EDITORIAL

Arab women in science

It's a common trope that Arab women lack equality of opportunity and freedom to engage with the world. The received wisdom is that they are prevented from pursuing an education and a career by religious and/or cultural restrictions. But the truth is more nuanced. Religion and culture are not the strongest determinants of Arab nations' approaches to women's education—systems and resources are. Choosing to see religion or ethnicity over economics and prosperity is both careless and damaging.

There is no religious bar to education for women in my faith, Islam. Indeed, according to religious doctrine, the acquisition of knowledge is binding on all Muslims, regardless of gender. A peppering of female role models, stretching back to the earliest days of Islam, supports this assertion and gives women today a pedigree to be proud of. For example, in 859 CE, Fatima al-Fihri founded the University of al-Qarawiyyin in Morocco, today the oldest continuously operating university in the world. Of course, highlighting this heritage of education must not disguise the cultural impact of patriarchy in some societies that are predominantly Muslim, but it is a way to put that in its proper place—that is, patriarchy is neither unique to the Arab world nor intrinsic to its predominant religious tradition. Arab women have more opportunities to pursue an education and career in Malaysia, Qatar, Kuwait, and Bahrain but fare much worse in Afghanistan, Yemen, Sudan, and Chad. Why? The differences have little to do with a common religion and more to do with economic development and national prosperity.

For Jordan, there is an interesting story to be found in the middle of those extremes. In a 2019 report by the Organization for Economic Cooperation and Development, Jordan was one of three countries where women felt more comfortable with mathematics than men. The reality of Jordan's university output is also surprising. According to the most recent data available (2016), almost half (47%) of undergraduates in science, technology, engineering, and mathematics (STEM) fields were women. In the same year, 56% of M.Sc. degrees and 61% of Ph.D. degrees in STEM fields were awarded to women. Unfortunately, many of these women graduates now face an environment that provides a strong university education but little opportunity to forge a career path close to home.

The challenge is not persuading Arab societies, and the families that define them, to open STEM education to their daughters. The issues arise further downstream. Jordan's pipeline of scientific female talent flows most strongly at its beginning. Like many other nations, research-strong or not, the cracks begin appearing quickly as this talent flows through. Today, just 19% of Ph.D. researchers in Jordan are women.

This is partly because the deep social cohesion within Arab societies places a greater onus on women to juggle their careers while playing an integral role in family development. This challenge is not specific to Arab women but to most women in science. We, in Jordan, must ensure that opportunities are available closer to home for women scientists to flourish. Jordan spends only 0.3% of its gross domestic product on research and development, which translates into a failure to create meaningful career pathways for women—or anyone—with a STEM education. This has left Jordan as a consumer, rather than a producer, of new knowledge.

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Jordan cannot create opportunities without the honest engagement of global actors. Research-strong nations are well-placed to leverage our research-weak systems and to profit from talent mobility. For Arab nations, like Jordan, the result is a drain of STEM talent, including women. This situation is not going to change overnight. If we truly want to help Arab women scientists to thrive, then both Arab governments and the global science community must invest in improving career prospects in Arab countries.

The global science community needs to be mindful of the real challenges facing Arab women in science—those that are universal to women in science and those that are distinctly related to an absent science infrastructure—and not to be sidelined by the tropes that veil the truth. Arab women in science are educated and ambitious. Let's give them opportunities at home so that they can help build a better future for all.

–Sumaya bint El Hassan

PHOTO: JUBEHA STUDIOS

Sumaya bint El Hassan
Her Royal Highness (HRH) Princess Sumaya bint El Hassan is president of the Royal Scientific Society in Amman, Jordan. HRH is the founder of the Reticular Foundry, which provides research opportunities to emerging scholars in Jordan. president.office@rss.jo

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