Reconstructing Afghanistan: An Architecture Curriculum for a "New Way of Life"

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In 2008, the University of Hartford, College of Engineering Technology and Architecture, under the direction of Dr. Mohammad Saleh Keshawarz¹, was given a \$1.33 million grant from the World Bank to help reestablish the School of Engineering facilities, curriculum and faculty at Herat University.² The grant directly funded faculty members from Herat University to come to the private college in West Hartford to earn their master's degrees in various engineering and architectural disciplines. The grant mission also facilitated creating a new Architectural Engineering Technology (AET) program to address the growing needs of contemporary Afghanistan. Having never had an architecture program in the City of Herat, the slate was blank and the opportunities were endless. Over the next three years various individuals have worked to forge an innovative curriculum, one that melds the historic traditions of a two-thousand year old city with the contemporary needs of a Western-style Islamic society.

Afghanistan is not a country or culture, which has benefited from years of self-revelation and sheltered exploration. After 30 years of continuous war: with its death, destruction and despair; Afghanistan has become a true Deconstructivist culture. Not a prestigious landscape littered with stylistic artifacts, but a true context of complexity, conflict and chaos. Constructs, such as Modernism, Post Modernism, Deconstructionism and New Urbanism seem to have no place in current Afghanistan, yet recent and past examples of these expressions can be found all over the landscape. The evolving City of Herat has become a true pluralist environment, and the variety of styles and habitation has generated a multitude of confusing and yet significant representations and meanings. In the current context of extensive destruction and expansive re-building, neither Islamic Traditionalism nor Soviet Modernism has been able to provide a dominant or visionary *episteme*. As such, University of Hartford faculty acted as visionaries trying to project architectural education into the future. But was a new, more radical approach to architectural education the answer to address the critical question, "How to rebuild a culture?"

When the ideally conceived, western inspired curriculum was finally taken to Herat University for approval and implementation, a new and harsher reality emerged. This paper will chronicle the events that eventually reshaped the ideally proposed curriculum. Less an academic critique and more a personal narrative, this paper endeavors to relay the insights gained while working in a chaotic and transitional environment. It will relay how the current state of the profession, cultural traditions, expanding innovations and economic realities came to bare on the development of this new program; and how western preconceptions were revised by Islamic realities. And finally, how did the melding of these realities supplant initial utopian agendas in the creation of a more viable, integrated curriculum, which supports an evolving, unique and contemporary architectural identity.

THE GRANT

The first few years of the grant focused primarily on revitalizing the School of Engineering and its related faculty. Sixteen faculty members were brought sequentially to the University of Hartford to continue their education at the master's degree level. After this aspect of the grant was established, attention turned to the possibility of establishing an Architectural Engineering Technology degree at Heart University. To date there is only one architecture program in the Republic of Afghanistan and it is based at Kabul University. During the initial phase of the program development, Dr. Keshawarz consulted with both Dr. Albert Smith³ and Dr. Michael Crosby.⁴ Aspects of the Bachelor of Science degree in Civil Engineering from Herat University were melded with the Bachelor of Science degree in AET from the University of Hartford. The evolving hybrid curriculum proposed a common engineering first-year, with AET courses in the remaining three years. Heavily laden with math and structures courses, this draft paid homage to Islamic traditions while trying to be philosophically contemporary.

When Dr. Crosby declined the offer to go to Herat, Afghanistan to further develop the program, he handed over the project to me, Associate Professor Theodore Sawruk. In some ways, I was a natural choice, as I have been involved in developing four previous undergraduate curriculums and had just the past fall helped our program acquire its accreditation. For me it was an ideal opportunity to put my skills to work on a relatively blank slate. Expanding on their previous work, I continued along the same track, balancing craft and theory, with just a touch of history and sustainability. I was enamored by the potential and naturally oblivious to the limitations and preconceptions embedded in our proposal. Courses were structured. Course descriptions adapted and revised, and course sequences were restructured. We were so confident in our proposal that text books were proposed for each course and desk copies were purchased. With all the good intentions of Dr. Frankenstein, we had sewn together the perfect program and were only awaiting the opportunity to bring it to life.⁵

ARRIVING IN HERAT

In June of 2009, Dr. Saleh Keshawarz and I set off to Herat to present the new curriculum to the president of the university and to fund the inception of the new program. Leaving Hartford, we flew via Dubai and Kabul to Herat. Some 25 hours later, we landed on the dirt runway of the airport. As we proceeded down the lanes, roads and boulevards to the hotel, there were three constructs that dominated the landscape. A massive fortress, initiated by Alexander the Great, dominated a hilltop overlooking the extensive medieval city, recently designated a World Heritage Site by UNESCO.⁶ There was an abundance of early 20th century white, cubist buildings, which reference a previously pro-European age, and lined all the major boulevards and public squares. And finally, the newly emerging 10, 15, or 20 story concrete frameworks that heralded progress, yet seemed to erupt randomly throughout the continuous four and five story residential neighborhoods.

Herat province was once an agricultural paradise, which supported a thriving culture of art, architecture and education.7 The city's heritage is centuries old and realized a truly unique and exhilarating architectural fabric. Herat, in the 14th century hosted both the Friday Mosque, one of four significant religious centers in the then Islamic world; and the Musalla, one of the preeminent learning institutions in the world. Under the 20th century monarchy, the region hosted a summer residence and again thrived under the realm of pro-western Modern-The neighborhoods surrounding my hotel ism. were more reminiscent of the Weissenhof Exhibition⁸ then anything Persian, and could have easily been plucked right from Prague, Vienna, Dessau or Rotterdam. Restricted over the last thirty years by conflict and upheaval, the city has been spared the evasive impact of industrial progress. Yet, real destruction looms on the horizon. Intense expansion and unbridled construction threaten to impede if not destroy the current cohesive urban context.

When I arrived at the University of Herat, I was introduced to Abdullah Kazemi, the one and only architecture faculty member in the School of Engineering. Kazemi holds a BS in Architecture form Kabul University and practices architecture as an engineer-architect locally in Herat. During my brief stay, he would serve as my colleague, liaison, and in many ways my one true ally. He always gave me honest and frank answers and sincerely supported the development of an architecture program. The other key figure in my lexicon of supporters and advisors was Dr. Nasir Ali Ahmady, the Dean of the School of Engineering, with whom I forged a personal friendship and a deep rooted respect. A reserve, modest figure, he directed the School with an almost grand-fatherly authority. He was, by in far, the most astute of us all. For, he alone, had been appointed during the monarchy and had survived as an academic through all the previous political evolutions. In the days that followed, I was cordially introduced to the President of the University, the Dean of the Art School and numerous faculty members from a variety of other departments.

The proposed curriculum and related course descriptions were presented at all levels in English, with Farsi footnotes for technical or architectural terms. All meetings with faculty, deans and even the university president were conducted in English and only translated into Farsi, when absolutely Though questions were asked, issues required. raised and comments made, it quickly became evident that this was "my," meaning the University of Hartford and the World Bank's program. It was being conceived by us, implemented by faculty educated by us and largely funded by our resources. It was initiated with the support of the central government and we were acting as its liaison to Herat University and the School of Engineering. I naively thought of this as a bottom up proposal, but soon learned it was very much a top down initiative.

I also came to realize that the new architecture program would not only be housed in the School or Engineering, but would share both its faculty and coursework.⁹ With only one dedicated architecture faculty, and four additional in training¹⁰, a good percentage of the coursework would fall to engineers and adjuncts. As a pre-professional program, there were fewer constraints on the curriculum, but also less mandatory requirements. It also became obvious that this degree would primarily serve as a stepping stone to advanced degrees and various specializations.

As I began to ask more directed questions about architecture and the profession in Afghanistan, the Dr. Ahmady quietly recommended Kazemi put me in touch with some of the local architects. There are only eight licensed architects in the Provence of Herat and only one of those individuals makes his living practicing architecture.¹¹ The others have found careers in government, education, construction and business. This group of concerned professionals quickly formed the basis of an advisory board, or more practically a think tank. As I worked with this group on a weekly, sometimes daily basis, I began to understand more and more about their current situation and the previous years of personal hardship. Most of these men had all been educated within a few years of each other at the University of Kabul, and graduated with degrees in Architecture.¹² Many had also gone on to study for a short term in Soviet Union or other allied countries. They all had high hopes of long and productive careers, designing numerous significant buildings. Yet, those dreams would never be realized. The profession of architecture, and relatively all construction, has been serubticiously usurped by engineers acting as amateur designers. The government only requires the seal of an engineer to guaranty structural integrity, so the value of design has been rendered impotent or superfluous.

Many of the groups' concerns were practical and grounded in decades of failed realities. They respected and appreciated my desire to tailor the program to their culture, but also struggled to understand my implied values. Discussions related to the philosophy of architecture or "Green" building techniques, though intriguing and academically stimulating, were largely overshadowed by more pressing and practical concerns. Many of my initial aspirations fell not on deaf ears, but on very astute ears, attached to men who asked more pertinent questions then "How many credit hours" and "What is the content sequence." Instead, they asked:

- Who would want to be an architect in the current economy, and commercial climate?
- Who would hire the graduates and utilize the services they could provide?
- What could they be realistically expect to contribute to the community in the current climate?
- Who would teach them the academic background needed to function as an architect?
- Who would train them professionally beyond the classroom?

They felt it was critical for me to understand that architects would not be able to compete with engineers in the areas of civil engineering, and soon, structural and electrical engineering. These services are the bread and butter of the over 400 previous graduates, primarily male, who own or work within established firms. Although tolerant and even gender competitive, an established profession would not allow its role or its financial resources to be usurped by an emerging, most-likely female dominated profession. (Confused at first, it was quickly explained to me by Kazemi that architecture was not being developed as a male profession in Afghanistan, but instead was being initiated by the current administration as a field primarily for women. This is not the traditional western marginalization, i.e., "women go into interior design," but a more evolved version, where all significant building lies in the control of engineers, who happen to be mostly men. Architecture, as such, would be largely relegated to the realm of residential design and naturally, in the current context, more appealing to women.) What we needed to do was find a way to make architecture and engineering, not only compatible or co-operative, but somehow co-dependent within the Afghan construction industry. Again I must stress, this is a world where engineers control all building, rarely enlist the services of architects, and the architectural profession is basically non-existent.

If architecture was going to become a viable field of study in Herat, the real quest was not just defining a meritorious curriculum, but simultaneously finding a way to make that education essential to the society at large. The conversations among these eight architects were always respectful, patient and elusive. Never abrupt, critical or demanding, all comments were usually voiced as an enquiry or thought. It was easy to see how this tenuous group had survived the three rapid regime changes, each more extreme then the last.

Very quickly a set of unspoken concerns and priorities began to emerge.

- Architects had to make a unique contribution, fill a void in the commercial sector. And, if possible, garner the support of the existing engineering profession by enlisting its aid in fulfilling its role.
- An undergraduate architectural education had to provide a stepping stone to advanced education and the opportunity to study beyond the borders of Afghanistan. The current climate has allowed students to study via grants throughout the world. Currently, all young professionals, of any academic standing, have an advanced foreign degree.¹³
- The education and related profession of architecture had to become more attractive

to males, if it was going to be socially and politically considered more than a residential design degree.

And finally, the program had to create the basis for a true professional organization that could act as one voice in establishing its critical necessity.

So, how does one educate students in the merits of architecture, when it is for all intensive purposes an erroneous subject and a non-existent profession?

REVISING OUR PROPOSAL

After about two weeks of daily conversations, three major areas of focus emerged. The recent investment of millions of dollars by the Agha Khan Cultural Foundation, private donations and local authorities¹⁴ gave commercial merit to the reconstruction of the vast medieval city. From a global perspective, this historic maze of neighborhoods represented millions of dollars in future tourist revenues. With its over 800 untouched Timurid, Ghoris, and Kertis style mosques, shops, baths and villas, it is an endless resource for historic preservation and traditional masonry structures. Restoration is a field not yet fully explored by the engineers and offered endless collaborative possibilities. Coursework in historic preservation, Islamic architecture and traditional masonry construction were added as both individual upper level electives and within the over-all design studios.

With the current explosion of unregulated construction,¹⁵ it was more than evident that there was no real zoning or construction inspection over-riding the building process in Herat. Although construction inspections might be logically enforced by the engineering profession, city planning was beyond their abilities. It was easy enough to buy, sell, and modify existing proto-typical building plans, but the on-going design of a hierarchy of interrelated public spaces was a service only a trained architect could offer. Again, here was a real need only an educated professional could provide, which would not compete with the existing professional structure. An urban design component was thus introduced to design studio coursework and as a specific support course.

And finally, there was a concern that undergraduate architecture students might find themselves needing an engineering degree to truly gain professional status and financial stability. As such, a number of advanced math and structures coursework was added to facilitate the option of advanced studies in civil engineering.

In conclusion, the proposed curriculum (figure 1) presented to the president of Herat University, the Ministry of Education and the World Bank, was a sincere response to the needs of the people of Herat Province. Sponged from the proposal were the

preconceptions and prejudices of our naive, though well meaning, western perspective. The new program would strive to produce architecture students comfortable both in the realms of engineering and architecture. These emerging professionals could aspire to be both in-demand and respected within the building industry and the community at large. And, finally, both male and female students could significantly have an impact on shaping the reconstruction of a decimated country.

Total

18

(Figure 1) Department of Architecture - Herat University Proposed Course Outline

August 2009 (Total Credits 144)

All 4 credit courses are lecture and lab or studio courses and have extended hours. All 3 credit courses are traditional lecture courses.

First Sen	nester	Second Semester
IS ES ES M ENG HIS	Islamic Studies1Technical Drawing I3Into Engineering4Calculus I4English I4History of Afghanistan117	ISIslamic Studies1ESTech Drawing II3PHYPhysics I4MCalculus II4ENGEnglish II3ESComputer Programming3Total 18
Third Semester Fourth Semester		
IS ARCH PHY M ENG ES	Islamic Studies1History of Architecture I3Physics II4Calculus III4English III3Eng Mech. I (statics)318	ISIslamic Studies1ARCHHistory of Architecture II3ARCHArch Design I: Principles4ARCHMaterials & Methods of Con.4ARTArch. Sketching/Rendering3ESStrength of Materials3Total
Fifth Semester Sixth Semester		
IS ARCH ARCH ARCH CE CE	Islamic Studies1Urban Planning I3Arch Des II: Small Bldg4Building Systems4Surveying I3Structural Analysis419	ISIslamic Studies1ARCHUrban Planning II3ARCHArch Des III: Civic-Masonry4ARCHConstruction Documents4ARCHPrinciples of Landscape3CEConcrete I4Total 19
Seventh Semester Eighth Semester		
IS ARCH ARCH ARCH ARCH	Islamic Studies1Preservation3Arch Des IV: Urban4Technical Elective3	IS Islamic Studies 1 ARCH Sustainable Bldg. Systems 3 ARCH Arch Des V: Comprehensive 4 ARCH Prof. Practice/Project Mang. 4

NOTE: If a student plans to continue with a Master's Degree in Engineering, they must take Differential Equations as an elective before graduating.

18

Proposed Technical Electives: Architectural Theory, Interior Architecture, Advanced Computers in Architecture, Applied Urban Design, Site Planning and Development, Advanced materials and Construction Methods, Advanced Structural Systems, Architecture Study Abroad.

ENDNOTES

Dr. Mohammad Saleh Keshawarz is an Associate 1 Professor of Civil and Environmental Engineering at the University of Hartford. He is also the Director of Partnership between University Hartford and Heart University, representing the University of Hartford. He is a Registered Professional Engineer in the State of Connecticut. He received his BSCE degree from Kabul University, M. Engr. from Tennessee State University, and his Ph.D. from the University of Oklahoma. The \$1.3 million was awarded by the Afghanistan Ministry of Higher Education as part of a larger grant given to the ministry by the World Bank, to help rebuild higher education in Afghanistan after years of warfare against the Soviets and neglect under the Taliban. M. Saleh Keshawarz, a native of Afghanistan and an associate professor in the College of Engineering, Technology, and Architecture (CETA), is the principal investigator on the grant, together with CETA Associate Professors Hisham Alnajjar and Ivana Milanovic. http:// www.hartford.edu/dailv/Articles. 1/9/08.

2 Herat University, which was established about 20 years ago, has been working with the World Bank to help develop partnerships with 15 universities around the world. To date, Herat has established partnerships with universities in Germany, France, Slovakia, and Thailand. The University of Hartford is Herat University's only American partner. http://www.hartford.edu/daily/ Articles.asp?MainID=6155&Category=1

The grant from the World Bank to the Ministry of Higher Education, Government of the Islamic Republic of Afghanistan, University of Heart School of Engineering in collaboration with the University of Hartford, the College of Engineering, Technology and Architecture was primarily directed towards revitalizing the School of Engineering but also allowed for the introduction of formal Architectural Engineering Education to the University of Heart, Afghanistan.

3 Dr. Albert C Smith, Associate Professor in the Architecture Department at Ryerson University and a registered Architect. His PhD in Architecture is from Georgia Tech and has a subject area of History, Theory and Criticism, with a main interest in Representation. Dr Smith was a faculty member at the University of Hartford in 2008.

4 Dr. Michael J. Crosbie is the Chair of Architecture Department at the University of Hartford. He is also an Associate Professor of Architecture. He is a registered architect and received his BS, M.Arch. and Ph.D. from Catholic University.

5 Victor Frankenstein is a fictional character, the protagonist of the 1818 novel Frankenstein; or, The Modern Prometheus, written by Mary Shelley. He is the scientist who, after studying chemical processes and the decay of living beings, gains an insight into the creation of life and sets out to ... create an ideal man. He succeeds in ... giving life to his own creature (often referred to as Frankenstein's monster). http://en.wikipedia.org/wiki/ Victor_Frankenstein

6 Ministry of Information and Culture, Transitional Islamic State of Afghanistan submitted the City Of heart to UNESCO for cultural heritage site designation on 17/08/2004. The city of Herat, which is currently the regional capital of western Afghanistan, has long been of strategic, commercial and cultural significance to the wider region. Although the city has developed extensively in modern times, and has suffered the ravages of conflict, the site is unique in that it has largely retained its historical footprint, and many significant Islamic monuments have survived. http://whc.unesco.org/en/tentativelists/1927/

7 According to the account of Mustawfi, Herat flourished especially under the Ghurid dynasty in the 12th century. Mustawfi reported that there were "359 colleges in Herat, 12,000 shops all fully occupied, 6,000 bathhouses; besides caravanserais and mills, also a darwish convent and a fire temple". There were about 444,000 houses occupied by a settled population. The men were described as "warlike and carry arms", and they were Sunni Muslims. The great mosque of Herāt was built by Ghiyas ad-Din Ghori in 1201. http://en.wikipedia.org/ wiki/Herat

The estate was built for the Deutscher Werkbund 8 exhibition of 1927, and included twenty-one buildings comprising sixty dwellings, designed by seventeen European architects, most of them German-speaking. The German architect Mies van der Rohe was in charge of the project on behalf of the city, and it was he who selected the architects, budgeted and coordinated their entries, prepared the site, and oversaw construction. The twentyone buildings vary slightly in form, consisting of terraced and detached houses and apartment buildings, and display a strong consistency of design. What they have in common are their simplified facades, flat roofs used as terraces, window bands, open plan interiors, and the high level of prefabrication which permitted their erection in just five months. All but two of the entries were white. http://en.wikipedia.org/wiki/Weissenhof Estate.

9 School of Engineering, Heart University: Current Status in 2007

Civil engineering program at Herat University enrolls more than 300 students, about 11% of whom are women (a key goal of the Ministry of Education's plan for higher education). More than half of current male students and 75% of current female students are at the freshman and sophomore levels. The trend of significantly increased enrollments is expected to continue. Eleven full-time and seven part-time professors share teaching and administrative duties. The program follows a standard engineering curriculum and uses primarily U.S. textbooks as technical references; graduates receive the BSCE degree and have been successful in finding employment in Afghanistan. http://www.hartford. edu/ceta/herat/afghanequalityalliance/engineeringeducation.aspx

10 The two female Afghan faculty members, Mahsa Khatibi and Homaira Fayez, were in the last year of the advanced civil engineering/architecture studies at the University of Hartford and would soon be returning to begin teaching the first architecture class. Meanwhile, two additional male Afghan faculty members were in the Slovak Republic completing their advanced studies. All of these faculty members had a BS degree in Civil Engineering from Herat University prior to starting their studies in architecture.

11 XXXX primarily works for the government and over the years has design the majority of all government buildings in the province.

12 Based on a transcript of one of the architects, the curriculum at Kabul University was based on the soviet model, an approach to education where content delivery was characterized by numerous short-term, highly focused courses, rather than a few semester-long broad-based courses.

Five million USD had been allocated for stu-13 dents to improve their education beyond the country, the ministry of higher education said yesterday. ... In an interview with Kabul time's reporter. Spokesman of MOHE, Azim Noorbakhsh said "documents of almost 1200 students have been collected and we hope to send more than 2000 students abroad by the end of this year. Noorbakhsh continued the government of Afghanistan through the ministry of higher education tries its best to increase the number of scholarships we are in contact with different world countries whereby more than 1200 scholarships additional to the previous number be sent to India, Pakistan, Kazakhstan, Egypt, China and Turkey" he said adding they hope to introduce more than 2000 students to various countries of the world for receiving higher education .It should be mentioned that the government of Afghanistan has for the first time acquire the expenditures of the students and allocated \$5 million in this regardRelated to what disciplines had been chosen by the government of Afghanistan to send the students to other countries for higher education he said," as you know we have 80 thousand students engaged in education in twenty-six of the government institutions." Also about 45 thousand student in higher education institutions, it is noteworthy that the disciplines needed mostly by the government of Afghanistan are engineering, pharmacy, mines, and agriculture. http://www.mohe.gov.af/?lang=en&p=news&nid=1071

14 A Rehabilitation and Reconstruction Commission has been established in the city of Heart to oversee historic restoration of the old city. <u>http://www.hartford.</u> <u>edu/ceta/files/pdf/herat/architecteduc.pdf</u>

15 As a result of many years of war in the country, Afghans migrated to neighboring countries in large numbers. Upon their return, they brought with them different architectural styles from those countries. Iranian and Pakistani styles are the more prominent ones. As a result, the city looks like a hodgepodge of buildings with no clear or distinct architectural style. http://www. hartford.edu/ceta/files/pdf/herat/architecteduc.pdf