COMMUNICATION

Meeting Grothendieck, 2012

Katrina Honigs

Photo courtesy of Michael Moewe.

Katrina Honigs enjoys travel. In addition to having met Alexander Grothendieck, she also once touched the nose of a marmot in the Swiss Alps. Both experiences were very thrilling, though in different ways.

I met Alexander Grothendieck on January 2, 2012. I had read a bit of his mathematical work and felt a sense of connection with it. I was at a point in my third year of graduate school where I was not only not making progress on solving any problems but miserably unengaged by my work. Despite the burnout, Grothendieck's work remained an island of enjoyment in an otherwise featureless sea. So when I was in France for a conference, I sought him out.

The village of Lasserre is small and remote. My appearance in a rental car was a strange enough event that as soon as I parked, a friendly man came out of a nearby house to ask if I needed any help. It turned out Grothendieck's house was not fifty feet away.

I had purchased some *galettes du roi* that morning in preparation for apologizing to Grothendieck for entering his yard. After clearing the fence, I stepped furtively across the slightly ramshackle yard, which had many plants and terra cotta pots in various degrees of wholeness, and walked up the steps. I knocked on the door and then shouted "Monsieur Grothendieck!" and waited, but there was no response.

Suddenly I realized that a figure with a large white beard and a brown robe over his clothes had appeared utterly silently quite nearby on my left. In one hand, he held a short pitchfork loosely at his side. It reminded me of his doodle of devils with pitchforks around the Grothendieck-Riemann-Roch formula. His free hand rose, brandishing an admonitory finger. "Il ne faut pas entrer," he said, advancing slowly toward me. I tried to form some sentences about visiting, but Grothendieck did not react. He continued to walk slowly toward me, wagging his finger, telling me that I shouldn't be in here disturbing him. I tried to give him the galettes, but he told me again to leave.

Once he had seen me leave his yard, we studied each other from opposite sides of the gate for a moment. We were a similar height, and his blue eyes were alert and focused. Grothendieck asked me not angrily, but a bit sternly, in French how I knew his address and how I had gotten there. He told me again that I should not have come in and should not have disturbed him in his "cloître", which reinforced the impression given by the brown robe that he thought of himself, in some sense, as a monk. When I was given the address, I had said I wouldn't tell Grothendieck how I came by it, so I just watched him silently during this monologue, looking shocked.

Then, he asked me my name and explained that he could not hear very well anymore and so I must shout into his ear. After I said my name, I started to spell it, but he stopped me partway, since he had already recognized it: a couple of weeks before I had sent what I now realize was a very enthusiastic fan letter. He then switched to English and, irritably,

Katrina Honigs is research assistant professor at the University of Utah. Her email address is honigs@math.utah.edu.

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asked me why I had included a French translation. "To be polite? La politesse?" Nothing by him that I had read had been in English. But of course he knew English, and I had offended him a little.

He told me he had responded to my letter, explaining that my reasons for contacting him were not sufficient and that I should not visit. I felt a bit deflated but also couldn't help but be a little amused. Trust a mathematician to tell me that my reasons for writing were "not sufficient."

After Grothendieck discovered that I had not received his response to my letter, he seemed to decide that this partly explained my presence. But he was still dissatisfied and asked again why I had visited. Clearly a bit suspicious that I had some unsavory motive, he said he thought my visit must indicate that I wanted something. I told him that maybe he didn't realize, but he is very famous and I just wanted to meet him. He shrugged and said again that I didn't have any satisfactory reason for visiting, but I could tell that he was a bit amused by being told that he was famous, and he relaxed a bit.

He told me that he could see from my face that I didn't have any bad intentions and that he would never want to harm anyone. I saw then that the pitchfork was no longer in his hand but propped against the fence. If you had received my reply, he said, you would have understood that I am not taking visitors and you should not disturb someone in their retirement. He expected, though, to receive a letter from me soon explaining how I got his address. "C'est la moindre des choses," he intoned, switching back to French for a moment. He used to receive all his visitors, he said, but he had had two very bad experiences and no longer did it, though he was very sorry that I came such a long way to not be invited in and sorry for himself as well that he was not able to invite me in. He took my hand and shook it. He told me that he thought we would meet again, very soon, though not in this life. He told me he thought that he would die within the year, though this prediction was made with a practiced air that suggested this was not the first time he had made it.

After these heavy declarations, he turned his attention back to my visit. For all his bluster about not wishing to be disturbed, a part of him was curious about his visitor. How did I get here? On a train? No, in a car. Am I rich? No. Am I poor? Of course I'm poor! I'm a graduate student! I laughed, and he chuckled good-naturedly. Am I alone? Yes. Didn't I have something for him? The bakery box reemerged, and I opened it to show him the contents. He looked at the pastry inside. What is it? Galettes. What? Galettes! Did you make them? No, I bought them. What? I bought them! Oh, thank you for making them. He took the box from me and said he wanted to get something for me too and then went back into his house. I was glad for my instinct to bring baked goods. They smooth everything over in the American Midwest, where I'm from.

I was not able to discuss math with him at all. At one point, when I tried to make our conversation more detailed by writing on a piece of paper, he waved it away. But we had spoken more than I had thought we might. When he came back out of his house he presented me with a tomato and a packet of almond paste. The tomato was large and fresh and came from his garden—impressive for January—and he told me to eat it in good health. He also said I should remember that it was his friend (likely something was lost in translation). The packet of almond paste was very large. A kilo.

"He told me we would meet again, very soon, though not in this life."

After the exchange of gifts was over, it seemed we were finished. Grothendieck wished me well, shook my hand again, and, after entreating me once more to write a letter telling him how I came to know his address, told me goodbye and walked back to his house. I said goodbye as well, but his back was already turned to me, and I realized right after I spoke that he likely didn't hear me.

My experience of the rest of the day was odd and heightened. The drive back through the countryside. The primary colors of the public transit train in Toulouse. The tomato, when I ate it later that day. As the days and weeks went on, the visit was something I reflected on with enjoyment. My burnout faded, and I got more excited about my work again.

A little while after my visit, I did write Grothendieck again, but my letters were returned. Although my fantasies of having some magical conversation about math with him had to be swept aside, I am grateful to have had the chance to meet him.

A fuller version of this essay is at Katrina Honigs's personal website, `math.utah.edu/~honigs/Grothendieck.pdf`.