

The Iconography of Ada Lovelace in Fictional Worlds

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Ada Lovelace's extension of Charles Babbage's work on the "Analytical Engine", though thoroughly documented, has spawned a mythology all its own. Babbage's plans to build a machine that would perform complex numerical functions attracted the attention of mathematicians including Luigi Frederico Menabrea, whose paper was translated by Lovelace from the French to English and published in 1843. Her notes, numbering at around 20,000 words, was three times the length of Menabrea's paper. Note G, which includes detailed instructions about how the machine might perform a specific calculation using a lengthy sequence of Bernoulli numbers, is known arguably as the first computer program. Lovelace's composition of Note G, along with her understanding of AI's potential applications and limitations, marks her status as the mother of computing and she has become an AI "cultural icon." The visibility of Ada Lovelace the Icon has grown in parallel with the movements to increase enfranchisement of women and girls in STEM fields. As STEM fields grapple with questions of gender equality among their stakeholders, a critical examination of representations of Ada Lovelace will contribute significantly to a number of disciplinary conversations. Ongoing efforts to promote the visibility of female-identified scientists and technologists with Ada Lovelace as a representative figure prompts critical examination of her role.

This conference presentation spotlights her legacy from childhood prodigy to steampunk heroine to time-traveling companion. Emphases include representations of Lovelace in fictions from the novel *The Difference Engine* (1990) and the play *Arcadia* (1993) to the graphic novel *Thrilling Adventures of Lovelace and Babbage* (2015) and the television series Doctor Who. Crucially, Ada Lovelace's depiction in recent works is not just a concession to inclusion, appearing as an interesting but ultimately supporting player to the proceedings. Rather, we witness repeatedly how the character is given full voice and agency. In *Arcadia*, Thomasina, a stand-in for Lovelace, easily stands as the most brilliant individual of either era. In *Thrilling Adventures*, Lovelace partners equally with Babbage, and, indeed, is given top billing. And in the Doctor Who episode "Spyfall: Part Two", the first female Doctor assembles a team that includes both Lovelace and Noor Inayat Khan to defeat The Master and The SS. What we find so compelling is how Lovelace leapt so quickly from historical obscurity to one of the iconic images for women in STEM fields and that rapid evolution is as much credit to her groundbreaking work as to the women who wish to follow in her footsteps.