

افغانستان آزاد – آزاد افغانستان

AA-AA

چو کشور نباشد تن من مباد
همه سر به سر تن به کشتن دهیم
بدین بوم و بر زنده یک تن مباد
از آن به که کشور به دشمن دهیم

www.afgazad.com

afgazad@gmail.com

European Languages

زبانهای اروپائی

SEPTEMBER 26, 2018

by BARBARA NIMRI AZIZ
27.09.2018

How Many More Women Are There?



Photo Source NASA Langley Research Center | [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

How many more women await our discovery?

My question is not related to ongoing exposés of sexual abuse suffered by women under a culture of male privilege and dominance– the culture known by the trope #MeToo. What concerns me here is a seemingly unrelated silence and need for exposure, namely

accomplishments of women scientists. This too is being newly addressed, although desultorily.

Like millions of others I was alerted to the history of women in science after viewing [Hidden Figures](#). This celebrated film features three African American women working in the 1950s U.S. space program. It's based on the book by Margot Lee Shetterly, herself African American whose parents and neighbors were professionals working in the time and place of that story. So compelling were Shetterly's revelations, the film was completed just two years after the book's release. While this film is making a profound social impact, to grasp the full context of African American scientists and women in general in the U.S. government's pioneering space projects, read Shetterly's [full account](#). Book or film, *Hidden Figures* will propel more African Americans into the sciences while it impresses on all women the need for us to step out of the margins and into the center of public life.

Another 'hidden figure' is revealed with the recent award of the Breakthrough Prize in Fundamental Physics to British physicist Jocelyn Bell Burnell. Had the monetary award not been \$3. million, her story likely wouldn't be featured in a major U.S. newspaper. Nevertheless the article is an opportunity to learn, once again, how a brilliant student of physics, somehow, despite adversarial male and institutional attitudes, managed what many of us cannot: she remained at work, applied her genius and pursued her irrepressible love of science. Burnell persisted despite her Cambridge supervisor, not Burnell, [winning a Nobel Prize](#) for his research on pulsars, a discovery she had made. That interview provides an all too common narrative of how modesty allowed Burnell to demure to male colleagues, and be upstaged by her professor. In this account we hear more about her modesty than her professional history and ongoing work at Oxford.

This review regrettably includes a flawed note on other 'hidden figures'. It mentions the white scientist Rosalind Franklin and the celebrated film, but fails to name mathematicians Dorothy Vaughan and Katherine Johnson and engineer Mary Jackson featured there. When will we learn to know, repeat and apply these women's names? Dorothy Vaughan; Katherine Johnson, Mary Jackson; Dorothy Vaughan, Katherine Johnson, Mary Jackson; Dorothy Vaughan, Katherine Johnson, Mary Jackson. And add Margot Lee Shetterly to that deserving list.

Not long after perusing Shetterly's highly readable and conscientiously [researched book](#), browsing in my local library, I (by chance?) came across [The Other Einstein](#). It's an historical novel based on credible rumors regarding [Mileva Marić-Einstein](#), a

mathematician herself and first wife of *the* famous physicist. In *The Other Einstein*, published in 2016, author Marie Benedict explores rumors of a woman whom history not only marginalizes; it denies her any credit as a working scientist.

A promising student of physics in Zurich, was a close companion of Albert Einstein in university, a member of his circle of aspiring scientists, and mother of his children. Benedict presents a story of Marić that's debated by others; that is: she was Albert's indispensable intellectual collaborator and contributor to his research reports—a tantalizing issue which physicist and writer Dennis Overbye mentions in his 2000 [Einstein in Love](#), but leaves undeveloped — deserving of equal credit for his (sic) discovery of relativity. (Did he assign his Nobel prize money to Marić-Einstein as recompense for denying scholarly accreditation to her?) Benedict explores this possibility, offering a convincing portrayal of how Einstein may have exploited Marić's brilliance and her trust in him, removing her name from publications of their shared scientific discoveries. (A very serious charge which must be thoroughly explored.)

Albert Einstein is so lionized a figure that it will take much more research to clarify Marić-Einstein's real role in the history of physics. But the accounts by Overbye and Benedict are a start, just as [Shetterly's work](#) is an essential opening act on women in U.S. pioneering research .

Women everywhere struggle on mightily. In small snips we cut away the deep roots of misogyny in every culture. While progress is slow at the legal level, headway is being made by the slogging research work by our writers. Doubtless many more histories await our attention and when we uncover them we will find how many more predecessors broke barriers long before this modern era. Knowing women's early scientific work, even absent of fanfare or awards, is still empowering to this and future generations.