

Diversity Statement

Irwin Kwan

I am a Chinese person who grew up in a medium-sized town in the prairies of Canada. As a child, I went to a Catholic elementary school and I realized very quickly that I was a minority in two ways. First, my appearance was different—I was only one of two Chinese children in my grade. Second, my beliefs were different. I grew up in an agnostic household in which religion was unimportant and irrelevant, but yet I was attending a Catholic school.

In many respects, coping with discrimination as a racial minority was easier than being a religious minority. When you are a minority, you know that you are different, and thus, can compensate for it; my mother used to tell me, “Because you are Chinese, you will have to work twice as hard to get the recognition that the other kids will get.” I worked hard and I introduced my friends to Chinese customs and traditions and language that I grew up with. However, differences as a result of belief is harder to understand and describe, especially as a child.

One might think that something as intangible as differences of religion would be inconsequential to a child, but this was definitely not the case for me. Even though few people discriminated against me for my lack of religion, I was still aware from the age of seven that many situations at school that made me feel awkward. When we conducted morning prayer, I recited the words but did not make the Sign of the Cross. When the other children prepared for First Communion, I knew that I was not supposed to participate in the Sacrament even though I was never told not to. During Mass, I asked the other kids, naïvely, what the Host tasted like. I watched everything going on around me with curiosity because I wanted to understand why I was different. Looking back, my childhood experiences at school was my first research activity: I was a participant-observer in my own secret ethnographic study. I watched, I listened, and I learned to be accepting of their beliefs. These early experiences led to me learn how to respect the cultures and values of others.

Since that time, I have sought situations that involve people of different characteristics. I left my city in Western Canada and went to school in Ottawa, Canada's capital and a bilingual city. During my undergraduate education, I volunteered as a tutor to help first-year computer scientists. I worked in diverse labs at the University of Waterloo and the University of Victoria, and I volunteered for conferences in the United States, Brazil and India. As part of my involvement in global software engineering at the Software Engineering Global interAction Lab at the University of Victoria exposed me to a truly diverse group of people from various nations. As part of that research, I travelled overseas to Brazil to stay for two months.

I worked closely during my postdoc with a champion of diversity, Dr. Margaret Burnett, who helps lead the National Center for Women and Information Technology (NCWIT). NCWIT promotes the involvement of women in computer science programs. With Dr. Burnett's guidance, I have provided mentorship to a number of graduate, undergraduate, and high-school students from underrepresented groups.

Following Dr. Burnett's example, I will also pursue opportunities to mentor undergraduate students from underrepresented groups, as such mentorship is shown to retain these groups in computing fields. NCWIT's Research Experiences for Undergraduates (REUs) resource includes materials and guidelines to help ensure that the experience is productive for both the undergraduate research assistant and the faculty member. Involving these undergraduate researchers not only compliments my research group, it also provides the undergraduate with an opportunity to perform a wide variety of tasks ranging from software development to scientific data analysis. Because promoting confidence and mentorship skills in my students is important to me, I will encourage a collaborative environment in which undergraduate research assistants, graduate students, and I work with and learn from each other.

I will support diversity in the classroom by incorporating resources provided by NCWIT. I will use pedagogical techniques that support underrepresented groups, such as collaborative learning and teamwork. One collaborative learning technique I intend to incorporate in lecture is "turn to a partner", where students work in pairs to discuss and solve a problem. I will request students to find different partners so they work with as many different people as possible during the course. Self-confidence of students, especially those from underrepresented groups, improves when they are able to watch and listen to their peers work through the material being taught.

My research in gender-oriented human-computer interaction (e.g. [2]) with Dr. Burnett continues to enlighten me about the necessity of diversity. Small changes in user interface design that were initially targeted to help female users with computer use ended up helping everyone, regardless of whether they were male or female. In much the same way, my research into end-user software engineering [1] has allowed me to better understand how to support newcomers to various programming environments.

Overall, my philosophy regarding diversity is two-fold. First, it is important to watch, listen, and learn: these three actions ultimately lead to respect. Listening is especially important because diversity is not always apparent at first glance: it is much deeper than that. Second, it is important to do what you can to support everyone, especially underrepresented groups. If you can help these underrepresented groups, then you can help everyone.

References

- [1] Jill Cao, Irwin Kwan, Rachel White, Scott D. Fleming, Margaret Burnett, and Christopher Scaffidi. From barriers to learning in the idea garden. In *IEEE Symposium on Visual Languages and Human-centric Computing 2012*, pages 59–66, Innsbruck, Austria, 2012.
- [2] Valentina Grigoreanu, Margaret Burnett, Susan Wiedenbeck, Jill Cao, Kyle Rector, and Irwin Kwan. End-user debugging strategies: A sensemaking perspective. *ACM Transactions on Computer-Human Interaction*, 19(1):5:1–5:28, May 2012.