One Continuous Dragon: Innovation in Blindness Prevention

Tianyu (Tom) Liu ‘12

Describing his Lang Opportunity Project, Tom Liu ‘12 writes, “There is a phrase in Chinese, “一条龙”, which literally translates into “one continuous dragon”. It is used to refer to a process which is integrated and coordinated from beginning to end, and is commonly used to describe processes from fields as diverse as business to development. That seamless, coordinated process is what we are hoping telemedicine will bring to my LOS project, the Screening and Early Eye-Care Referral (SEER) program.

For the past two summers, I have been working at the Zhongshan Ophthalmic Center (ZOC), a large eye care hospital based in Guangdong Province. Since the establishment of its blindness prevention office in the late 1990’s, the ZOC has been involved in a number of programs to improve cataract services in the surrounding rural hospitals, including surgeon training and outreach screening. It’s been one year since the initiation of the outreach screening program; despite a marked improvement in the cataract surgical rate, it is still far from the rate needed to eliminate China’s backlog of cataract cases. The biggest problem is that outreach screening is only temporary. The screening van travels to a village for 1-2 hours, and if the villager can’t leave his/her work to attend during that window of opportunity, the opportunity is lost for at least another year. What we needed, I thought, was a permanent, local source of screening that villagers could go to at their convenience. What we needed was to train local village health workers (VHW).

In turn, what we needed for this entire referral system to function was a little technology. In my original proposal, the patient referral and post-operative management process relied upon many forms and phone call notifications. But we soon realized that this would become a logistical nightmare. Partner county hospitals have often complained in the past about the excess burden that filling out forms entails. Having a few VHWs call one coordinator at the hospital seems feasible, but there are around 200 VHWs in one county, and once we expand the training to beyond 25 VHWs per hospital, the number of phone calls would soon escalate to an unmanageable number.

(cont’d p 2)
One Continuous Dragon (cont’d)

Recognizing this problem, back in April I posted a message on a Google group comprised of people working on healthcare technology solutions in resource-poor areas. To my surprise, no less than 10 people had responded by the next day. One of the responses I got was from Mathias Lin, a software developer living in Guangzhou with many years of experience working with software, including open source projects such as FrontlineSMS and OpenMRS. After introducing him to my mentors at the ZOC, we agreed to collaborate with Mathias on creating a telemedicine system based upon JavaRosa to facilitate inter-provider communication and patient management in SEER.

Briefly, the system works like this:

When a patient presents to the VHW for screening, the VHW will input the patient’s basic information and exam results into a SMS-based form on their phone. This form will be automatically sent to a computer with the modified JavaRosa program at the county hospital. Because JavaRosa is open-source, Mathias modified the interface for our specific needs, namely patient management. Once enough patients have accumulated, the VHW coordinator at the county hospital can use JavaRosa to schedule a transport trip, which will send a hospital van to pick up patients and bring them to the hospital for diagnosis and treatment if needed. Following surgery, the JavaRosa program will automatically send SMS reminders to the VHW after discharge to check on the patient’s recovery process.

Ultimately, this system will be integrated with a large scale electronic medical records system the ZOC is developing for itself and its 50 plus partner hospitals. The system will allow for continuous patient record management, instantaneous statistics and report generation, and link the Guangdong blindness prevention network at the city, county, and village levels. We are developing the specifications of the SEER electronic referral system with this future integration in mind.

Over the course of the summer, I worked with doctors from the ZOC to develop a set of VHW training materials that included a VHW screening handbook, a patient record book, referral slips, cataract and eye health awareness posters, and a ZOC-recognized completion of training certificate. The most crucial component was the VHW handbook, a reference manual for VHWs to use long after training is complete. It contained a screening flowchart, reminders about collecting patient history and conducting vision screening, counseling material for cataracts, key points about follow-up after cataract surgery, and brief descriptions of commonly seen eye diseases. One common theme across all materials was an emphasis on simplicity, clarity, and usability. As Dr. Congdon succinctly put it, “You need to remember many of these villagers are illiterate with poor eye sight. Find someone who can’t read a word of Chinese—like my wife—and if she can understand what your poster is about, you’ve succeeded.”

By the end of the summer we had recruited 20 local medical school volunteers, completed training for 36 VHWs, carried out a two-week volunteer program across 29 villages, screened a total of 594 villagers and referred 245 for further examination and treatment. Ultimately, the goal of this project is to establish a sustainable and effective model for incorporating VHWs into the blindness prevention network. Thus, in the long term, the success of this project is gauged by whether the VHWs we trained can continue to independently screen and refer patients. The good thing about an online patient referral system is that one can monitor the progress of new referrals here in Guangzhou. On my last Sunday in China, I sign on to find a pleasant surprise. One week after we completed our screening and outreach activities in Yu’nan County, two VHWs have already begun independently screening and referring patients.

As for myself, what pushed me onto this incredible road was little more than a piece of paper in Parrish labeled “Lang Opportunity Scholarship” and a streak of idealism. But from the intensive Chinese studying to the eye-opening experiences I’ve had and the incredible people I’ve met, these past two years have invariably shaken my life goals and given me a new dream to pursue. Working amongst doctors and patients in China, you can’t help but hear the oft-cited compliant, “kanbing gui, kanbing nan” (“healthcare is expensive and hard to get”). My dream is to solve the problem of kanbing gui, kanbing nan for the 1.3 billion people living in the country I could not until now call my second home. Visit Tom’s blog or request a copy of Tom’s final project report from Jennifer Magee.”
LOS Class Notes

Qian Li ’05 writes, “I think it’s important for current LOS to believe their experience is unique and can seem unproductive but yield change eventually. For me, what’s important happened after college...I couldn’t have foreseen the lessons and accomplishments I had coming. With confidence in my abilities and drive to overcome obstacles, I’ve acquired [these] essential change agent [skills].

I don’t have much to say about my Lang project because I didn’t have one. Although I was a passionate agent of community service and advocacy before college, at Swarthmore misalignments between the personal, the social, and the political came into sharp focus for me. Lessons that upstaged community service included how to build healthy relationships, to distinguish genuine friendship, and to present myself honestly and wholly in a compact, multicultural environment sometimes opposite that my parents had provided. Still, despite the Forum for Free Speech and a laundry list of minority and anti-oppression groups, it wasn’t until years after graduation that I began to deal effectively with my gender identity, sexuality, immigration status, and ethnic heritage.

When I graduated I had no sense of what a grant was. I didn’t know how to brainstorm changes I could effect. After a romance ended badly I bolted across the country and eventually worked for Aspen Environmental Group in San Francisco, helping public agencies analyze and modify proposed electric transmission projects. When I got comfortable there, the lights changed. I scrambled for months to find supportive resources and people to guide me through gender transition and ultimately left the corporate job. Transgender advocacy became top priority: for years I visited classrooms with a volunteer speaker bureau; worked part-time for a drop-in center serving trans people who were homeless, mentally ill, or struggling with substance abuse; and reached gay and lesbian leaders in my BDSM community to discuss trans inclusion.

When I transitioned out of environmental consulting I also returned to composition, a habit I accidentally picked up along with my Music major. I haven’t been able to set it down since, although my work has transformed from pieces that are notated for trained performers from start to finish to ones that may not have notes scored at all, or that call on audience and performers to create. In January I took a Theatre of the Oppressed class. Augusto Boal’s concept of subverting the power dynamic between writer, performers, and audience resonated with my experience of intentional negotiation of power dynamics in relationships.

By March I hosted and produced the Philadelphia Home Theater Festival, part of an international tradition of independent performance, where I premiered the first of a growing collection of interactive pieces. Costumed in briefs, bondage rope, and medical needles I invited the audience in the parlor to touch me as I improvised on violin. The performer’s role was to interpret the energies of the live audience into sound and gesture. Behavioral and physical transition from female to male, presenting publicly and sexually in different genders, and investigating a variety of BDSM lifestyle roles have equipped me to defract perceived sensations and their associations into constituent elements. Although evocative of sexuality, these pieces heighten audience member experience from passive consumption to active creativity; even if their choice is to sit quietly or even to exit the space, art is transformed from presentation to catalyst for collective interaction.”

Malado F. Baldwin '97 writes, “This year I was the first alumni to be nominated to the Board of Directors of the LCU Foundation, a grant-making institution of over 150 years old. The LCU addresses the imbalance between the incredible educational opportunities in New York, and the lack of affordable housing. Their mission is to provide housing grants to women in New York who are pursuing education in fields that benefit their communities. The LCU’s grant was instrumental during graduate school as I pursued an MFA, and I am pleased to now be able to help other women pursue their educational dreams. I am so grateful for all the opportunities given to me, and the chance to evolve continually as an artist. First of all, I have a brand new website. I will continue to add new series and projects on a regular basis. Curators Liz & Genevieve Dimmitt have featured me as one of their artists at Etta Place, where you can browse artists’ studios and purchase work online. I am currently shooting a film with my collaborative partner, Sarah Walko, and we just screened another one of our projects in the Dumbo Arts Festival as a part of Immersive Surfaces. In November 2011, Malado will be a Visiting Artist & Lecturer at Swarthmore College, and in June 2012, Malado will exhibit a solo show at Swarthmore College as a part of her 15-year college reunion.
The Creative Studio, Sneha Shrestha ‘11

“The Creative Studio is a safe space for children and adults in Nepal to discover the power they have within to create, by experiencing a new world through vibrant and playful methods of art and storytelling. The Creative Studio helps fosters psychosocial wellbeing of vulnerable groups to believe in themselves, and start a creative journey based on the belief that art awakens the imagination and helps reach new possibilities.

The Creative Studio emerged to cater to the emotional needs of widows and their children who were internally displaced by the decade-long armed conflict in Nepal. The program has since expanded in scope and now reaches over 500 individuals including trafficked women, prisoner’s children, mainstream school students, street children, autistic and deaf children, as well as other vulnerable groups across Nepal.

This scope was possible through the train-the-trainer model that was followed. I learnt the process of expressive art therapy during my internship at the Mumbai-based NGO, Dreamcatchers Foundation. Then I trained township staff [people] from my partner NGOs in Nepal, Women for Human Rights and Transcultural Psychosocial Organization Mumbai. Together, we ran a pilot project in Nepal with conflict affected children and seeing the positive impact it had, we trained a selective group of 25 professionals working with trafficked women, prisoner’s children and other vulnerable groups. These professionals have since created a ripple effect and spread the program to their respective groups.

One of my biggest assets in conducting this project was having supportive mentors at the Lang Center like Jennifer, and strong ties with my community partners, who were aligned with my ideas. The Creative Studio’s ongoing expansion in Nepal is largely due to my community partner’s dedication and belief in the program.

The experiences that came with being a Lang Scholar have been some of the most valuable in my life. My journey as a Lang Scholar continues even as I leave Swarthmore, as it has now become an integral part of who I am.”