

MUSIC

INTRO:

HELLO, AND WELCOME TO THE ONE BOOK ONE NORTHWESTERN PODCAST. MY NAME IS BAYLOR SPEARS AND I'M YOUR HOST. SINCE YOU WILL BE HEARING MY VOICE ALL YEAR, I WANTED TO TELL YOU A LITTLE BIT ABOUT ME. I'M A SOPHOMORE AT NORTHWESTERN AND I'M FROM KNOXVILLE, TENNESSEE. HERE AT SCHOOL, I'M STUDYING JOURNALISM AND POLITICAL SCIENCE. I'M NOT EXACTLY SURE WHAT I WANT TO DO WITH THAT IN THE FUTURE, BUT I KNOW THAT RIGHT NOW I REALLY ENJOY CREATING PRINT AND AUDIO CONTENT -- HENCE WHY I'M WORKING ON THIS PODCAST. I'VE DONE QUITE A FEW THINGS IN AUDIO SINCE I STARTED AT NORTHWESTERN. MOST RECENTLY, I INTERNEED AT KNOXVILLE'S LOCAL N-P-R STATION OVER THE SUMMER AND I'M A PART OF W-N-UR NEWS WHICH IS NORTHWESTERN'S VERSION OF N-P-R. I ALSO FIND U-S. POLITICS REALLY IMPORTANT AND INTERESTING, SO I'M TRYING TO LEARN AS MUCH ABOUT THAT AS I CAN. REALLY, I'M JUST EXPLORING LOTS OF DIFFERENT SUBJECTS BECAUSE THAT'S THE POINT OF COLLEGE. ANYWAY, ENOUGH ABOUT ME LET'S GET ON WITH THIS YEAR'S THEME.

OVER THE COURSE OF THIS YEAR, WE'RE GOING TO BE EXPLORING SOME OF THE THEMES OF THIS YEAR'S ONE BOOK -- HIDDEN FIGURES BY MARGOT SHETTERLY! MANY OF YOU MAY BE AT LEAST A LITTLE FAMILIAR WITH THE STORY AND MAY HAVE SEEN THE MOVIE. FOR THOSE OF YOU WHO AREN'T FAMILIAR... HIDDEN FIGURES TELLS THE STORY OF BLACK FEMALE MATHEMATICIANS WHO WORKED AS "COMPUTERS" -- WHICH WAS AN ACTUAL JOB TITLE-- AT NASA BEFORE AND DURING THE SPACE RACE DURING THE MID-1950S. THE STORY DETAILS THE CIRCUMSTANCES THAT THESE WOMEN WORKED UNDER AND HOW THEIR WORK AND CALCULATIONS LED TO SOME OF AMERICA'S GREATEST SPACE ACHIEVEMENTS. WHILE THE STORY IS REALLY ABOUT ALL THESE WOMEN, IT FOCUSES ON THE LIVES OF THREE AFRICAN AMERICAN WOMEN IN PARTICULAR, KATHERINE JOHNSON, DOROTHY VAUGHAN, AND MARY JACKSON. THE BOOK ADDRESSES A WIDE RANGE OF IDEAS AND ISSUES INCLUDING RACE... GENDER... HIGHER EDUCATION... THE SPACE RACE AND FAMILY. THESE CONCEPTS WHICH ARE EXPLORED IN THE CONTEXT OF THE BOOK CONTINUE TO HAVE AN IMPACT ON PEOPLE FIFTY, SIXTY, SEVENTY YEARS LATER.

ON OCTOBER 17, 2019 MARGOT SHETTERLY WAS THE KEYNOTE SPEAKER ON CAMPUS. SHE CAME AND TALKED ABOUT THE RESEARCH PROCESS AND THE IMPACT THE STORY HAS MADE SINCE SHE BROUGHT IT TO LIGHT. I ALSO TALKED TO NORTHWESTERN STUDENTS AND STAFF ABOUT HIDDEN FIGURES AND WHAT THE STORY MEANS TO THEM. SO.. LET'S GET STARTED.

SHETTERLY GREW UP IN HAMPTON, VIRGINIA, WHICH IS HOME TO LANGLEY RESEARCH CENTER... THE OLDEST OF NASA'S FIELD CENTERS IN THE U-S. SHE EXPLAINED SHE GREW UP SURROUNDED BY SCIENTISTS AT NASA--INCLUDING HER DAD, WHO WORKED AS A RESEARCH SCIENTIST -- A JOB FEW AFRICAN AMERICANS HELD THEN AND NOW. AND IT'S HERE THAT SHE DISCOVERED HER INTEREST IN THE STORY OF NASA'S "HUMAN COMPUTERS."

SHETTERLY: I think there are two answers to that. One is being curious about a conversation that my dad and my husband were having about the women who worked at NASA, so it was sort of like this book came out of that conversation.

SPEARS: SHETTERLY SAID AS SHE LISTENED TO HER FATHER AND HUSBAND DISCUSS THESE WOMEN...SHE RECOGNIZED THAT SHE DIDN'T REALLY KNOW THIS PART OF THE STORY. SHE DIDN'T KNOW HOW SO MANY WOMEN OF COLOR AT THE TIME ENDED UP AT NASA. SHE ASKED HERSELF WHY HAVE WE NEVER HEARD THIS STORY BEFORE.

SHETTERLY: The deeper answer to that question is really a desire to understand more about the town, the city that I came from Hampton, Virginia. And what I really view as my origin story, which had to do with my dad working at NASA, and his career really having been supported by the work that these women did in the 1940 and 50s and early 60s.

SPEARS: SHETTERLY SAID SHE DIDN'T PLAN ON BECOMING AN AUTHOR, BUT THIS STORY KIND OF CHANGED HER PROFESSIONAL IDENTITY.

SHETTERLY: "I really believe the story found me so it wasn't so much that I said, I want to be a writer as I want to write this story."

SPEARS: IT WAS THE COMBINATION OF THIS NEW UNEXPLORED TERRITORY... THE SHEER VOLUME OF INFORMATION SHE GATHERED AND CONTEXTUALIZING SO MANY PIECES OF THE STORY THAT MADE THE WRITING DIFFICULT...SHE SAID.

SHETTERLY: There was the space and science technology element. There was the American history element, the civil rights element, the gender history element. There were all these different things. There was a local history that happened in Hampton, Virginia. There were so many elements to this story, and it was overwhelming at times. So I think the biggest challenge was figuring out how to take this huge, huge archive, treasure of information and turn it into a story that someone else would be interested in and do that not having written a book before.

SPEARS: SHETTERLY SAID TO GO THROUGH ALL OF THIS INFORMATION SHE HAD TO TAKE IT IN LAYERS. SHE STARTED OFF BY INTERVIEWING SOME OF THE WOMEN AND THEIR LOVED ONES ABOUT THEIR LIVES AND WORK AT NASA. THEN SHE WENT THROUGH ARCHIVES OF INFORMATION AND DUG INTO SOME OF THE SCIENCE TO CREATE A MAP OF EXACTLY WHAT THEY WERE DOING.

SHETTERLY: The work that these women did is the work you might think of it as the work that you do in an Excel spreadsheet where you put different values in and you get a certain apply certain operations and you get values out and then you figure out what that information means?

SPEARS: A DAY-IN-THE-LIFE FOR ONE OF NASA'S COMPUTERS COULD CHANGE DEPENDING ON WHERE THEY WERE AT WITH THE DATA. ONE DAY SOMEONE MAY BE CAPTURING DATA FROM EXPERIMENTS IN A WIND TUNNEL AND THE NEXT COPYING THE DATA ONTO A SPREADSHEET THEN DOING CALCULATIONS WITH IT. AND AS THE SPACE RACE BEGAN, THE MISSION SHIFTED A LITTLE, BUT THE WORK REMAINED MOSTLY THE SAME.

SHETTERLY: During the space age, they started working on the Mercury capsule and the challenge became not how are we going to get plane A from point B to point C? But how are we going to shoot a man into space orbit him around the earth and bring them back to Earth safely. So the nature of the problem evolved over time, but always in some way involved coming up with this problem, putting it into terms that can be measurable, doing experimentation and then kind of applying the answers to those experiments to whatever the engineering problem was.

SPEARS: SHE ALSO EXPLAINED THAT AS THESE WOMEN STARTED MOVING UP THE HIERARCHY AT NASA, THEY WOULD BE INVOLVED NOT JUST WITH CAPTURING DATA, BUT ALSO IN HELPING DESIGN THE EXPERIMENTS, AND THEY WERE ABLE TO MOVE INTO MORE OF AN ENGINEERING ROLE.

SPEARS: SHETTERLY SAID THE TITLE "HIDDEN FIGURES" IS KIND OF A MISNOMER BECAUSE THESE WOMEN WEREN'T SO MUCH HIDDEN AS THEY WERE UNSEEN BY OTHERS AND RESTRICTED BY SOCIETAL NORMS AT THE TIME. SHETTERLY POINTED TO KATHERINE JOHNSON AS JUST ONE EXAMPLE OF HOW THE WOMEN AT NASA HAD TO WORK TO MAKE THEMSELVES SEEN. JOHNSON WORKED ON ESSENTIAL CALCULATIONS AND RESEARCH FOR THE MERCURY AND APOLLO MISSIONS — BUT SHE WASN'T INITIALLY RECOGNIZED FOR HER WORK OR ALLOWED INTO MEETINGS AT NASA BECAUSE SHE WAS A WOMAN.

SHETTERLY: The people always said, you know, Katherine, you can't come to the meeting. There's no precedent for women coming to the meetings, and she said, 'Listen, is there a law against it? I'm going to one day one way go to those meetings, because my research was in that report, and I want to be in the room where it happens'. And eventually, she was able to do that.

SPEARS: JOHNSON WAS THE FIRST WOMAN TO BE ALLOWED INTO THESE MEETINGS AND THE FIRST WOMAN IN THE FLIGHT RESEARCH DIVISION TO RECEIVE CREDIT AS AN AUTHOR ON A RESEARCH REPORT.

SPEARS: ERICA KNIGHT, WHO WORKS IN NORTHWESTERN'S OFFICE OF DIVERSITY AND INCLUSION, FOUND THE NUANCE OF THE BOOK'S TITLE A KEY POINT IN SHETTERLY'S TALK.

KNIGHT: One of my favorite parts is to hear that author distinguish between being a hidden, hidden figure versus being unseen, and how the women really did not see themselves as hidden, but more so just as unseen. I think that that speaks to a larger issue today with regard to underrepresented populations and the visibility of those populations that's doing the work.

SPEARS: THIS STORY MAY HAVE GONE UNNOTICED IN THE PAST...BUT NOW THAT THE WOMEN HAVE BEEN PLACED IN THE SPOTLIGHT...IT'S CLEAR THE COMPUTERS' LIVES RESONANT WITH SO MANY.

SHETTERLY: I did not expect this impact. It's been a little more than three years since my book first came out. And the idea that I'm sitting with you guys here at Northwestern, still talking about this book three years later, it's pretty amazing to me.

SPEARS: SHETTERLY SAID SHE THINKS THE BOOK CAME OUT IN AN ENVIRONMENT THAT WAS PRIME FOR A CONVERSATION CONCERNING WOMEN AND

UNDERREPRESENTED GROUPS IN SCIENCE.. TECHNOLOGY.. ENGINEERING.. MATHEMATICS OR STEM CAREERS. THEIR EXPERIENCES AND COURAGE ARE INSPIRATION FOR WOMEN IN THESE FIELDS, TODAY.

SHETTERLY: I think that's one of the reasons why people have gravitated to these women and to the stories because even though the times have changed, they still provide, I think, an example of how to fight for example, when you haven't gotten credit for work that you did, you know, and how to refuse to take no for an answer.

SPEARS: HIDDEN FIGURES AS BOTH A BOOK AND AS A MOVIE RECEIVED RAVE REVIEWS. SHETTERLY SAID BEING INVOLVED WITH THE MOVIE WAS AN AMAZING EXPERIENCE AND IS VERY HAPPY WITH THE ADAPTATION. BUT SOME OF THE PROCESS MEANT REALIZING THAT WHILE THE MOVIE WOULD BE ACCURATE IT WOULDN'T NECESSARILY BE AS DETAILED OR AS TRUE TO REAL-LIFE AS THE BOOK. FOR EXAMPLE, IF YOU REMEMBER IN THE MOVIE DOROTHY VAUGHAN, A NASA MATHEMATICIAN, DRIVES ALL THE WOMEN TO WORK, BUT IN REAL-LIFE VAUGHN NEVER ACTUALLY LEARNED TO DRIVE.

SPEARS: EACH YEAR ONE BOOK HOLDS AN ESSAY CONTEST AND ALL INCOMING FRESHMEN CAN ENTER INTO IT. THEY ARE PROVIDED A PROMPT AND THEN HAVE TO RESPOND TO IT. THIS YEAR'S WINNER WAS A FRESHMAN NAMED LUTGARDIS UKANGUTSE. SHE IS FROM RWANDA, AFRICA. SHE HASN'T DECIDED HER MAJOR YET, BUT IS LEANING TOWARD STUDYING INDUSTRIAL ENGINEERING. HER ESSAY IS TITLED OVER THE MOON.

UKANGUTSE: Mostly what I focused on was how I connected personally with the book, and how I saw it actually impact the present that we are living in. I was kind of giving an analysis of how the book portrays the past and how that past in some ways has affected the present that we live in right now.

SPEARS: SHE STARTED THE ESSAY WITH A STORY OF WHAT HAPPENED WHEN SHE SOLVED A PROBLEM IN HER SIXTH GRADE MATH CLASS.

UKANGUTSE: The teacher got so shocked, and I think it was because, usually, I don't speak so much in classes, not because I'm shy, but because that's how I am. So when I solved a question that some boys couldn't solve, even the smartest boys in our class couldn't solve. The teacher got shocked. Somehow this shock to me meant something. It meant that he couldn't believe that I could do it.

SPEARS: SHE SAID THAT THE BOOK ABOUT NASA'S HUMAN "COMPUTER" IS ENCOURAGING HER TO PURSUE WHATEVER SHE WANTS AT NORTHWESTERN.

UKANGUTSE: When I read this book about those Hidden Figures, the women who actually were able to do it in conditions that were so limiting in a society, they couldn't believe that they could do it, I realized that it is not about acknowledgement. It's more about what you want to achieve and what you think you can actually do.

SPEARS: SHE SAID SHE KNOWS THAT THERE WILL BE CHALLENGES IN PURSUING STEM LIKE FEELING IMPOSTER SYNDROME OR HAVING PEOPLE NOT BELIEVE IN HER, BUT...

UKANGUTSE: If I love stem, why not go for it? I know my gender and color say something different according to society, but then I think that's not gonna limit me. So yeah, the book really pushed me that way.

SPEARS: SO WHERE IS SHETTERLY HEADED? SHE SAID THE NEXT BOOK SHE IS WORKING IS A CONTINUATION OF HIDDEN FIGURES AS SHE WILL STILL FOCUS ON THIS TIME PERIOD. THROUGHOUT HER RESEARCH FOR HIDDEN FIGURES, SHE SAID SHE NOTICED HOW INDISPENSABLE THE BLACK NEWSPAPERS WERE AT THE TIME, SO SHE SAID SHE IS LOOKING MORE INTO THE PEOPLE BEHIND BLACK NEWSPAPERS AND ENTREPRENEURS IN BALTIMORE. IT MAY BE AWHILE BEFORE WE SEE THIS STORY, SINCE SHE IS STILL IN THE EARLY STAGES OF RESEARCH.

SPEARS: THANKS FOR LISTENING EVERYONE! MAKE SURE YOU ARE ON THE LOOKOUT FOR THE SECOND EPISODE IN THE NEXT FEW WEEKS. WE'LL BE TALKING ABOUT LOW-INCOME AND FIRST-GENERATION STUDENTS IN HIGHER EDUCATION WITH DR. ANTHONY JACK, A PROFESSOR AT HARVARD AND AUTHOR OF THE PRIVILEGED POOR: How Elite Colleges Are Failing Disadvantaged Students.....

THANK YOU TO NANCY CUNNIFF THE DIRECTOR OF ONE BOOK AND EDITORIAL ADVISOR DR. AVA THOMPSON GREENWELL...

MUSIC