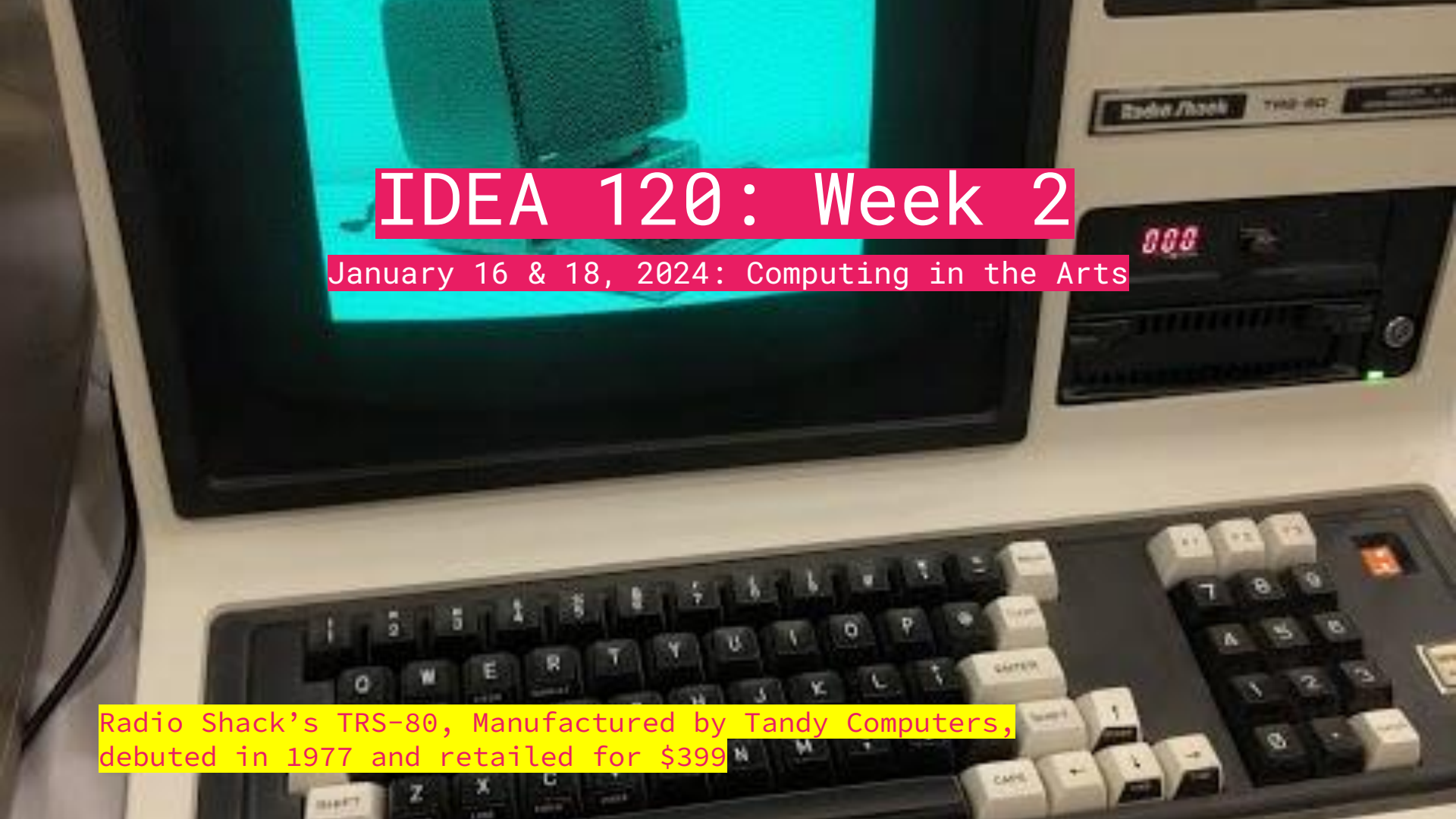
IDEA 120: Week 2

January 16 & 18, 2024: Computing in the Arts



Radio Shack’s TRS-80, Manufactured by Tandy Computers, debuted in 1977 and retailed for $399

<< How has computing changed creativity, and how has creativity influenced the history of computation? >>

Radio Shack’s TRS-80, Manufactured by Tandy Computers, debuted in 1977 and retailed for $399

Watch Jared Kelley-Hudgins’ excellent introductory lecture on Early Electronic Analog and Digital Computing in Early-to-Mid-20th Century Arts Practices:

https://vimeo.com/452741250/0b4773d055

Week 2 Reading:

Janet Murray, *Hamlet on the Holodeck*, Chapter 3: “From Additive to Expressive Form”

(access on course schedule: https://github.com/UICIDEAS/IDEA_120/blob/Spring2024/SCHEDULE.md)

Take note of the following TERMS in the Janet Murray reading:

- multimedia
- CD-ROM
- ELIZA
- interactivity
- immersiveness
- LISP (LIst Processing Language)
- Xerox PARC (Palo Alto Research Center)
- Graphical User Interface (GUI)
- ARPANET
- Multi-User Dungeons (MUDs)
- memex
- cybernetics
- feedback loops

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In addition, take note of the following writers, artists, and artworks:

- Janet Murray
- Vannevar Bush
- Ted Nelson
- Norbert Wiener
- *Zork* (1977, 1980)
- Stuart Moulthrop, *Victory Garden* (1992)

People of note:

Janet Murray

Professor in the School of Literature, Media, and Communication at the Georgia Institute of Technology. Before coming to Georgia Tech in 1999, she was a Senior Research Scientist in the Center for Educational Computing Initiatives at MIT.

Her book, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, asks whether the computer can provide the basis for an expressive narrative form, just as print technology supported the development of the novel and film technology supported the development of movies. Even though it was written in 1997, it predicts a future in which the capabilities of computing provide ample opportunities for rich, interactive storytelling.

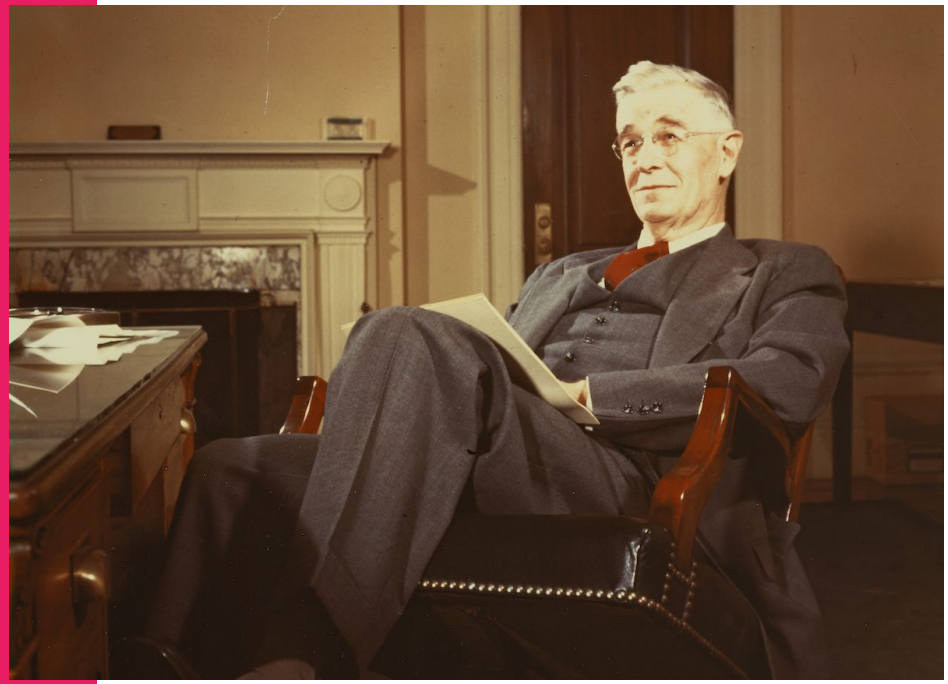
Murray reflects on the legacy of Hamlet on the Holodeck in a 2019 lecture

People of note:

Vannevar Bush

Vannevar Bush (1890 – 1974) was an American engineer, inventor and science administrator. He emphasized the importance of scientific research to national security and economic well-being, and was chiefly responsible for the movement that led to the creation of the National Science Foundation.

During his career, Bush patented a string of his own inventions. He is known particularly for his engineering work on analog computers, and for the memex. Memex is the name of the hypothetical electromechanical device that Bush described in his 1945 Atlantic article "As We May Think." The concept of the memex predates, but predicts some of the functioning of the internet; it was theorized to serve as an automatic personal filing system, making the memex "an enlarged intimate supplement to... memory."



Bush's involvement in designing the hypothetical memex was partially influenced by having had a leadership role in the Manhattan Project and subsequent bombing of Nagasaki and Hiroshima.

Demo of a Memex made from Bush's designs in 2014: https://www.youtube.com/watch?v=pW4SS_9nXyo

People of note:

Ted Nelson

Nelson is an American pioneer of information technology, philosopher, and sociologist. He coined the terms *hypertext* and *hypermedia* in 1963 and published them in 1965. His early Zine text *Dream Machines* and *Computer Lib: You can and must understand computers now!* (self-published in 1987) serve as manifestos for why everyone needs computer literacy.

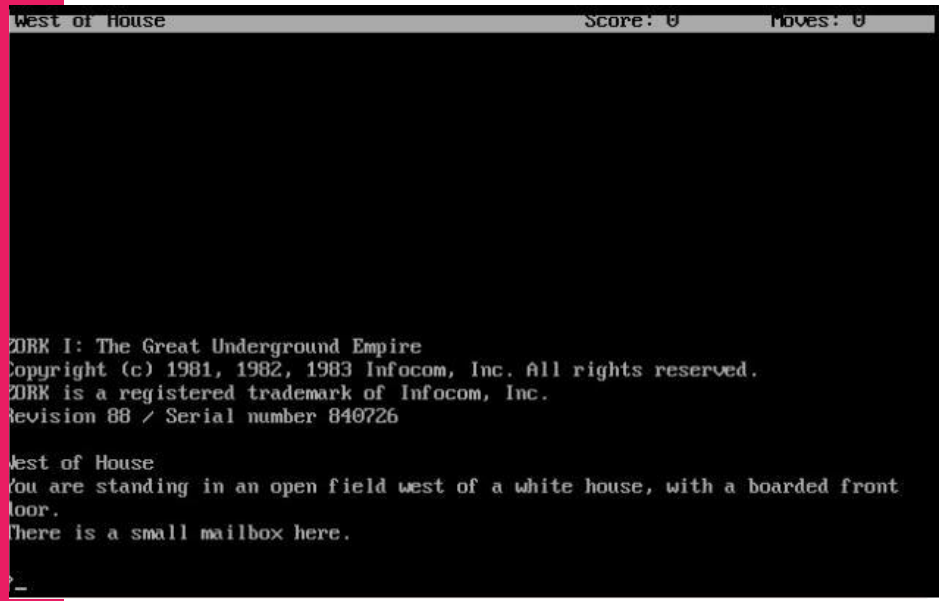
Still from the Werner Herzog's documentary *Lo and Behold, Reveries of the Connected World*, 2016

Artworks of note:

Zork, 1977, 1980

"In 1977, four recent MIT graduates who'd met at MIT's Laboratory for Computer Science used the lab's PDP-10 mainframe to develop a computer game that captivated the world. Called Zork, which was a nonsense word then popular on campus, their creation would become one of the most influential computer games in the medium's half-century-long history.

"The text-based adventure challenged players to navigate a byzantine underground world full of caves and rivers as they battled gnomes, a troll, and a Cyclops to collect such treasures as a jewel-encrusted egg and a silver chalice."

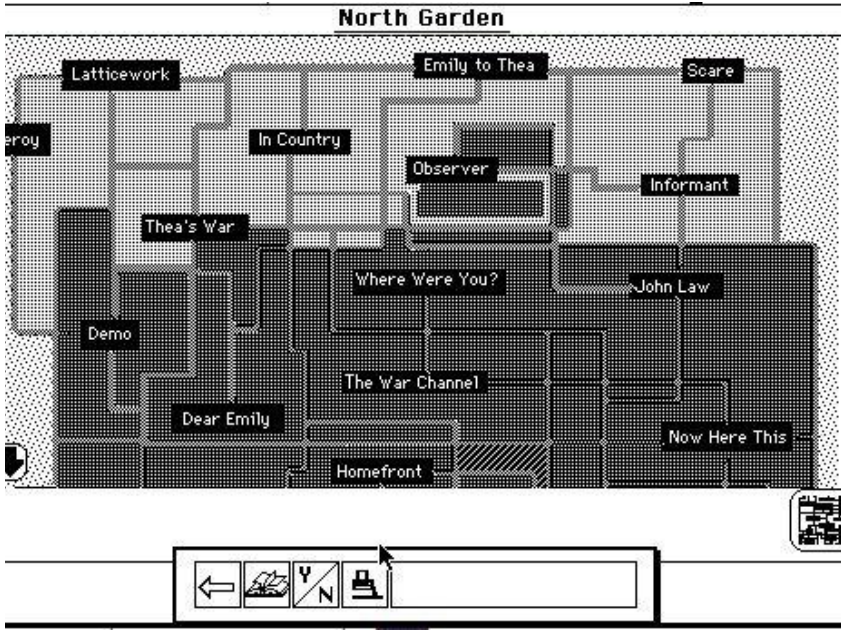


Recommended reading: MIT Technology Review article on the legacy of *Zork*: https://www.technologyreview.com/2017/08/22/149560/the-enduring-legacy-of-zork/

Artworks of note:

Stuart Moulthrop, *Victory Garden* (1992)

Victory Garden is a hypertext novel which is set during the Gulf War, in 1991. The story centres on Emily Runbird and the lives and interactions of the people connected with her life. Although Emily is a central figure to the story and networked lives of the characters, there is no one character who could be classed as the protagonist. Each character in Victory Garden lends their own sense of perspective to the story and all characters are linked through a series of bridges and connections.

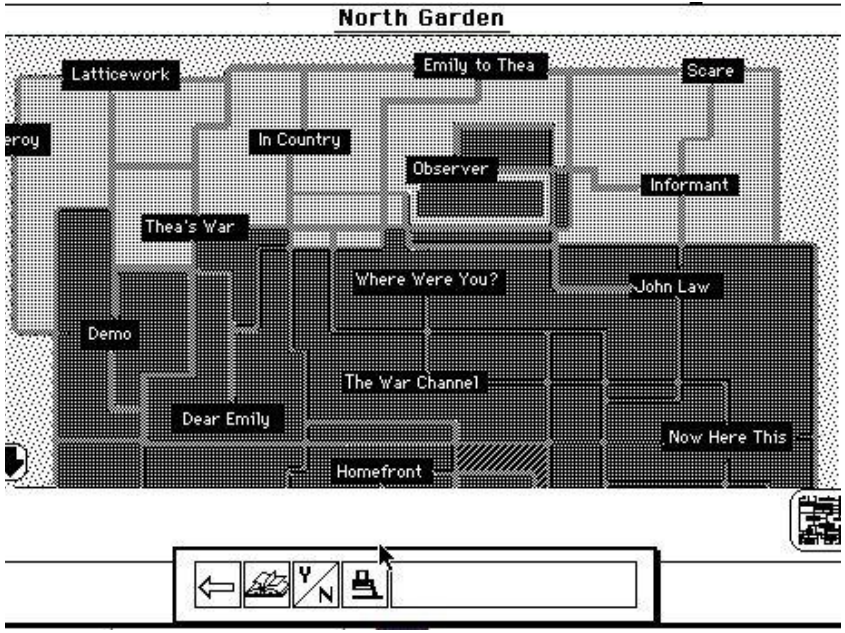


Victory Garden narrative map

Artworks of note:

Stuart Moulthrop, *Victory Garden* (1992)

There is no set "end" to the story. Rather there are multiple nodes that provide a sense of closure for the reader. In one such "ending", Emily appears to die. However, in another "ending", she comes home safe from the war. How the story plays out depends on the choices the reader makes during their navigation of the text. The passage of time is uncertain as the reader can find nodes that focus on the present, flashbacks or even dreams and the nodes are frequently presented in a non-linear fashion. The choices the reader makes can lead them to focus on individual characters, meaning that while there are a series of characters in the story the characters focused on can change with each reading, or a particular place.



Victory Garden narrative map

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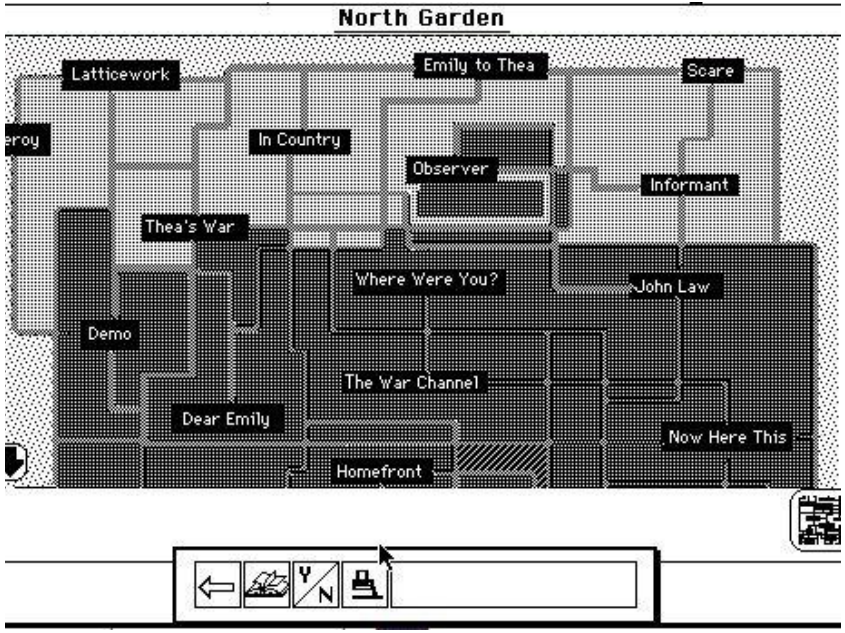
Upon entering the work the reader is presented with a series of choices as to how to navigate the story. The reader may enter the text through a variety of means: the map of the 'garden', the lists of paths, or by the composition of a sentence. Each of these paths guides the reader though fragmented pieces of the story (in the form of node) and by reading and rereading many different paths the reader receives different perspectives of the different characters.



Victory Garden narrative map