**Assignment Name:** Cause and Effect Visualization using AI

**Purpose**

Many courses explore cause-and-effect relationships in a variety of contexts. This assignment asks students to visually represent a hypothetical scenario with the use of an AI text-to-image generator. By helping them to both develop an appropriate image and then critically evaluate the image through individual reflection and class discussion, I am able to help students navigate a range of learning processes from the lowest levels of comprehension and concept recognition to analysis and evaluation of representation. In this process, the AI text-to-image generator provides a creative way for students to visualize scenarios and it adds a layer of critical thinking more fully as they work through the process of image generation and critique. My goals for this assignment are to help them think critically about cause-and-effect….

**Skills**

Through this assignment, you will practice:

- Understanding the fundamental principles of cause and effect in your discipline.

- Applying knowledge to hypothesize outcomes in alternate scenarios.

- Analyzing and critiquing generated images for accuracy and plausibility.

- Synthesizing information from different sources to create a cohesive representation.

- Evaluating peers' interpretations and providing constructive feedback.

- Creating innovative visual representations using AI tools.

**Knowledge**

You will become familiar with:

- Key events, figures, or concepts in history/sociology/sciences that have significant cause-and-effect relationships.

- The capabilities and limitations of AI text-to-image generators.

- Principles of visual representation and design.

**Tasks**

1. Choose a significant event, figure, or concept with a clear cause-and-effect relationship.

2. Research and understand the cause and how its effects manifest thoroughly.

3. Use an AI text-to-image generator ([Ideogram](https://ideogram.ai/t/trending), [Picsart](https://picsart.com/create/editor?category=photos&app=t2i), [Stable Diffusion](https://stablediffusionweb.com/) are all free; may require you to make an account) to create a visual representation of the event, figure, or concept if the cause had been different. Note that you will likely have to play around with many parts of your prompt, like:

A. Art type: photography, oil painting, digital art, film still

B. Colors: vivid colors, pastels, sepia

c. Background details: with no background, a blurred sunny field

4. Write a brief explanation of the changes you made and why.

5. Present your image and critique its accuracy and effectiveness in class.

A. This will be a class discussion. You will share your image, explain your prompt, and give your critique of the image that was created.

B. Classmates will have questions about your critique, so ensure you are able to defend your critique.

Note: It's possible that your generated image might not be perfect or fully align with your vision. Embrace the challenge and reflect on why the AI interpreted your input in that way.

**Criteria for Success**

- Clear and accurate representation of the alternate cause.

- Thoughtful and well-reasoned critique of the generated image.

- Constructive participation in peer reviews.

- Ability to explain and defend your choices during the presentation.

Examples of successful projects include:

1. A depiction of the industrial revolution without the steam engine, focusing on alternate means of production.

2. A representation of the civil rights movement without the influence of key figures like Martin Luther King Jr., considering other potential leaders or strategies.

**Visual Creation and Critique Rubric**

| **Criteria** | **Exemplary (41-50 points)** | **Proficient (31-40 points)** | **Basic (21-30 points)** | **Below Basic (0-20 points)** |
| --- | --- | --- | --- | --- |
| **Clarity of Alternate Cause Representation** | The image clearly and effectively represents the alternate cause, leaving no ambiguity. | The image represents the alternate cause with minor ambiguities. | The image somewhat represents the alternate cause but lacks clarity. | The image does not clearly represent the alternate cause or is off-topic. |
| **Relevance to Chosen Event/Figure/Concept** | The image is highly relevant and directly ties to the chosen event/figure/concept. | The image is mostly relevant with minor deviations from the chosen event/figure/concept. | The image has some relevance but significant deviations from the chosen event/figure/concept. | The image is not relevant to the chosen event/figure/concept. |
| **Criteria** | Exemplary (41-50 points) | Proficient (31-40 points) | Basic (21-30 points) | Below Basic (0-20 points) |
| **Understanding of Cause-and-Effect Relationship** | Demonstrates a deep understanding of the cause-and-effect relationship and its implications. | Shows a good understanding of the cause-and-effect relationship with minor misconceptions. | Some understanding of the cause-and-effect relationship but with notable misconceptions. | Limited or incorrect understanding of the cause-and-effect relationship. |
| **Analysis of Image Accuracy** | Provides a thorough and detailed analysis of image accuracy, identifying strengths and weaknesses. | Provides a good analysis of image accuracy with minor omissions. | Provides a basic analysis of image accuracy but lacks depth. | Does not provide a meaningful analysis of image accuracy. |