Rebooting the Ada Lovelace Mythos

Valerie Aurora
The Ada Initiative

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About the Ada Initiative

- **Mission**: increase participation and status of women in open technology & culture
- **Founded**: 2011 by Valerie Aurora and Mary Gardiner
- **Projects**: AdaCamp conference, conference anti-harassment, training
- **Supported by**: individual donations

http://supportada.org
Ada Lovelace: the short version

- Wrote the world's first computer program in 1843
- Lord Byron's daughter
- Died at age 36 after painful illnesses
- If she'd lived, maybe the computer age would have started in 1850, not 1950
My questions for this talk

What are the stories we tell about Ada?
What are the effects of those stories?
What new stories could we tell?
Outline of talk

- Cast of characters
- Biography of Ada
- Ada's reputation through history
- Suggestions for new stories to tell
George Gordon, Lord Byron
(Ada's father)
Meet the Byrons

“The Wicked Lord”

“Mad, bad and dangerous to know”

“Mad Jack”
Dead at 36
Anne Isabella Milbanke (Ada's mother)
The “Princess of Parallelograms”
Raised Ada alone
Charles Babbage
(Ada's collaborator)
Designed (but never built) the first computer c. 1830
Ada's friend and collaborator for almost 20 years
Augusta Ada Byron King, Countess of Lovelace
Like being Kurt Cobain's kid

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Math will cure that poetry

(c) Sydney Padua, Adventures of Lovelace and Babbage
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Not just a mathematician

Lady Anne Blunt, Ada's daughter

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Part of the science “scene”
Married at age 19, has 3 children
Continues mathematical studies

Augustus de Morgan

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Translates Menabrea's paper on Analytical Engine

Luigi Menabrea

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Happens to write first computer program at age 27

<table>
<thead>
<tr>
<th>Number of Operation</th>
<th>Variables used</th>
<th>Variables preceding results</th>
<th>Indication of source for the next operation in the sequence</th>
<th>Statement of Results</th>
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Brief summary of controversy over first programmer title

• Babbage did write simple programs first
• Bernoulli numbers program was first “non-trivial” program
• Evidence is strong that Ada wrote this
• Ada published first
• Ada was first to understand the true potential of general purpose computing

=> Ada was first computer programmer
Illness
Gambling and infidelity
Dies at age 36
Ada through history
1815: Byron's daughter
Conference CFP

“An interdisciplinary conference celebrating the achievements and legacies of the poet Lord Byron’s only known legitimate child, Ada Byron King, Countess of Lovelace”
1833: Part of the amateur science scene (also Byron's daughter)
1838: Countess of Lovelace
### 1843: Rumored author of “Notes”

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<th>Number of Elements</th>
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<th>Elements having closed variables</th>
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<td>v27, v28, v29, v30, v31</td>
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</table>

Here follows a repetition of Operations thirteen to twenty-two twice.
1845: Too immoral for the library
1848: Definitely author of “Notes”
1852: Byron's dead daughter

Obituary of Notable Persons.

Miss Berry, the last surviving friend of Horace Walpole, died at her house in Curzon-street, on the 20th ult., in her ninetieth year. She sank gradually, without suffering, and without disease, into what appeared but a placid sleep. She was sensible to the last, and had retained all her faculties unimpaired.

Ada, Countess of Lovelace, died on the 27th ult., in her 37th year, after an illness of above a year's duration. She was the only daughter of Lord Byron. In 1835, she was married to Lord King, now Earl of Lovelace, a union whereby the lineage of Locke was blended with that of Byron. Lady Lovelace was distinguished for strength of intellect, as well as for elegant accomplishments and amiable qualities.
1853: Gambler and adultress
The notes of the Countess of Lovelace extend to about three times the length of the original memoir. Their author has entered fully into almost all the very difficult and abstract questions connected with the subject.
1864 - 1950: *crickets*

- 1889: “Notes” reprinted as part of a collection on Babbage's machines
- 1905: Footnote in history of calculating machines by Maurice d'Ocagne
- 1932: Mention in MIT Technology Review
1950: Strawman for Turing

3.6.6 *Lady Lovelace’s Objection*

Our most detailed information of Babbage’s Analytical Engine comes from a memoir by Lady Lovelace (1842). In it she states, “The Analytical Engine has no pretensions to originate anything. It can do whatever we know how to order it to perform” (her italics). This statement is quoted by Hartree (1949) who adds: “This does not imply that it may not be possible to construct electronic equipment which will “think for itself”, or in which, in biological terms, one could set up a conditioned reflex, which would serve as a basis for “learning”. Whether this is
1953: Wrote first computer program

“Lady Lovelace had undoubtedly a profound understanding of the principles of the machine, and she added greatly to the value of her translation by some comprehensive notes about the machine and a series of examples of its use, including what we should now call a programme for computing the Bernoulli numbers by a very sophisticated method.”

- Bertram V. Bowden, Faster Than Thought
1972: Mother of computers
1976: First computer programmer

Dorothy Langley Moore

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1980: Namesake for programming language
1985: Mad, bad, and moderately smart
1986: Brilliant, flawed, part of a scientific movement
1990: Overrated, delusional, and ignorant

Allan G. Bromley
CC-BY SA Ezrdr
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1990: “Mad as a hatter” and “contributed little”
1990: Mathematical genius of great potential
1990: Mathematical genius of great potential

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1992: Ambitious, complex, flawed, and brilliant
1993: Mathematical genius ahead of her time
1997: Inventor of time travel

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1998: Lovelace Medal

Lovelace medal winner
Karen Spärck Jones

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2000: Deluded, bossy, coquettish, demanding

Little Dorrit (Dickens), 70–1
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158–9, 161–2, 163, 168; translation
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160–1, 162–3, 165–6, 169, 171
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Ludgate, Percy, 314

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2009: Rallying cry for giving credit to women in STEM

Ada Lovelace Day founder
Suw Charman-Anderson

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2009: Half of a crime-fighting duo - the smarter half

(c) Sydney Padua, Adventures of Lovelace and Babbage

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2009: Brooding, brilliant, occasionally unhinged

(c) Sydney Padua, Adventures of Lovelace and Babbage

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2011: Symbol for women in computing
2011: Successful, respected, influential
2012: Co-founds a computer company with Babbage
2013: A Female Genius

How Ada Lovelace Started the Computer Age

A Female Genius

James Essinger

The Ada Initiative
Stories we tell today

- First computer programmer
- Icon for women in STEM
- Delusional, arrogant but had some insight
- Mentally ill, morally repugnant, and ignorant too
First computer programmer - so one-dimensional!
Complex, multi-faceted person
Icon for women in STEM

Ada Lovelace

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Ignores Ada's contemporaries

Marie Sophie Germain

Mary Somerville

Maria Mitchell
Delusional and immoral but some insight

Nikola Tesla

John Nash
The Ada Initiative

Isaac Newton
Mentally ill, morally repugnant, and ignorant

She didn’t write it. She wrote it, but she shouldn’t have.
She wrote it, but look what she wrote about.
She wrote it, but she wrote only one of it.
She wrote it, but she isn’t really an artist, and it isn’t really art.
She wrote it, but she had help.
She wrote it, but she’s an anomaly.
She wrote it BUT...

How to Suppress Women’s Writing by Joanna Russ
What are some new stories we can tell?
New stories

A history of women Victorian mathematicians and scientists and their influence on modern-day science and computing, including Ada Lovelace, Mary Somerville, and the women's magazines that published math puzzles and papers
In a moving and sensitive portrayal, Anne Hathaway plays brilliant yet tortured Victorian scientist Ada Lovelace, exploring the conflicting pull of her passions toward mathematics, art, family, fame, and madness. Won Oscars for Best Actress, Best Supporting Actress, and Best Picture.
Ada Lovelace and Mary Somerville found an academy for young women, where they teach harp, horseback riding, and computer programming. The second computer program is a menstrual period tracker. Alumnae instigate and lead the Information Revolution of 1852.
New stories

Ada Lovelace, a mediocre poet at best, programs the Analytical Engine to help her write poetry, which she publishes anonymously under the name Equus Libros. All London wonders: is the author man or machine? No one suspects the truth until she reveals all in a live performance.
New stories

Horse ebooks @Horse_ebooks
Unfortunately, as you probably already know, people
Expand
Ada Lovelace becomes the first literal rock star, playing computer-generated music and inventing electronic amplification of instruments. She makes millions and blows it all on harps, horses, and laudanum. Babbage refuses to speak to her ever again.
[your Ada Lovelace story here]