on human geography (Lucy Lippard's *Lure of the Local)*, offering perspectives of how an artist's sense of place or home influences the resulting work; on graphic design activism (*Conscientious Objectives, Graphic Agitation 1, Graphic Agitation 2* and *Citizen Designer)*, explaining the specific ways designers create powerful and responsible imagery; on information graphics (Richard Saul Wurman's *Information Architects* and Edward Tufte's visual imagery series), revealing organized ways of depicting complicated information. The latter articles might find their way into typical design curricula, but the former articles were decidedly outside the usual design reading assignments. The 2006 students also participated in a video conference discussion with Mark Randall of World Studio Foundation in New York, a socially minded, non-profit organization that was formed to use graphic design to create change in communities. The self-portrait project, conducted in 2005 and 2006, called upon students to create tabloid-size self-portraits that visually and graphically described who they were and how place —their homes, their travels, their communities—had helped shaped them. Students incorporated maps, landmarks, song lyrics, computer gaming imagery, science diagrams and even cigarette butts to give others a visual sense of who they were. Once completed, the self-portraits were shuffled and exchanged with the other schools.

Students were then directed to study the self-portrait they each received of an unknown student from another participating school and deliberately label and stereotype the person reflected in this design. Students were encouraged not to self-censor or feel the need to be politically correct in their assessment of the anonymous maker; if faculty were to conduct an honest discussion about image and stereotypes, these labels and stereotypes had to be honest as well. Once the labels were assigned to the self-portraits, all of the students gathered together—via video conference in 2005 and in person in Los Angeles in 2006—for the unveiling of the twenty to thirty labels each design had elicited.

For one designer's self-portrait, which used images of an onion and text detailing important transitional moments the maker's life, the range of labels assigned included: stuck-up, creative, driven, towel head, obsessive-compulsive and focused. (The "towel head" labeler from another school had initially mistaken the onion image for a turban and assigned a term for someone of Middle-Eastern descent who wears a kaffiyeh. This then lead to discussions of 9/11, Al Qaeda and the visualization of terror.) In another portrait, which included images of crosses



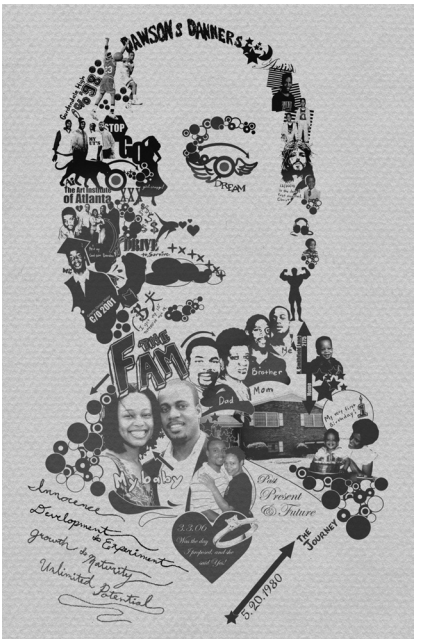


Figure 1: Self-portrait by Maria José Banos, San Francisco State University received the following labels: Life stinks, Hate of family, Confident, Stuck-up, Farmer, Flavorful, Strong, Creative, Driven, Rooted, Shrek-wants to break out of upbringing, Future focused, Towel head!, Loves family, Religious, Well self-esteem, Satisfied, Sure, Vegetarian, Obsessive-compulsive, Type A, Hard working, Hungry, Happy Californian, Focused, Grown up, Onion loving, Book worm, Know it all

Figure 2: Self-portrait by Brandon Dawson, University of Alabama at Birmingham received the following labels: Family-oriented, Traditional, Complex, Soulful, Christian, Goal-oriented, Warm, Healthy, Ladies man, Wealthy, Rebellious, Inspirational, Balanced, Outgoing, Artistic, Normal, Motivated, Thinks outside the box, Concerned about image

and old family photos, the designer was called: preppie, religious, dependent, conformist, typical and all-American, among others. Terms once carelessly thrown out, such as "sluts," "hippies," "junkies" "possibly retarded," "suicidal," "bipolar," "towel head," "liberal bastard," "witch" and "stupid," took on new resonance when the labelers met the labeled; misreading images that lead to incorrect and even harmful labels also caused students to reexamine their reactions.

Students' lessons in this project were twofold: ownership of language and ownership of visual graphic solutions. Did the students receive appropriate terms

for their work given the semiotics at play? If not, what aspects of their design were misleading to their audience? In their use of language, had they applied terms that were truly appropriate or misleading? How did this intimate lesson relate to their soon-to-be-profession? As image-makers for their community, and potentially the world, it is imperative that graphic designers use responsible language and imagery. Students learned first-hand how it feels to be stereotyped and to stereotype others and how misinformed language can shift perceptions.

Armed with this intimate lesson, students were then directed to create awareness-raising messages for their respective communities. Each school identified a seminal issue; some students worked as individuals, some as teams, to generate solutions to issues as diverse as abandoning degrading terms such as "slut" and "fag," encouraging Hispanic students to consider college and ways to overcome Alabama's "illiterate redneck" stereotype. Selected works were exhibited at the Birmingham Civil Rights Institute in Alabama, a venue that strives to consider the minority experience and offer artistic and visual works with human rights themes.

Students consistently echoed the validity and deeper learning experiences from the overall curriculum, especially those enrolled in the 2006 project, which included the Los Angeles symposium. The exchanges in Los Angeles were some of the most impactful and rich of the entire curriculum. "The dialogue created from everyone seeing each others' [stereotype portraits and corresponding labels] was incredible," said one student. "This was the most beneficial part to me, because people became defensive and started speaking without hesitation on subjects that needed to be spoken about openly."

"The discussions that took place in L.A with the other universities revealed many differing opinions that helped open my eyes to the fact that we stereotype... everyday, most of the time unconsciously making those decisions," another student said. "I found it interesting that something we do without thinking can really affect other people in a profound way." Even a simple assignment, such as the stereotype postcard quickly obviated the seemingly automatic tendency to categorize a person. "Sadly, I found it very easy to immediately come up with a stereotype about someone based on superficial information," said one student.

Students learned about themselves: "[One of the exercises at the LA symposium] was really uncomfortable for me at first but it made me deal with things that I felt. I had to acknowledge that my modest up-bringing was considered privileged and that didn't make me evil." And they learned about others: "I loved being able to meet all of the different people," said one Birmingham student. "I found it really interesting that the students from Utah were so similar to us in a lot of ways." Another also

validated the revealing process: "I'd love to see more collaborative experiences in the future. They force interaction between foreign groups and create more necessary dialogue." And they learned about the responsibility of being a designer: "Design is a powerful tool because it can be reproduced cheaply and easily and it is accessible to everyone. Given this set of circumstances, design can easily promote change in the community, especially when the cause is taken up and pursued by members of the community who wish to cause change."

"I have always considered myself a fair and decent person, but since some of our exercises in Los Angeles, I have noticed 'harmless' words that I say that could really hurt someone that overheard me," said one student. "I also realized what kind of potential power, be it good or bad, that I as a graphic designer possess. I have to always keep in mind what an awesome responsibility designers have to encourage positive changes and movements."

Although both years had tremendous successes, there were many areas for improvement as well. It was a heavy administrative load to coordinate the different classes, develop and broadcast the curriculum, install an exhibit and produce its catalog, while attending to the many logistical details. Finding simultaneous windows of time for video conferencing and the Los Angeles symposium proved difficult, furthering the time commitment to these administrative details. Although all were given the same project assignment sheet, the four 2006 faculty members had slightly different interpretations of the expected outcomes and this led to some skewed results of overall projects. Faculty collaborators also wished for more involvement from students, yet the semester's clock was not gracious. The in-person conversations also seemed to have barely scratched the surface when it was time to close the discussion. The exhibit and catalog were produced post-semester, unwittingly removing the students from a significant portion of the overall project. Finally, the faculty also failed to conduct more pointed pre- and post-analysis surveys to more accurately gauge any shifts in thinking about tolerance, stereotyping and the design profession.

Multiple viewpoints were absolutely necessary for meaningful conversations that could result in enriched work. The group's diversity offered a wide range of political perspectives, life experiences and spiritual practices that informed discussions and created a larger knowledge base. The success of increasing the numbers and diversity of the participating schools propelled faculty collaborators to go a step further for the next iteration: to conduct the project with an international student base diverse in language, culture, politics as well as global location and apply the lessons learned as faculty collaborators.

looking forward

The 2010 iteration of Sticks+Stones will broaden the conversation and the curriculum to an international scope; collaborators have invited sixty design students from China, Turkey, Germany and the United States to participate. These students from more distant geographical locations represent differences in native languages, lifestyles, political climates and cultures, traditions and rituals, values and goals, religious majority, socio-economic status and affluence, yet the common thread will be the students' interest in and passion for design and visual communication. It is through design that students will come together as one group to create messages about their experiences and stereotyping.

Each of the locations is rich in historical as well as contemporary relevance. Germany's Berlin is a city whose history is in contradiction to its present. During World War II, the city was an epicenter for the Nazi party and its plans for the genocide of the Jews; Sachsenhausen, one of the most notorious Nazi death camps, is located just outside the city limits. In the heart of the city, Brandenburg Gate stands as symbol of Berlin's conflicting past, representing both the repression and division of the former Berlin Wall and the restored unity and openness now present today. The city that was once known for its exclusion is now a welcoming inclusive spot where artists thrive. Berlin will play a pivotal role as the location for a two-week symposium.

China, too, is a country of contradictions: The Beijing Olympic games enhanced the nation's image in 2008 yet the 2009 riots in Western China were a nadir, the country's deadliest ethnic unrest in decades. The Chinese students will be able to offer enriching first-hand accounts about life in a Communist country with its relatively more limited expressive freedom, experiences growing up in an officially atheist land that persecuted religious followers, as well as life in a nation that offers a burgeoning technology and is quickly becoming a key player in the global economy.

Turkey is a predominantly Muslim nation with large numbers of immigrants, often illegal, and the subsequent multicultural issues that result; its geographical location between Europe and Asia provides residents with a unique blend of Eastern and Western cultures. In addition, its proximity to the recent and ongoing violent clashes in the border countries of Georgia, Iran and Iraq, give its students a strong understanding of unrest and religious struggles. The Turkish students' abilities to speak first-hand about these experiences and their impressions will foster greater understanding and knowledge of others for the Sticks+Stones group. Furthermore, Turkey will provide a link to Germany as an estimated fifteen-million people in Germany are foreigners or of foreign origin, with twenty-percent of those coming

from Turkey. Turkish people compose Germany's second highest immigrant population, but are the least integrated of immigrants, facing difficulties earning an education and gaining employment (Deutsche Welle, 2009).

The United States is often touted as a welcoming "melting pot" for immigrants, but recent events keep it from living up to its characterization. According to the Southern Poverty Law Center's 2009 investigative report, the treatment of immigrants in the southern US region often mirrors the treatment of blacks during the post-slavery, segregationist era. Individuals who appear to have a Latino background or appearance, whether legal resident, US citizen or undocumented worker, are assumed to be illegal and thus are routinely subjected to racial profiling, bigotry and widespread hostility (Southern Poverty Law Center, 2009). In addition, the post 9/11 assumption that persons appearing to be of Middle Eastern descent must be terrorists of some kind and the eviction of a black school group from a predominantly affluent, white swimming pool community decidedly point to the United States' still prevalent stereotyping.

From the United States' Jim Crow era treatment of Latinos to the ethnic riots in Western China to Turkey's stereotypical association with headscarves, Islam, belly dancers, kebabs and subsequent false association with 9/11, to Germany's violent history of genocide and division—all of these locations' connection to ideas of stereotyping, immigration and prejudice will reinforce their relevance. All too often we judge others' cultures by our own, which creates skewed perspectives. The importance of learning from first-hand sources of diverse culture cannot be overstated. For Sticks+Stones these sources include not only the symposium location—Berlin and its historically rich venues—but also the students themselves.

The Sticks+Stones 2010 project will use immigration as a primary topic to address these issues of prejudice, stereotyping and racism. This will not be an easy task for students. Misinformation abounds regarding immigration. Often assumptions are made that anyone speaking with a non-native accent must not only be an immigrant, but an illegal one; these conjectures support racial profiling, bigotry and repressive treatment (Southern Poverty Law Center, 2009). Moreover, the plight of immigration is generally not a popular, sympathy-inducing one. With the current devastated global economy in particular, immigrants are made scapegoats for this dire economic situation. Accusations of stealing jobs, overburdening the social systems and contributing to other economic drains are rife. Online dialogues in the United States regarding immigration are often vehement, hate-filled diatribes that blame immigrants for all that is wrong with the country, including its depleted economy. The recent passage of Arizona's controversial

immigration law that allows, if not encourages, racial profiling has helped escalate the immigration debate to a fevered pitch in the United States. Immigration's pervasive unpopularity adds another complication to an already complex subject that the Sticks+Stones 2010 design students will be assigned to parse.

Students will confront this complexity as the group gathers for two weeks in Berlin: What will be the German students' impressions of the Turkish students, given the pre-existing immigration strain between these two countries? What will be the US American students' reactions to the Chinese, who stereotypically represent a more-intelligent student body? How will the Turkish students, who hail from a Muslim country, respond to the Chinese students, who hail from a land that reportedly blamed the Uighur Muslims for the riots in 2009 (Cha, 2009)? How will each group transform the fragmented histories and knowledge of the others' regions into a more-informed view of their fellow designers? What will be the response of students when they are exposed to a multitude of perspectives of 'truth' about immigration? These global students will be called upon to respond personally and professionally to these juxtapositions.

Taking students through the task of representing such a complex issue as immigration instills the ethical principles of responsibility and message truth. The degree to which students from around the globe can form free and true expression of an issue will vary, perhaps significantly. For example, the extent to which Chinese students could express/protest a governmental issue varies greatly from that in the United States. The German students will potentially have the most expressive freedom, particularly when representing the human form, as Europeans are less inhibited about nudity. In contrast to this, Turkish students' Muslim culture, which in its strictest interpretation, forbids any representation of the human figure. Students will be challenged to consider which of these creative parameters (or lack there of) will be appropriate when constructing their group project.

The collapse of the current global economy has shown that we are all connected, despite the fiercely guarded borders and vast bodies of water that separate countries. Opportunities for awareness and learning about ethical considerations of the design profession are limited outside a university setting. If college students are not exposed to and taught the ethical parameters of the profession, then they will most likely conduct their professional career unaware of this essential knowledge. If students can learn to make a difference, the collective positive effect might also be felt globally.

Although the 2010 participants hail from the far reaches of the globe, a thoughtful pairing of students within the same geographical region could also

yield a richly diverse group. By interacting with and learning from students of other cultures, all of the 2010 Sticks+Stones participants can come away with a better understanding for others as they are exposed to differences they would not recognize if not juxtaposed to contrasting others (Trepagnier, 2006, 111). This self-reflection applies not just to students but to faculty as well for their personal experiences and beliefs also influence their curricula (Brunson, 2007, 131).

This difficult and often painful work of looking inward is important for graphic designers to create the appropriate awareness of how their personal biases and beliefs might seep into their visual messages. It's risk-taking for design students and it's risk-taking for design faculty. When design students in Vancouver, Canada learned of the 2006 Sticks+Stones project during a post-project presentation, they voiced their hesitation—even unwillingness on the part of some—to participate in such a course. Such blatant discussion of racism and prejudice—particularly in reference to immigration—is not commonplace in today's curricula as it is unsettling for both faculty and students.

These insecurities can be minimized, however, by enlisting the expert help of additional faculty, skilled facilitators and other knowledgeable professionals. In 2006, collaborating faculty quickly realized that the discussion of race and religion would be potentially more charged than any design critique forum, so they invited Dr. Robert Corley, an expert on race relations and conflict resolution and a University of Alabama at Birmingham faculty member, to help facilitate these difficult dialogues. Dr. Corley has extensive experience addressing civil rights and racism, facilitating discussions about religious differences and has served on the boards of numerous civic and social justice organizations including the Alabama Poverty Project and the Birmingham Civil Rights Institute. When the 2006 Sticks+Stones group met in Los Angeles for a three-day symposium, he not only helped construct the framework for the activities but also led the emotional Privilege Walk exercise and ensuing discussion. Dr. Corley also joined the group again at its concluding online video conference at the end of the semester and frequently participated in the Birmingham classroom's discussions. His participation contributed to the overall success of the project. For 2010, faculty collaborators have sought guidance and assistance from the campus study abroad office, the sociology department and immigration specialists. A professional facilitator will again help lead discussions of immigration, stereotypes and racism in Berlin.

Another successful yet complicated component of Sticks+Stones is the element of travel. In previous Sticks+Stones, the most impactful teaching opportunities came in face-to-face discussions, whether video conferences or in-person discussions,

and the gathering in Berlin is also expected to be an essential component to the project's success. Empirical research tells us that online exchanges are inferior to in-person discussions; further, online learning can serve to reinforce perceptions and stereotypes, since when presented with an unknown quantity the tendency is to fall back on making judgments from a personal perspective (Karakaya and Pektas, 2007). Thus, Sticks+Stones has evolved into a hybrid course: part online, part study abroad and part bricks-and-mortar. The Berlin travel experience will also help make real cross-cultural issues. Removing students from the comfort zone of their respective home campuses and placing them in unfamiliar surroundings generates the uneasiness of being in a foreign place and the tendency to stereotype to clarify one's surroundings (Hofstede and Pedersen, 2002, 19). The in-person exchanges, afforded by the Berlin symposium, are essential for students to rediscover the myths and stereotypes of the "other." By blending in-person and online group discussions with typical single-campus exchanges, students will have a variety of learning experiences that will further their skills as professional collaborators.

Faculty collaborators will push boundaries by asking students to weigh the limits of creative freedom against the necessary exposure of a message and to potentially build something that might not be possible in another's country due to politics, religion or other censorship issues. Students will look inward to their countries, communities, religions, families and other influential groupings and assess how they frame their beliefs regarding the construction of visual messages. Do the students agree with their culture's freedom or limitations of imagery? Are they aware of the boundaries, or lack-thereof, that other designers face? How will students react to creating in a more or less inhibited culture? To what extent do these repressions influence the designs of the students? How will their visual solutions change once the freedom, and perhaps even curriculum mandate, of expression has shifted? To what extent will students push to report the issue of immigration and how will this manifest in visual form? Gathered in a single room, this collection of students from diverse customs, life experiences and closely held beliefs will be forced to consider multifaceted views to issues of stereotyping, racism, xenophobia and migration as they relate to visual message-making.

anticipating student issues

The students who participate in the Sticks+Stones 2010 will be carefully chosen for their potential diversity, design skills, willingness to engage in this emotionally challenging curriculum and their mental stability. The latter is especially important as students who act out in small ways on home campuses could potentially experience intensified outbursts when put through the paces of a provocative course in a foreign location. Design faculty are not trained psychologists or social workers, thus they might not catch the warning signs of a student's deteriorating mental stability. By quickly enlisting the help of outside experts and keeping school officials such as department chairs and deans apprised of potentially troublesome situations, negative experiences can be minimized. This issue revealed itself when one troubled student posted a skewed and distorted perspective of his 2006 experience online. His professor was singled out in the public forum, maligning both her and classmates. The student later rescinded his rant and apologized, but the warning remained: This curriculum is not for the faint of heart.

Another potential challenge for the group project is creating an inviting atmosphere for individuals to feel comfortable expressing personal thoughts and participating equally in group forums. Stereotypically, Asian students, particularly female students, tend to shy away from participating in class discussions. The level of discomfort associated with being in a strange location with a large group will most likely exacerbate this tendency and not just for the Chinese students. In anticipation of this, the Berlin symposium will include "think-pair-share" discussion opportunities, small group conversations and group presentations. A key assignment will be to have students create presentations about their homeland for the group. These presentations will tell the story of their native land from a peer perspective; students will gain not only a sense of pride by showing off where they come from, but they will also learn in engaging ways about the places the other Sticks+Stones 2010 students call home. Sticks+Stones will also employ personal narrative, a powerful tool for cross-cultural (and other) learning, through a variety of assignments including journal entries and online postings.

Another obvious issue with the group gathering will be language. US faculty collaborators struggled with ways to be more inclusive to non-English speaking students and to minimize any appearance of the project being too US-centric. However, practical logistics ultimately dictated that all participating students be fluent in English. Although the English-only language requirement quickly narrowed potential international campuses, it was seen as an unavoidable parameter of the project.

engaging a wider audience

Graphic design is an inherently collaborative profession; the Sticks+Stones 2010 project calls upon students to put these skills to use in extreme ways. Students will span native languages, global time zones and cultural norms as well as learning and working methodologies to create a thoughtful and strong final project. Studies show that a curriculum of collaborative learning, where all students are simultaneously imparting and absorbing knowledge, is more effective than traditional lecture-driven models (Rohidi, 2009). Through a mix of presentations by students, facilitators, faculty members and design professionals, 2010 participants will have multiple points of entry for the curriculum, enhancing the potential for permanent knowledge. Further, by engaging students in a collaborative, high-profile group project, the results will most likely be more thoughtful.

The Sticks+Stones 2010 exhibit project will challenge students to address migration by assembling an informative design installation that will be easily accessible to the public; the collective group will determine the exact form, message and intended response of the installation. Sticks+Stones faculty will not assert a political position within the issue of immigration but will instead prod students to create an objective, well-informed project that allows the viewer to decide what is right and what is wrong regarding the subject. This final project will include a measurable response or outcome, so that its impact will be discernable; students will then address the influence, successes and potential failures of their project. By engaging within a healthy debate and rigorous design making, students of the Sticks+Stones 2010 project will come away with knowledge of the specific subject as well as a working knowledge of how to break down complex issues into understandable visuals to educate a diverse public.

One of the consistent aspirations collaborators voiced about the direction of the 2010 project is the effort to reach outside of graphic design curricula and even the graphic design profession. By posing an exhibit or installation as the capstone project, it will live outside the walls of the classroom; this added level of responsibility that students will experience all too quickly mirrors their future work as professionals. Often class projects are seen as a means to a grade and a possible portfolio addition. By raising the bar to create in the highly diverse, often-unpredictable public sphere, students bear an added sense of responsibility of not just "making" for themselves or their portfolio. By working within their "sphere of influence," as Beverly Daniel Tatum refers to it, visual communication students can bring about social change and meaningful dialogue (2003, 204). Ultimately, it

will be up to the students to decide how they pursue issues of migration or other concerns in their professional life, but with the Sticks+Stones experience under their belt, they will have a tangible, concrete experience to frame their future involvement with social justice causes. If the well-intended Sticks+Stones 2010 plans come to fruition, the students will have been immersed in a pedagogical experience that will create enduring knowledge and will permanently influence their design careers in a positive way.

conclusion

Technology has put us closer to a virtual reality of living side-by-side with global cultures and given us unprecedented speed and connection to the far corners of the globe. With instant connections to international destinations and peoples, the emphasis on knowledge and research is even more important, but time is a precious commodity. This is easy to say, harder to practice. Sticks+Stones is ultimately an experiment, a voyage into the unknown with the goal of returning with two prized possessions: residue from a rich immersion in cross-cultural conversations and fresh perspective on the "other."

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visible language 44.2

Beyond borders

Participatory design research and the changing role of design

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abstract

University art and design programs are branching out and creating cross-disciplinary programs and research centers that connect design students and faculty across various disciplines such as business, engineering, architecture, information studies, health sciences and education. A human-centered, problem-based approach to design research looks to position industry and academic leaders to work alongside students, community leaders, artists and non-profits to develop creative and innovative solutions to the challenges facing contemporary society. But, as these challenges become more global in scope, participatory design research and the Internet become critical tools in addressing cultural differences in visual and verbal messages. This paper looks at the role of social networking tools and participatory research in addressing cross-cultural and multicultural challenges. It addresses the question: can the use of classroom collaboration, participatory design research and online critique and workspaces encourage creativity, innovation and critical thinking in student and professional designers?

introduction

We are about to redefine the very nature of design… In the near future, as a matter of course, we will take cradle to grave responsibility for the objects we design. Our conscience will demand it, our environment will require it, and our clients [...] will insist on it. —Veronique Vienne, Citizen Designer

Designers are building the future. Better stated, designers are in a unique position to shape both our physical and virtual environments and are empowered to act on their beliefs for how it should be shaped. In his 2007 commencement address at the School of Design, University of Pennsylvania David Orr stated:

> You must see design as a large and unifying concept—quite literally the remaking of the human presence on Earth. Design in its largest sense has to do with how we provision ourselves with food, energy, materials, shelter, livelihood, transport, water, and waste cycling. When designers get it right, they create ways that reinforce our common humanity at the deepest level.

That is not to say that designers are solely responsible or that they play a larger role than any other field. Rather, Orr's statement is a recognition that design *will* contribute, perhaps significantly.

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the need for a new design curriculum

The undergraduate graphic design curriculum is expected to do many things. At the end of their coursework, students are meant to be creatively flexible, experts at the affairs of business, interpersonally gregarious, adept writers and skilled at creating complex visual communication and using leading edge technologies. There are a lot of factors complicating the efficacy of a program built to provide these skills. Important among these factors are that different people learn differently; that design coursework appears in schools and programs with vastly different philosophies of design, including being located in critically different areas (art departments, technical schools and portfolio schools). For example, design curricula situated in an art department and/or within a school of the arts or in liberal arts may open more time for experimentation along the way to an end result, while more portfolio-based technical programs will eschew certain elements of process in order to produce more pieces of final work and sometimes use more time for elaborate software instruction. Further complicating issues, there is little room for programs to address the changing global scope and reach of design work. As design programs become overloaded with courses focused on providing new technical skills, the ability to develop cross-disciplinary and cross-cultural experiences diminishes.

The designer's role and the skills necessary for providing success are changing quicker than educational programs can accommodate. In the last decade, graphic design has gone from being defined largely by style to something that is influenced and can influence international policy, consumption, education and the environment (Drucker and McVarish, 2009). Along with the rapid expansion of a potentially international audience, designers are being asked to solve multi-faceted problems that address issues of sustainability and globalism. Universities are becoming increasingly international and multicultural through cheap and accessible technology like the Internet and social networking tools. Students have unprecedented access to information and international audiences for the purpose of research and critique. Experiences once reserved for overseas study have been opened up to all students with a reliable Internet connection.

linguistic barriers

Design is a complex interplay of audience, information, client and aesthetics. In addressing a multicultural audience, designers must consider both the audience's

and their own cultural orientation. Cultures may differ even within a relatively small geographic region, sometimes within a single household. Within the United States, cultural and linguistic barriers continue to present problems in accessing information on the Internet. According to the 2000 US Census Bureau, nearly one in five Americans speak a language other than English at home. That is an increase of nearly fifty-percent over the last decade and that number is only expected to rise for the Census of 2010. During that same census, they found that 11.9 million people lived in linguistically isolated homes, meaning nobody in the home aged fourteen or older knew English "very well." That was up fifty-four-percent from 1990.

Design and design research must address multicultural and multi-lingual audiences within a solution and take a critical look at the role that design will play in reducing information poverty. Information poverty is defined as that situation in which individuals and communities, within a given context, do not have the requisite skills, abilities or material means to obtain efficient access to information, interpret it and apply it appropriately; this is further characterized by a lack of essential information and a poorly developed information infrastructure (Britz, 2004).

> Information is not only a source of knowledge, but also a special source of advancement of economic, social, political, and cultural freedoms. It can be said that access to and use of information and communications are essential conditions for development, as they affect every dimension of life. Likewise, information and communication poverty may only be one dimension of poverty, but affects all other dimensions (Gigler, 2005).

According to the World Economic Forum (WEF), many in the underdeveloped world face the problem of information poverty in the form of a lack of access to knowledge and education, feeding back into the cycle of financial poverty. The WEF continue that information poverty further increases the gap between the rich and the poor and affects every aspect of life, from medical care and nutrition through access to technology and dissemination of information. It affects all age levels and, in the US, is concentrated in immigrant and linguistically isolated communities. In order to address the growing global scope of modern design problems, designers must go deeper than mere appearance and style and address cultural and language differences in order to create effective design solutions that reduce the growing gap between the information "haves" and the information "have-nots."

digital media and curriculum

Digital media is by nature less defined at completion than more traditional artifact-based design. When working in digital media, designers and design problems, cannot focus solely on issues of layout, composition, typography and legibility. Today's designer must have an understanding and appreciation for a project's lifecycle, its global reach and multiple mediums of production. Today's designer must be more malleable and willing to surrender creative control and work collaboratively toward a final product and, in some cases, the designer must focus on process rather than final output. In order to address this level of complexity and lifecycle, design education and research must be multi-disciplinary and broader in scope to create responsible solutions that extend beyond the boundaries of their educational institution and into the community and the newly accessible global society.

In an era defined by Facebook, Skype and Twitter, even the student designer's work has the potential to reach audiences across the globe. In an intermediate typography class at the University of Wisconsin-Milwaukee junior design students collaborated with graduate students at a university in Taiwan on "multi-generational" posters that explored student-determined topics such as dreaming. Through the use of Skype and iChat, students held work sessions and critiques in a uniquely global classroom experience. At the conclusion of the project, students printed their final collaborative posters and conducted a final Skype critique inviting working practitioners on both sides of the globe. Blogs, wikis and online critique spaces provide students with a rich, potentially international audience to further develop their ideas. Writing online either in a wiki or in a blog format adds vigor to the critique process. During a sophomore course on icon development students were required to post to a course blog on a weekly basis. Over the course of fifteen weeks, students used the space as an extension of the physical classroom, posting critiques, involving colleagues from other programs, posting events and additional research as the course progressed. It is possible that the resulting liveliness was due to the game-like aspect of working online. The student felt more comfortable with several modes of content running at the same time: music playing, Internet open, blog open. There is a sense not only of the current moment which brings energy to the activity of writing online, but also the excitement of being seen, of being made public. At the 6th International Conference on Networked Learning in Haldiki Greece, Ray Land and Sian Bayne provided a clear and expressive vision of what educational work online means by citing Ronald Barnett in *Realizing the University in an Age of Supercomplexity*:

> The last two decades have witnessed, as part of the wider phenomena of globalization and 'supercomplexity', an inexorable shift in higher education from print–based culture to digital. This shifting emphasis has occasioned different ways of generating and engaging with knowledge. Print culture, in the form of the stable, bounded, individual and private text, has tended to operate within, and to reinforce, patterns of authority and individualized authorship. The digital, more protean and volatile, is concerned increasingly with image, openness, multimodality and collectivity. It works more from collaborative enquiry and production, inviting contestability but also requiring consensus and trust (Land and Bayne, 2008).

Design projects may spend their entire lifespan within the digital realm. Conceived of and developed on the student computer, tested by colleagues in a multitude of locations, uploaded and accessed almost simultaneously across the globe and reaching audiences with a huge variety of speeds and screen parameters. Design curricula no longer question the relevance and longevity of digital media and its ability to disseminate information. Today, perhaps a more appropriate question to ask of our design curricula is how much do we solve with design?

creating global designers

Today's designer must be comfortable working within a team environment. Cross-cultural and global problems require designers willing to work on multi-faceted problems with teams of engineers, businessman and scientists. Educators need to recognize this increasingly multi-disciplinary and multicultural dynamic in their classrooms. Incorporating aspects of local and international life into the graphic design curricula makes better graphic designers no matter where in the world they may eventually live. Unfortunately, many design programs focus on individual mastery of a skill set and the development of traditional graphic design artifacts. Designing in a global context requires designers that can envision the entire lifecycle and depth of investigation needed to solve a problem rather than develop a product or series of products. When designing something with a more regional reach, designers can more easily place themselves within the intended audience and anticipate potential problems. When designing for a more global audience, designers must be more vigilant in defining the audience(s) with less ability to anticipate problems and behaviors. Additionally, the increased scope of global work magnifies the problems when design fails. Designers must share the responsibility for developing a project as well as understanding the audience. New designers are valued as much for

their ability to collaborate, innovate and creatively solve problems as they are for their understanding of typography and layout. In an effort to address these needs, university art and design programs are branching out and creating cross-disciplinary programs and research centers that connect design students and faculty across various disciplines such as business, engineering, architecture, information studies, health sciences and education in order to create a more complete vision of the design curricula. Further complicating the issue is the need to retain a traditional skill base necessary to produce effective designs and students that are skilled in both visual communication and the latest technologies.

changing the design curriculum

Conversely, the growing importance of the Internet as a mode for disseminating information as well as the growth of global super-brands such as Nike and Levis have made cross-cultural appeal a requirement. In addition to the changing scope of design's cultural reach, the methodology we use to create our designs is becoming increasingly collaborative. During the undergraduate design curriculum at the University of Wisconsin-Milwaukee, students are required to work with other students outside the school of the arts in multiple classes. To develop a curriculum that trains students to address interdisciplinary problems in a highly complex, global innovation economy, an historic interdisciplinary collaboration between faculty members within the Peck School of the Arts and the College of Engineering & Applied Sciences has been launched. This collaborative effort will develop a cross-disciplinary certificate program in Innovation and Sustainability that takes an adaptable approach to product development and design. The certificate will consist of a four-course sequence that will be jointly taught by engineering and arts faculty and will be based on the formation of multi-disciplinary teams. While both engineering and art disciplines focus on technology innovation and entrepreneurship with a positive social impact and value action (participatory) research, their approaches to problem solving are different—and it is the synergy between these approaches that will form the basis of the new certificate program. The program curriculum will train students to successfully navigate the highly nonlinear product development process—from generating creative new product concepts, to prototype fabrication and testing, to market assessment and to product launch.

A human-centered, problem-based approach to design research looks to position industry and academic leaders to work alongside students, community

leaders, artists and non-profits to develop creative and innovative solutions to the challenges facing contemporary society. But, as these challenges become more global in scope, participatory design research becomes a critical tool to address cultural differences in visual and verbal messages. Often, design curricula lend themselves to a more linear design process focused in production that ignores the larger issues of community and the environment in the scope of their solution. The question then becomes "How, as designers, can we begin to see and then solve design problems at a higher level? How do we get students to see design in terms of systems and communities rather than artifacts or even components of an artifact?"

increasing complexity of design problems

In his book, *Design Methods*, J. Christopher Jones writes about the scale of design problems within contemporary society. At the smallest scale, design solves only a small part, a component of a problem. At this level, design research is largely formal and concerned with issues of aesthetics and content hierarchy. At the product level, design looks at an entire artifact or problem. Design research may involve formal and content research. Designers are responsible for the entire making process. Within the component and product levels, design is largely concerned with the production process; in this case, it is responsible for creating a visual system and hierarchy that can be continued through a variety of media but is not as concerned with its life outside of the product. At the system level, design problems become more complex and require thorough research and thought into the context of an artifact or problem. The most expansive of Jones' hierarchy levels, the community, requires an in-depth examination of the depth of a design problem. At this level, designers must address issues of sustainability and life cycle as well as aesthetics and hierarchy. Jones tells us that contemporary design problems are most often at the community and systems levels, and not at the levels of products and components where our design curricula are most often centered.

Before asking design curricula to solve more complex design problems we need a better framework in which to conduct our research. The process of participatory action research allows students a broader frame of collaboration within the classroom and the community as well as a process of formal self-evaluation that allows students to better address the issues of a global community within their designs.

participatory design research

Thinking about the people for whom we design as participants in the design process, action research, is an iterative process that balances collaborative problem solving with data driven analysis or research (Reason and Bradbury, 2001). Action research has several distinctive features including the following:

- → Collaborative enquiry
- → Reflective practice
- → Participatory problem solving
- → Self-evaluation

Action research requires that students analyze and develop concepts and theories based on experiences. Concepts and theories are self-evaluated at multiple stages in the development process. Students involved contribute equally to the enquiry and collaborate both as partners and as those affected by the problem and its solution. Allowing the students to experience a problem as both designer and intended audience gives a heightened sense of responsibility as well as the sense of being expert at some part of the problem solving process.

Perhaps the most important aspect of action research to the classroom process is its use of collaborative enquiry. In order for students to understand the problem outside of a largely formal framework, they need to directly observe, interact and design with other designers, developers and end users. Working in and observing multi- and cross-disciplinary teams builds accountability and user testing directly into the design process. Students venture into the community in order to better understand the complexity that surrounds a problem.

Participatory action research is a diverse approach to research. In recognition of diversity within this type of research, Reason and Torbert formulated a three-person framework. These three separate, yet integrated pathways are described as first-, second- and third-person action research. First-person action research fosters self-inquiry and increasing awareness of the researcher's own everyday life as the process unfolds. Second-person action research focuses on interpersonal encounters and the researcher's ability to collaborate with others in their community of inquiry. Third-person research activities extend the inquiry within a wider community with the intention to transform the politics of the issue.

Bradbury and Reason differentiated first-person practice as 'work for oneself,' second-person as 'work for partners' and third-person as 'work for people in

the wider context' (Bradbury and Reason, 2001). It is within the third person that students are pushed to think about design and issues of sustainability, the environment, the community and life cycle.

conclusion

Undergraduate and graduate education plays a pivotal role in the development of the future designers of the world and our educational institutions must rise to and meet the challenges facing the designers of tomorrow. Design curricula must do the following: educate design students of the future; foster current, innovative creative research that will positively impact the field; and provide a space for faculty, students and the community to come together to solve multidisciplinary problems for the betterment of a global society.

Design problems have become increasingly faceted and complex. Designers must address lifecycle, wildly varied audiences and increasingly tight timelines in addition to communication. In addressing the increasingly complex problems facing our global community, we must ask the question, how can the use of classroom collaboration, participatory design research and multidisciplinary teams encourage creativity, innovation and critical thinking in student and professional designers; and, can it create more sustainable designed solutions?

In order to address the changing role of the designer we must first address the problems facing our current design curricula. We need to address the gap between where the field is going and where the design curriculum has stagnated. This is a question of what challenges our future designers will face—what our design curricula can do to address them.

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visible language 44.2

Virtual conferencing in global design education

Dreams and realities

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abstract

The concept and use of the synchronous and asynchronous forms of virtual conferencing is central to the experience of global design education. Easy and ready access to people and information worldwide is at the heart of a paradigm shift in design practice and education, defined by collaboration and digital technology. The dream of smooth, global interaction via virtual conferencing rests on the concept of presence, that is the ability for people to feel as though there are no barriers to their communication. The reality, however, is to encounter such things as dropped video or audio signals, rastered images and e-mail attachments that will not open because the sender and receiver have different versions of a software application. This paper explores the dissonance between the dreams and realities of virtual conferencing in global design education by discussing the idea of presence, examining the relationship between virtual conferencing and contemporary design practice and education, presenting the virtual conferencing experiences of three international student projects and addressing what we still need to know in order to best use such technology within the context

of global design education. The paper concludes with comments about providing students with valuable international design experiences.

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introduction

Virtual conferencing–i.e., all forms of virtual communication that mimic human communication like video, voice, chat rooms, e-mail, telephone, PDFs and all forms of electronic documents–conjures dreams of instant access to information and seamless interaction with anyone anywhere in the world at any time. For design educators, virtual conferencing sets us to dreaming about collaborative international student projects and broadening our students' sense of connectedness to the rest of the world. But the actual experience of virtual conferencing involves coping with adaptations of all sorts–technological, strategic, physical, intellectual and emotional–in order to benefit from digital connectivity. The problem is that the dream of virtual conferencing–creating the "here" presence of someone who is literally at a distance "there"–is still grappling with the realities of technology and of how to be most effective in global design education.

Synchronous forms of virtual conferencing seek to replicate real-time, multi-sensory face-to-face conversation (video/audio conferencing, teleconferencing) and allow for collective decision-making; asynchronous forms of virtual conferencing (e-mail, threaded discussions, interactive websites and databases) change real-time to "my time" and enable individuals to ponder ideas, craft comments and connect with others at his/her own pace. Sharing ideas synchronously is immediate, collective and uses direct personal interaction to communicate meaning; sharing ideas asynchronously is reflective, individualistic and uses artifacts to (indirectly) communicate meaning. Both synchronous and asynchronous virtual conferencing seek to provide "presence"–to connect people in ways that lets them feel as if they were not separated by time or distance. This paper focuses on the dreams and realities of virtual conferencing in global design education by first discussing the concept of presence in understanding virtual conferencing, second by examining the impact of virtual conferencing on framing contemporary design practice and education, third by illustrating both the dreams and realities of virtual conferencing through examples of international design courses and students projects and fourth by asking what we still need to understand about the role of virtual conferencing in design education. The paper concludes with observations about balancing those dreams and realities to provide students with the valuable opportunity of producing and understanding their work in a global context.

presence in virtual conferencing

Lombard and Ditton (1997) describe six conceptualizations of presence and the first three–presence as social richness, presence as realism and presence as transportation–relate to virtual conferencing. They define presence as, "...the perceptual illusion of nonmediation" (Lombard and Ditton, 1997). This means that people, in real-time, do not notice the mediation of the medium–the experience feels like it's happening without the aid of any device, that people act and respond to one another as if nothing was separating them. Presence as social richness "...is the extent to which a medium is perceived as sociable, warm, sensitive, personal or intimate when it is used to interact with other people" (Lombard and Ditton, 1997). Presence as realism is "...the degree to which a medium can produce seemingly accurate representations of objects, events and people–representations that look, sound, and/or feel like the 'real' thing" (Lombard and Ditton, 1997). For presence as transportation, "...three distinct types of transportation can be identified: 'You are there,' in which the user is transported to another place; 'It is here,' in which another place and the objects within it are transported to the user; and 'We are together,' in which two (or more) communicators are transported together to a place that they share" (Lombard and Ditton, 1997).

But virtual conferencing is ideally the sum of all these definitions of presence so that the medium–the computer and the software that make the virtual conferencing possible–all but disappears, enabling us to concentrate on the content of our communication. However, this dream of "interpersonal interaction through synchronous voice, data and visual imagery, a combination that will pave the way for virtual experiences in their truest sense" (Starr, 1998) and of "a truly powerful [asynchronous] anytime-anyplace foundation for successful work" (Lipnack and Stamps, 2000) exists side-by-side with very real gaps of presence that haunt the current technology. Limited bandwidth, dropped signals, confusing interfaces, pixilated images and the incompatibility of software contribute to a diminished sense of presence.

Technical problems and the time spent coping with them are the biggest contributors to a diminished sense of presence in virtual conferencing and it affects the whole experience. While most discussions laud the value of virtual conferencing and are framed by the glow of the utopian vision of all that virtual conferencing can allow us to accomplish, little is published regarding the corresponding problems that can plague the use of virtual conferencing. If anything is mentioned, most often it is tucked into the end of an article or essay or chapter as essentially a footnote to the adulation. While there are many reasons to promote the gains and possibilities

of virtual conferencing, people can be unaware of the "fine print" realities of various virtual conferencing technologies and get caught in a web of difficulties. When this happens in education settings, the diminishment of presence reverberates in the quality of collaboration and the facilitation of learning.

One article that focuses on the problems encountered in using virtual communication was a study of the mathematics education faculty at the University of Saskatchewan who employed video conferencing as a way to circumvent the time and expense of travel to meet with student teachers whose internship placements were spread widely throughout the province (Nolan and Exner, 2009). The study tested various video conferencing products and settled on Adobe Macromedia Breeze. The advantage of Breeze was its "simultaneous audio and video with multiple users; its high 'emote-ability'; its interface is visually appealing; it is highly customizable" (Nolan and Exner, 2009). Its disadvantages were "it supports only flash video; it is deemed by some to have too much 'emote-ability' (distracting bells and whistles); it has a steep learning curve; and its costs are seen by many as formidable" (Nolan and Exner, 2009). What the researchers found was that while the experience "highlighted a few of the promises of virtual mentoring, the desktop video conferencing process in this study was replete with barriers and limitations…such as software costs, technology compatibility issues and the role of student and faculty training in using the technologies effectively" (Nolan and Exner, 2009). Breeze incorporated several communication modes (audio, whiteboard, chat, etc.) that were to enable participants to transfer to another mode if one mode failed. As the following excerpt from the diary of one of the participants demonstrates, problems with technology adversely affected the quality of collaboration and the learning experience.

> In general, I found that there were relatively long delay times between actions and the visual representations of them. In addition, we found that the audio feature kept malfunctioning on us. We each tried to be sure that we held down or locked the talk button when we wanted to share something, but for some reason the audio still cut in and out without any of us having a sense of how to fix it. We tried writing more to compensate for the audio problems, but even the chat tool was slow, making the flow of conversation quite a challenge. We tried collaborating on the white board—I would ask the interns to use the text tool to contribute their ideas on how to use the particular mathematics problem to teach students about non-linear functions, but even textboxes were not consistent in format or in delay time; some interns could not even find their whiteboard tools (but they did not experience this problem in our training session!)…All in all, it just seems that too much advance planning is required for technology 'neophytes' to function in a competent manner (that is, to at least be able to

use the tools available) and the technology itself was inconsistent and, dare I say, unreliable? When such barriers are present, one must ask the question: is it worth it? At this point, I would answer no, not yet. With such a steep learning curve on top of issues of unreliability (product and/or environment?), users are just not comfortable. It's my belief that both product and user need some more attention to make things workable (Nolan and Exner, 2009).

the impact of virtual conferencing on design and design education

The picture is slightly different for design and design education. The design fields (especially industrial design and graphic design), whose heritage is the Industrial Revolution, have long been linked to technology. With the advent of computers, designers embraced the dream of virtual communication, enthralled with the hardware and software of the present but hoping for further improvements. *Design in the Information Environment: How Computing is Changing the Problems, Processes and Theories of Design*, published in 1985, contains essays written by enthusiastic designers and educators who talked about the new experiments in computer technology (Whitney, 1985). They could see the day when people would interact with data in a personalized way through voice commands or the touch screen of a handheld device. The vision is there in words, but the pictures show the then limits of the vision–large screen, TV-like monitors with pixilated OCR typography and lots of dials. A decade later in *Design in the Age of Information: A Report to the National Science Foundation*, professional designers and design educators looked ahead another ten years to 2006 and proposed a new paradigm for the practice of design and the education of future designers that embraces interdisciplinarity and virtual learning environments (VLEs) (Krippendorff, 1997). The writing of the report is infused with a sense of wonder at what is already possible and with inspiration for an even more wondrous future. This vision of the future of design lists four overarching and intersecting world altering transformations at the heart of the paradigm shift–digitalization, networking, equity of access and dispersion of design (Krippendorff, 1997).

First, digitalization is the ability to create, replicate and store artifacts using extremely small units and to manipulate them rapidly via computers. This has changed the kinds of objects we can create and greatly increased the venues for design. Next, networking is the ability to link what we have created digitally across time and space to enable people to communicate with each other who ordinarily would not know one another and to provide them with access to more

information than they would otherwise be able to obtain. This opens a wide range of opportunities for design research and collaboration. Then, equity of access is the ability of anyone to find and use information regardless of geographic, cultural or social boundaries. This creates new opportunities for social interaction and for participation in design decision-making. Finally, dispersion of design is the ability for more people to be part of the design process and to address issues through multi-disciplinary groups. This means addressing design problems collectively through teams rather than by single 'genius' individuals.

The new paradigm for design championed in *Design in the Age of Information*–in essence, a design manifesto–is highly collaborative in nature and both grows out of and is dependent on the interactive nature of digital technology's ability to provide tools for virtual communication (Krippendorff, 1997). Based on shared knowledge, resources and decision-making facilitated by technology, the future of design will be non-hierarchical and constructivist in approach, collaborative in process and diversified in use and application. "Designers are asked to transcend their initial concerns with surface appearances and increasingly address issues of meanings and identities, computer interfaces, multi-user information systems, cyberspaces, socially viable projects and discourses for designing design, whose materiality is far less obvious yet of considerable social significance" (Krippendorff, 1997).

Design education would be correspondingly reformed to fit this new paradigm, putting digital technology and collaboration at the heart of university and college level design studies. In fact, of the report's six recommendations for design education, the first one is to provide courses and projects to be carried out by interdisciplinary teams. Virtual Learning Environments would arise from the technological capabilities, enabling people to work together on projects–joining people from around the world and from a variety of disciplines in a common endeavor. Virtual conferencing would become the primary technological means to enable the paradigm shift for design education. While most current design education does not yet resemble the vision of the report, the shift is definitely underway.

Design educators who use virtual conferencing to engage students in international collaborative projects find that their visions, their hopes and dreams for what students will gain and what students will produce, are often adjusted by the realities of the hardware and software that currently define the experience of virtual conferencing. Limits on virtual conferencing are often due to a lack of access to technology and of the quality of available software. While very good virtual conferencing technology exists, the price (and support costs) usually put it out of reach of many universities, especially state supported universities. Skype, which

can be used for free, enables video, audio and chat, but add a third person and the video disappears when using Macintosh computers (as most graphic designers do). The interface of much virtual conferencing software, such as Dimdim and Zimbra, has many options crowded onto the desktop screens that are not intuitive to use or understand. It is easy to get confused with the dizzying visual display and the lack of visual hierarchy–where do you look first? The learning curve for these options can be steep and the tutorials are often visually daunting, filled with jargon and not designed from the user's perspective. The software allows for video participation, but only one person at a time. Individuals "share" the whiteboard and post documents sequentially; the moderator controls sharing. The option for private messaging can be distracting if an individual is in the middle of a presentation. Even e-mail has problems such as limited file sizes for attachments, the contents of simple documents that get scrambled because of incompatibilities between PC and Macintosh formats and files that cannot be opened if sender and receiver have different versions of software. *Design in the Age of Information* does include some acknowledgement of the current limits to its vision because of such things as variations in access to devices, software and knowledge, competing and sometime incompatible hardware and software, and problems with effecting virtual reality (Krippendorff, 1997). It acknowledges the difficulty inherent in trying to anticipate future technological developments, especially as affected by social, political and cultural events and institutions. Competing yet incompatible software and the inequality of access can complicate or inhibit the ability of design students to engage in collaborative projects. It is important to note that the simulation of presence through the technology of virtual conferencing undergirds all of the four transformations of the new design paradigm and is the key to both the dreams of global education and to the realities that impinge upon those dreams. And it is the sense of presence at the heart of the promise of virtual communication that has propelled designers and design educators to envision their future as digital and collaborative–the essence of virtual conferencing.

examples of virtual conferencing in global design education

Perhaps the best way to understand how the dynamic between dreams and realities of virtual conferencing affects efforts to provide international educational experiences for students is through example. The following three narratives

describe three different contexts–an assignment, an online course and a conference project–that utilized virtual conferencing at different points in the educational and design process.

EXAMPLE 1–ASSIGNMENT

My Winter 2006 course on information design at Wayne State University, Prescription Medicine Labeling, held its final critique sessions in April 2006 with David Sless, director of the Communication Research Institute in Melbourne, Australia and author of one of the textbooks for the course, *Writing About Medicines for People: Usability Guidelines for Consumer Medicine Information*. Each student worked with three to five people to design a bottle label and its accompanying Consumer Medicine Information (CMI) sheet based on the informational needs of those individuals. David had agreed to be guest critic for the students' final presentations, which would require two three-hour sessions over two days. The dream of virtual conferencing with David was to provide students with the opportunity to interact with and receive input on their designs from an expert in the field who happened to live on the other side of the world; we would use virtual conferencing to have him be "present" for the final critique. (This was the first time virtual conferencing was specifically and deliberately incorporated into the structure of a graphic design course at Wayne State University.)

Immediately we encountered several realities, each of which contributed to shaping and reshaping the nature of our interaction. The first issue to address was time zones–Melbourne is fourteen hours ahead of Detroit. We negotiated a mutually agreed upon time: 8:30 am Detroit time/10:30 pm Melbourne time. Originally we had proposed a Skype conference call with a separate video and audio connection for each student in our Mac computer lab, but quickly realized that Skype only permits video conferencing between two Mac computers. Then we decided that each student would take a turn presenting his/her work via a Skype connection. A few weeks before the final critique, we tested the Skype connection and found that the Skype video signal consistently broke into pixels or froze in transmission; the audio was garbled, echoed and could only be remedied with headphones (which if used would not permit the rest of the students in the class to hear David's comments nor to ask him questions); that the call itself was often suddenly dropped. We then tested telephone conferencing; this seemed to work. David was patched into a telephone with a speakerphone that also had speakers attached so that his voice could be broadcast in the classroom. However we found that the connection required speaking close to and very deliberately into the speakerphone in order for

David to hear anyone. Since there was now to be no real-time visual component to the final critique, the students sent PDFs of their designs to David a week before the scheduled critique sessions.

The students presented their work in real-time to the class and David could follow along as he viewed their work on his computer in Melbourne. The problem here was that he could not experience the physical dimensional nature of the label and Consumer Medicine Information (CMI) sheet mock-up nor could he assess the quality of the mock-ups. A few students had sent him a PDF showing a three-dimensional model of their labels on bottles and of the folding sequence of the CMI; most PDFs were flat layouts. As a result, most students spent a fair amount of time explaining their design decisions within a three-dimensional context. David was, however, able to comment in-depth about the students' choice of type (size, weight, wording), sequence and hierarchy of information, type/image relationships, color, etc. He could hear the students state their design objectives and explain how those objectives framed their finished designs. He could also engage them in conversation about their visual choices and the testing of the designs that the students conducted with their participants.

In spite of the limitations, the students were enthusiastic about David's participation in the course. They expressed awe at being able to talk with someone whose work they knew and admired and at the ability to talk with someone so far away. They were impressed that he stayed up late specially to meet with them and they found his insights about their work to be very helpful. This experience opened the students' designs specifically developed to address the needs of people in Detroit to become part of the global dialogue on the design of medicine labeling.

EXAMPLE 2–ONLINE COURSE

In 2007/2008, Lennart Strand of the Information Design program at Mälardalen University in Eskilstuna, Sweden, developed and twice taught a ten-week infographics course, the first course offering of the Information Design University (IDU). The idea behind the IDU, operating under the auspices of the university, was to offer online courses on the study of information design to people anywhere. Lennart received special release time to develop the course and then taught it as part of his usual course load for the year.

The infographics course examined the presentation of charts and diagrams, especially those found in newspapers and magazines; its focus was on theory and analysis. Students had assigned readings and wrote reports; they did not design infographics. Lennart's class crossed many geographic boundaries–the students

came from the USA, Portugal and Austria–and crossed disciplinary boundaries–they were professional graphic designers, writers, teachers and university students. The course was divided into five modules of two weeks each and included a real-time "seminar discussion" chat session at the end of each module. Lennart established a virtual classroom website for the course and his Study Guide explained the procedures for accessing the website and stipulated that assignments were to be uploaded to the website three days before the scheduled seminar. The papers were to be read by other class members and their comments uploaded no later than one day before the seminar (Strand, 2008). Additionally, Lennart prepared and posted podcasts on his website as additional information sources for the students.

One of the challenges for Lennart was that the course took much more preparation time than he initially anticipated (Strand, 2009). Another was finding a time slot that would work for students living in different time zones; 6:00 pm Central European Time (12:00 noon Eastern Standard Time in the USA). His comments on the technical experience of this online course include the problem of staggered, lag time that occurred in the seminars' chat sessions: different responses took different amounts of time to write and their appearance often interrupted both the content and flow of the conversation, creating gaps or overlaps that made the thread of the conversation ragged. To address this issue, Lennart found that he needed to assign people turns to respond. This, however, seemed to reduce the amount and spontaneity of conversation. As a result of his experience with this course, he recommends a test session of the software connections with all students before the course begins to make sure that everyone has good connections and can access the website and download materials. He would also present his teaching materials in more varied formats, e.g., lectures in PowerPoint, PDFs and Word and post his lecture ahead of the seminar so that students could have them in advance and be prepared to discuss the contents of the lecture. And he would hold shorter, more focused seminars that covered less material so that students would feel "less weighted down" by seminar preparation.

Along side access to technology (all his students had good computer skills and were disciplined and motivated individuals), the most important issue for the success of the course was to make people feel involved. Students had the option to work on assignments as individuals or in groups; the students in groups stuck with the course and seemed to have the most interaction with the material and each other compared to students who worked independently (a few of whom wound up dropping the course). Lennart would take more steps to broaden the contact and interaction that students have with one another (Strand, 2009). One of the good

things to come out of the course was to see the influence of cultural context in the students' designs analyses, such as the different associative values and meanings of colors. He himself became much more aware of cultural differences and perspectives in visual aesthetics and had to adjust his expectations of how to interpret visual material. Lennart reports that the collaboration on the projects broadened the students' cultural understanding and ability to work in virtual teams. He says that the students' evaluation of the course was high, saying that they learned a lot and had a very positive learning experience.

Unfortunately Mälardalen University withdrew support for the IDU and Lennart has not been able to offer the infographics course again; bureaucracy, politics, money and resource allocation issues became insurmountable obstacles. Other administrative problems arose forestalling the dream of IDU providing online courses taught by the best faculty from around the world. If someone at one school teaches a course that is taken by a student at another school, which school gets to 'count' the student as part of its student numbers and claim the student's tuition? How are the requisite tuition and fees at US schools reconciled for European students whose higher education is free in their home countries? Conversely, do US students still pay tuition and fees when taking a free European course? What about a university policy that requires its adjunct faculty to be physically on campus or at least reside in that country in order to be on the university's payroll?

EXAMPLE 3–CONFERENCE PROJECT

"DD4me" was the student project portion of the conference, Data Designed for Decisions: Enhancing Social, Economic and Environmental Progress (DD4D), that was held in Paris, June 2009. Co-sponsored by the International Institute for Information Design (IIID) and the Organization for Economic and Cooperative Development (OECD), the conference looked at how statistics influence our everyday decision-making and students from around the world were asked to participate through DD4me. Students were invited to examine when, where and how statistics enter their lives, how statistics and the visual representation of statistics influence their interests and thus their decision-making, what relevance statistics have to their lives (why and why not) and what new ways of evaluating and understanding statistics can be devised (e.g., how would you change the way statistics operate in and impact your lives) and ultimately to prepare a project for presentation at the conference.

A DD4me website was created through the Ning social network host by Veronika Egger, deputy director of IIID and coordinator of the DD4me project and those

interested in participating signed up as "members" of DD4me. By the time of the conference, one-hundred-fifteeen students and their faculty advisors representing thirteen countries across Europe and the Americas had become members and twelve projects from nine schools were registered (eight projects were actually presented at the conference). Veronika posted a set of broad guidelines for developing projects and deadlines for project statements and submission of finished work (projects could be developed by individuals or groups of students). The website enabled students to upload images, video, text, create discussion forums and send messages to each other. The website was free form in that the use of the site depended on the contributions of the participants. The hope for and intention of the website was that students from the different schools would use the site to share information with each other and create forums to discuss their research, thoughts and design processes–in other words–the students would be engaged in active dialogue about the topic.

Instead there was no dialogue via the website (Egger, 2009). Members from one university posted some photographs and videos of their research and a couple of groups posted their project statements. There was little activity except for the burgeoning list of members. The DD4me Ning homepage listed all the members, their university affiliation, their location, the groups and their membership and a running tally of the number of members. This allowed people to get a sense of who was involved and interested in the project. A click on the picture or name of any member or group took you to that individual's or group's DD4me page.

While the expectations for interaction via the website were not met, the site created a community of people who shared a common interest. People who had never met (or even knew each other existed) and might never meet face-to-face were now connected. Veronika found that it was "mind-boggling to see how many people were interested" (Egger, 2009). For the few students who were able to attend the conference in Paris, the website became their introduction and established the common ground for their face-to-face exchanges. And the impact of DD4me continued to resonate worldwide as the work of the twelve students group projects was presented at the Organization for Economic and Cooperative Development (OECD) Third World Forum in Busan, South Korea, in October 2009.

Veronika's assessment is that the website did not generate the interaction expected because the site required a higher threshold of involvement–the public nature of the site (what was on the site could be seen by everyone else), meant that you had to really think about what you were willing to say–something more than a quick, personal note in texting shorthand on Twitter. She recommends doing three things differently in the future.

1. Have several people commit themselves to be actively engaged with the website who will keep after others to stay involved.

2. Have someone in charge of moderating and monitoring the activities on the website to keep the pace going–otherwise activity will wither and die.

3. Maintain a regular flow of information, activities and task deadlines through the website to sustain people's interest and engagement.

The challenge for IIID and OECD is to find a way to sustain the DD4me connections and channel the shared interest into future design projects. Students attending the conference testified to being amazed at seeing the work of others and thrilled to be part of something bigger than their own school.

questions remaining

All three stories end with optimism for the future, even with their technical difficulties and shifts of expectations. All suggest changes for next time and are invested in the future of virtual conferencing. But as convinced as design educators are about the benefits of virtual conferencing, there are still two important questions implicit in these stories that will continue to hover over proposals for future international student design projects. And these questions bring us back to the issue of presence.

1. When and how are the best ways to incorporate virtual conferencing into the learning process and thus into the shape of the project?

2. What do we really mean by collaboration and do we really understand what is necessary for students to work in virtual teams?

We have bought into the dream of virtual conferencing and see its potential but do not know its pitfalls–only discovering them as we stumble over them and then try to adjust, work around and figure out what works and what does not. One of the most important things we do not know about virtual conferencing in design education is when to utilize it. We think we know how virtual conferencing can be used, but we are riding assumptions from our past experiences in other media, in other constructions of social interaction. What is the best place to incorporate it into the educational experience for students? We really only have a vague idea of how to use it effectively and we learn as we go. "The adoption of computer-mediated communication (CMC) in higher education has far outpaced our understanding of how this medium should best be used to promote higher-order learning" (Garrison, Anderson and Archer, 2004).

Usually the question of how and when to use virtual conferencing is left wide open as in the report on Martti Raevaara's paper presentation, Interlinking Studio and VLE–Promoting a Dual Space for International Cooperation in Art and Design Education, in *Interface: Virtual Environments in Art, Design and Education: A report on a conference exploring VLEs in art and design education* (Hanrahan, 2009). Raevaara's approach to e-pedagogy is to let the teachers figure out what works through trial-and-error. "There is no one way to deliver an excellent e-learning course and especially in art and design–where we don't have much experience of using VLEs–Raevaara thinks that it is important to try out different approaches and experiments all the time" (Hanrahan, 2009). Some studies have specifically attempted to determine the best use of virtual conferencing in the development of a student's process of critical thinking–the afore-cited study by Garrison, et al. is one reference that could help design educators frame the discussion of international collaboration work and figure out how and when design students can best take advantage of virtual conferencing.

The study by Garrison, et al. seems to suggest that students use virtual conferencing most effectively as an avenue for exploration and investigation (Garrison, Anderson and Archer, 2004). The authors evaluated the content of messages exchanged between students during two computer conference courses to assess the impact of virtual communication on the process of critical thinking exhibited through four phases of practical inquiry–a triggering event (an issue or problem to be addressed), exploration (brainstorming, questioning and exchange of information), integration (constructing meaning out of discovery) and resolution (action or result). The greatest frequency of the content of the messages (forty-two percent) related to the exploration phase. In that phase "people feel free to share their insights and contribute relevant information" (Garrison, Anderson and Archer, 2004). The surprise was that the frequency was so low for integration (thirteen percent) and resolution (four percent). One reason "...for the lack of resolution responses could be that the medium (i.e., computer conferencing) does not support this kind of activity. Application or testing of ideas is difficult...given its vicarious, and even contrived, aspects" (Garrison, Anderson and Archer, 2004). The authors note that while all four phases employ "...moving between private and shared worlds–that is, between critical reflection and discourse," their work suggests that virtual communication can be more useful in some phases rather than others (Garrison, Anderson and Archer, 2004).

The first part of their assessment is that "for a computer conference to serve as an educational environment, it must be more than undirected, unreflective, random

exchanges and dumps of opinions. Higher-order learning requires systematic and sustained critical discourse where dissonance and problems are resolved through exploration, integration and testing. The guide (i.e., practical inquiry model) must be the full cycle of the critical-thinking process, which includes interactions between the public shared world and the private reflective world" (Garrison, Anderson and Archer, 2004).

Thus collaboration, one of the goals of the new paradigm of design education, must be structured and purposeful. Lipnack and Stamps in their book, *Virtual Teams*, underscore this and would support the observation described by Garrison, et al. in the work flow of virtual teams, that is, the rhythm of "together/apart" (Lipnack and Stamps, 2000).

> Most work combines a pattern of individual and group tasks, time spent working alone and time spent working with others... For best results, time together is planned, prepared for, and followed up on...Virtual teams need to be more explicit in their planning and their plans [than collocated teams—that is, teams who work face-to-face]. Clarifying goals, tracking tasks, and accounting for results are all part of elaborating process time in a manner visible to all members of the team (Lipnack and Stamps, 2000).

The authors suggest that while virtual teams often employ various forms of synchronous and asynchronous forms of virtual conferencing, each form may be best suited for a different kind of task–the virtual conferencing forms correlating to the together/apart rhythm of the project. As the second half of the Garrison, et al. assessment says:

> The complexity and challenge of facilitating this educational process...necessitates skilled facilitation. Collaborative learning in an educational sense is more than a mindless free-for-all. Interaction must be coordinated and synergistic. This requires an understanding of the medium of communication, the process of higher-order learning, and the critical role of teaching presence in attaining higher order learning outcomes (Garrison, Anderson and Archer, 2004).

Another issue to address concerning student collaboration on international projects is language. English has become the de facto language of international communications; it was the language used in the IDU online course and the DD4me student project. Unfortunately, the command of English falls hardest on those for whom English is not their first language. Language skills, a non-technical limitation on virtual communication, can affect all students' experience of collaboration in

international projects and courses. While a discussion of the pros and cons of a common educational language is beyond the scope of this paper, it is important to factor in language as an element vital to the planning and success of global design education efforts. The various modes of communication within virtual conferencing can help serve as work around options to problems of language that may surface.

While collaboration is a term often tossed about in design education, understanding its use and incorporation into global projects and online courses is in flux. We are still groping to understand the rhythm of together/apart for virtual collaboration and thus to know the best ways of synchronizing the various modes of and current capabilities of virtual conferencing to the planning and pacing of virtual collaboration. When we figure out how to insert virtual conferencing most effectively into the learning process and into the patterns of collaboration, we will be able to more easily adapt the technical realities of virtual conferencing to the process and patterns that will provide students with the best sense of presence as they work together across borders and disciplines.

conclusion

So finally, what can we take away from an examination of the dreams and realities of virtual conferencing in global design education?

1. The simulation of transparent presence–especially as conceptualized by Litton and Ditton (1997) in terms of social richness, realism and transportation–in virtual communication is the dream to easily enable international student collaboration and learning. The reality is that the sense of presence in virtual communication is compromised by limitations in two categories: Technology and Design Process. Technology, the design of human/computer interfaces; and issues surrounding the accessibility of hardware and software. Design Process, figuring out the best use of virtual communication in developing critical thinking; and understanding the rhythm of virtual collaboration and then determining how to best integrate virtual communication into opportunities for international student virtual collaboration.

2. Given the limitations of reality, we must cope with the relationship between the virtual and the real–that is, dealing with the realities to sustain the dream–to ensure the most amount of presence.

3. The experiences of those in design education who have used virtual communication in its various permutations for global initiatives have found that we must deal with two essential interconnected issues: Time–accommodating time

zones, preparation and testing, learning curves for software and procedures and any other unforeseen events or issues; and

4. Planning—understanding the pacing of tasks and events when using virtual communication; anticipating additional preparation for and facilitation of virtual communication in relationship to the tasks and events of a project; and being better prepared to revise schedules and expectations when problems with virtual communication arise.

The shift to the new paradigm of design education is happening and those in design education who have worked to balance the dreams and realities of virtual communication in international projects and courses are helping manifest the shape of the new paradigm. The end of the report on Raevaara's presentation puts the situation well, "despite the obstacles to be overcome, the new visions of international cooperation not only enhance the learning opportunities available to students, but also have a lot to offer the teacher/researcher" (Hanrahan, 2009). This certainly proved to be true for all who participated in the Wayne State University prescription medicine label course final critique, the Mälardalen University online infographics course and the DD4me conference project. As further research into the technology and usability issues surrounding virtual conferencing provides a greater sense of presence for the synchronous and asynchronous forms of virtual conferencing and as more universities invest in changing design curricula to support international student collaboration, we are able to work more effectively and collaboratively with one another across the world. The elusive dream of seamless, vivid virtual conferencing is becoming more real.

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visible language 44.2

The New School collaborates

Organization and communication in immersive international field programs with artisan communities

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abstract

Under the umbrella terms of "humanitarian design," "social design" and "social responsibility," educational institutions and specifically design programs are more and more searching for opportunities to engage their students in critical and hands-on learning via collaborations between students, faculty, communities in need and non-profit organizations. Such active learning is rich and meaningful for all parties involved, but the challenges are rarely discussed and yet compromise the collaborations' sustainability and potential for activating local change and development. This article uses the first two years of "The New School Collaborates," (TNSC) an ongoing project between The New School's divisions of Parsons (design), Milano (non-profit management and urban development) and General Studies (international affairs) in New York, several external partners and groups of Mayan artisan women in Guatemala, as the central case study for the abovementioned type of work. Of particular interest is the central role that organization and communication play in immersive international field programs. This article argues that the key to a successful collaborative process includes a clear and transparent partnership upfront, with a clear understanding of the roles and opportunities for each

organization involved and a communication infrastructure that is sensitive to participants' skills and resources. The article refers to, and includes, documentation from specific experiences from two years of courses on campus as well as in Guatemala and the overall process and evaluation of this particular case. Of particular interest is a reflection on challenges faced and how an active and thoughtful analysis of them can lead to a more appropriate, and in the long-term more sustainable structure for this type of work.

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introduction

The "Design for the Other 90%" exhibition website states that "...of the world's total population of 6.5 billion...90% have little or no access to most of the products and services many of us take for granted" (Design for the Other 90%, 2009). This statistic offers a responsibility and an opportunity for educational institutions to specifically engage students in collaborations that will ameliorate this percentage. There has been much engagement from social science disciplines, particularly around economic development and designers have been considering the positive impact their work can have since the 1980s (Papanek, 1984); but projects that bring together design and the social sciences are less common. Case studies, such as those documented by UNESCO, have demonstrated that design can play "...an important role in encouraging environmentally sustainable and economically viable models...of marginalized groups" (Designers Meet Artisans, 2005, 6). Furthermore, Ovidio Morales, Dean of the School of Architecture and Design in the Guatemalan Universidad Rafael Landívar, confirms that "...design professionals should be potential agents of change in society, to make it more human, more just, and more democratic" (Morales, 2009, 47).

These opportunities framed the creation of "The New School Collaborates" (TNSC), a cross-divisional and interdisciplinary faculty research group at The New School (TNS), a university in New York City, interested in how socio-economic and urban development can be achieved through design. Of particular interest is how students, through interdisciplinary on-campus courses followed by intensive international fieldwork experiences learn skills that would never be possible in a standard on-campus classroom setting and how interdisciplinary groups of students can holistically approach development work with artisan groups with the long-term goals of culture preservation and income generation (*see figure 1*).

What distinguishes TNSC from similar initiatives such as Designmatters at Art Center College of Design (http://www.designmatters.artcenter.edu/) and Design 4 Development at University of Florida in Gainsville (http://designshares.com/share/) is the multi-disciplinary approach. Design is leveraged as a process through which development can occur as a result of the cooperation of students from diverse backgrounds such as the development concentration of the graduate program in International Affairs as well as the School of Management, bringing together the expertise of social entrepreneurship, organizational change and urban development.

Universities are not always immediately able to engage with communities in need since they are in the "business" of teaching and learning, with a principle

Figure 1: Member of *Ajkem'a Loy'a* weaving on a backstrap loom, Fall 2007

focus on face-to-face on-campus semester-long courses. The role of a partner can help break the boundaries of the physical campus by connecting faculty and students to potential constituents. Since the partnering organization is often structured and organized very differently than a university, it becomes critical to adopt a model for the partnership that is sensitive to the needs and interests of each institution.

This article first proposes a model for how a partnership can be structured. It then presents TNSC as the central case study from which the argument is built. The article then highlights two categories of challenges observed in TNSC: those related to the organizations and the communication between them, and those connected to communication technologies. Finally, the article concludes with a proposal for a new structure moving forward.

partnership models

The "Partnership Cycle" model adapted by the Collective Leadership Institute (*see figure 2*) (Collective Leadership Institute, 2007) suggests several steps that have proven to be key moments in TNSC. The first part of the cycle indicates that an idea be tested before the partnership is initiated. This slow start to a partnership was successfully tested in TNSC by first conducting a feasibility study (Berdiel and Dehejia, 2007) which investigated if it was feasible or not for CARE and The New School to collaborate. This feasibility study outlined opportunities, challenges and insights and informed the project's framework for 2008. The step "clarify goals and identify resources" was only completed to an extent. Since TNSC was originally funded with a large single-donor grant, neither institution considered long-term resources, and as addressed later in this paper, resulted in the NGO partner no longer being involved in the project. Finally, a critical milestone in this model that TNSC did not apply is to "define roles, structures and procedures." As discussed later in this paper, a lack of clarity in roles in both initial partnering organizations caused many issues that have since had to be addressed. The New School is currently in the process of redefining the partnership and is referring to this model as an opportunity to develop clarity and long-term sustainability of the project. The different sites of the project involve slightly different partners, but what is currently proposed should be a clear partnership between the university, local in-country designers and artisan organizations or individuals.

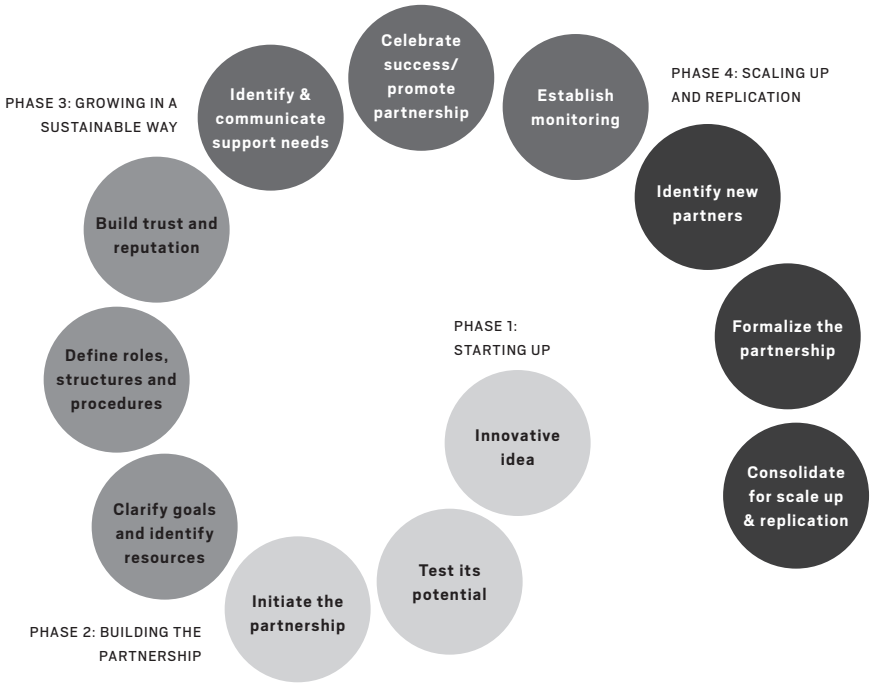

Figure 2: The Partnership Cycle

the new school collaborates

In 2007 the global humanitarian organization CARE and TNS began the aforementioned long term collaborative project "The New School Collaborates" to empower a group of Mayan women in Guatemala—*Ajkem'a Loy'a* (AL)—by helping them develop a business model to export their handcrafted products to the United States. The village of San Lucas Tolimán in Guatemala was selected as the site for the initial pilot project due to AL's:

- → Existing partnership with CARE
- → All women participation—relying on research indicating that "if the goals of economic development include improving the general standard of living... then it is natural to work through women" (Yunnus 2007, 72).
- → Relatively young membership. Since the project was initiated as a minimum year-year commitment, it was of interest to have both a broad age range (so

as to work with several generations) as well as to have young members so that they may remain interested in the project for a longer period of time.

- → High literacy levels—critical to facilitate the running of on-site capacity-building workshops
- → Interest in taking advantage of globalization to improve their business opportunities.

Several meetings in Summer 2007 led to a trip to Guatemala with representatives from TNS and CARE to meet with AL, and culminated in the publication of a feasibility study (Berdiel and Dehejia, 2007). The women of AL lacked many of the skills required to convert their vision into reality. They did not have a real understanding of basic business skills like business development, marketing, sales, accounting, inventory and quality control; western market requirements or design trends; nor the necessary skill sets (sewing, patternmaking, sizing) to produce a finished product.

The study also established the goals of improving AL's business, organizational and design skills through training workshops; enhancing the academic experiences of the students involved by providing hands-on learning opportunities; developing a "Designed by" business model, as opposed to the practice of design from a developed country being handed down to a low-wage manufacturing situation in a developed country (Margolin, 2007). This approach elevates women in developing countries to a new economic and social position by playing a pivotal role in the actual design of the products; creating a business that is sustainable for the women and their communities; preserving and strengthening the women's culture, heritage and traditions; providing a model that can be replicated and scaled up within Guatemala and other countries; and linking to women in the US in a way that supports furthering the movement to overcome global poverty. In his article on design and social responsibility, Dean Ovidio Morales from the Guatemalan University Rafael Landívar, describes the situation that TNSC has also experienced with the artisan groups. He states that "...during the last few years, the Guatemalan artisan sector has had problems due to the fact that in the majority of cases, the groups working in this trade, are not well organized as businesses" (Morales, 2009, 47). This offers a challenging context; yet it offers a prime opportunity for university students and faculty to transfer business skills to groups of Guatemalan artisan women.

The pedagogical emphasis has been to establish an equal exchange between all participants (between faculty and students, as well as between university affiliates, and community partners and individuals). With this value as a priority, and with the assumption that students need to prepare on campus before being immersed in hands-

on fieldwork, faculty from several programs at Parsons The New School for Design and from TNS's Graduate Program in International Affairs (GPIA) structured a spring course as a prerequisite for the month-long immersive summer program in Guatemala.

The spring course, after iterations in 2008 and 2009, is structured as a lecture series and seminar and ends with an intensive prototyping phase in which teams of students apply what has been read and discussed to the real world context within which they will be working in the summer. The lectures (which are offered by the core faculty as well as experts from a variety of areas within and without the university) include teaching and learning in informal settings; digital media to communicate, represent and empower; social innovation and entrepreneurship; marketing; fundraising; and urban development. In terms of design, the approach taken in the course and more broadly in TNSC is that described by John Thackara in the section From Design as Project to Design as Service in his book *In the Bubble: Designing in a Complex World*. In it, the author points to a shift in design thinking from one that is product-centered to one that is process-oriented. Furthermore, he explains that although "...stand-alone products...are needed within product-service systems...the real action will take place among the organizations developing new services and infrastructures" (Thackara, 2005, 224). It is this kind of thinking through which TNSC wishes to position design, particularly with regards to the other participating disciplines (international affairs and management.)

Central to the course's pedagogy is the demystification of the master—the idea that a single person may have all the answers to the question—to create an equal field of questions, skills and knowledge to which all participants (students, faculty and community collaborators) can contribute and from which all can learn. This approach has been visibly successful while in the field when students actively position themselves as active participants (beyond just learners) with a wide variety of skills and life experiences (which often extend far beyond their declared major). It also comes up as a positive experience in anonymous student evaluations of the course or the program. One such comment from a summer 2009 evaluation pointed out, "I enjoyed the amount of leeway and responsibility the group experienced with regard to the project. I learned many invaluable lessons this way, and I am confident that I have gained skills applicable to an array of development projects and initiatives."

This positioning of students as active agents of the knowledge they have, prepares them to be the leaders, facilitators and teachers of the capacity-building aspect of the summer work in Guatemala (to which they travel for periods ranging from one week to two months). Workshops that students have prepared (*see figure 3*) and conducted span from ice-breaker activities to promote leadership and teamwork, to specific

Figure 3: TNS student leading activity on logo design, Summer 2008

skill-based workshops in product pricing, sewing, patternmaking and computers, as well as discussion based activities such as how to run an organization and how to manage inventory and quality control. In course evaluations, project debriefings and other documentation from the project, students have expressed that this is the most valuable learning experience they have ever had. They also speak to the sense of responsibility that comes with working on a real project. As shared by a Summer 2008 participant in the CARE-produced online article, A Pattern Emerging: "We have some expertise, but we don't have all the knowledge. There is a tremendous responsibility when you come into someone's life like this and try to help make changes" (CARE and Parsons The New School for Design, 2008). Additionally, faculty advise students in their role as project leaders once the group is in Guatemala. This hands-on intensive approach requires that students be able to quickly translate theory (from the spring class and previous training) into practice; this always results in a shift for students where they no longer feel that this is a "class," but instead a situation in the real world in which they are playing a critical role.

Participation in the project is by application only, to ensure a high quality of students and a balanced variety of skills and interests. In 2008 and 2009 this process

resulted in a similar mix of approximately fourteen students from Design and Management, Design and Technology, Fashion Design, Fashion Marketing, Graphic Design, Integrated Design, International Affairs and Organizational Change.

This mix of students and the nature of the project lend itself to an integrative learning environment. "Integrative learning is an umbrella term for structures, strategies and activities that bridge numerous divides, such as…general education and the major, introductory and advanced levels, experiences inside and outside the classroom, theory and practice and disciplines and fields" (Klein, 2005, 1). To create such an environment, it is critical to have students from a variety of levels (undergraduate and graduate) as well as with a diversity of backgrounds, interests and skills. The project is then structured in such a way that students learn from one another, while at the same time leveraging the skills and strengths with which they join the project (so that once they are in Guatemala they are teaching, not based on their interests but on their actual knowledge.)

The fifteen-week Spring 2008 course was designed as a weekly lecture series with guest experts on Guatemalan history and culture, marketing and consumers, basic business skills, design & artisanship, and workshop development. During weeks six to ten, students engaged in a pilot run of the intensive summer project. Working in three teams, of approximately six members each, students developed prototypes of actual designs, as well as lesson plans for the summer workshop series in Guatemala that included the following pedagogical components.

BUSINESS. This component explored possible ways in which the women in Guatemala could organize themselves, it also established a pricing model that could be used for all artisan products.

MARKETING AND COMMUNICATION. This component entailed designing a variety of materials through which to market the story of the Guatemalan women and the creation of their products. They also prototyped a variety of possible brand names, logos and tag systems.

PRODUCT DEVELOPMENT. This component entailed prototyping a variety of designs based on their knowledge of the women's current craft skills and access to materials. The intention was to demonstrate innovation through minor changes to current products woven on the back strap loom, as well as explore possibilities for interaction between the women who weave and those who bead.

Although with a lot of assumptions and uncertainty about what exactly would happen upon the group's arrival in Guatemala, students developed an extensive curriculum of workshops (in business, marketing, design and product development) to offer to the women of AL. How well the spring course prepared each team was

demonstrated through how little involvement the faculty had in the pre-workshop preparations once on site with members of AL. The collaboration in San Lucas Tolimán was originally planned in two parts: two weeks of workshop delivery focusing on skill building in eleven key areas—work time valuation, pricing, inventory, quality control, the association's organization, new product development, patternmaking, sewing, marketing, computers and English; and two weeks for collaborative development of new artisan products.

An open discussion with all participants from TNS and AL at the end of the second week of June determined additional outcomes for the latter part of the month. One team of students continued sewing, patternmaking and product development workshops specifically supporting new products designed by AL; another team worked with AL as their client and redesigned both the association's logo as well as their local store. Members of the business team worked on a new organization for AL as well as a contract and microloan; and finally, one student team worked with AL to develop workshops for tourists on beading and weaving as a way to promote their heritage and tradition as well as generate income that would require less upfront investments of materials and time.

During the 2008–2009 academic year the project's faculty coordinators (from Parsons and International Affairs) focused on raising funds to continue the project as well as expand it to new areas within Guatemala. Since one of the principal goals from the beginning of the project was to design a model that could be replicated, it was critical to work with new groups in other locations to test its replicability. Therefore, TNS decided to connect with the local government (i.e., the mayor's office) of San Antonio Aguas Calientes to specifically work with several artisan women groups as part of their community tourism program.

The spring 2009 course was the elective Designing Collaborative Development in the International Affairs Master's program, also open to management and design students and team-taught by an international affairs and design faculty. This course focused not only on the project in Guatemala, but also considered broader issues, mainly how socioeconomic development can happen via community collaborations and how design can play a pivotal role in such initiatives. Most students in the course were participating in the summer 2009 program in Guatemala, but some were preparing to travel to Ethiopia and Malaysia for similar work, while others took it as a general elective.

The summer 2009 program in Guatemala was structured as a two-month field program, an expansion of the 2008 month long field program. In the first month, two faculty traveled with ten students (from International Affairs, Parsons and Milano)

Figure 4: TNS students leading information session open to all citizens of San Antonio Aguas Calientes, Summer 2009

to work with the new partners in San Antonio Aguas Calientes. Since this was the first time members from TNS were meeting the new collaborators, this first month focused on identifying exactly who the partners were, getting to know the municipality of San Antonio (*see figure 4*), assessing the needs and interests of the community, understanding how a diverse team of students could collaborate and determining if and how the university wanted to establish a long-term project in this new site. After several weeks of meeting with a variety of members in the community, TNS established a general goal for this new site to identify, engage with and foster community leaders who would ensure long-term project sustainability. Further, with a particular interest in the small village of Santiago Zamora, and a group of 10 artisan women, TNS (led by the International Affairs graduate students) focused on the goals of

- → Building trust within the community / group
- → Developing a plan to empower the participants by providing capacity training to enhance skills needed to be part of community group
- → Promoting and cultivating a form of collaborative development (selling of

Figure 5: Member of IA records her colleagues performing a typical dance, Summer 2009

Figure 6: New scarf design by *Ajkem'a Loy'a*, Summer 2009

products and services) that would empower the community to preserve and respect culture, language and tradition

→ Identifying and building partnerships with any institutions and community leaders that will aid in the project's sustainability moving forward (Cadavid, Edwards, Mazzocco, Smith and Wahi, 2009).

The collaboration with this new group of artisan women, *Ixoqui A'j Ru Xel Kiem* (IA), meaning "Native Women Weavers" focused mainly on building trust and running workshops in media (video recording), computers, design and group dynamics. The collaboration started with the media workshops. Framed with the goal of sharing their village with the world, the women of IA storyboarded and recorded a documentary about their daily lives (*see figure 5*) which some TNS students edited in Fall 2009. Students also facilitated the process for IA to become a formal group of artisans interested in establishing a business via the sale of their artisanal goods. They are a group of ten organized with the roles of Participants, Secretary, Treasurer, Design Manager, Quality Control, Public Relations and Communications, Production, and Advisor (a legal advisor in their village who will advise when requested but does not have a vote within the group). They also wrote a "Constitution" which outlines some of the responsibilities for each member of the group and indicates that decisions will be made by consensus.

A third faculty member spent a month in San Lucas Tolimán working with AL and a team of six design students whose primary interests were in fashion and product development. This team from TNS spent three days per week with members of AL working on a collaborative process of design and construction with the end goal of producing a new line of handbags that could then be marketed and sold in New York City. As described by one of the students on the project's blog on July 16, 2009, "We began our work with *Ajkem'a Loy'a* by introducing a series of inspiration images for them to look at. Each of the women selected a few of their favorites, explained to us why they chose them and began experimenting with their weaving, using the images as reference. The outcome was very pleasing: each of the women explained what elements they used from the images in their weaving (most of whom were initially attracted to the colors). Mayda, [from AL,] drawing inspiration from a picture of the ocean, not only incorporated colors from it, but also created a dotted pattern in her weave that represented the rocks underneath the water. Those rocks closer to the surface and thus received more sunlight were translated into brighter yellow dots in her weave, while the other rocks further from the ocean's surface were more subdued in her design (The New School, 2008). During this collaborative

process the faculty member, who had also traveled to Guatemala in 2008, observed a clear advancement in AL's design skills and approach to products. Specifically, they began to work with color palettes that were broader across their products, yet more controlled within each design, for example, moving from multicolor designs to using threads from the same family of hues (*see figure 6*).

They also became freer in their weaving techniques and were more likely to explore asymmetrical patterns or one-off details in the cloths they produce. These observations are in-line with those documented in cases such as *Sop Moei Arts* in Thailand, in which, after several years of working on designs provided to them (Jongeward, 2001), there was observable advancement made in the group's own design abilities.

The goal for the 2009–2010 academic year includes following up (via telephone) with *Ajkem'a Loy'a* regarding their products, potential sale outlets, as well as sharing feedback received from vendors; also following up with *Ixoqui A'j Ru Xel Kiem* to receive progress about their group and define goals for the next several years. Faculty coordinators will also continue to seek grants, update their colleagues on this year's progress and possibly start to segment the project to facilitate its growth and to share the administrative load amongst several faculty.

challenges in organization and communication

To ensure long-term sustainability and avoid reinventing the wheel, these kinds of projects can only happen via a well-structured and clear organization that include students, faculty, university administration, external partners and the artisan communities with whom the students collaborate. If a center or other centralized office in the university does not house the project then there must be a new organization created for its management. One challenge is to maintain information flowing throughout the different parties to make sure all participants are well in agreement as to where the project stands and what the next steps may be. Another challenge is to carefully assign roles and responsibilities (Shirky, 2008). The case described here has been complicated because at least three divisions of a large university were interested in participating; there was no obvious central home for the project; the faculty involved were also the project's principal staff and were in charge of coming up with its structure and pedagogical vision as well as overseeing its implementation; and finally to this day there is no multi-year funding that would permit us to set up an infrastructure to oversee the work.

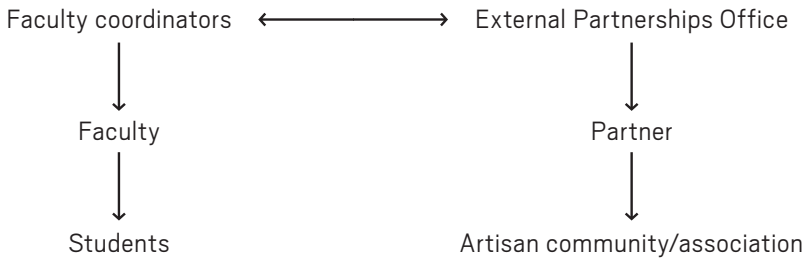

Figure 7: The New School / CARE partnership

In terms of partnerships TNS' collaboration with CARE was initially structured as depicted in Figure 7. Faculty coordinators worked directly with Parsons' External Partnerships Office, which in turn was the main contact with the partner (in this case CARE). The artisan communities only had direct communication with CARE; and students communicated directly with faculty involved who in turn were all overseen by the faculty coordinators for the project.

Figure 8 depicts the media (face-to-face, email and telephone) used for communications between all parties involved. Of interest is the fact that most internal university interactions happen face-to-face (this is the nature of teaching and learning outside of online environments), while the key liaison between the External Partnerships Office and the partner organization was mainly participating via email or by phone rather than in person (CARE staff assigned to the project were based in the organization's home office in Atlanta). The lack of clear communication throughout prevented all participants from feeling that the project was centrally organized. Instead, the students and faculty were well connected and with the External Partnerships Office and the partner organization was not really aware of what was happening in the classroom. Also problematic was the fact that the collaboration began with no direct connection between the students or faculty and the artisans and that this connection was established only once the summer program in Guatemala was under way.

This structure also created a need for many more meetings between the Faculty coordinators and the External Partnerships office to ensure that the goals of faculty and students were being clearly represented and communicated to the artisans. Without a centralized location (either online, in person or an office) to which all had access there was no guarantee that correct information was flowing through the entire organization. The final issue with this setup was the lack of potential

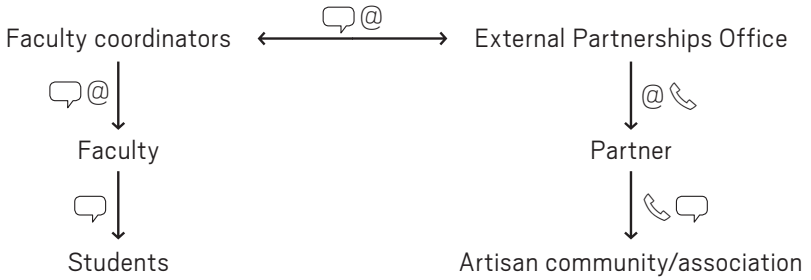

Figure 8: The New School / CARE partnership communications—2008

for sustainability of the project. This project was only one in the many that the External Partnerships Office was overseeing; so having this office be the central point of communication was not the best use of university resources (it would have made more sense to centralize all communications with one of the Faculty coordinators.)

Once CARE lost its funding related to the project in late 2008, TNS decided to continue working directly with the artisan community. The organization depicted in Figure 9 was established.

This new organization allowed for participation by the partnering organization without the project depending on it. Faculty were able to communicate directly with the artisan community and therefore plan curricula and apply for grants ensuring response to their needs and interests. Furthermore it removed the External Partnerships Office from a central position to one of advising the Faculty coordinators, who were now the ones who oversaw the project, which therefore truly revolved around teaching and learning. Since all participants were connected to the faculty, information could flow more freely through all the participants (via email between the faculty, partners and students and via telephone with the communities in Guatemala). Despite the improvement in communication, much work needs to be done in establishing continuity from one year to the next because, for the most part, the student group changes. One student participant from summer 2009 points out this issue in their course evaluation, "...work in the communities should continue, and I think that it is unfortunate that that work will not be done by the same students who worked on it this summer. I think some of the projects that were not completed this summer could be completed in the Fall and a proper debriefing and transmission of information could happen to make it easier to build upon in the next [International Field Program.]"

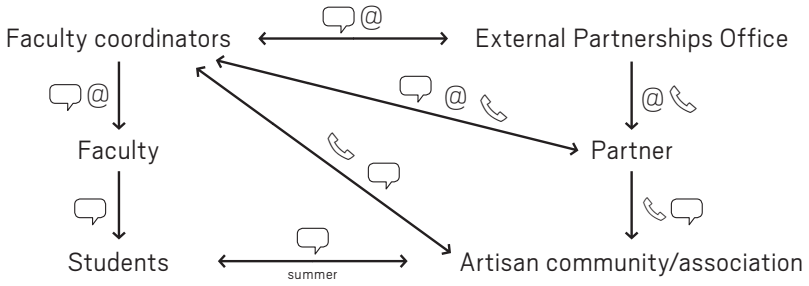

Figure 9: The New School / CARE partnership communications—2009

The initial project's location, San Lucas Tolimán, was identified by CARE and the artisan women involved had been working with CARE Guatemala in a Mayan leadership and empowerment program *Liderezas Mayas*, since 2005. Despite this TNS' main contact was with CARE Atlanta's Public Relations and Marketing staff who naturally had a different focus and interest when participating in conversations about the project. The first summer program was developed between TNS and CARE Atlanta which made CARE Guatemala staff not really understand their role when TNS faculty and students traveled to Guatemala—a missed opportunity since their on-the-ground experience and knowledge of the artisan women and their culture could have greatly benefited the project. Instead, as mentioned in the introduction, neither party knew exactly what CARE Guatemala's role should or could be, because it was not established from the beginning of the partnership.

During summer 2009 it was critical for TNS to identify staff members in the municipality of San Antonio Aguas Calientes (SAAC) who were also in direct contact with the community participants, to ensure clear and transparent communication between all parties from the beginning of the project. It was advantageous that TNS group met with SAAC's mayor and members of his staff from the beginning of the summer with continuous contact. The major disadvantage of partnering with a local government is the uncertainty of what happens to the project when there is a change in party and/or leadership—this will need to be addressed in 2012 when the mayor of SAAC is up for re-election. Even before traveling to the new site, faculty participants observed a clearer relationship with the project and new site.

The artisan groups in the project also have their internal organizations that at times facilitate or complicate their associations' functions. In the case of *Ajkem'a Loy'a*, this group was originally constituted as an association with the roles of President, Vice-President, Treasurer, Secretary and Participants, assigned to the

women who were in the groups, without a sense of term lengths or how the roles could change. During summer 2008, the student business team led two sessions for AL about their association, in which the team proposed a new structure that would both facilitate a stronger sense of group and unity, as well as support and continue the work started during the month long collaboration. After these sessions, AL adopted a new horizontal structure for the association, which eliminated the positions of President and Vice-president and democratized decision-making through the creation of additional positions such as Design Manager, Quality Control Manager, Store Manager, Communications Manager and Workshops Manager. All positions were proposed to rotate on a six-month basis. Additionally, the association assumed a micro-credit in the amount of Q6631 (approximately U$800), the sum of all the materials purchased for the summer collaboration with the project's initial funding (six sewing machines, threads, patternmaking supplies and all of the materials related to the store's redesign) which had to be repaid in a year at an interest rate of twenty-four percent, to a savings account in the association's name (Lawson, 2008).

The assumption was that with rotating roles and financial investment in the association, the women would be motivated to function as a group, strengthening the trust between them and thus ensuring a higher success rate for the group's future endeavors. This success rate has been clearly documented by micro-credit endeavors around the world (Yunnus, 2007). Additionally, with more specific roles (focused on areas and not hierarchy), decisions in the group could be made more easily. In reality this horizontal organization was not truly adopted by the group and *Ajkem'a Loy'a* continues to function with its original hierarchy (President and Vice-President) and no clear sense of rotation. In summer 2008, a member of AL brought up the issue of collaboration within the group, which has been observed as an ongoing challenge now that the project is in its second year. "[My goal is] that the group gets closer because I see the group very distant. When there is something to benefit from, the group shows up but otherwise not. I want the group to organize better" (Raxtún, 2008).

In the case of Santiago Zamora there was no official artisan group before TNS's arrival. This allowed for a participatory approach to the establishment of the artisan group, the project and a vision for the collaboration. Thus, *Ixoqui A'j Ru Xel Kiem* has adopted a much more horizontal and non-hierarchical structure similar to what TNS was advising AL to adopt in summer 2008 (Lawson, 2008). Of interest moving forward will be to compare and contrast, for the two artisan groups, the impact of organizational structures on their business development and interaction with TNSC project.

challenges in technology and communication

Digital technology has inevitably played an important role in this project—and more because of its absence rather than its presence. The use of media can be broadly divided into the categories of documentation, empowerment and communication. Media as documentation is commonplace in these kinds of projects, in which documenting what happened and being able to share it through beautiful images (moving and still) is critical to securing interest and funding from others. The cases described above are documented at length on a blog created for this purpose (The New School, 2008) and have also been presented in publications from some of the partners as well as on-campus exhibitions. In summer 2009, with the new group in Santiago Zamora, there was emphasis in sharing documentation with the artisan collaborators—so that it wasn't just faculty and students documenting "them" but both sides documenting the project and collaboration.

This shift in point of view is what then relates to media as empowerment. The popularity of kids with cameras projects, like the ones described in Wendy Ewald's book (2001) *I Wanna Take me a Picture* has to do for the most part with giving a voice to underrepresented communities. Instead of feeling like outsiders are observing them, these communities can be empowered to depict themselves directly. Sharing cameras with the community in Santiago Zamora, for example, helped build a very fast level of trust. Soon after the footage was shot, viewers at a conference in Guatemala City were amazed to see the level of comfort with which the women were recording, as well as speaking to the camera (these comments came from Guatemalans who are more accustomed to seeing depictions and recordings of shy and reserved indigenous women). AI, the group with whom this collaborative media project occurred, also expressed excitement over the fact that someone external to their village would be interested in seeing them and learning something about their place and culture.

As shown in Figure 8 communication throughout the project occurs face-to-face, via email and over the phone. Since "women in the Third World appear to be the group most aided by the new telecommunications technologies, including the cell phone" (Kasprzak, 2007), it was expected and confirmed that most of the participants in the project in Guatemala own cell phones. And although many reports point to a closing of a digital divide for women and younger people (Haddon, 2004), most of TNSC's community participants had had little exposure to the Internet before the collaboration started. This has made the principal vehicle for communication between faculty coordinators and artisans to be the telephone (and

face-to-face interaction when the field program is running). What is interesting is that although the artisans are interconnected via cell phone, all group decisions are made face-to-face (driven both by their culture and financial struggle) they have set meetings on the first Saturday of every month, and additionally the president calls extraordinary meetings in case there is an important decision to be made. In spring 2009 during the planning for the summer program faculty coordinators observed a breakdown in the communications with AL. The president of the association (and the main contact person) was not reachable via phone, so all calls had to go through another member of the association who would then contact the president (presumably via phone as well), who would call a local association meeting at which point decisions could be made. This process created a delay of at least two weeks for any decision to be made; an extremely long time in the framework of modern technology in which communications are instantaneous and decisions are made within a few minutes' notice.

The main technological hurdle these artisan groups need to overcome in order to successfully sustain businesses is precisely the immediacy of communication of their market (well-to-do professionals in urban centers). With a long-term goal of having the artisan groups function independently and sustainably, it is critical that they become fluent in emailing as well as comfortable with the Internet, browsing and computers in general (*see figure 10*). Without these skills these groups would not be able to compete in today's market, and most importantly, to connect with their consumers who are not just local, but also located internationally.

To address this goal both summer programs have included computer and Internet workshops. However, there has been an observed lack of engagement with the topics since participants do not own these technologies and therefore do not feel they can necessarily practice what is being learned. Furthermore, operating systems, browsers and free web-based email programs use metaphors that these groups are not necessarily comfortable with or exposed to, such as desktops, work spaces, books and dictionaries. Much of this challenge of technology in developing countries has been addressed via the design of inexpensive technology, such as the One Laptop per Child (OLPC) project (http://www.laptop.org/en). However, initiatives such as OLPC raise the issue of the usefulness of the hardware if the metaphors on which the software was designed do not translate culturally. Would it be possible to instead focus on a different kind of user friendliness in the software being used? What would a web-based email program specifically tailored for adults with little schooling look like? Are the current software and hardware metaphors necessarily adaptable to all societies? What would technologies rooted in local

Figure 10: Computer workshop with *Ajkem'a Loy'a*, Fall 2008

contexts and specifically designed to meet the needs of local communities look like (Mariátegui, 2009)?

In December 2008 a TNS faculty member traveled to Guatemala to teach the members of AL how to email and browse the Internet. Two strategies were implemented to address some of the issues above. The first was to counter-intuitively start the workshops outside of the computer room. It is commonplace for schools and universities to teach about computers in front of a computer. However, because of the unfamiliarity of this particular group with these technologies, it was important to first explain the computer, the operating system and the browser, without the distractions of an Internet café. The second strategy was to use metaphors familiar to AL. For example, in explaining web-based email it was most helpful to talk about the URL as the address for a post office, and to connect the steps for sending an email with the steps for sending a letter via mail. The biggest challenge following the workshops has been the issue of financial resources, since the members of AL do not have Internet-ready computers at home, and those who do cannot afford the cost of Internet access. It has been the experience in TNSC that all participants in the project had to use an Internet café to check their email, and with Internet being an essential component of every modern day start-up business, it is clear that future

funding for the project should include a small stipend for at least one person to consistently check email on behalf of the group.

Two principal shifts need to occur in the artisan collaborators with regard to their Internet connectivity. The first is that they need to understand how the Internet can play a critical role in their business—as a place to sustain networks that will benefit them and as a source of design inspiration. The second, and most challenging, is that there needs to be a significant change in the women's sense of time in terms of communication. In each computer workshop, faculty and students from TNSC have had to emphasize the importance of frequently checking email. Checking email once a month (which seems to be the frequency which most appropriately fits with the artisans' everyday activities) is not appropriate if the group is doing business with someone who is used to email as a way to receive immediate response.

Finally, it is impossible to speak about international programs and not address the issue of language. In the case described, there was a significant shift from 2008 to 2009 in this regard. In 2008, not all students and faculty who traveled were fluent Spanish speakers, so there was a constant need for translation between English and Spanish. It was a definite challenge to not have dedicated translators in the team, and to have to rely on Spanish speakers to undertake the double tasks of leading or participating in workshops, as well as translating. The Spanish speakers also encountered communication issues due to the level of schooling from the women in AL (most participants had not attended school past the third grade and two could not read and write on their own). Based on the assumption communicated by CARE, that all of the women would be able to read and write, workshop facilitators planned materials and activities that included reading and writing (Lawson, 2008). In reality, at least three of the women had difficulty reading and writing independently. The women in AL helped their peers who had the most difficulty, but there was an observable lack of engagement with the learning process and overall project on the part of the less literate women.

In 2009 it was a requirement for students to either be fluent in Spanish or to study at least one semester of the language before traveling to Guatemala. This requirement caused a significant and positive shift in how the various members of the student team could relate to the artisans. In 2008, there were a select few who could freely communicate with the artisans, whereas in 2009 more of the members of TNS team were able to speak directly with individual artisans, accelerating the process of trust building and aiding in the communication flowchart described above.

conclusion

Immersive, international field programs are important for universities to engage in, as meaningful and hands-on global learning opportunities. However, there are also myriad of challenges for all organizations involved—the university, partners and local artisan groups—including:

- → ensuring clear and transparent communication between all parties
- → gaining the trust and interest of local communities
- → setting teaching objectives that are ambitious yet realistic
- → meeting those objectives in spite of cultural differences
- → appropriately introducing Internet technologies to indigenous communities
- → appreciating and overcoming challenges posed by the hierarchical structure of the groups

The faculty team in The New School Collaborates, based on many of the challenges faced, is proposing a revised model for summer 2010 which would include partnering with local designers in Guatemala. This local partnership will hopefully alleviate some of the stress and miscommunication that occurs throughout the year, when faculty and students are back on campus in New York City and cannot sustain an ongoing communication with the artisan groups in Guatemala. The local design partners will play an important role in maintaining continuity with each group after the summer collaboration, as well as in connecting the artisans with local opportunities for the sale of their artisan products.

What is yet to be determined is how critical the role of technology can really be if the artisan communities see computers and the Internet as something completely foreign to their everyday lives and routines. This article suggests that communication technology must play a central role so that the groups have a chance at succeeding as businesses, and will certainly be one of the priorities for TNSC moving forward. Finally, it is the hope that TNSC serve as a model that can be adopted and adapted by other universities, non-profit organizations and artisan communities.

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The Economics of Attention, Style and Substance in the Age of Information RICHARD A. LANHAM

Chicago, IL: University of Chicago Press, 2006 / ISBN 10: 0-226-46867-4
Paperbound, 312 pages, black and white illustrations / $18.00

This may seem like an odd review for *Visible Language*, yet whether we are producers and disseminators of information, or recipients and users of it, we all struggle to capture others' attention or to control our own. Many of the information formats now in use are based on the economics of scarce information and a substrate of physical material. Some would say we are drowning in information given our exposure to media and its relentless push on us; information is no longer scarce, but attention is.

Lanham takes issue with the standard we use for communication, what he calls the C-B-S model, i.e., clarity-brevity-sincerity. This runs counter to what behavioral psychologists know about human communication—it keeps running to allow people to reaffirm themselves and to keep the interaction and connection going. Much information exchange is redundant; it maintains social connections. The C-B-S model is about information as stuff, an economics of stuff model that Lanham believes is obsolete; it is transparent with well-documented progeny, such as the crystal goblet of Beatrice Warde, who prescribed the goal of typography and its presentation to be invisible; allowing readers to focus on content alone.

Many writers, editors and traditional designers represent and are trying to sustain an obsolete method for information dissemination. The author cites the creators of video games as masters of the attention economy, much like novelists who draw us through an intricate story and keep us coming back for more. The new group of attention economists is interface and interaction designers, who capture attention and lead us through dynamic sites in which the user decides what is important and deserving of closer attention.

"'Design' is our name for the interface where stuff [content] meets fluff [style]. The design of a product invites us to attend to it in a particular way, to pay a certain type of attention to it. Design tells us not about the stuff per se but what we think about stuff. It is the interface where the stuff we dig out of the earth's crust meets a fully human reality of feelings, attitudes, and ambitions" (18).

Artists such as Marcel Duchamp, Andy Warhol and Christo tune attention, provide the opportunity to experience something differently, thereby commanding our attention. The kind of attention the viewer produces changes the object from mundane to unique, or possibly even profound. The art captures attention and transforms it, both art and attention, into something unexpected.

This brings us to rhetoric, that most maligned aspect of communication. Rhetoric gets our attention; it is dramatic and takes us out of ordinary exposure to bland, colorless information. The fundamental idea that Lanham puts forward is that elements that regulate attention are style, and further that there is an oscillation of attention between content and form. He likens a useful approach to information and its attention requirement to be more like attending to a poetry reading rather than to examining a profit-and-loss statement. The oscillation is an at/through sequence that he elaborates on in terms of a Style/substance matrix. The oscillation can also be understood as a switch between purpose and play.

"If information is now our basic 'stuff,' must not our thinking about human communication become economic thinking?"(21).

Graphic Design Translated, A Visual Directory of Terms for Global Design PETER J. WOLF

Beverly, MA: Rockport Publishers, 2010 / ISBN 978-1-59253-595-8
Hardbound, 432 pages, full color illustrations / $50.00

Having been concerned with designer's use of "plastic" language (see Poerkson, 1995) and my own foray into the problematic process of definition (see Poggenpohl, 2004), we now find that, as we cross borders and collaborate, our use of language as translation further complicates things. Designers are not notable for their linguistic precision even within their native language, many things are left unsaid, yet they collaborate across borders and get things done.

Peter Wolf's new book, *Graphic Design Translated, A Visual Dictionary of Terms for Global Design,* addresses graphic design terms dealing primarily with typography, printing, visual fundamentals (color, layout, scale, etc.) and historical references (art nouveau, modernism, etc.). It acknowledges only in a small way terms relating to technology or electronic media; thus the book is traditional in its treatment of graphic design. The book is structured with terms arrayed alphabetically in each of its five sections covering: English, French, German, Italian and Spanish. Following each word entry and its visual illustration, the appropriate translation into each of the four other languages follows.

The fun begins when you flip between languages using translated terms as the guide, and view the illustrations for the same term as few of them are used repetitively. Some illustrations, because of the technical nature of the word, are very clear visual descriptors. Others, because of the broader meaning of the word, require

more visual understanding and interpretation on the part of the viewer. Viewers will also, no doubt, quibble over the iconic value of some illustrations, particularly those related to historical terms. Nevertheless the author is to be commended for the broad visual accompaniment to the words and his effort to get all the permissions necessary for this project.

Also of interest is that the author appears to have attempted to illustrate the German or Spanish sections, for example, with design from those countries. Of course, these days it is difficult to precisely attribute names of people or businesses to national origins.

The book is beautifully produced with full color images and a clear and useful reference structure. It is a pleasure to look through and even play by comparing the illustrations for one concept.

With so much printing outsourced to Asia (this book was printed in China), I can't help but wonder if the author plans a similar book with translation to Chinese or Japanese. The translation might prove to be more difficult, but as English has less dominant use in these countries, the translation could prove to be even more essential. Further, as we know, China is the world's manufacturer of products. The author teaches industrial design as well as graphic; the need for a translation of manufacturing, material and industrial (product) design terms that cross western-eastern languages might also be useful.

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Poggenpohl, Sharon, Chujit Jeamsinkul and Praima Chayutsahkij. Language Definition and Its Role in Developing a Design Discourse. *Design Studies* 25, 579–603.

The Grid Book HANNAH B. HIGGINS

Cambridge, MA: MIT Press, 2009 / ISBN 978-0-262-51240-4
Paperback, 300 pages, black and white illustrations / $25.00

Books about grids seem to come out periodically since the first of its kind, *Designing Programmes* (Gerstner, 1963), a hallmark of modern design thinking.

By title, the book reviewed here could be a rehash of other grid books that demonstrate the process and aesthetics of using grids, attributing their use largely to modernism, and more recently to post-modernism (Samara, 2002). However, this is

far from the case. The author is an art historian who grew up in the cradle of fluxus. One expects more from her and she surely does not disappoint.

The following chapter list demonstrates the breadth of understanding presented in this book: brick (hand unit), tablet (with cuneiform writing), gridiron (urban grid), maps (not necessarily rectilinear), notation (music), ledgers (accounts), screens (perspective illusion, frame), type (modular unit), box (unit of space) and network (dynamic information space). Each chapter title contains a date of use, for example, brick is followed by 9000BCE, while notation is 1025 and network is 1970, thus the author brings us through time demonstrating the history and efficacy of the idea of grid. It is only with type, box and network that we see association to earlier grid books whose intended audience was designers. Modernism itself is apparent only in these last chapters. Each chapter moves through history from early to more recent, thus the context of grid application and expression demonstrates change through time in this consistent structure. What is achieved in this book is to not only put grids into a broader historical context, but to show them as instruments of human control and development. The reader may see relationships among these grids in terms of construction of buildings or words, location systems for places, sounds, things or information, or comparison systems for wealth, scale translation or information.

Not content with just the history and what is known, the book goes further into what is now emerging, concluding with an afterword titled, Toward Fractional Dimensions. Chaotic grids deeply embedded in nature such as Einstein's space-time or Mandelbrot's fractal geometry take grids into future understanding and end the book with ideas about four dimensions and the dynamic of time. Again, this is a trip through time, from da Vinci and Newton to recent scientific developments, connecting with modern and fluxus artists and their experiments to open the picture plane, expand on sound (or silence), chance and intermedia.

This is a book with which to gain perspective on the concept of grid; it is also a book with which to think. Quoting the author (276):

"Grids, in other words, should not be seen merely in terms of the space, parallel bars with their attendant association with penal codes and social regulatory systems. Each grid has its own texture, uniqueness, individuating features, capacities for creative enactment, and relationship to other grids, as much as each person combines and utilizes a grid for him- or herself."

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Samara, Timothy. 2002. *Making and Breaking the Grid*. Gloucester, MA: Rockport Publishers.

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