

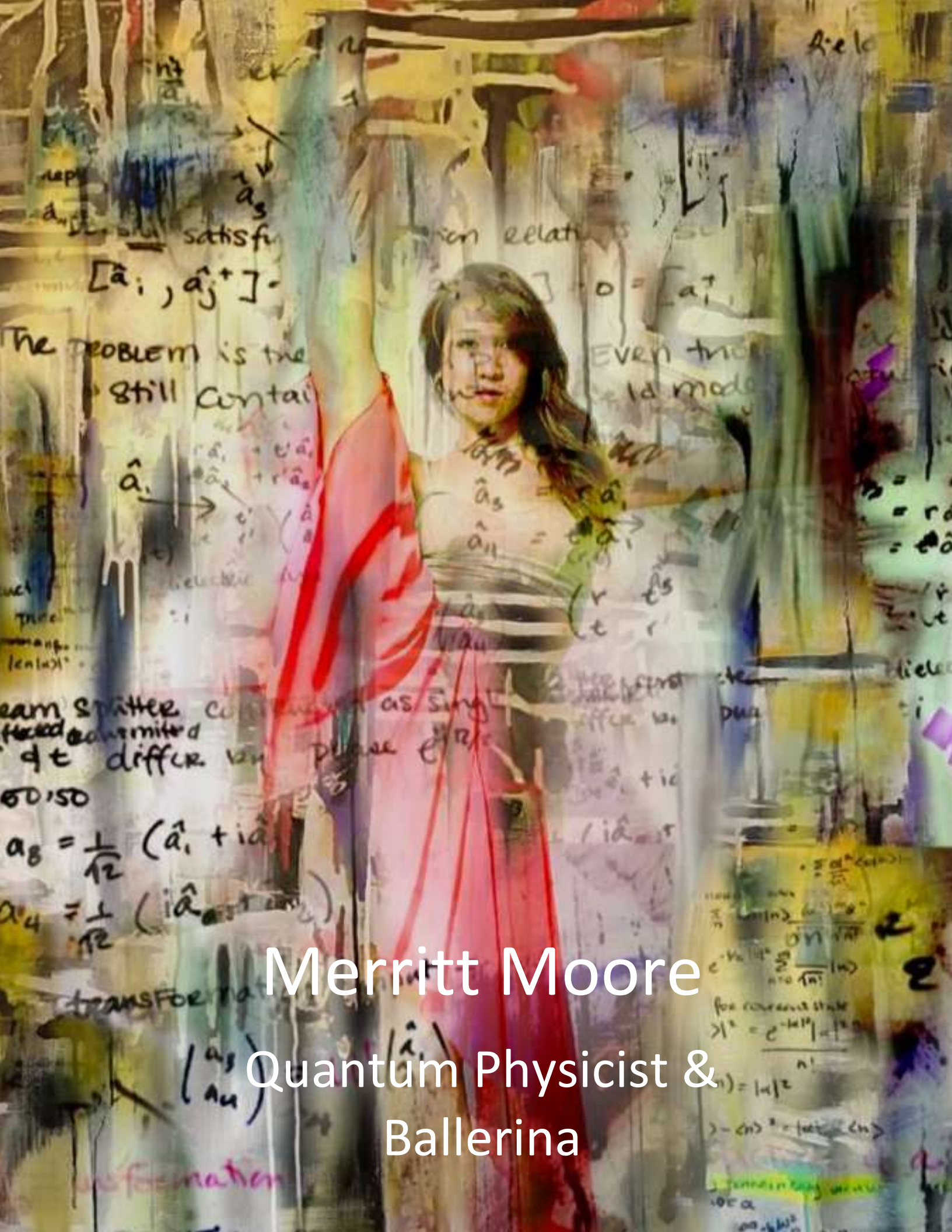
Girls Who Grew Up to Change the



Merritt Moore



Oprah Winfrey



$$[\hat{a}_i, \hat{a}_j^\dagger] = \delta_{ij}$$

The problem is the
still contain

$$\hat{a}_i \rightarrow \hat{a}_i + \epsilon \hat{a}_i$$

$$\hat{a}_3 = \epsilon \hat{a}_1$$

$$\hat{a}_4 = \epsilon \hat{a}_2$$

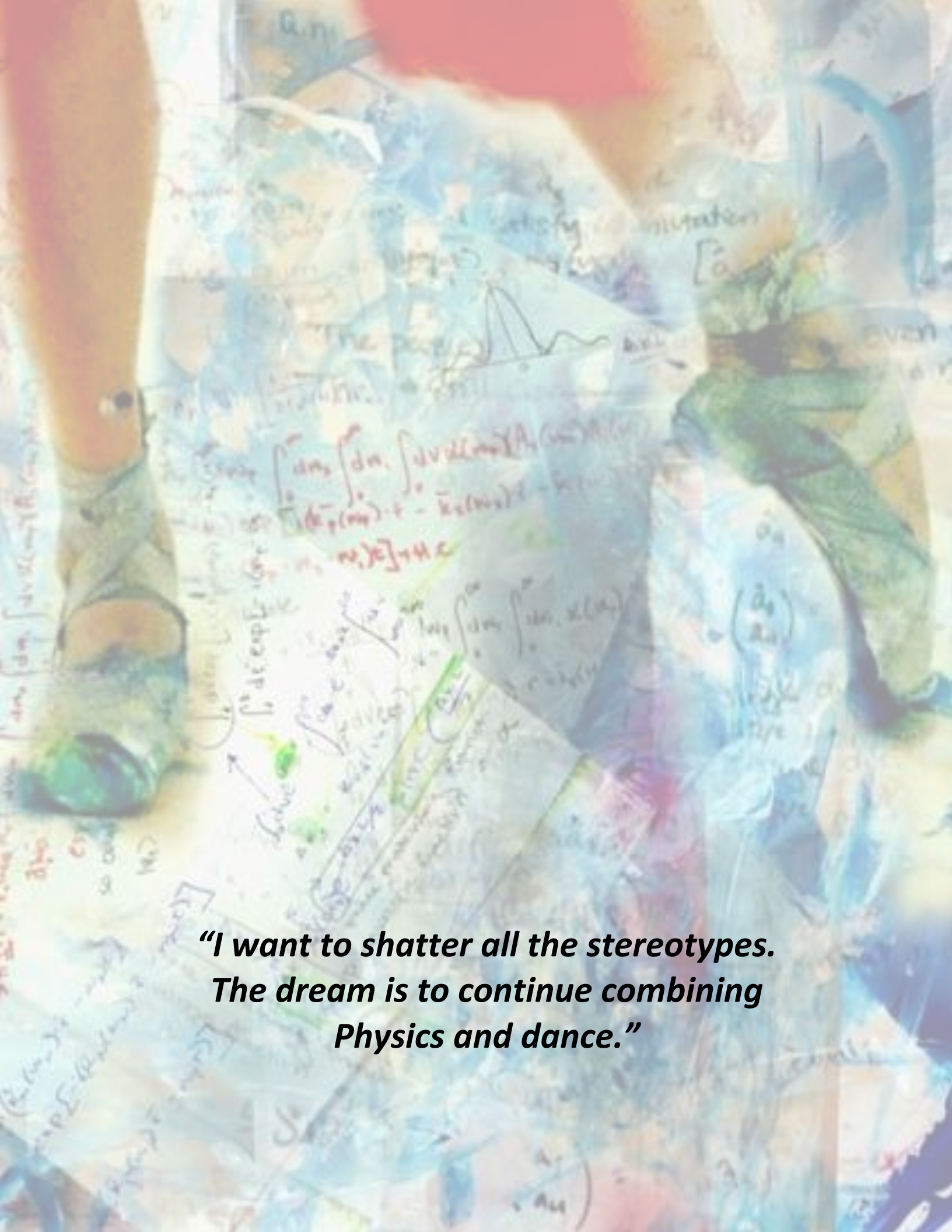
beam splitter
differ by phase ϵ/π

$$a_3 = \frac{1}{\sqrt{2}} (\hat{a}_1 + i\hat{a}_2)$$

$$a_4 = \frac{1}{\sqrt{2}} (i\hat{a}_1 + \hat{a}_2)$$

Merritt Moore

Quantum Physicist &
Ballerina

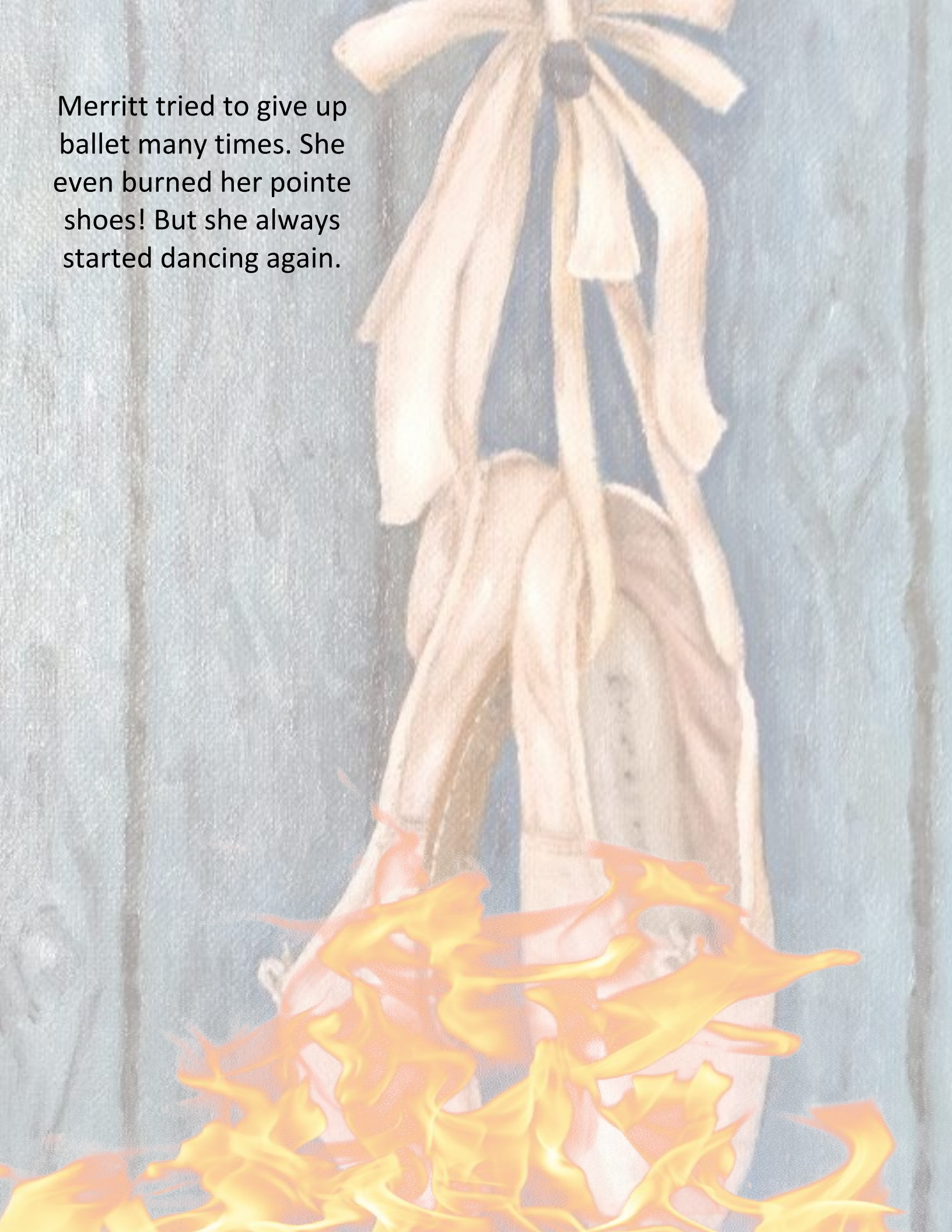
A collage of various physics-related notes and diagrams. It includes mathematical formulas like $\int_0^{\infty} \int_0^{\infty} \int_0^{\infty} d\mathbf{r} d\mathbf{r}' d\mathbf{r}'' A(\mathbf{r}, \mathbf{r}', \mathbf{r}'')$, $\int_0^{\infty} \int_0^{\infty} \int_0^{\infty} d\mathbf{r} d\mathbf{r}' d\mathbf{r}'' A(\mathbf{r}, \mathbf{r}', \mathbf{r}'')$, and $\int_0^{\infty} \int_0^{\infty} \int_0^{\infty} d\mathbf{r} d\mathbf{r}' d\mathbf{r}'' A(\mathbf{r}, \mathbf{r}', \mathbf{r}'')$. There are also diagrams of a triangle, a circle, and a square. The background is a mix of blue, green, and orange colors.

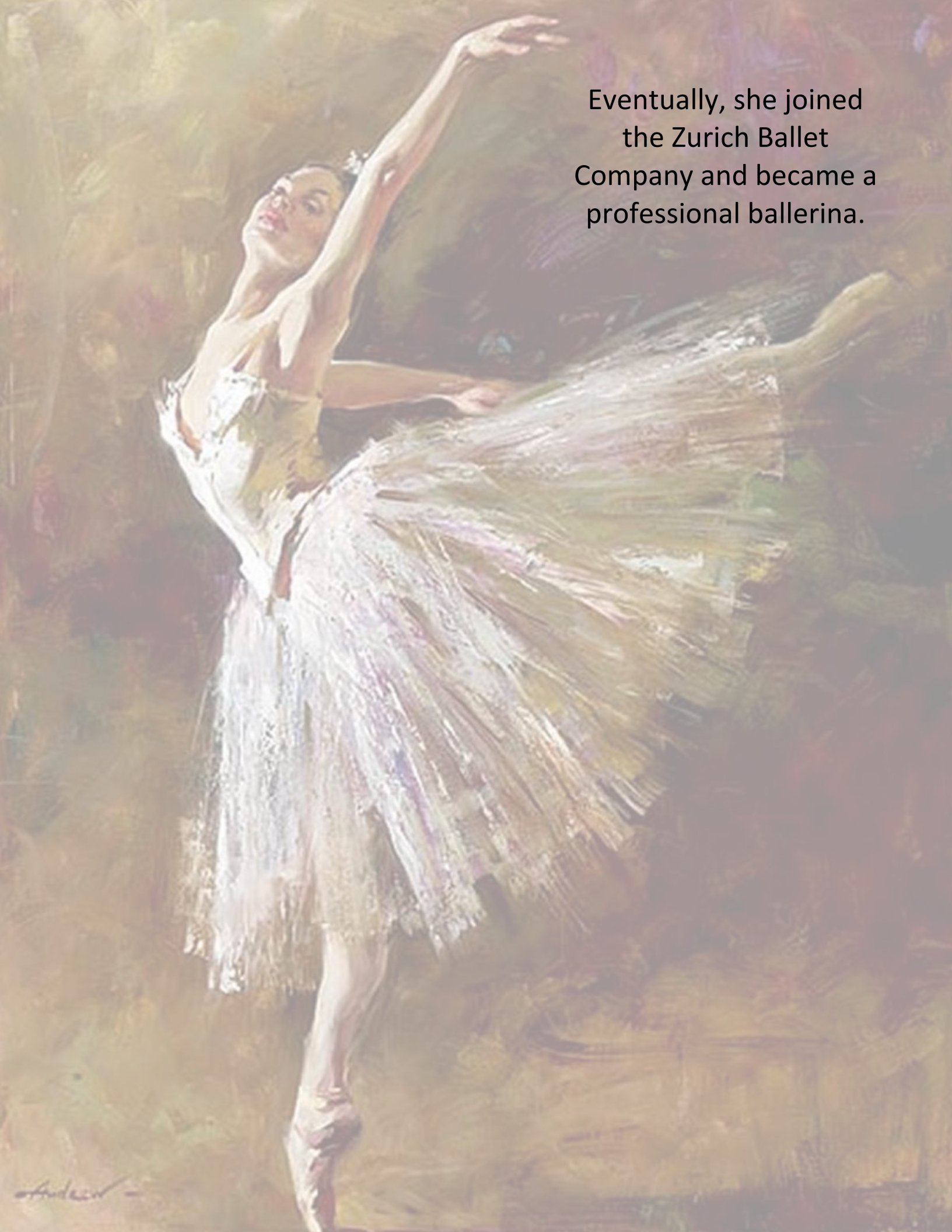
***"I want to shatter all the stereotypes.
The dream is to continue combining
Physics and dance."***

Once upon a time, there
was a girl who loved science
and ballet. She was equally
talented at both, but
everyone said: "You'll have
to choose Science or art?
Physics or ballet?"



Merritt tried to give up ballet many times. She even burned her pointe shoes! But she always started dancing again.

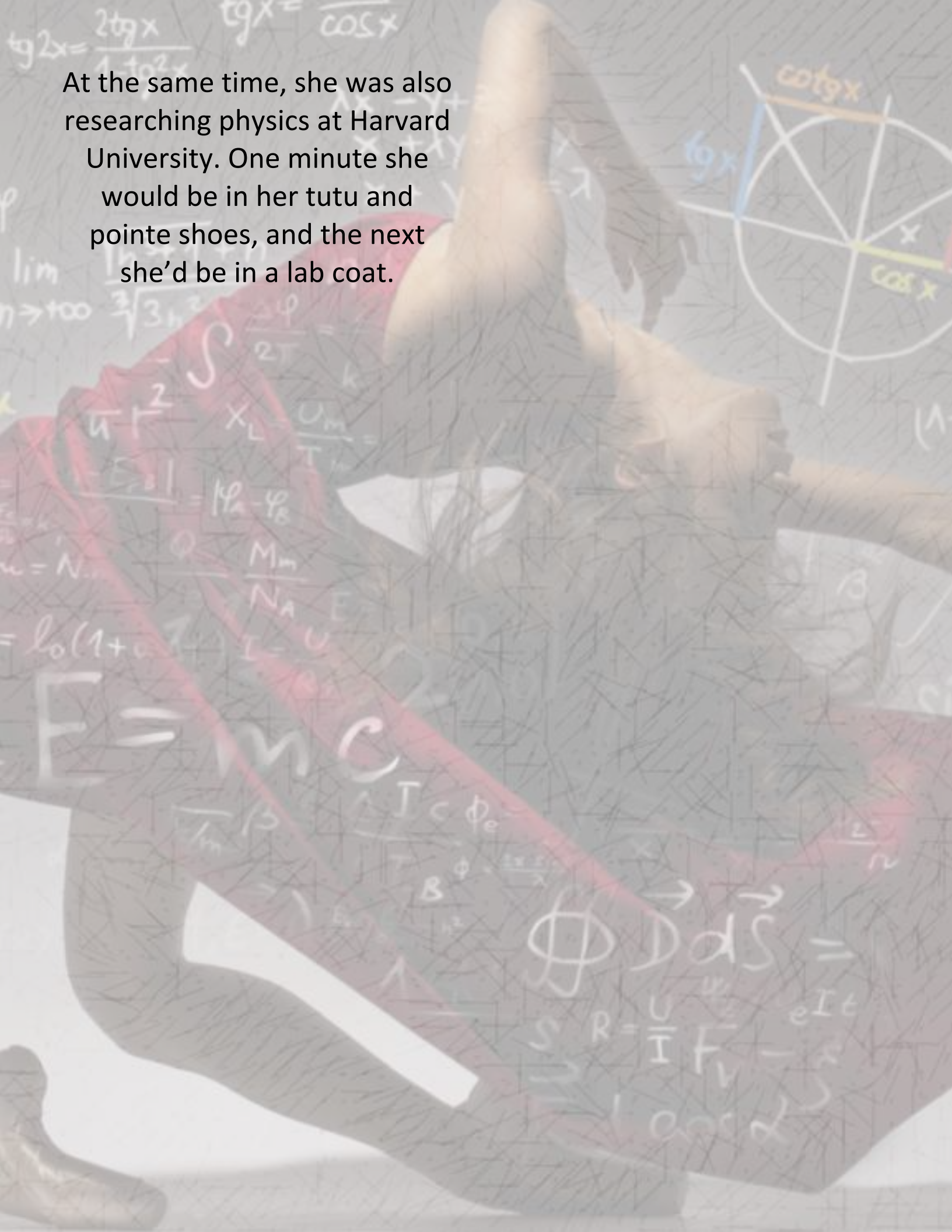





Eventually, she joined
the Zurich Ballet
Company and became a
professional ballerina.

Andrew

At the same time, she was also researching physics at Harvard University. One minute she would be in her tutu and pointe shoes, and the next she'd be in a lab coat.



A woman with long brown hair, wearing a white lab coat over a pink dress, is captured in a dynamic pose as if dancing. She is in a laboratory setting, with her right arm raised high and her left arm extended towards a lab bench. The background shows typical lab equipment, including a fume hood and various containers. The overall tone is artistic and captures a moment of joy amidst a professional environment.

It was hard. “Sometimes I felt overwhelmed,” she said. “I would be in the lab for twenty hours a day, even sleeping there. But I knew I had to dance.” She would take a break from work, sneak out to a stairwell, and practice ballet there. When she did, she found that she came back to the lab with a fresh perspective.

“I think it’s so important for scientists to explore art. You have to think about concepts with imagination and creativity.”

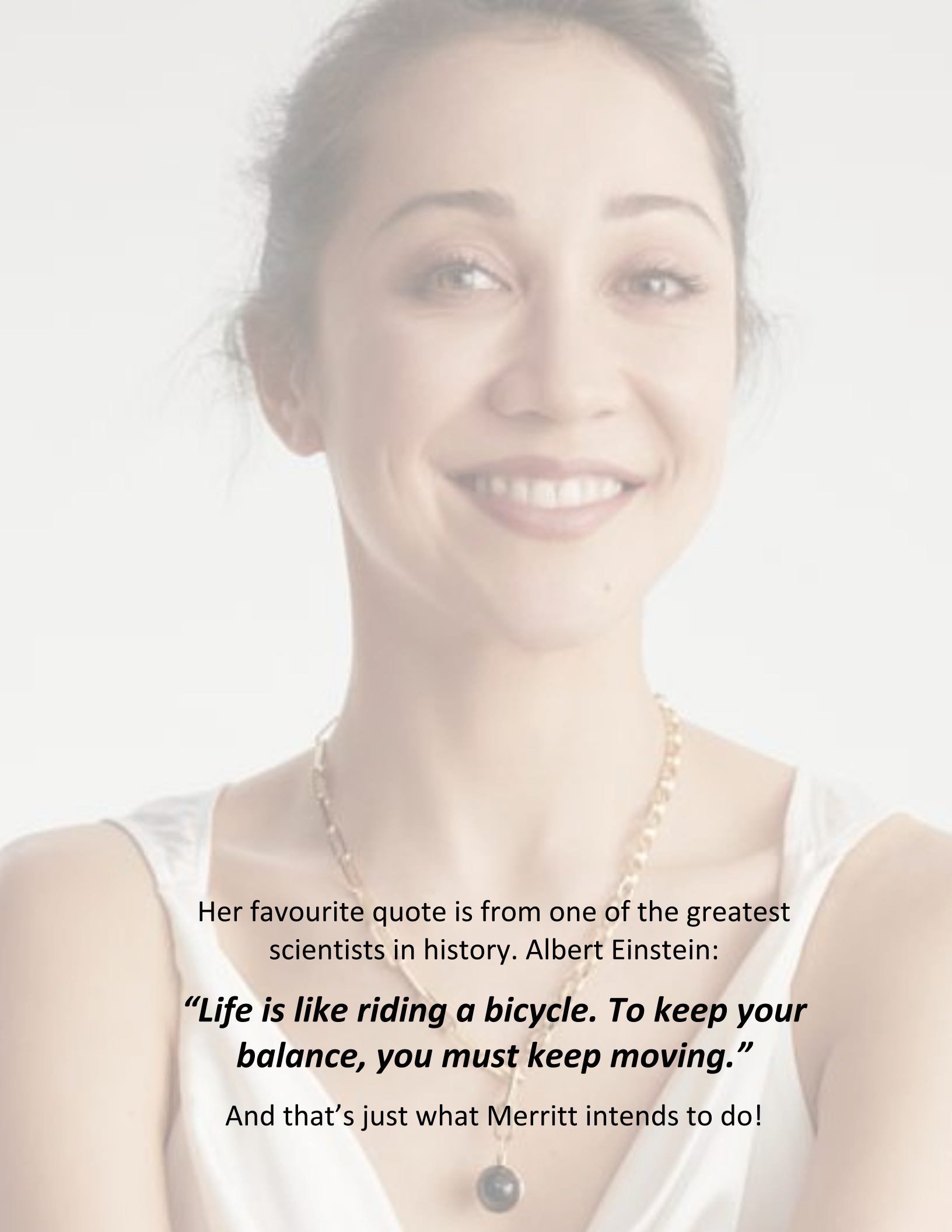


The two parts of her life came together beautifully in a dance piece called Zero Point, which explored a concept from quantum physics called zero-point energy.



Today, Merritt is finishing her PhD at Oxford University,
and she still keeps dancing.





Her favourite quote is from one of the greatest scientists in history. Albert Einstein:

“Life is like riding a bicycle. To keep your balance, you must keep moving.”

And that’s just what Merritt intends to do!



Oprah Winfrey
TV Host, Actress and
Businesswoman

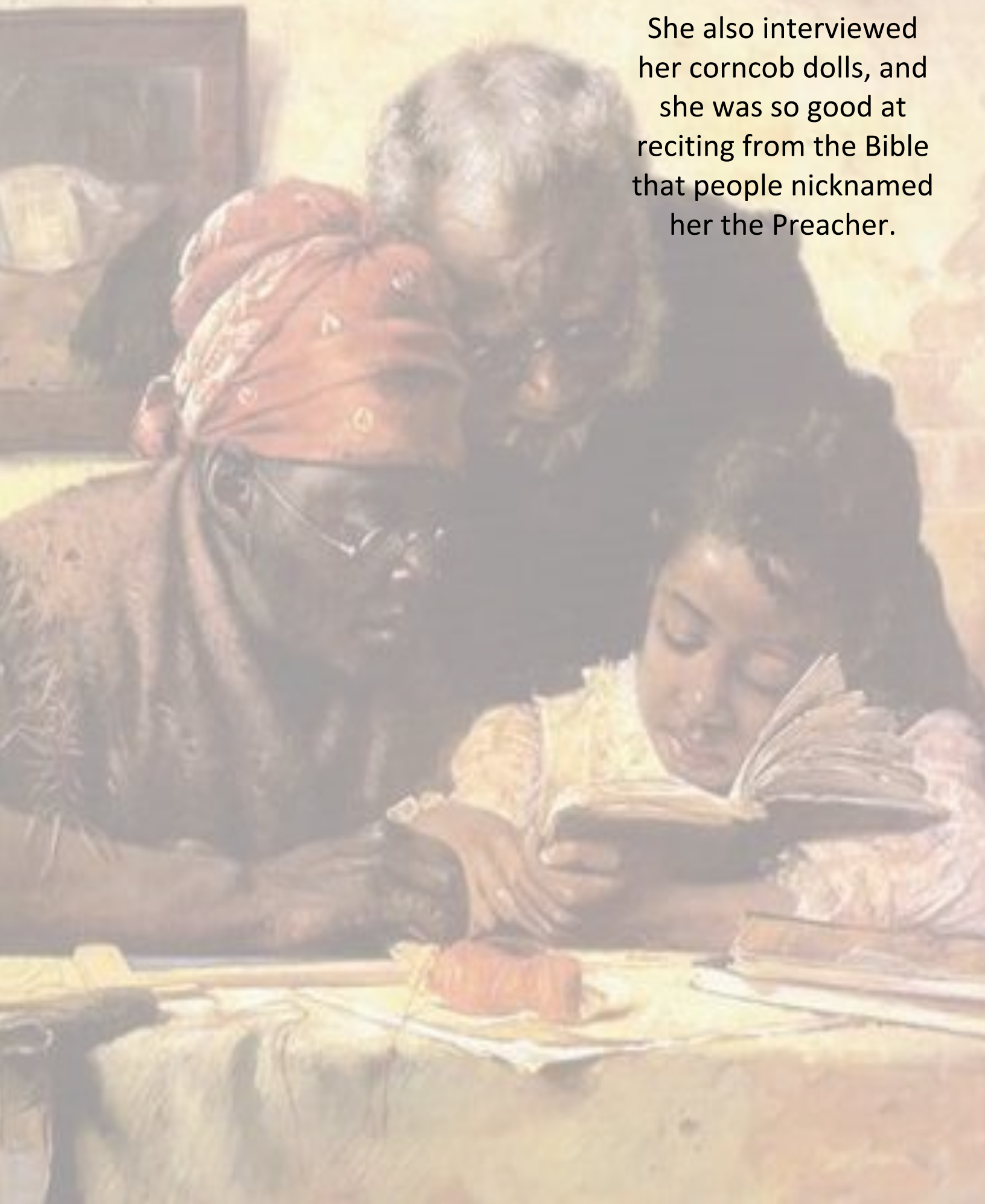
***“You get in life, what
you have the courage
to ask for.”***



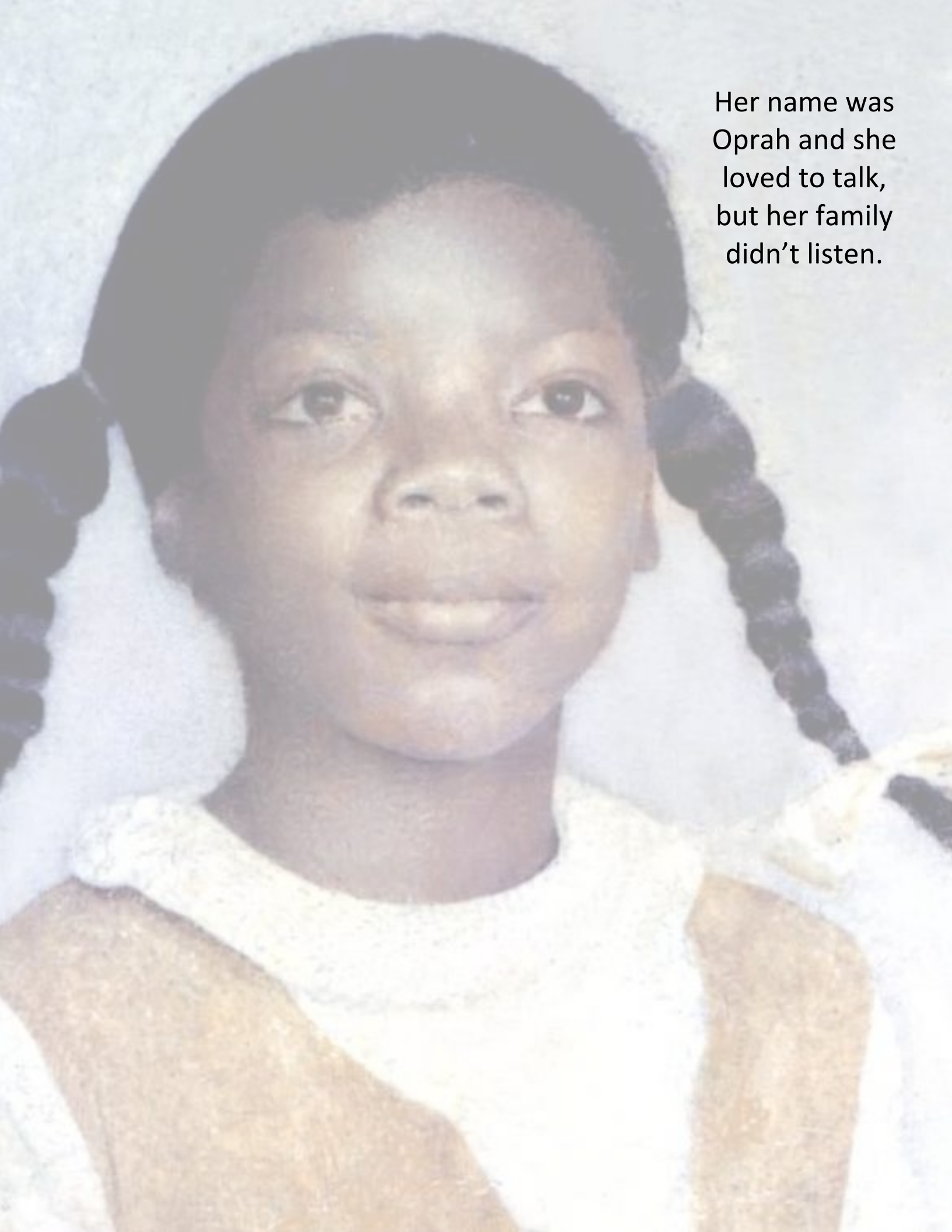
Once there was a little
girl who interviewed
crows.



She also interviewed
her corncob dolls, and
she was so good at
reciting from the Bible
that people nicknamed
her the Preacher.

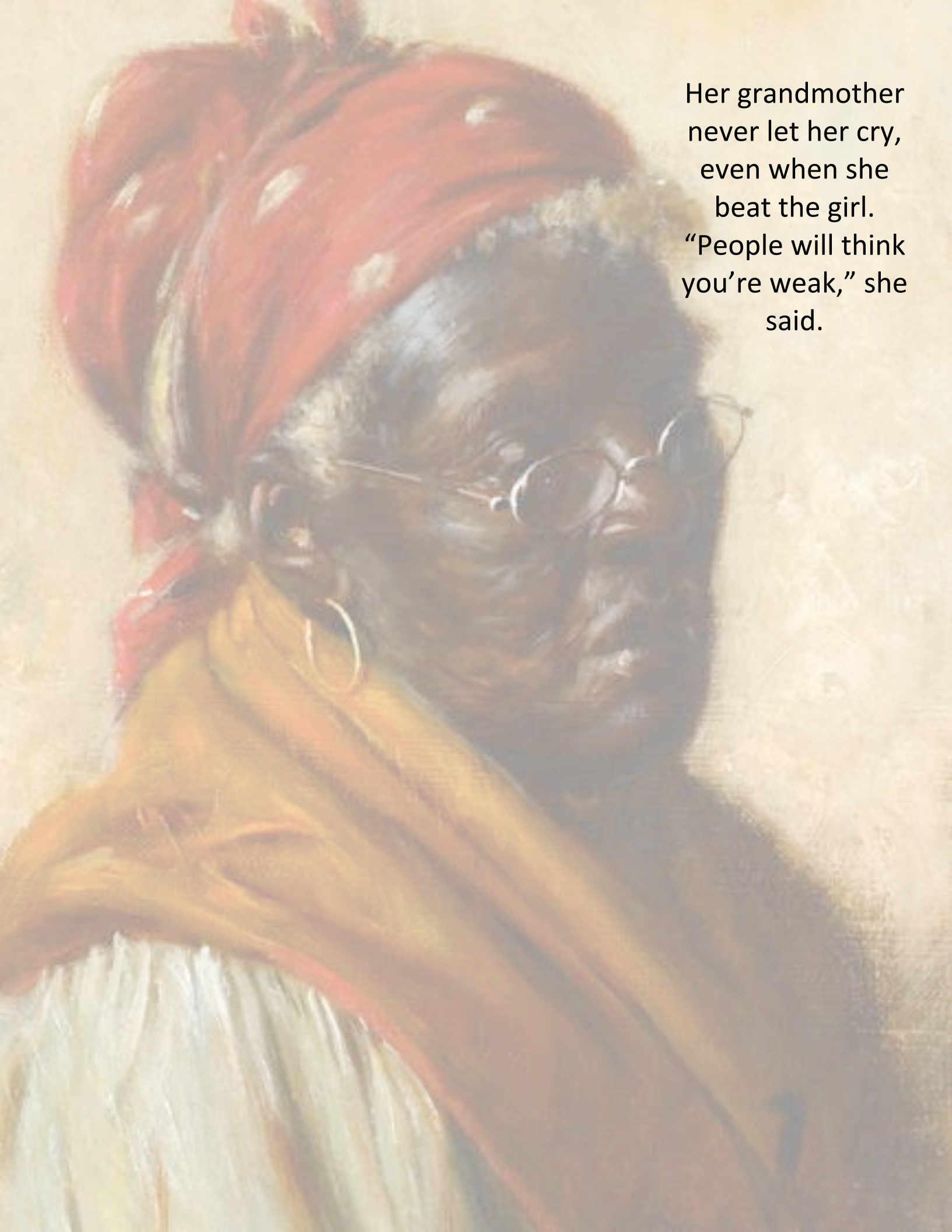


Her name was
Oprah and she
loved to talk,
but her family
didn't listen.



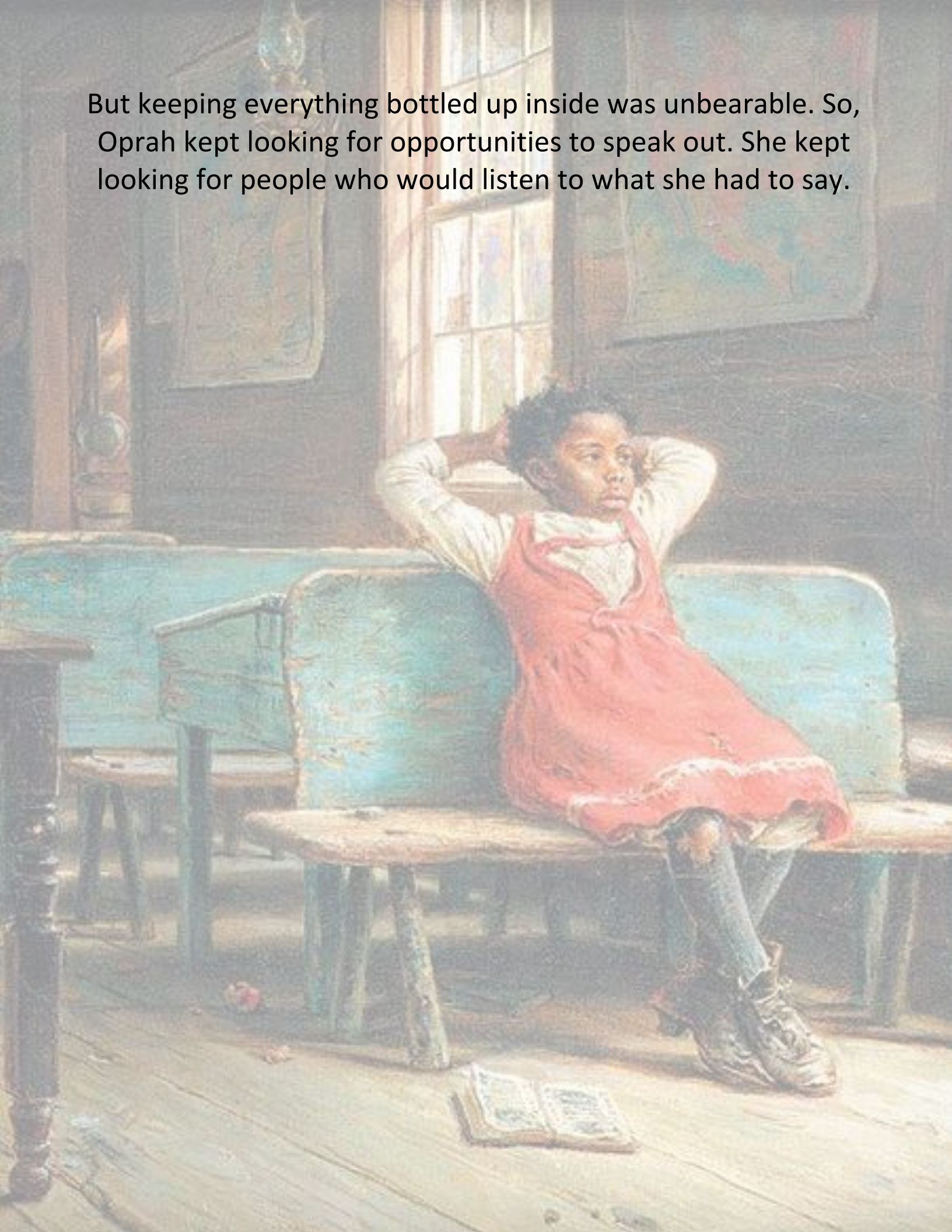


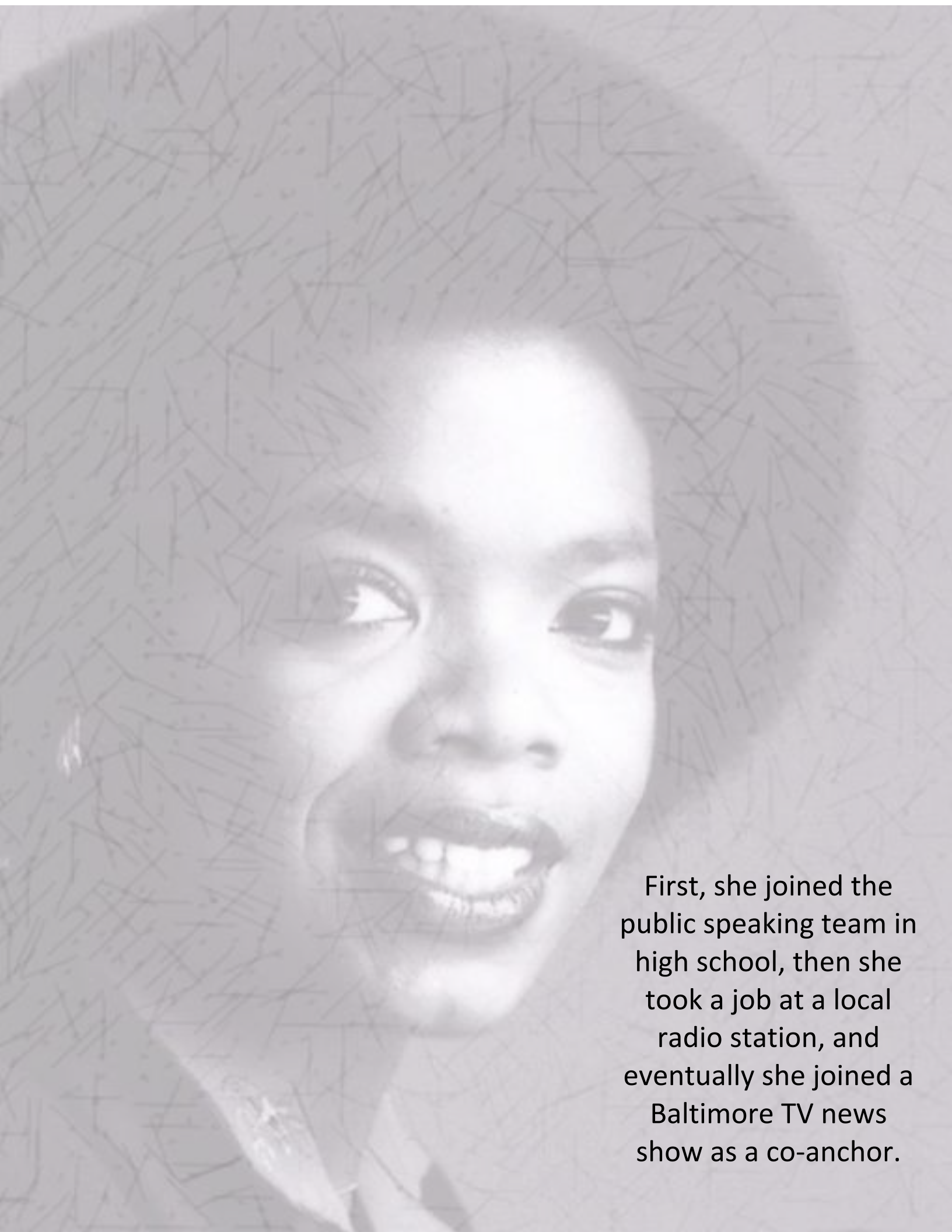
Her mother
brushed her
away, saying,
“Be quiet! I
don’t have
time for you.”



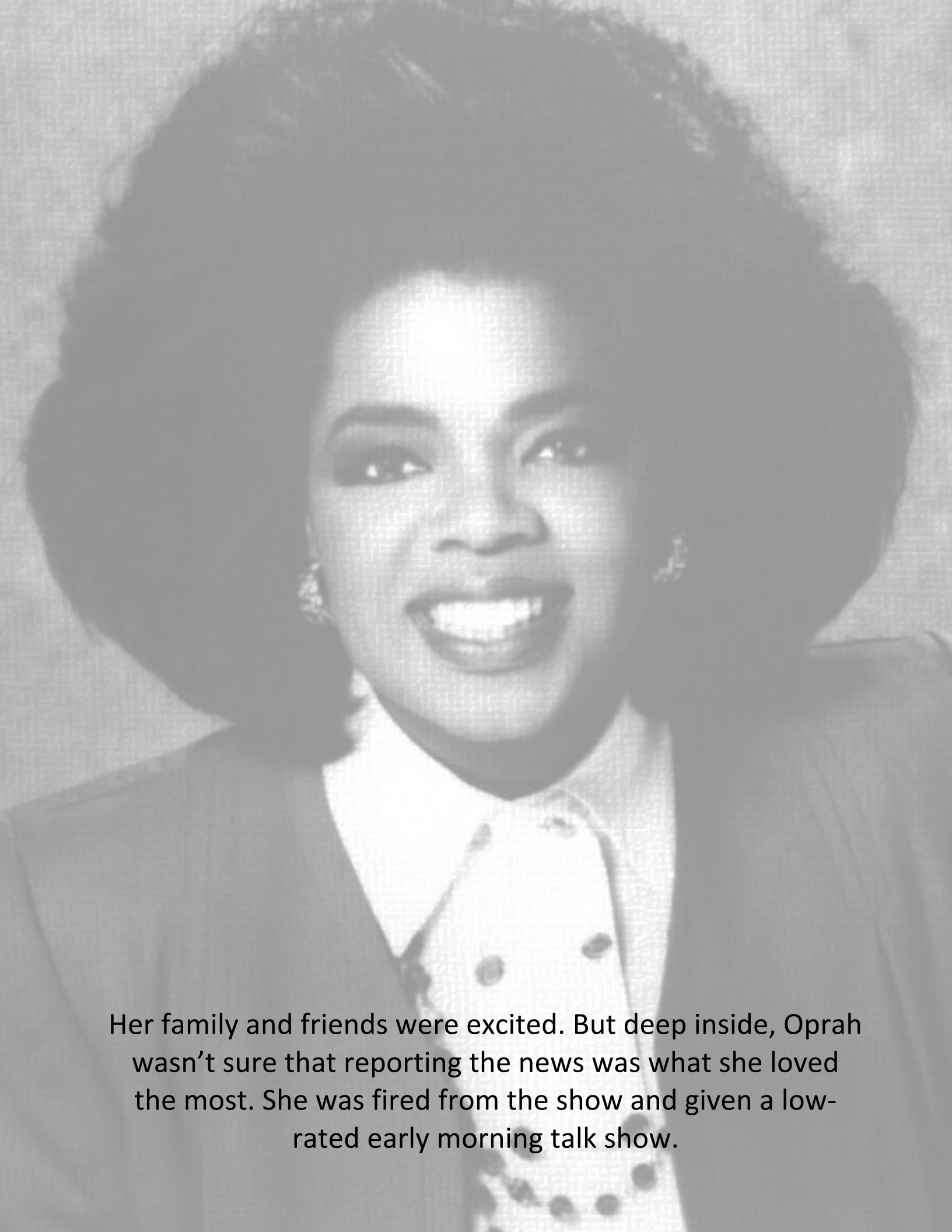
Her grandmother
never let her cry,
even when she
beat the girl.
“People will think
you’re weak,” she
said.

But keeping everything bottled up inside was unbearable. So, Oprah kept looking for opportunities to speak out. She kept looking for people who would listen to what she had to say.

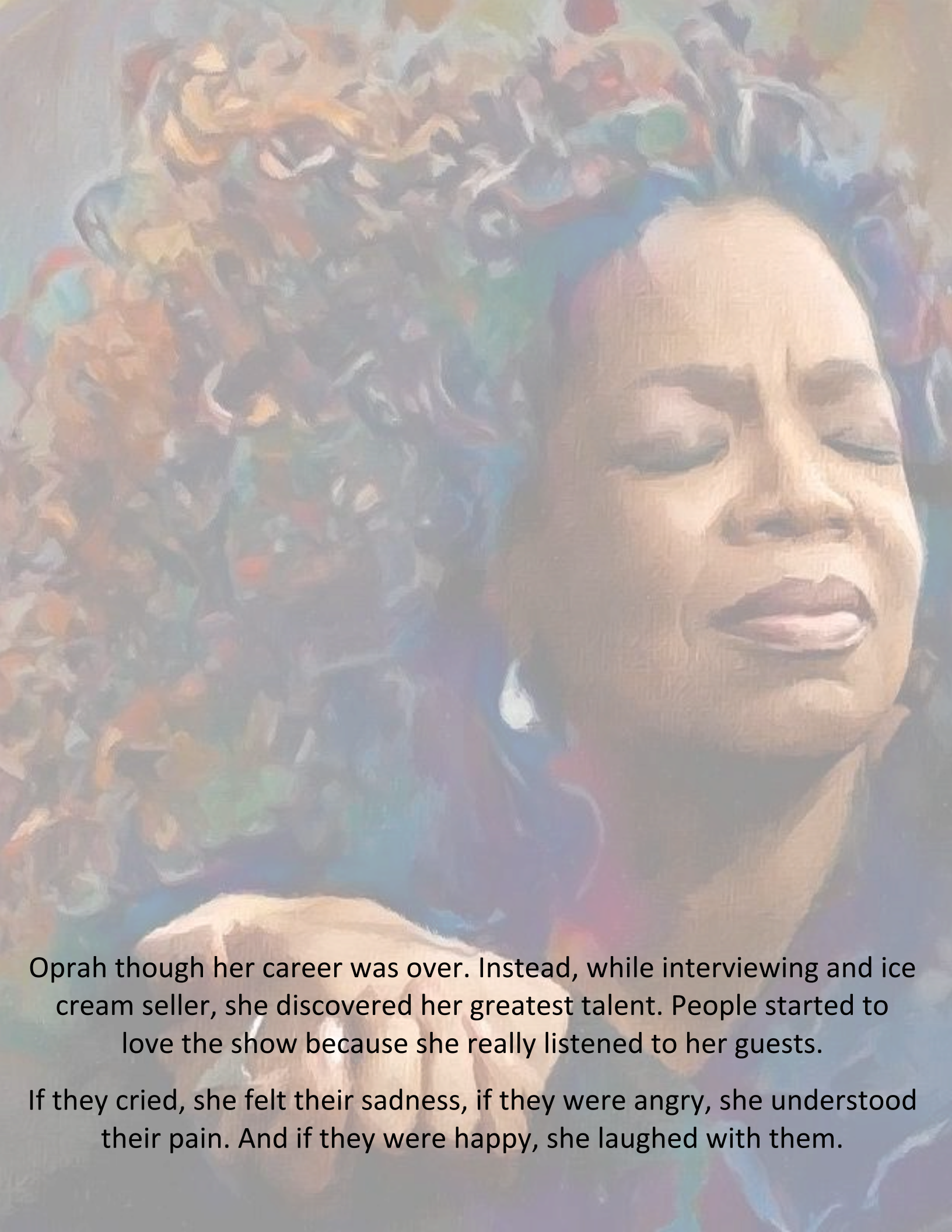




First, she joined the public speaking team in high school, then she took a job at a local radio station, and eventually she joined a Baltimore TV news show as a co-anchor.



Her family and friends were excited. But deep inside, Oprah wasn't sure that reporting the news was what she loved the most. She was fired from the show and given a low-rated early morning talk show.



Oprah thought her career was over. Instead, while interviewing and ice cream seller, she discovered her greatest talent. People started to love the show because she really listened to her guests.

If they cried, she felt their sadness, if they were angry, she understood their pain. And if they were happy, she laughed with them.



Oprah became the queen of talk shows. She moved on to national television, launched her own network, and became a multi-millionaire and one of the most generous philanthropists in history.

