

The Impact of Social Informatics on My Career

It is difficult for me to think of Social Informatics as it's own discipline. Because it is so interdisciplinary in nature and can apply to any field where technology and people are involved, it is difficult to see where Social Informatics ends and the other discipline begins. Obviously, it is important to understand how people use technology when designing for them, especially when the intended use of the technology is social. It is also important to understand how people socialize in general, so that the appropriate technologies can be developed. However there is more to Social Informatics than learning how people socialize. The impact that computing technology has had on the world has provided opportunities that were not imagined before my lifetime. But there are also many new questions that we face, and a huge responsibility to make sure that technology is used in a positive and productive way. In this way Social Informatics affects all of us in any field that combines computing and people. But the extent to which an individual person needs or cares to consider it as a part of his/her career will vary. To me, Social Informatics is important because I plan to pursue a career that involves using technology to promote social and individual change.

Getting a BA in Sociology left me with an ideal vision of a world where all people have enough to eat and drink, can pursue whatever life they choose, have access to health care and aren't denied opportunities based on gender, race, sexual orientation, or any other superficial basis. It also made me wary of powerful organizations such as governments and corporations. I thought Computer Science was a field for the haves, to help the other haves get more. But when I went out to work for a non-profit organization I learned that technology offers huge opportunities to small organizations. A little investment in technology could help a small non-profit maximize fundraising events, increase their success at grant writing and spend more time offering services and less doing tedious administrative duties. The problem for non-profits is that software isn't cheap, and it usually is built for profit driven companies with very different requirements. There isn't much in the way of affordable software that addresses the unique needs of non-profits. I began to see Computer Science as a tool that could have a positive social impact on the world.

All of the Computer Science courses that I took were highly technical and completely ignored the existence of people. So I came to the School of Informatics to study Human-Computer Interaction and try to find that balance between people and computers that I believe is

necessary for creating technology solutions that are usable and useful to people. There are a lot of ways to find that balance, from doing ethnographic studies, to finding out how people use and think about technology within their particular culture, to designing products that are appropriate for the intended users, no matter how different or strange their culture may be to us. In this essay, I will summarize some of the projects that are going on that address the issues I am interested in. Aspects of Social Informatics are woven in throughout, particularly in the impact of current technologies on people and in the study of user groups to determine how future products can be developed to affect social change.

Corporations and Emerging Economies

Computer scientists and interaction designers generally create for the consuming Western culture. But there are countless groups of people around the world who can benefit from access to technology. However, they need products and services that they can use. A woman in a village in Africa has little use for a PDA that tracks stock prices, and kids in inner city schools can't afford most of the MP3 players and other accessories that suburban kids tote around. Unfortunately, markets drive the world, and lucrative markets are preferred. HP and Intel are both doing research in parts of the world that have long been ignored as pliable markets. They believe that countries like India and regions in Southeast Asia are teeming with opportunity. They are doing very interesting work to learn more about the people in these markets in order to develop technology that is useful and appropriate.

HP is considering products such as a photo tool kit that a person in India could purchase for under 200\$ and then use to make a living as the village photographer. They have a digital photo center that is already in medium sized photo shops in India. HP hopes that photo shop owners will find the center to be a good investment, and affordable enough to purchase and pay off in a reasonable time. They are also considering a shop owners management assistant that could help shop owners keep track of sales and inventory. Suppliers could subsidize these, as their use would make the shop owners more profitable which in turn would make the suppliers more profitable. There are many other examples of products on HP's website. They are all in the experimental stage but they are interesting examples of the ways that we can change how we think of technology here in the US.

At the research and development office at Intel, anthropologists and ethnographers are working with computer and information specialists to understand users and create human centered technology by immersing themselves in the user groups they are interested in. They have studied people in nursing homes, urban and suburban homes, stores, schools, vineyards and more. Their goal is similar to HP's – to understand their users well enough to create innovative technology that is especially useful to the group.

I don't necessarily believe that Intel and HP have the best interests of people in mind. They both claim in their vision statements that they want to create positive social change. But the end goal of their vision is to create profit. They may truly be developing products that will have a great benefit to people but I strongly doubt that HP or Intel truly cares about making the lives better for people in developing countries, save for the fact that if these people have more money, they can buy more products. When the purchasing power of these countries increases, corporations want to be ready. This could present a problem for the economies of these countries as multi-national corporations overtake local entrepreneurs. However, I do believe that technology can be used to provide great opportunities to people in the US and everywhere who are not normally targeted by major technology corporations. Furthermore, I agree with their approach to development by doing user studies and needs analyses to solve problems from a new point of view. Social Informatics researchers could study work being done by corporations like HP and Intel to try and determine what the true impact of their work is and will be on emerging economies.

Non-Governmental Development Organizations

There are several international organizations whose mission it is to understand technology and how it can be used to alleviate poverty, illness and other social problems. ICT@AED and ApproTech are two examples of such organizations. ICT@AED (Information and Communication Technologies @ Academy for Educational Development) is promoting development by creating Community Technology Centers (CTC's) and promoting the use of technology in schools. Their clients include the Governments of Botswana, Jamaica, Pakistan, Uganda, the World Bank, and US Government agencies. They work in the US and abroad and are "committed to solving critical social problems in the U.S. and throughout the world".

ApproTech is a non-profit organization that is based in the US and does work in East Africa. They build appropriate and affordable technology that provides people with a way to lift themselves out of poverty. Their MoneyMaker Irrigation Pumps have been extremely successful at increasing farmers' yields. According to their web site they have 33,000 pumps in use, which has helped to create 16,000 new jobs and generated \$35 million in profits and wages. This is a great deal of money in sub-saharan Africa, in fact, the new profits and wages in Kenya account for .5% of its GDP. Obviously appropriate technology can have a huge impact on poor people.

An irrigation pump is not digital technology, but there is research that suggests that providing Community Technology Centers does have a positive impact as well. It narrows the digital divide by giving access to people who otherwise do not have an opportunity to use a computer. An organization called CTCNet (Community Technology Centers' Network) did an impact study to see if their CTC's in the US had an impact on the communities they were in. 53% of the participants had access to computers only at the CTC. Participants reported increased access to employment opportunities, improved computer and language skills, feelings of increased independence and increased participation in civic activities (Mark et.al.). The success of CTC's in Africa and other developing nations is controversial. There are success stories, but there are also issues of sustainability. Social impact studies by Informaticists could provide helpful information and suggestions to the organizations that are implementing CTC's in developing countries.

Non – profit organizations (NPO's) often get stuck with software that doesn't work. (This is a problem for governments and universities as well.) NPO's can see how much computers and the Internet have helped the business world, so naturally, they want to use some of the same technology. However, the translation from business to other types of organizations often doesn't go smoothly. These organizations don't have the money to waste on technology that doesn't help them or decreases productivity. They need affordable technology that is made for them and is tailored to their unique needs.

There are a few companies and organizations working on this problem. eTapestry is a web-based company that provides affordable fundraising software. The NPO logs into the website to enter or modify data. eTapestry maintains the database for the organization, and provides software to analyze data and reach potential funders. TechSoup is a non-profit web site that serves other NPO's. It is funded by corporations and foundations and provides advice to

NPO's on how to use technology. They provide Q & A forums, a way to link up with techie volunteers, how-to's on products and much more. It's an extremely popular site with local editions in San Francisco, Los Angeles, and New York. You can quickly see by visiting the site that it is a much-needed service.

The approach taken by eTapestry and TechSoup is to get to know what the needs are of the NPO community. An important issue that corporate software has never considered is that NPO's can't afford IT staff. They generally don't have a database administrator onboard to maintain the database. They don't have networking people. They do things on their own unless they are lucky enough to have a technically slanted volunteer or two. They struggle with the technology they have and often don't know who to ask, or can't afford to ask it. They need equipment and software that is easy to install, use and maintain. In the future there will be more companies and organizations like eTapestry and TechSoup who provide quality solutions to non-profit organizations.

Many people argue that the dangers of the digital divide are mythical. They don't believe that there is a place for technology in the developing world or that a computer can help solve the problems faced by a child in the inner city. In a way they are right. What good is email if the phone lines are down most of the time? Who will care about having a word processor in the village if there is no drinking water? An inner city girl whose parents are dead or in jail probably won't be saved by a PC. I agree that computers alone can't solve all of the problems of the world. But I do believe that there is a place for technology in all parts of the world and for all people. We must be aware of the impacts of technology as its use spreads. We want computers to be a tool that helps close gaps between people, not something that adds to the divide between the haves and the have-nots. Social Informatics can contribute greatly by researching the impacts of new technologies and the ways in which people use them.

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