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TO CARLOS ON HIS SIXTIETH BIRTHDAY: GREETINGS FROM YOUR FRIENDS IN IOWA

Philip C. Kutzko

Mathematics and CLAS Collegiate Fellow, University of Iowa Iowa City, Iowa 52242, USA Director: National Alliance for Doctoral Studies in the Mathematical Sciences

It is hard, now, to imagine a time when our math department's graduate program had no minority students. The diversity of our program has become so familiar to us that when, this spring and summer, seven of our minority students earned their doctoral degree it was hardly commented on. Indeed it was only when we began to miss these students – students who were like family to us – that the reality of this singular achievement manifested itself to us. Yet there was indeed a time when there were no minority graduate students in mathematics at the University of Iowa. In fact, only two minority students earned their doctoral degrees from our department from1974, when I joined the department, to 1998. And it is no exaggeration at all to state that, without the trust and support of Carlos Castillo-Chavez, it is unlikely that the transformation of our graduate program that took place over the past fifteen years would have occurred.

To understand this, it will be helpful to understand a bit about our culture and our demographics. The State of Iowa has always been, by American standards, progressive in the area of race and ethnicity. Indeed, the two doctoral granting Iowa Regents universities had developed a reputation in the post-World War II era as one of a handful of places where minority students, especially African Americans, could earn a Ph.D. For one reason or another, though, this had largely ceased to be the case by the late 1980's. Given that Iowa, like its neighboring states, is overwhelmingly Northern European in its ethnicity, such reputations are as easily lost as they are created and by 1995, when several of us set out to transform our graduate program, we were virtually unknown to the small minority community in our profession. Because of this, our first steps were difficult ones.

I remember returning home from Europe in the spring of 1995 to find that several of my colleagues had applied for and received funding for eight fellowships from the Graduate Assistance in Areas of National Need (GAANN) program. Although these fellowships could be awarded to anyone coming from a group that was underrepresented in mathematics, my colleagues were determined to keep the commitment they had made to use this support for minority students and they worked hard to attract such students. The problem was that we (for I had joined with them by then) had no contacts in the minority community nor knew anyone in that community who would vouch for the seriousness of our commitment. Luckily for us, Herb Hethcote, who was one the first of our faculty to join our effort, knew Carlos well. In fact, Carlos viewed him as something of a mentor. So Herb turned to Carlos and Carlos, in an act of faith, trusted us with several of his MTBI alumni. As we quickly learned, MTBI not only prepared its students mathematically, but it also

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prepared them for the experience of attending graduate school in a department like ours – a department comprised of faculty and students who were open to change and committed to broadening participation but who were also undeniably provincial. As Carlos's students began to arrive at Iowa, they played a critical role in transforming us. And arrive they did! Starting in the late 1990s, at least twelve MTBI alumni entered our program and, so far, we have awarded doctorates to ten of them. They came from New York City, California, New Jersey, and Puerto Rico, among other places. Two MTBI alumni – both of them of European background – even came from the Midwest and played a critical leadership role while at Iowa.

There was a kind of joyous feel to our department in those days. I remember one winter – the first winter in Iowa for several of the students from Puerto Rico – when several of our graduate students went bar hopping after their finals. The students from Puerto Rico had never seen snow and several of our students from Iowa and Minnesota thought it might be instructive to bring snowballs into the bar. Sadly, we were all thrown out but we were thrown out in the same good spirit in which we had all entered. I remember also the time our dean visited the department on other business and stopped by the coffee room where there was a group of students representing the full diversity of our country all working at the board. As I looked at her taking this all in, I noticed a tear in her eye.

Our program grew and, by any measure, it has succeeded. And much of this success is due to the encouragement that Carlos has given us over the years as well as an important lesson we have learned from him: that a successful minority program depends both on passion and on organization and that its success is measured at least as much by its successful institutionalization as by its number of successful students. So it is perhaps fitting that I am returning from Puerto Rico as I write this. Juan Ortiz, an alumnus of MTBI and a 2007 Ph.D. from Iowa now directs SIDIM and, together with Errol Montes, we have organized a day-long conference, "Tu futuro en las matematicas," to be held each year in conjunction with SIDIM. While at this conference, I met with two other alumni of MTBI who are graduates of our program at Iowa – Joaquin Rivera (Ph.D. in 2007) and Matiel Ortiz-Albino (Ph.D. in 2008). They are now mathematics faculty at Puerto Rican universities and they have agreed to develop a Puerto Rican regional alliance that will work closely with our National Alliance for Doctoral Studies in the Mathematical Sciences. Yet another MTBI alumna, Erika Camacho, represents the Southwest Region on our Alliance Regional Board.

All of this was put in motion when Carlos took the risk of trusting a group of mathematicians at a majority institution in a largely white state in the Midwest that, as far as I know, he had never even visited – trusting that they would keep their word to mentor and nurture his students, that they would commit themselves to give these students a home, and that they would work to provide a safe and supportive environment so that these students would continue to thrive. Without that trust and the mentoring and encouragement he has provided over the years, I doubt that our program would have thrived.

Our department thanks you for trusting us, Carlos, and we hope we have not betrayed that trust. We will look to you in the future, as we have in past, as a friend, an ally and a collaborator in building a new American mathematics. Happy Birthday, Carlos, and God Bless!

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E-mail address: philip-kutzko@uiowa.edu