

The MONDAY INTERVIEW with Ms. Fatma Moalla, first Tunisian to earn the agrégation and to obtain a Doctorat d'État in Mathematics

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At a time when the image of Tunisia is increasingly associated with terrorism, taking sometimes an intentionally exaggerated character, counter-offensives are carried out by certain organizations like that of the Tunisian Women Mathematicians' Association (TWMA) which seeks to valorize historical exploits proving that the Tunisian culture is bigger and richer than what some try to ascertain pointlessly At its first meeting, which dates back a few months, the TWMA has set up three annual mathematics prizes including the international "Fatma Moalla" award for mathematical popularization. This prize bears the name of the first ever Tunisian woman in history to have obtained her Agrégation in mathematics in 1961 and her Doctorat d'État in 1965. This pioneer is currently enjoying a peaceful retirement surrounded by her three children and grand-Children. We wanted to meet her exclusively. With remarkable discretion that goes hand in hand with her kindness and sense of conviviality, and after many negotiations, she finally agreed to return on her exceptional experience setting the example and restoring hope in these difficult times. Interview with an extraordinary lady!

Mrs Moalla, you, who came from the high school in the Rue du Pacha, you must surely have known those Tunisian women who have marked Tunisian education, such as Ms. Mongia Mabrouk, first doctor of Arabic literature and Ms. Zoubeïda Amira, first Tunisian director to hold the reins of a high school in Tunisia just after independence. Accessing the field of knowledge at that time was a privilege and must not have been easy. How did it all begin?

It was a completely different time! And I personally have an excellent memory of it. I had a happy childhood and a thriving adolescence. My five sisters and I lived in Tunis. We were born in Tunis as well, except for my older sister who was born in Sfax. And my Father was the first sfaxian to emigrate to Tunis, with my maternal Uncle and Mr. Taïeb Miladi. At that time there was also internal emigration. My Father continued to do in Tunis the same job he did in Sfax, namely bookseller. He settled in Rue Sidi Ben Arous and has known generations of Zitounians and Sadikians who frequented his bookstore. He was a known figure of the souks of the Medina, a scholar and an enlightened man who loved books and reading and who transmitted to us this love intact. As for us, at that time, we went out very little and we used to stay home. But I will always keep a wonderful memory of my childhood in the Bardo family house, often in the garden,

with my Mother, so gentle, so enlightened, so open, so good, and with my sisters and young nephew. From my childhood, I will also remember that our greatest joy, my sisters and myself, was to go into my Father's back bookstore to practice our favorite sport: reading! How many books have been devoured!!

And that's how you evolved very early in the world of studies with a childhood where you were initiated to teaching...

That is to say that my sisters and I have a passion for teaching. We have all become teachers in Tunis. But the younger ones did interpreting too.

In high school, your training was rather scientific or literary?

I attended high school in the Rue du Pacha, which provided Sadikian instruction, that is to say that at the end of the first part of the Baccalauréat (the Baccalauréat was previously divided into two parts and was obtained at the end of two years), we presented the "Sadiki College Graduation Diploma", which gives an excellent training, quite bilingual. By the way, during the high school, I loved practically all the subjects, whether they were taught in Arabic, or in French, or even in English. But at the end of the first part, one had to leave the Lycée of the Rue du Pacha, because it no longer dispensed teaching, which was given up to the first part of the Baccalauréat, the first part that I obtained in 1956, as well as the "Sadiki College Graduation Diploma". But then, at the end of the first part, two problems were posed to me: I had to leave "my adorable high school", with its excellent teachers, and it was especially necessary to choose one of the three branches available at that time: mathematics or experimental sciences, or philosophy. It took me a while to choose. Finally, I opted for mathematics.

And why especially mathematics?

With hindsight, I believe that the reason is that mathematics corresponded more to my character: I adore rigor, precision, honesty. I hate cheating. And this is mathematics! This exact and hard science, where one must be precise. Thus, each word has its importance in a mathematical definition: one has no right to remove, add or change a word. Mathematics requires clarity, and even limpidity. The famous words of Boileau are always remembered in mathematics: "*What is well conceived is clearly stated, and the words to say it flow with ease.*" In mathematics, one learns to become fair by treating all cases equally, and one learns to become humble and to move away from human vanity by measuring his own limits in front of the difficulty of the problems to solve. In mathematics, we want to exclaim: Glory to honesty, glory to clarity, glory to the clean treatment of problems! Down with amalgams, down with obscurantism, down with deceit! And that's why I chose math. However, although mathematics help to make a person a good person, they sometimes fail to do it (otherwise all world mathematicians would be good persons). I immersed myself, without regret, in the universe of mathematics at the Lycée Carnot, the year of the second part of the Baccalauréat that I obtained in 1957.

You got the first part of the Baccalauréat in 1956, the year of independence, a symbolic date...

Absolutely! It was a year of great patriotic enthusiasm. Independence was achieved! Later on, everything was built: schools, high schools, universities, hospitals...

Then, you went to university...

Yes, by integrating the "Institute of Higher Studies" located at the Rue de Rome. A university establishment which was related to Algiers, and Algiers was in turn related to Paris. I graduated in mathematics after three years, in June 1960. Afterwards, I wanted to continue my studies, but I could no longer do it in Tunis because the teaching of mathematics in Tunis stopped at the level of License. By correspondence with Paris, I was able to prepare a diploma of superior geometry that I obtained in October 1960. At this point, to continue, I had to imperatively leave Tunis. And there, I had to have the consent of my father, and I had to have a scholarship. Fortunately, President Bourguiba and Minister Mahmoud Messaâdi were enlightened and encouraged the education of both boys and girls. That's why I got a scholarship. As for my Father, who

was very conservative, he agreed to send his daughter abroad so she could finish her studies. It should be noted that there were at that time many "supposedly" modern parents who prevented their daughters from going abroad to study. It is in tribute to my Father that I agreed to associate his name with the prize launched by the TWMA. So that the name of my father "Mohamed Moalla" persists in time. My Father always wanted girls to be educated. My Father and Mother did not want us to stop our studies for marriage ... How they were ahead of their time!

And once in Paris?

Once in Paris, in one year, I prepared the CAPES and the Agrégation that I obtained in 1961. Moreover, I sat for the oral examination of the Agrégation during the three days of bombing of Bizerte, another marking post independence date. And I was deeply afflicted, shocked by this war. Being someone extremely pacifist, I will never be able to understand the wars. And I was horrified, saddened by the terrible number of deaths in this war. It was sad! I was deeply distressed because of my dead compatriots, they should never have been sent to death...

And back in Tunisia, you were undoubtedly welcomed back with great fanfare?

Yes, that is to say that everyone was glad, especially in my family, both maternal and paternal. There, I realized how much the Tunisian people liked studying, as this glorification of studying was unanimous ... But I was also received in great pomp by the officials: by President Habib Bourguiba, by Minister Mahmoud Messaâdi, by national organizations. Why? It so happens that in the female and male population of Tunisia, the very first person who earned her Agrégation in mathematics was a girl, before the boys. So I was the first but it takes a first to everything! So, in addition, the "National Union of Tunisian Women", which was very important, exploited this with a lot of fuss. And I hope that one day one will stop making such a fuss, largely for a simple chronological chance ... And immediately, I was appointed by Messaâdi, who had proposed me a half-service at the Secondary and a half-service at the University in order to have a varied educational experience, according to him. So in 1961-62, I taught in my old high school in the Rue du Pacha, and at the same time I was an Assistant at the Faculty of Sciences in Tunis, which was at that time at « La Place de la Monnaie », and where I taught to students sometimes older than me ... About this, for the "curious", my date of birth is: January 14, 1939! In short, it was the good old days when one did not wait for years to be appointed to the public service, and where the candidates willingly accepted what was proposed to them: I fulfilled this task as best as I could.

Was this the final stage of your professional career?

No, I missed something: I wanted to continue my studies to the end. In other words, get my doctoral thesis and still do math. Effectively, I defended my "doctorat d'état" thesis in 1965, in Paris. This doctorate was the first earned by a Tunisia woman, and perhaps by a Tunisian man. I was, after that, directly appointed to the Faculty of Sciences of Tunis, where I taught until retirement, without ever leaving, without ever accumulating another job ... I have formed generations of mathematicians, and some have taken over.

And finally, what advice would you give to students today?

First, I recommend to be serious, that is, to do your job as a student as best as you can. It is necessary to study in detail, and especially to consult as many books as possible, as courses are not sufficient.... In short, the main thing is to work as hard as possible. Also, it is imperative to avoid strikes, otherwise, hello ignorance! Hello incomplete training, sometimes even nonexistent training, doubled with pretension...! Hello, oh students, empty shells at best cases and stuffed with wickedness in other cases, that one hopes to be a minority... What can we expect from students who have gone on strikes during their schooling? And who have never made a correct direct reasoning, a correct reciprocal, a correct reasoning by absurd, etc.?

Are they worthy of the qualifier "student"? Later, these students not only are unable to track down mistakes, but unfortunately are able to do a lot of harm. Thus, a student who explodes to kill 100 people is a person who is, no more and no less, 101 times murderer. What wickedness! Mathematicians have well imagined the exponential growth, which is a vertiginous growth, but this growth is incapable of measuring the wickedness of such an act! It can not ! On the other hand, a student who gets eliminated, or who agrees to be eliminated, to save the lives of 100 people — one can imagine, for example, horrific accidents of mines where a person is stuck across in a place horribly narrow, to the point of preventing that one accesses 100 miners stuck behind — well, this person is to be hailed and deserves the name of martyr. As has often been said, it is the intention that counts. So do not cheat! Do not confuse cases! True mathematics does not allow these amalgams.

Can we think about genius when talking about you?

If I were, I would have had the Field Medal or at least a medal ... ten times less important. No, I was only serious. I have always been serious in everything I have undertaken. I also enjoyed my work and, after all, it is a pleasure to do the work that you love. I have great memories of brilliant students or simply hardworking or good ones, and an excellent memory of colleagues I have worked with among whom often remarkable women's teams... And I hope I have been a good teacher. As for "my reputation", it is due in large part to a mere coincidence in time and chronology of events ... The second remark concerns the first question you asked me where you were talking about Ms. Mongia Mabrouk and Ms. Zoubeïda Amira. I salute your love for your foremothers, and I hope that one day too my grandchildren like you will remember me with love... Indeed, I knew well Ms. Zoubeïda Amira, she was the Director of my high school in the Rue du Pacha. What a good Director! And what a good teacher! Since she also taught in parallel Arabic history. I loved her course ... To my former principal and professor, to my Father, to my Mother, to my elder sister, to the deceased of my paternal family and my maternal family, to Bourguiba, Messaâdi, Sghaïer Ouled Ahmed ... I Would say to all: I have not forgotten you. You made me what I am today. I feel so much gratitude for you. Peace to your souls! (Some may wonder: what does the Poet Sghaïer Ouled Ahmed do in this list of deceased? Well, it is that I address to his memory all my thanks for expressing, so simply, in a verse of his poetry, what I have always felt: the love of the country, its verse of poetry helped me to overcome the setbacks of recent times ...). As for me, alive to this day, I say to myself: "Hamdollah" and I will proclaim until the last minute: Down with terrorism, down with obscurantism, down with amalgams, down with deceit! Long live Work, long live Clarity, long live Mathematics and, in the first place: Long live Tunisia!

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