

Learning while creating documentaries - weaving threads with AI

Ph. D. Lennart Rolandsson, Department of Education, Uppsala University, Sweden

Introduction

There is a silk factory (today it is a museum) in Stockholm where the time is standing still, and the Jacquard hand looms are "talking" about the women that made small wages weaving silk shawls in the beginning of the 20th century. The factory was not profitable at all. That made me question the stereotypical stories by historians about the industrial revolution: why did the owner of the factory continue the business? Did he care for the employees? I experienced, obscurity, doubt, conflict and disturbance in my encounter with the stories told by the museum pedagogue, and started an inquiry as I needed to transform the disturbance into something clear, coherent, settled and harmonious (Dewey, 1933, pp. 101-102). I crafted a film, assisted by AI-tools and footage material from the museum.

In line with Verbeek (2011), I consider information technology to have the power to amplify specific forms of engagement with reality and reduce others. In fact, today's technological culture with AI-tools are able to replace the original artefacts with fake images making our world troublesome, as well as enlightened if we gain media literacy. In fact, we can explore the history making parallel worlds with the complexity that comes with human affairs, instead of the grand theories by in history, e.g. modernism, postmodernism, and post-colonialism.

Method

To make a story interesting, you need something intriguing. Based on the footage material, the sound effects and the voiceovers you can make it pop if you succeed to combine the components like in a historical documentary. However, it has to follow the historical records, and what the experts consider to be true. In the following (headlines A to E), I describe how I wove a story in steps that made it clear, coherent, settled and harmonious according to me (and the historians).

A. Searching for the conflict

Commonly you search for historical threads in the archives and in museums. Besides you need to listen carefully to what the museum pedagogues try to convey; the conflicts are somewhere in the stories told, and the information could easily become abundant. However, in the film making process you need to extract at least one conflict to explore in details what actually happened as you "write with images" (Benjamin, 1968), and footage material.

B. Crafting the manuscript

With the assistance of chatbots like ChatGPT, you work in many iterations the characters and their inner world of beliefs systems. This can be tedious and randomly done. Instead using prompts, you can pinpoint what you have found in interviews and archives. In the following I describe (some of the prompts) what crafted together with ChatGPT 4o.

Prompt #1: The weavers had a great sense of pride and ownership over their work, as they knew the hand looms very well. However, the silk shawls did not sell in 1907 as they used to do. Please, give me five different belief systems of a weaver, Jenny such that we understand her driving forces to stay at the factory.

Outcome: Artistry and Tradition of Weaving, Quality Over Quantity, Community and Collective Effort, Emotional Connection to Her Craft and Economic Resilience and Adaptability.

I decided to use two of these beliefs systems (yellow) in the following film making process.

Prompt #2: I need three scenes for a movie that describes the conflict in detail between Jenny embracing the **Community and Collective Effort**, and the manager, Eric Holmberg embracing the **Economic Resilience and Adaptability** beliefs system. Create a proposal for a historical documentary about that conflict.

ChatGPT 4o is free, to some extent, but as you reach the limit of tokens per day, you will toggle between it and a previous version. However, there are similar chatbots like Groq, Gemini and Claude that will do the same job.



Figure 2. ChatGPT was used to unravel the original manuscript.



Fig. 401. Jacquardvävstolen.

Figure 3. A Jacquard hand loom (Ålund, 1875, p. 446).

C. Crafting the characters

With the assistance of AI-tools for text-to-image and image-to-video I explored how the workers looked like and acted on the site. This is also done in many iterations with tools like Midjourney and Runway Gen 3.

The crafting of the characters is very interesting as you go down the rabbit hole of prompt engineering. After all the outcome need to harmonize with the historical threads (photos and the artefacts from the museum). In the film-making process I were surprised as the details became crucial for the final product and the narrative. Besides, in the details I found the important ingredients for what can be imagined by the AI-tools.



Figure 4. Midjourney and Runway Gen 3 are tools for text-to-image and image-to-video production. They have some free credits in the beginning, but after that you need to subscribe.

/imagine a photo of two ordinary persons. A weaver woman in a vintage outfit and a manager in a light brown costume. Both are in focus and looking at the camera. bright blurry modern warm office in the background. captured by Canon EOS --cref <https://s.mj.run/zNwttKEOAEo> --sref <https://s.mj.run/zNwttKEOAEo> --v 6.1 --style raw --s 50 --ar 16:9

There are many different AI-tools for text-to-image, text-to-video, and image-to-video. Some of them are free. Most likely you need to pay as you become advanced.

D. The footage material

In parallel with the search for a conflict and the crafting of the characters I needed some footage material and sounds from the museum, to weave into the story. Besides, such material from the site as well as synthetic media will make it possible to harmonize the story with the information that was conveyed, by the museum pedagogue.

E. Editing the story

Finally, you edit (weave) the story into a film with a video editing suite. I used DaVinci Resolve where the synthetic media, footage material, voiceovers and sound effects, each had their own channels, such that the conflict and the characters were adjusted, making the story engaging and trustworthy.

Conclusion

In fact, I "wrote with images" (Benjamin, 1968), about weavers as I edited the story. However, the AI-tools played a crucial role, as I walked the steps. In that process I became a creative story teller as the AI-tools opened new avenues, and I went into the dialogues to make the historical documentary trustworthy.

I discovered the many details in the film making process, as I returned to the historical threads, interviews and the footage material. In that process reexamining what the museum pedagogue actually told me, new perspectives emerged.

Besides, the film making process made me aware of different events that could have happened with another conflict (based on the different beliefs systems). For instance: what would happen if the weaver Jenny and the factory manager had the same belief systems (see Method, part B). In fact, the film project made me understand how the transformation of workers could have been different, making me aware of the fact that technology can be non-deterministic and we tend to craft stories that align with stereotypical stories that we already know from today's society.

Result

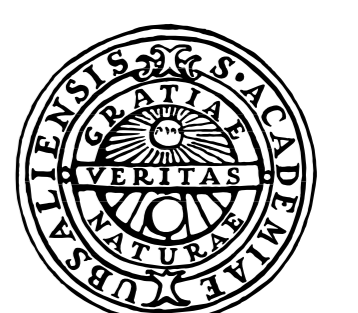
The final movie is not published yet, but if you give me your e-mail address, I will send it to you. However, you can watch a video pitch at youtube. You need to search for "AlmgrensPitch" at <https://youtu.be/klRqWvT1yzA>

Acknowledgments

To the museum pedagogue, Tove Karlsson working at the silk factory K A Almgrens, Stockholm, Sweden.

List of references

- Benjamin, W. (1968). *The Work of Art in the Age of Mechanical Reproduction. Illuminations: Essays and Reflections*. Ed. Hannah Arendt. Trans. Harry Zohn. New York: Schocken. pp. 217-251.
- Bartelds, H., Savenije, G.M. and van Boxtel, C. (2020). Students' and teachers' beliefs about historical empathy in secondary history education. *Theory & Research in Social Education*, 48(4), 529-551.
- Bull, A. C., & De Angeli, D. (2021). Emotions and critical thinking at a dark heritage site: investigating visitors' reactions to a First World War museum in Slovenia. *Journal of Heritage Tourism*, 16(3), 263-280.
- Bunz, M. (2014). The Silent Revolution: How Digitization Transforms Knowledge, Work, Journalism and Politics without Making Too Much Noise. Basingstoke: Palgrave.
- Bunz, M. (2023). Thinking through generated writing. *Artikelutkast*.
- Endacott, J. L. & Brooks, S. (2018). Historical Empathy: Perspectives and Responding to the Past. In Scott Alan Metzger & Lauren McArthur Harris (ed.) *The Wiley International Handbook of History Teaching and Learning*. Wiley-Blackwell, 203-326.
- Dewey J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*, Houghton Mifflin Company, Boston.
- Hayles, N. K. (2023). Figuring (out) or relations to AI. I (red.) Jude Brown, *Feminist AI: Critical perspectives on algorithms, data and intelligent machines*
- Lopes, A. P. (2023). Artificial History? Inquiring ChatGPT on historiography". *Rethinking History*, 24 (4).
- Rettinger, J. (2023). *Machine Vision: How Algorithms are Changing the Way we See the World*.
- Snickars, P. (2023). När AI petar i vårt förlutna.
- Verbeek, P.-P., 2011. *Moralizing Technology: Understanding and Designing the Morality of Things*. The University of Chicago Press, Chicago; London.
- Ålund, O. W. (1875). *Uppfinningarnas bok. Öfversigt af det industriella arbetets utveckling på alla områden. 6e bandet. Råämnenas mekaniska bearbetning*. Stockholm: Hjalmar Linnströms förlag. (Elektronisk <https://runeberg.org/uppfinn/6/0456.html>)



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