

# Interview with Bernadette Faye

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*Bernadette Faye is one of the students in the Third World who has benefited from support from the CDC, and an interview with whom is meant to complement the previous interview with Michel Waldschmidt.*

**UP: Where are you from?**

BF: I am from Senegal. I grew up in Dakar. A big city.

**What is your background?**

I come from a poor family. My mother took care of the home, while my father was driving a taxi.

**So you went to school obviously.**

It's compulsory. I did not like it at first, I hid under the bed in the morning, I did not want to leave my mother. But I got used to it and started to like it.

**You were taught in your native language?**

No, in Senegal we are taught in French from the very start. There are several native languages. However, we have one which is considered as a national language. It's called "Wolof". Nowadays there is a movement to replace French by Wolof from primary school.

**I guess French is seen as a vestige of colonial times, but it is very convenient: it gives you a ticket to a much larger world.**

That is true. We can travel all around Western Africa and communicate easily.

**You were good at math?**

I liked it and it came naturally to me, but I did not think much of it.

**When did you discover it as a discipline on its own?**

When I attended university, I had inspiring teachers.

**How did you get to university? Is that common or are there financial restrictions? And maybe other restrictions?**

High school is open to everyone, so were also universities. But then so many wanted to go, so they had to impose restrictions. In practice, there are no financial restrictions since the registration fees are not so high. However, most

of those who are admitted to the universities don't finish undergrad since they are eager to find employment so they can contribute to the upkeep of their family. Family is very important in Africa.

**I guess unlike the pampered West the family is essential to physical survival, and I do not speak about the immediate family, but also cousins and grandparents. As a result I suspect that there is less emphasis on the individual as such apart from the family, so the issue of individual careers is not so strong as in the West.**

I agree. In my family my parents were very supportive of us children and they were willing to go to great sacrifices in order for us to get an education. It was never a question of me sacrificing myself in order to support the family.

**What about the student population at the university?**

Half of the high-school students continue to university, but only 5 percent or so are any good, meaning that they are thinking of it as an intellectual adventure. Most students only want to pass exams, find the shorter path to get a job and be done with it.

**Just as in the West. So what did you do mathematically?**

After obtaining my bachelor's degree in mathematics, I was selected to pursue a master's program in cryptography and information security in the Department of Mathematics and Computer Science at the University of Dakar (UCAD). It was considered applied and very useful, but I soon got more interested in the underlying number theory. In 2012, I joined the African Institute for Mathematical Science (AIMS) in Senegal, where I met a researcher from UNAM in Mexico, Florian Luca, who supervised me for my master's degree. Then, after obtaining a PhD fellowship from the TWAS-OWSD, I started my PhD studies in co-supervision between UCAD and the University of Wits in Johannesburg, where Florian had got a new position. I graduated in December 2017. This dual program enriched me a lot with professional and academic experience in both universities.

**Going to South Africa must have been quite a move. It would have been a no-no until the 90s, and your French would not have been so helpful.**

In the past, it would of course have been impossible for me to go. But South Africa is one of the leading countries in Africa in sciences and technologies. It has good infrastructure. I am speaking about libraries and internet, etc.

**Is there still much racial tension in South Africa twenty years on? And if so would it affect your life as a university student?**

There is still very much tension, Black students usually do not study advanced mathematics so my fellow students were mostly white or international students.

***You wanted to eventually return to Senegal, you never considered going to the West?***

In Africa you are very close to your family, as we have discussed before, and it would be unthinkable for me not to be close to my parents and siblings, and of course I very much identify with Senegal as a country as well. And besides Senegal has an AIMS institute in Mbour, one of the few in Africa, so from that point of view it is a regional mathematical centre in Africa.

***So where are you now? Not in Dakar?***

I am not in Dakar, instead in a very small town out in the countryside. At first I was not so comfortable, being used to big cities, like Dakar and Johannesburg, but I got used to it, and now I feel quite comfortable, and appreciate the quietness.

***But from a mathematical point of view it is not ideal?***

No, of course not. There is a heavy teaching load, there is not much emphasis on research, in fact almost none. But that is to be expected.

***But how do you survive mathematically?***

I have co-workers all around with whom I correspond and also am able to visit as it is possible to apply for grants. It is not so easy though, and as a student I would have wished that we had given more instruction on how to find grants and how to apply for them.

***Which are the granting institutions?***

There are of course national ones, but also international ones which are very important. In the past two years, I received grants from the European Mathematical Society (EMS-CDC) who provided a travel grant and living expenses for research visits to Europe. This was very useful for me since I am in an earlier stage of my career and I still need a network of co-workers.

***So how do you envision your future ideally?***

That I will be able to travel and discuss with other mathematicians, but also that I may be able to interest some students in what I am doing and gradually build up a research group. But it will take time.

***But you are young.***

Yes, so I guess I can manage it.

***Thank you very much for consenting to the interview.***

It was a pleasure.