Imagining the Past: Generative AI Prompting, Source Sets, and the TAP(E) Protocol

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In the summer of 2023, as I prepared to teach my U.S. history survey course, I searched for ways to revise my class sessions and assignments to incorporate emerging artificial intelligence technologies. An early adopter and experimental meddler, I was intrigued by how the rigor of the historical discipline and the critical thinking skills it fosters could shape the responsible development and human oversight of cutting-edge artificial intelligence technologies. The survey course that I teach embraces a version of "uncoverage" pedagogy, wherein we dive as deeply as possible into historical problems across American history until 1865 using inquiry and primary sources.[1] The key historical thinking skills targeted during the course include sourcing, analysis, critical thinking, and corroboration "to ensure that students develop the reasoning skills central to the discipline."[2] For each unit, students engage with multiple perspectives and develop an argument using secondary source context and a primary source set to answer a compelling question. This approach is nothing novel, but the potential to integrate AI in this iterative class script presented an opportunity to use emerging tools that could provide relevant assessments of historical thinking.

May I be so bold to say it: historians might just make for the best prompt engineers on the market - a sexy new(ish) job title that currently promises a generous salary for the most talented wordsmiths. Prompt engineer-historians are thinkers who employ creativity, trial and error, and patterns to create input texts that help AI systems respond to human instructions and generate outputs. This pitch for the applicability of history training to the tech market created a determination to merge history skills with refining large language models (LLMs) for use. Most of my students are not training to become historians, so the ultimate goal was to help them foster skills that would be pertinent outside of their humanities general education. Students could apply the critical thinking required in source interpretation to write a source-based prompt that would generate a new source: an AI imagination of the past, visualized. Creating a new source through artificial intelligence unleashes a groundbreaking avenue for interpretation, empowering students to wield their historical acumen in an unprecedented fusion of technology and imagination that redefines the very essence of historical inquiry.

The result was a semester-long and necessarily evolving journey to develop an assignment and structured protocol that could be adapted for different learning abilities and levels to assess reasoning and analysis.[3] The protocol was created to help students grapple with visual cues, context, and details from primary sources to write and revise prompts and consider the ethical implications of AI use for this purpose. As students navigate through source details and begin to imagine the past, they demonstrate how AI-generated prompts can unlock hidden historical narratives beyond the initial source set and provoke the exploration of various analytical angles.

1 Grant Wiggins and Jay McTighe, *Understanding by Design* (Alexandria, Va: Association for Supervision and Curriculum Development, 1998), 98-114; Lendol Calder, "Uncoverage: Toward a Signature Pedagogy for the History Survey," *Journal of American History* 92, no. 4 (2006): 1363.

2 Sam Wineburg, Mark Smith, Joel Breakstone, "What Is Learned in College History Classes?" *Journal of American History*, 104, no. 4 (March 2018): 991. https://doi.org/10.1093/jahist/jax434.

3 During this semester of development, I was a fellow for the Mellon Civic Engagement Teacher Scholar Program. This program allowed me to workshop the assignment and receive invaluable feedback for its development. Cues for adaptation and formative assessment revision were taken from Mark Smith, Joel Breakstone, and Sam Wineburg, "History Assessments of Thinking: A Validity Study." *Cognition and Instruction* 37, no. 1 (2019): 118–44. doi:10.1080/07370008.2018.1499646.

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The Assignment: Setup and Considerations

Prior to the initiation of this exercise, instructors should assign shared readings to help students ethically and critically engage with developing AI technologies. These texts will help instructors and students develop a shared understanding and vocabulary surrounding the technology, which can then be applied in reflective writings and discussions.[4] As part of this process, the instructor can lead students through a set of questions that encourage critical thinking about technology, or technoskepticism, initially developed by Daniel Krutka and Scott Metzger. Krutka and Metzger draw from Neil Postman's influential 1998 talk "Five Things We Need to Know about Technological Change." Speaking at the cusp of the internet age, Postman posited that,

> First, we always pay a price for technology; the greater the technology, the greater the price. Second, that there are always winners and losers, and that the winners always try to persuade the losers that they are really winners. Third, that there is embedded in every great technology an epistemological, political or social prejudice. Sometimes that bias is greatly to our advantage. Sometimes it is not. The printing press annihilated the oral tradition; telegraphy annihilated space; television has humiliated the word; the computer, perhaps, will degrade community life. And so on. Fourth, technological change is not additive; it is ecological, which means, it changes everything and is, therefore, too important to be left entirely in the hands of Bill Gates. And fifth, technology tends to become mythic; that is, perceived as part of the natural order of things, and therefore tends to control more of our lives than is good for us.[5]

Krutka and Metzger's AI revision of Postman's ideas demonstrates that despite changes in the types of technologies that have dominated global cultures over the past quarter century, there is still a persistent need to check our exponential technological progress. Technoskeptical questions help students consider the implications of AI's technological trade-offs, harms and benefits, needs and interests, human experience, and the ecological nature of changes wrought by introducing and adopting new technology.[6]

After shared readings on the technology and a review of its societal effect, students are given a set of sources to explore a compelling question about the historical phenomenon for that unit.[7] They read through the assigned source set, searching for descriptive evidence and relevant context that could visually represent their source materials. Next, students begin crafting their first prompt to input into AI image-generating software.[8] Proficient prompts synthesize and summarize the source set, extracting relevant but specific details that can result in a striking visualization of historical imagination.[9]

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4 Suggested shared readings for the university level could currently include the following texts: Selections from Ethan Mollick, *Co-Intelligence: Living and Working with AI* (New York, New York: Penguin, 2024); Krutka, D.G., Heath, M.K. & Mason, L.E. "Editorial: Technology Won't Save Us – A Call for Technoskepticism in Social Studies." *Contemporary Issues in Technology and Teacher Education*, 20 1 (Waynesville, NC USA: Society for Information Technology & Teacher Education, 2020), 108-120; Stephen Jackson, "Don't Stop Worrying or Learn to Love AI: A Plea for Caution," *Perspectives on History*, November 6, 2023. https://www.historians.org/research-and-publications/perspectives-on-history/november-2023/dont-stop-worrying-or-learn-to-love-ai-a-plea-for-caution; Ed Finn, "Introduction and Coda," in *What Algorithms Want: Imagination in the Age of Computing* (Cambridge, MA: MIT Press, 2017).

5 Neil Postman, "Five Things we Need to Know about Technological Change," (speech, Denver, Colorado, March 28, 1998), University of California, Davis, https://web.cs.ucdavis.edu/~rogaway/classes/188/materials/postman.pdf

6 S.M. Metzger & D.G. Krutka, "Interrogating the smartphone: Teaching through Technoskeptical Questions," *Social Education*, 87(5), 2023: 314.

7 The effects of AI are going to change as the technology changes. Instructors should adjust their shared readings based on those developments and the subsequent research.

8 Choosing an appropriate AI software for this task brings its own challenges and is constantly evolving. I encouraged students to explore free software options, but even throughout the semester, as we repeated this exercise, new tools emerged as developers rushed to meet the wave of AI use. As time goes on, each tool's capabilities will become increasingly more sophisticated. I have been impressed with early versions of Dall-E, Midjourney, and Adobe Firefly. Because our school has an institutional license to the Adobe suite, students tended to default to that tool.

9 A protocol for structuring a sound prompt will be explored in a later section.

Once students choose their software, they enter their first prompt to begin to imagine the historical reality that they have been researching. Then, they begin an iterative image generation process, situating themselves as critical users of the technology's limitations and possibilities to imagine a historical scene. When the first image set is created, students are confronted with a wholly new source: not primary or secondary like they are accustomed to, but a tertiary source of their own initiation and AI's algorithmic output. The images materialize from their mind's eye, scenes emerging from their interpretive design. Then, students are faced with a set of questions that compel them to interrogate and evaluate this new source's credibility and ethical production. They revise their prompt, rearranging details, locating new terminology, and inserting material that best reflects the tone and perspective they wish to take in answering the compelling historical question at hand. They repeat this process for a third time, finally landing on an image that falls within the reasonable scope of their intended purpose. By the end of the exercise, students will have produced three different versions of an AI-generated image based on the instructor's chosen source set. They will have reflected on the process and been asked to "show their work" as they revise their prompt.

Choosing Source Sets Conducive to AI Image Generation: Assignment Example

An AI image generation assignment can reach beyond the routine practice of primary source analysis and extend into informed action. Informed action gives students an "authentic platform to practice literacy skills as they address real world issues through the use of interdisciplinary content, aptitudes, and evidence, developing partnerships with institutions in their community as they work for improvement and sustainability."[10] As part of an initiative at Governors State University in the south suburbs of Chicago, the Southland History Collective (SHC) is a group of university faculty who collaborate with local historical societies to identify inclusive histories in the university's surrounding communities. One neighboring township, Monee, Illinois, has been designing a statue to commemorate the town's namesake, Marie LeFevre Bailly. Marie Bailly, a Métis woman, was granted a tract of land through the Chicago Treaty of 1833. In 1851, she sold her allotted land to William Ogden, who recognized its potential value for the development of the Illinois Central Railroad.[11] The town grew around the Monee station, and in 1874, the village was officially incorporated, named after the phonetic pronunciation for Marie Bailly.

The SHC assembled a source set in collaboration with the Monee Heritage Center to imagine a public statue that accurately reflects Marie LeFevre Bailly's indigeneity based on a few extant materials. I assembled a four-source set based on these constraints and began the task of seeing if AI could help inform the development of this project. History teachers should be engaged in the careful process of curating sources for students that affirm and complicate accepted historical narratives. Consulting multiple sources that engage different and potentially competing perspectives and opinions can widen a student's understanding of the breadth and diversity of human experience. Educators should be cognizant about the limitations of a document-based activity and transparent that this type of activity is a small and controlled example of the types of historical evidence that exist for historians to interpret.[12] If the classroom is a laboratory for disciplinary practice, source set analysis is only a simulation of historical work.

For this type of activity or simulation, I have found the most success using four to five short sources with a mix of primary and secondary sources. It is especially helpful to choose sources that describe place settings and physical phenomena, or strongly convey tone or opinion. Students can identify and use that language to help develop initial prompts that adhere more closely to the historical record. Source A was a timeline, adapted from the National Park Service, that outlined the contours of Marie LeFevre Bailly's life and movements

10 Mary Ellen Daneels, "Thermometers to Thermostats: Designing and Assessing Informed Action," *Social Education* 80, no. 6 (2016): 370.

11 Muriel Muller Milne, *Our Roots are Deep: A History of Monee, Illinois* (South Suburban Genealogical & Historical Society, 1973): 99–102.

12 Keith C. Barton, "Primary Sources in History: Breaking through the Myths," *Phi Delta Kappan* 86, no. 10 (06, 2005): 749.

throughout the Great Lakes region.[13] It included the most comprehensive account of Bailly's travels, complex family history, and impact on the multiple communities in which she lived. Source B was a description of Odawa dress worn by Marie LeFevre Bailly and her oldest daughter, Agatha, on Agatha's wedding day in 1819. Marie's outfit is described here in part:

> The waist, or sacque, is a sort of loose-fitting garment made of silk for extra occasions, but usually of calico. It is made plain, without either embroidery of ribbon or beads. The sleeves snugly fit the arm and the wrist, and the neck has only a binding to finish it. Beads enough are worn around the neck to fill in and come down in front. Silver brooches are worn according to taste. The hair is worn plain, parted in the middle, braided down the back, and tied up again, making a double queue.[14]

The excerpt reveals a stunningly detailed visual description of Marie LeFevre Bailly's garments and hairstyle, which contributed to the prompt for a more historically centered depiction.

The final two sources were visual and gave contextual cues that were considered in the final prompt. Source C was a Portrait of Agatha de la Vigne Biddle, Marie Bailly's daughter (Figure 1).[15] Because no photograph survives of Marie LeFevre Bailly, a portrait of her daughter corroborates parts of the textual description

Figure 1. Photocopy of Agatha Biddle Portrait, Keith Widder Library, Mackinaw City, MI, Mackinac Island State Park Commission. Photo undated. Photocopy provided by Mackinac Island State Park Commission.

13 Joseph Gruzalski, "Marie LeFevere Bailly," https://www.nps.gov/people/marie-bailly.htm. Accessed April 24, 2024. For the broader historical context of Marie Lefevre Bailly's life during a period of intense political and demographic upheaval across the Great Lakes, see Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (New York: Cambridge University Press, 1991); Michael A. McDonnell, *Masters of Empire: Great Lakes Indians and the Making of America*. (New York: Hill and Wang, 2015); R. David Edmunds, *The Potawatomis: Keepers of the Fire* (Norman: University of Oklahoma Press, 1979); John William Nelson, *Muddy Ground: Native Peoples, Chicago's Portage, and the Transformation of a Continent* (Chapel Hill: University of North Carolina Press, 2023); Andrew R.L. Cayton, *Frontier Indiana* (Bloomington: Indiana University Press, 1998); Susan Sleeper-Smith, *Indian Women and French Men: Rethinking Cultural Encounter in the Western Great Lakes* (Amherst: University of Massachusetts Press, 2001); Susan Sleeper-Smith, *Indigenous Prosperity and American Conquest: Indian Women of the Ohio River Valley, 1690-1792* (Chapel Hill: University of North Carolina Press, 2018); Gregory Evans Dowd, *A Spirited Resistance: The North American Indian Struggle for Unity, 1745-1815* (Baltimore: The Johns Hopkins University Press, 1993); David Curtis Skaggs, and Larry L. Nelson, eds., *The Sixty Years' War for the Great Lakes, 1754-1814* (East Lansing: Michigan State University Press, 2001); Michael John Witgen, *Seeing Red: Indigenous Land, American Expansion, and the Political Economy of Plunder in North America* (Chapel Hill: University of North Carolina Press, 2022); Bethel Saler, *The Settlers' Empire: Colonialism and State Formation in the Old Northwest* (Philadelphia: University of Pennsylvania Press, 2014); John P. Bowes, *Land Too Good for Indians: Northern Indian Removal* (Norman: University of Oklahoma Press, 2016).

14 Elizabeth T. Baird and State Historical Society of Wisconsin, *Reminiscences of Early Days on Mackinac Island*. (Madison: Democrat Printing Company, State Printers, 1898), 44-45. https://www.loc.gov/item/28012392/.

15 Photocopy of Agatha Biddle Portrait, Keith Widder Library, Mackinaw City, MI, Mackinac Island State Park Commission. Photo undated. Photocopy provided by Mackinac Island State Park Commission.

in Source A and could be further engineered into the prompt. Source D was a painting that has been displayed in the Monee Post Office since its opening in 1959. Local lore contends that the painting's subject is the authentic "Princess Monee" and has built a mythology around Marie Bailly's image based on this composition (Figure 2).[16] The provenance of the portrait is unknown, but it obviously deemphasizes the subject's Indigenous features. This is consistent with John Coward's analysis, which found repeated misrepresentation of Indigenous women in the pictorial press of the early twentieth century. He concluded that, "these ideas and images operated as part of a long-standing national (and male) fantasy that constructed Indian women as symbolically useful outsiders, alternatively alluring or repulsive, but always contained by the dominant ideologies of Euro-American culture."[17] As a result, Source D was chosen for the set for what it *is not* as much as what it is. The inclusion of local perception should allow the prompter to grasp how their analysis might be inclusively framed to gently correct a public audience and counter racialized representations of colonized "others."

Figure 2. Picture taken in 2023 at the Monee Post Office by Christi Holston, Monee Historical Society.

After an analysis of the sources, I began the prompting process. Each prompt includes a topic, action, and parameters for the AI that communicate my synthesis and interpretation of the primary and secondary sources to produce an image that begins to imagine the past. My first prompt and set of images follow:

> An Odawa French woman, Métis, who lived in the early to mid 1800s. She is dressed for her daughter's wedding in Mackinac Island, Michigan. She is about 36 years old. She proudly wears native dress. She has sleeves that snugly fit the arm and the wrist, and the clothes around her neck has only a binding to finish it. Beads enough are worn around the neck to fill in and come down in front. She wears silver brooches. Her hair is worn in a plain manner, parted in the middle, braided down the back and tied up again, making a double queue. (Figure 3)[18]

The specificity of the prompt produced some of the desired visual details but also created obvious errors. They display an evidently elderly indigenous woman, even when the prompt specified that Marie LeFevre Bailly should be "about 36 years old." The AI generated a version of native dress and beaded adornments to match the prompt description. Further research could be conducted to build more accurate historical detail, but in strikingly visual ways, the produced image reflects the primary source detail.

After the first images were generated, I interrogated the efficacy of the AI's interpretation. What important visual cues were omitted that could be prominently displayed with revision of the prompt? I recognized that AI generated images are not necessarily less legitimate as source material than the colonialist or Orientalist paintings and photographs depicting colonized "others." Visual media created through the colonial gaze produce depictions

16 Christi Holston, *Princess Monee at Monee Post Office*, 2023, Photograph, Monee Post Office.

17 John M. Coward, *Indians Illustrated: The Image of Native Americans in the Pictorial Press* (Urbana: University of Illinois Press), 74.

18 Midjourney, "Imagine an Odawa and French woman, Métis, who lived in the early to mid 1800s. She is dressed for her daughter's wedding in Mackinac Island, Michigan. She is about 36 years old. She proudly wears native dress. She has sleeves that snugly fit the arm and the wrist, and the clothes around her neck has only a binding to finish it. Beads are worn around the neck to fill in and come down in front. She wears silver brooches. Her hair is worn in a plain manner, parted in the middle, braided down the back and tied up again, making a double queue," Megan VanGorder, April 2024.

Figure 3. Images created from Prompt 1 for an image of Marie LeFevre Bailly, produced by Midjourney, April 2024.

that necessarily rely on assumptions and tropes. All such depictions do far more than capture an external reality.[19] Take, for instance, the "before and after: photograph of Tom Torlino at Carlisle Indian School (Figure 4).[20] The side-by-side photographs were explicitly used by Carlisle for propaganda purposes. Tom Torlino had little choice in the change in his appearance, but his stark physical transformation was meant to demonstrate "conventions of middle-class portraiture, thus reinforcing the predominately Anglo viewers' perception that a 'civilizing process' was being documented."[21] Source material is often constructed, meaning that even canonic and teachable primary sources like the Carlisle images are not necessarily more authentic than AI-generated images. AI images are built from different - and sometimes not so different - source materials than the "before and after" photos from the Carlisle Indian School. They introduce the bias of the prompter and the training data within its own system. The value of the generated source, like other source materials, comes from the analytical and interrogative practices of the careful historian.

A second source generation process is initiated after analyzing the newly produced AI source. I explored AI features that could combine the portrait of Marie LeFevre Bailly's daughter – an authentic primary source – with one of the AI-generated sources from my first prompt. Using Midjourney's "Blend" feature, I uploaded the Agatha Biddle portrait and the AI-generated image to create an output that would resemble Agatha Biddle but also incorporate the primary source details related to dress. The result can be seen in Figure 5.[22] The second iteration of the imagined Marie LeFevre Bailly does not prominently display Odawa dress: the beads are understated, and the brooches are nonexistent. When the AI tool combined the images, it erased the shawl from Agatha Biddle's portrait and replaced it with a plain black calico dress that reflects traditional settler dress. For each image uploaded to AI, the women don native dress elements, but the final image subdued those elements. The result perpetuates the old trope of the "Vanishing Indian," and suggests that even explicitly articulated indigenous cultural elements are destined to disappear or assimilate into the dominant culture.[23] The AI image generation tools favored Euro-

19 For example, see George Winter, "Queh-Meh," Watercolor, 1837, Tippecanoe County Historical Association George Winter Collection, Purdue University E-Library. https://earchives.lib.purdue.edu/digital/iiif/gwinter/958/full/full/0/default.jpg

20 John N. Choate, "Tom Torlino, 1882 and 1885," Photograph, Reproduction, 1880-1889, in Souvenir of the Carlisle Indian School (Carlisle, PA: J. N. Choate, 1902), Dickinson College Archives & Special Collections, https://carlisleindian.dickinson.edu/images/tom-torlino-1882-and-1885

21 Eric Margolis, "Looking at Discipline, Looking at Labour: Photographic Representations of Indian Boarding Schools." Visual Studies 19 (2004): 78.

22 Midjourney, "Blend [Agatha Biddle Portrait] and [Midjourney image from Figure 3]," Megan VanGorder, April 2024.

23 Brewton Berry, "The Myth of the Vanishing Indian." *Phylon* 21, no. 1 (1960): 51-57.

Figure 4. "Tom Torlino - Navajo. AS HE ENTERED THE SCHOOL IN 1882. AS HE APPEARED THREE YEARS LATER." In John N. Choate's Souvenir of the Carlisle Indian School (Carlisle, PA: J. N. Choate, 1902).

Figure 5. AI Generated Image. Midjourney's Blend Feature using Agatha Biddle's Portrait and the AI generated image from Prompt 1. Midjourney, April 2024.

American visual elements in the blended prompt. While subtle, the AI source perpetuates harmful stereotypes and downplays the ongoing existence and vibrancy of Native American cultures.

Throughout each part of the prompt generation and revision, I consistently engaged in an ethical evaluation of the AI tool's creation. A critical assessment of language, syntax, and parameters helped align the prompt to better convey an imagined depiction of a historical figure. The produced image, even after adding source details, is not a magical conjuring of the past. However, employing historical thinking skills throughout the prompting process evoked a deeper engagement with the provided texts and led to a more holistic understanding of the nuances involved in public commemoration. While such an exercise could aid a community like Monee in its attempt to articulate its past with visual cues, the ultimate value of the assignment lies in the attention to source details and the evaluation of the interpretation made by generative AI.

The TAP(E) Protocol for Generative AI Prompting

This approach enriches history source investigation and cultivates technoskeptical skills essential in the evolving AI age.[24] Through a structured protocol, students explore the ethical considerations surrounding AI, encouraging them to question and analyze the implications of technology on historical interpretation.

TAP(E) Protocol – Generative AI Prompting

To engineer a thorough prompt for a generative AI model, consider the details necessary to produce a suitable image for your purposes. Follow the steps below.

Explanation of each component

	What is it?	Examples
Topic	refer to subject matter or specific historical event, period, or figure you want to explore or visualize	ancient civilizations, the industrial revolution, Frederick Douglass
Action	tasks or the type of engagement you want the AI to perform with the topic	creating a visual representation based on the description or details found in primary sources
Parameters	constraints, styles, or specific details that should be included in the response	Period, geographic location, cultural context, source type, artistic style
Ethical Evaluation	After the image has been generated, critically analyze and reflect on the content generated by AI in response to the given prompt.	

Step 1: Using the primary source set, construct a detailed prompt for the generative AI tool. Combine the Topic, Action, and Parameters into a coherent expression and input it in the TAP prompt box.

Topic	
Action	
Parameters	

TAP Prompt:

Step 2: Generate the image using AI and your TAP prompt.

1

Figure 6. Step 1 of the TAP(E) Protocol – student worksheet

To provide a scaffolded structure for prompting, students might follow the TAP(E) protocol. The TAP(E) acronym represents the components of the prompt: the "Topic" for the generated image using historically specific terms; the "Action" to be executed by the AI tool; "Parameters" for the image that include periodization, geography, and other relevant sourcing information; and "Ethical Evaluation," to identify potential bias to aid in a revision of the prompt. The topic, action, and parameters are crafted into a prompt, and then the image is generated (Figure 6).

The ethical evaluation is completed after the image generation process (Figure 7).[25] For each image generated in the assignment, students reflect on the possibilities and limitations of using artificial intelligence to imagine the past. Because they have read reflectively on the subject, students are better equipped to explain their prompt revision process. For example, they should be able to address: how did the AI respond to revised prompts? What biases were apparent in the image generations? Answering these questions should help them to frame the second and third iterations of prompts and images.

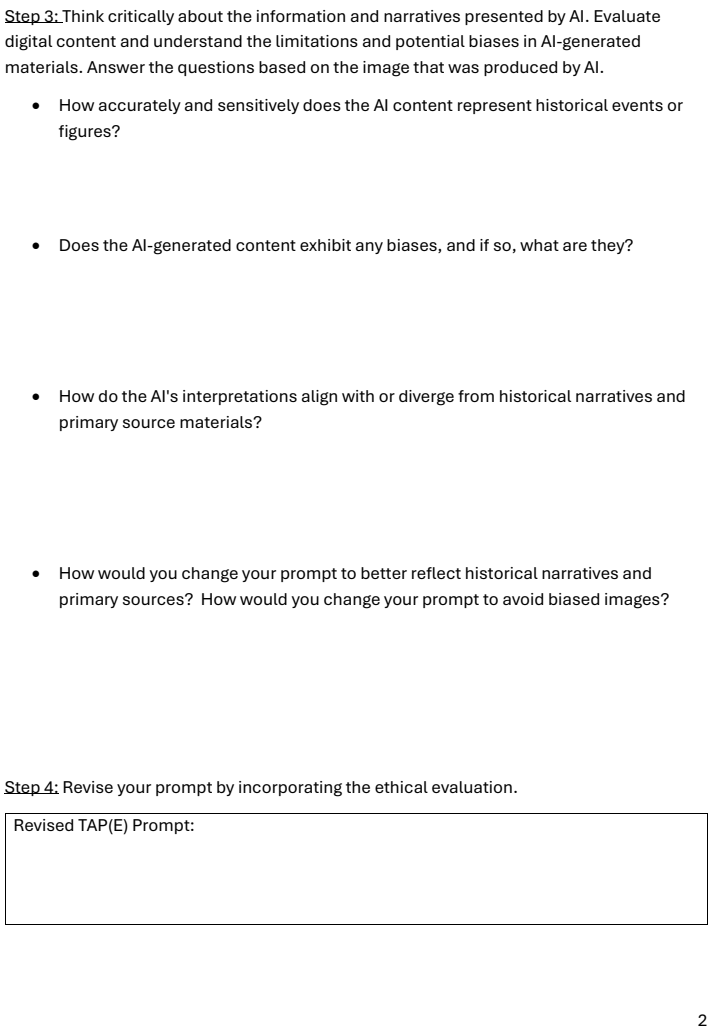
This portion of the assessment mirrors an AI training process called Reinforcement Learning from Human

24 Jacob Pleasants, Daniel G. Krutka, and T. Philip Nichols, "What Relationships Do We Want with Technology? Toward Technoskepticism in Schools," *Harvard Educational Review* 93, no. 4 (2023): 487.

25 The order of operations for this protocol is why the "E" in the acronym is expressed parenthetically. Procedurally, the ethical evaluation occurs after each image is generated.

Feedback (RLHF).[26] As humans interact with AI, they can help reduce bias and continuously finetune Large Language Models. By keeping the "human in the loop," students learn the importance of placing constraints on artificial intelligence through rating its representation of the human experience. RLHF encodes the perspectives and worldviews of the humans providing feedback into the AI system. As students critically examine and rate the AI's representations through an ethical lens, they actively shape the model's knowledge base and outputs. This experiential learning process underscores the importance of carefully curating the training data and feedback to avoid propagating harmful biases or narrow ideological viewpoints.

As teachers gather data from students' ethical evaluations, they can initiate discussions about how the "RLHF process makes many AIs seem to have a generally liberal, Western, pro-capitalist worldview."[27] This observation invites deeper discussions around representation, inclusivity, and whose values get prioritized in AI development. By actively grappling with these issues through the assignment, students can develop an understanding of the ethical implications and potential injustices arising from biased training data. It also prompts critical self-reflection on individual biases. As students evaluate the AI outputs through their own socio-cultural lenses, they must confront how their subjective experiences and belief systems influence what they deem accurate or ethical representations. This self-awareness is crucial for responsibly stewarding AI technologies that will increasingly shape human society and knowledge systems.



Step 3: Think critically about the information and narratives presented by AI. Evaluate digital content and understand the limitations and potential biases in AI-generated materials. Answer the questions based on the image that was produced by AI.

- How accurately and sensitively does the AI content represent historical events or figures?
- Does the AI-generated content exhibit any biases, and if so, what are they?
- How do the AI's interpretations align with or diverge from historical narratives and primary source materials?
- How would you change your prompt to better reflect historical narratives and primary sources? How would you change your prompt to avoid biased images?

Step 4: Revise your prompt by incorporating the ethical evaluation.

Revised TAP(E) Prompt:

2

Figure 7. Steps 2-4 of the TAP(E) Protocol - student worksheet

Conclusion

Throughout the semester, students in this survey course were given a choice between traditional essays and an innovative AI image creation and analysis assignment. As the instructor shared examples of their peers' work, more students gravitated towards the AI option. At the conclusion of the course, students were asked to reflect on their experiences with AI and its impact on their engagement with the course material. The following responses from two students who chose to do the AI assignments over the traditional essays throughout the semester highlight the ways in which this new approach influenced their learning process and understanding of historical concepts.

One student who chose the AI assignment for all three assignments said, "Initially, I didn't understand the benefits of AI and how it could benefit me in learning about history. After making so many images and trial and error, I didn't struggle to create what I wanted by the third assignment; I explored the settings a little more in this

26 Yuntao Bai, Andy Jones, Kamal Ndousse, Amanda Askell, Anna Chen, Nova DasSarma, Dawn Drain et al. "Training a helpful and harmless assistant with reinforcement learning from human feedback," *arXiv preprint arXiv*: 2204.05862 (2022): 4.

27 Mollick, *Co-Intelligence*, 37.

set, and I loved the photo outcomes. But I loved how this activity allowed me to retain more information about the topic and show my creativity." This student's reflection demonstrates the potential of AI-based assignments to enhance engagement, creativity, and information retention in history education. It also underscores the importance of allowing students time to become comfortable with new technologies and providing multiple opportunities for practice and improvement. Perhaps most significantly, the student reports that the activity cause her to "retain more information about the topic." This suggests that the process of creating AI-generated images may have helped students engage more deeply with the historical content through visualization and creative interpretation of concepts.

Another student reflected that image generation was more successful when the sources were thoroughly understood and analyzed. On the reflection they commented on a particularly successful image result: "I feel like I understood my source well which in turn helped me fine tune my prompts better." This student's reflection offers valuable insight into the relationship between source comprehension and effective AI image generation. Their comment highlights a critical aspect of the learning process that emerges when integrating AI tools into historical studies. The student's suggests a symbiotic relationship between traditional academic skills and AI utilization. The AI assignment did not replace the need for rigorous source analysis, but instead complemented and potentially enhanced it. The student's experience indicates that deep engagement with historical sources directly translated to more refined and accurate image prompts. This reflection also hints at an iterative process of learning and creation. As students delve deeper into their sources, they likely develop more nuanced and historically accurate prompts, leading to more satisfying image results. This cycle holds the potential to motivate students to engage even more thoroughly with their sources to achieve better AI-generated outcomes, creating a positive feedback loop that enhances both historical understanding and technological proficiency.

This assignment and accompanying protocol shape the conversation around traditional source analysis by leveraging AI image generation as a creative learning tool. By crafting prompts that synthesize descriptive historical details, students can unlock new narratives and perspectives, materializing their interpretations through AI-visualized outputs. The process requires critically evaluating AI capabilities and limitations while honing skills like contextual analysis, ethical reasoning, and iterative refinement. As students revise prompts across multiple iterations, they develop a more complex understanding of how data inputs shape outputs and the weight of purposeful prompting. Using the AI generated image as a co-intelligence and co-author to the source material at hand adds "another layer of resistance, and thus reflexivity," to the thinking of the researcher who uses it.[28]

Interrogating the AI images' credibility and responsible production pushes students to situate these visualizations within broader discourses around innovation ethics, human experience, and desirable technological change. Drawing from shared readings, they can thoughtfully consider and reflect on AI's societal impacts. This assignment holds potential for training algorithms to produce more equitable representations of humanity's diversity. By following the structured protocol and carefully curating prompts, students can effectively guide generative AI models to produce images that meet educational objectives while respecting standards and cultural sensitivities.

Applying prompt engineering to history education cultivates an invaluable intersection of interpretive analysis, creative expression, and critical thinking about society and progress. Inviting students to become both creators and critics of AI imagination exemplifies how AI can be used as a platform to foster historical learning objectives while simultaneously equipping students with digital and civic literacies. As capabilities rapidly evolve, exercises like this will keep humans in the loop and contribute towards producing the next generation of ethical, innovative AI citizens. It is unclear whether AI-generated images reinforce colonial or neocolonial biases or if they have the potential to challenge these biases by incorporating a diverse range of perspectives. By using and interrogating AI images as informed historical thinkers, students can be positioned to answer whether this technology can disrupt entrenched narratives and work towards the imagination of a more inclusive past.

28Tommaso Venturini, "Bruno Latour and Artificial Intelligence," *Tecnoscienza – Italian Journal of Science & Technology Studies* 14, no. 2 (2023): 104. https://doi.org/10.6092/issn.2038-3460/18359.