Intersections of Visual Semiotics & Computational Design

Conceptual and aesthetic explorations with generative AI image synthesis

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imaginary workspaces electrostatic --ar 16:9 - Variations by @self-organizing (relaxed, private)
imaginary workspaces electrostatic --ar 16:9 - Upscaled by @self-organizing (relaxed, private)
Some Specific Photographic Primitives

- the sub-division of the image
- visual tension between forms
- overall simple to complex structures
- foreground / background
- regular to irregular forms (repetition / variation)
- balanced / imbalanced spatial grouping of forms
- what angle directions for forms and lines
- rhythmic variation
- texture range for each form
- light / dark tones for subsections
- the number of light / dark toning areas
- the number of colors, color hue(s), color saturation, color darkness / brightness,
- complementary color contrast
- depth perspective
- blur value between visual elements
Urban Nature (1975-1978) A photographic series capturing scenes in the world by which to study in visual coherence
Catalog of Found Objects (1975) A study in classification and systemic organization
Here are three tufas. Can you identify the others?

The smallest hypothesis that covers all examples.

Learning means trying to select the simplest model that fits the data. Suppose I show you the top card and tell you that the three objects surrounded by thick lines are “tufas.” With so little data, how do you find the other tufas? Your brain makes a model of how these forms were generated, a hierarchical tree of their properties, and then selects the smallest branch of the tree which is compatible with all the data.
Catalog of Found Objects (1975) A study in classification and systemic organization
Still Lives (1977-1985) Studio staged photographs to explore propositions based on deductive reasoning, methods of logic, syllogism, comparisons, etc.

two chairs, an illustration of two forms that differ markedly in terms of complexity.

a bale of hay, approximately 21" long, 13" high, 3" deep.
Corporate Culture (1980-1982) Staged narrative construction
Beneath the Surface, Scratching the Surface (1987) “Born digital”, from the “Noise-to-Signal” Series
“Generative art refers to any art practice where the artist uses a system, such as a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy contributing to or resulting in a completed work of art.”
Anamorph-Voronoi (2020) Explorations in algorithmic organization of images in 3D virtual space
THE TWO-STEP CREATIVE PROCESS:
• User provides a text or image prompt which generates a complex image
• Curation process where one selects out of the results

FUNDAMENTAL QUESTIONS:
• If complex images that resemble masterful artworks can be produced by feeding textual prompts into an opaque system, can the results be considered creative?
• What is the nature of the human creativity involved in generating images with text-to-image systems

CHALLENGES:
• An opaque process
• Based on the image we can infer little about the system used
• We don’t know what text and configurations resulted in the prompt – to access full extent of human creativity, need information on all aspects

The Office (2022)
The Alchemist's Study (2022)
Imaginary Workspaces: Cold Kitchen (2022)
Imaginary Workspaces: Orange Lab (2022)
Imaginary Workspaces: The Lab (2022)
Imaginary Workspaces: Street Kitchen (2022)
Creative Control (blue and green), Black Box Processing (orange)

[Diagram]

1. Preparation stage
2. Configuration stage
3. Presentation stage

https://www.semanticscholar.org/reader/f3479740d4ec7f91b6d7a01167e9c875a72d386e
BLACK BOX SYSTEM:
- Only control at input (prompts) and output (curation)
- Even though image dependent on huge (5.8 billion) image database, results still dependent on what is in the database
- Most common prompts get the more literal results
- Esoteric, specialized terms and references not effective

AS-OF-YET UNEXPLAINED EASTHETIC DESIGN DECISIONS:
- Based on the image we can infer little about the system used
- What are the factors that determine consistent and variable details
- To what degree can one go against embedded stylistic determinants

BIAS, COPYRIGHT, etc:
- Datasets unreliable, mislabeling, ideological, stereotypes
- Database training sets include internet scraped images with potential intellectual property issues
“The choice of image nowadays is a new form of framing the image. It may have been luck but informed luck connecting to all sorts of memories and impulses, imaginings, envisioning what bypasses the Midjourney 'style' or 'look'.