

PIONEERS OF PROGRESS

JOCELYN
BELL BURNELL

MARY
LYON

⊗ ACTIVE
'X'

MARY
BARBER

HARRIETTE
CHICK

MARY
ANNING

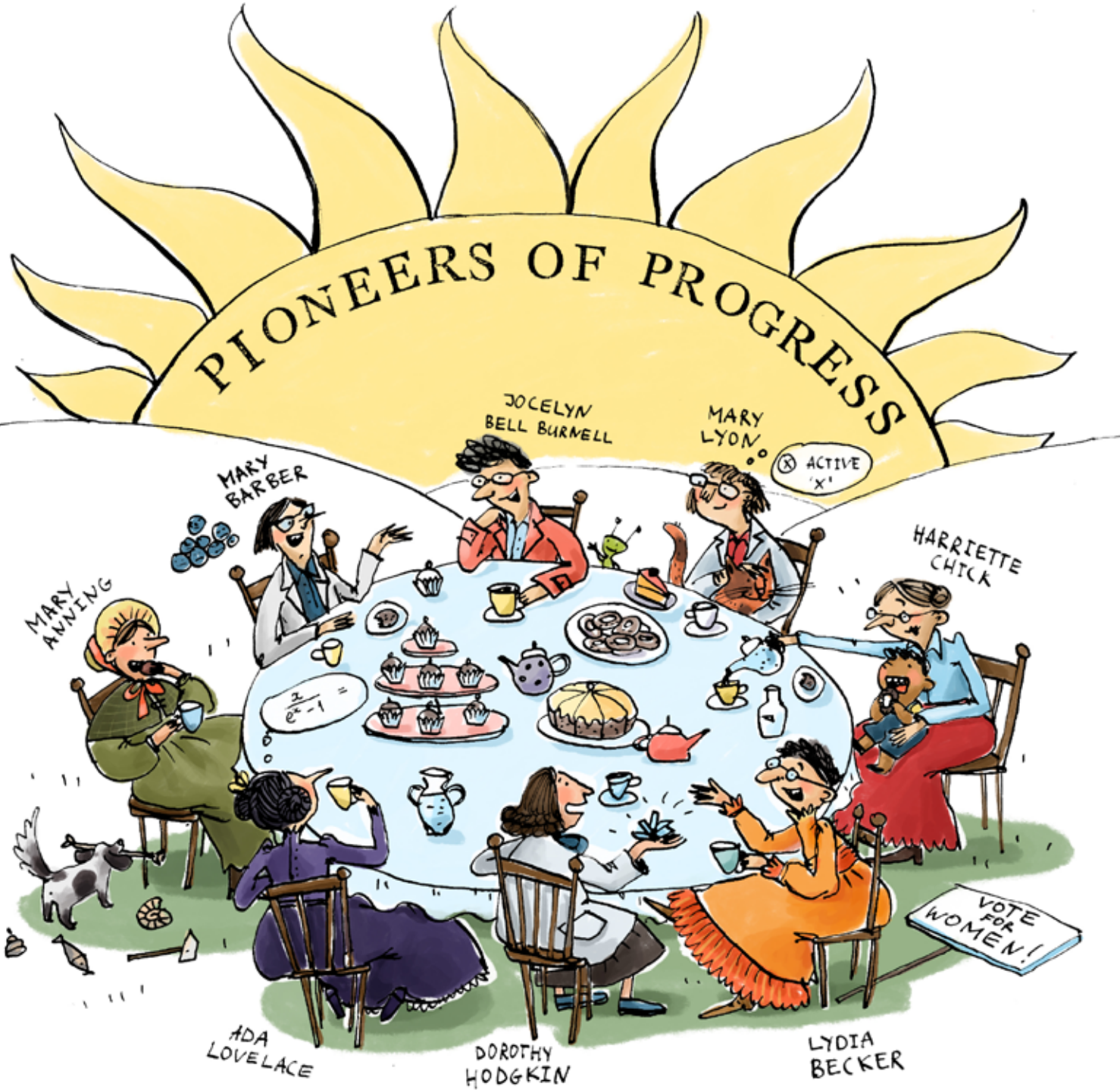
$$\frac{2}{e^x - 1}$$

ADA
LOVELACE

DOROTHY
HODGKIN

LYDIA
BECKER

VOTE
FOR
WOMEN!





1908

WHAT DO
THEY WANT NEXT?
HALF OF THE
WORLD?



Stories and research: Kirstin von Glasow
Illustrators: Elina Ellis and Lindsay McBirnie

Pioneers of Progress

Pioneers of Progress tells the tales of eight women whose contributions to scientific discovery had huge impacts on the world we live in. Their work and the scientific legacies they left behind has often gone unrecognised.

These women were pioneers in the truest sense of the word, not only because of their scientific breakthroughs, but because they were advocates for female education and forerunners of women's suffrage.

One example is **Mary Anning**, who against all the odds became one of the world's most famous fossil collectors. She was a gifted palaeontologist despite receiving no formal education. **Ada Lovelace** was the first computer programmer and daughter of Lord Byron. While mentored by Charles Babbage she was educated by two women - her mother and the mathematician and astronomer Mary Somerville. Botanist **Lydia Becker** provided plant specimens for Charles Darwin, and at the same time was a leader of the early suffrage movement and a promoter of female education.

Many years later the research of two women, **Dorothy Crowfoot Hodgkin** and **Jocelyn Bell Burnell** was recognised by awards in Chemistry and Physics. Although Bell Burnell missed out on a Nobel Prize for her discovery of pulsars. Both aspiring scientists may not have attained their scientific successes if their parents hadn't campaigned for their daughters to study 'science' instead of 'domestic science' at school.

We tell the scientific stories of Harriette Chick, Mary Barber and Mary Lyon. **Harriette Chick**, co-founded the Medical Research Council and discovered that cod liver oil and sunshine were an essential cure for rickets in children affected by malnutrition after the war. **Mary Barber** encouraged the wearing of face masks in hospitals to prevent cross-infection and began to pioneer the restricted use of antibiotics. Geneticist **Mary Lyon**, first described a process called X-chromosome inactivation that transformed our understanding of epigenetics and how genes are turned on and off.

Pioneers of Progress is the sequel to **Heroes of Health**, a comic book that described how the Medical Research Council began more than 100 years ago. It told the stories of some of the ground-breaking discoveries that researchers have made that are transforming the way we live.

We hope you enjoy this story from the book. There are seven more to discover in this instalment - get ready for the next instalment of **Pioneers of Progress**, as there are plenty more stories of pioneering women in science just waiting to be told...

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ADA LOVELACE

THE POETICAL SCIENTIST
AND THE ANALYTICAL ENGINE







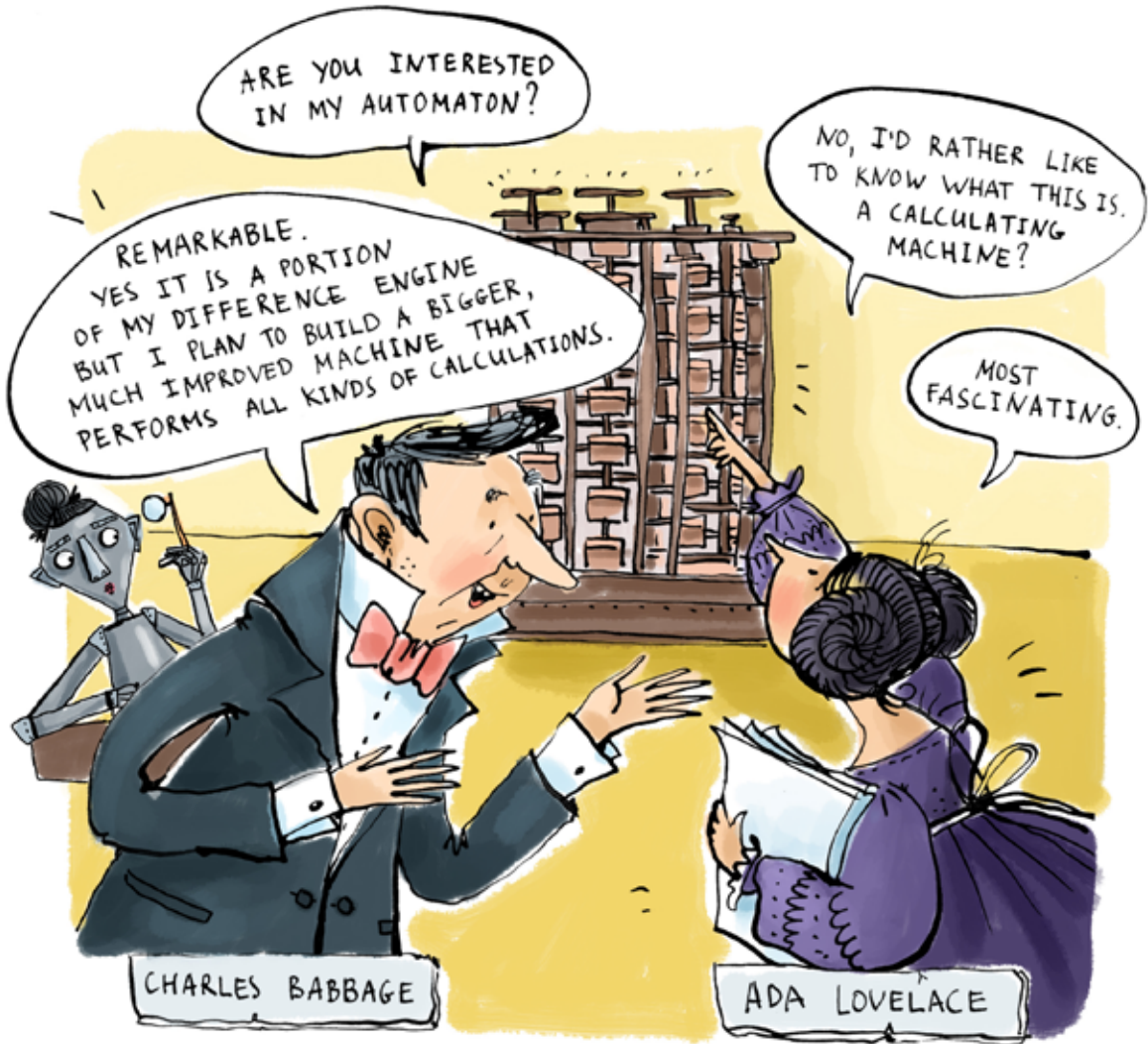
1833

I DON'T KNOW WHAT TO DO. ADA TRIED TO ELOPE WITH THE TUTOR. I FEAR SHE HAS DEVELOPED HER LATE FATHER'S MERCURIAL TEMPERAMENT.

SHE JUST HAS A LIVELY SPIRIT. SHE NEEDS SOMETHING TO OCCUPY HER MIND. I WILL INTRODUCE HER TO MY FRIEND CHARLES BABBAGE

LADY BYRON

MARY SOMERVILLE
SCIENTIST AND
ADA'S TEACHER

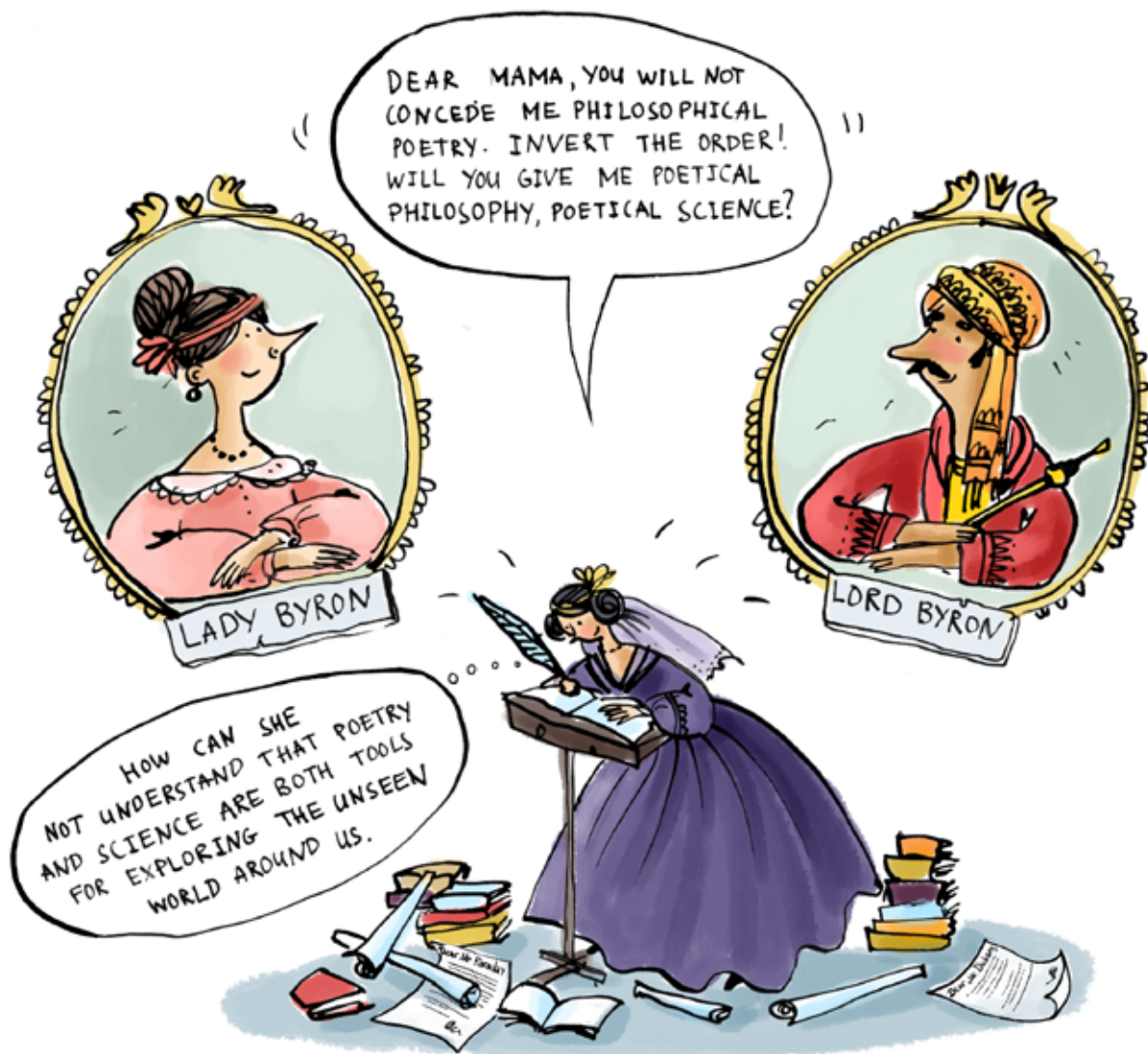












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The beautiful illustrations are by Elina Ellis (Anning, Lovelace, Becker, Bell Burnell) and Lindsay McBirnie (Chick, Hodgkin, Barber, Lyon), with the cover and title pages by Elina Ellis.

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2020

WHAT ARE
THEY ON ABOUT?
THEY ALREADY
HAVE THE VOTE!



MRC

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of Medical Sciences



Medical
Research
Council

