Discovering the Language of New Media/Digital Art

February 5: Readings in The Language of New Media:

1. Introduction, pp. 2–17
2. Chapter 1: What is New Media?, pp. 18–61

In the Introduction to The Language of New Media, the author (Manovich 2001) provides a straightforward list of the areas of new media that are examined in the book. These include: "[w]eb sites, virtual worlds, virtual reality (VR), multimedia, computer games, interactive installations, computer animation, digital video, cinema, and human-computer interfaces" (pp. 8–9). The objects in the list are diverse in nature and form and, perhaps, most important in purpose and/or function. They are, however, united in their shared grounding in an essential or seminal relationship with the computer. The Introduction to the text provides a discussion of the overarching "mapping" strategy used by Manovich (2001, 11) throughout the book to identify and examine key concepts necessary for a deeper understanding of the current practices/functions of new media objects. The author also provides a rationale for the "bottom up" approach he employs to present his discussions of new media. These readings also include a history of the relationship of traditional media and new media objects and key principles that distinguish new media from old.

What is the significance of the terms/language associated with new media? (Introduction)

- Significance of the word "language" with regard to understanding new media
- How do new media differ from "old" media? How are they related?
- Mapping new media: methods and organization
- Terms: language, object, and representation

The history of new media and its relationships to old or traditional media (Chapter 1)

- Cultural history of new media
- Interactivity: Why is this term deceptive when referring to computer-generated objects (i.e., new media objects)?
- Its relationship to "old" or traditional media, grounding in print, photography, and cinema
- "Myths" of new media: What is not new media?
- Discuss Manovich’s five principles of new media:
  - Numerical representation: essential nature of all new media objects
  - Modularity: refers to the retention of the independence of the different elements that make up an object, elements that can be modified at any time without having to modify the larger object itself
  - Automation
  - Variability: new media objects can exist in a variety of versions
Transcoding: the translation of something into another format (i.e., the computer's "translation" of HTML code into a web "page")

The Significance of the Interface and the Role of the Computer as a Physical and Metaphorical Interface between User and Machine

February 2 – 14: Reading in The Language of New Media:


The computer interface is not just a physical or particular component of digital technologies. Rather, it can also be described as a carrier of cultural messages (Manovich 2001, 64) that users interact with as they access via different types of media. As such, how the user perceives the computer interface greatly influences how the computer itself is perceived (p. 64). The computer interface organizes the data that users access and presents it through various kinds of filters that frequently draw upon already-familiar "interfaces" as metaphors for the presentation of information (i.e., printed magazine page, cinema, VCR, or CD player in the case of leisure-oriented data or folders, files, desktop in the case of work-oriented activities.) Consequently, understanding the evolution of the computer interface and its influence over our perception of the computer is important to understanding new media and the creation of new media objects and how they are perceived by users/audiences.

What is a "cultural interface" and how does it relate to new media? How do the metaphors of other cultural traditions contribute to the current HCI (human-computer interface)? Chapter 2, pp. 62–93. Manovich (2001) fashioned the phrase "cultural interface" to describe the ways in which the computer has evolved to serve as an interface between users and cultural data. Understanding this term and the metaphors used within this type of interface is a key principle in new media

- HCI - What does this term mean? How has it evolved?
- Evolution of the computer from a "work" machine to a "universal media machine" (Manovich 2001, 67)
- Discuss Manovich's (2001) use of term "cultural interface" (pp. 69–70)
- Prototypical cultural interfaces of 1990s
  - Web page as magazine page
  - Cinematic interface (i.e., games such as Myst)
- What metaphors are employed within or by cultural interfaces?
- How do these relate to older cultural traditions (i.e., printed page and cinema)?
- HCI hybridity: blend of representation and control

The implications of the screen. Chapter 2, pp. 94–115. The final section of this chapter focuses on concepts of the screen and how they have influenced our perceptions of viewing, art, perspective, the computer, etc. Most specifically, Manovich (2001) locates his discussion in the interactions between the user and the screen.

- History of the "screen" as a frame for viewing
  - Classic screen (i.e., painting)
  - Dynamic screen (the moving image as in cinema and television)
- Computer screen: its history and evolution (brings relationships back to the first examination of computer history)
  - Surveillance/reconnaissance
  - Military applications (i.e., the radar of "real time" viewing)
  - Early graphics applications (i.e., Sketchpad)
  - Interface/filter for cultural data (text, images, music, video, VR experiences, etc.)
- Relationship of the screen and the body
The Role of Operations in Software Applications

February 19 – 26: Reading in *The Language of New Media*:

1. Chapter 3: The Operations, pp. 116–75

In Chapters 1 and 2 of *The Language of New Media*, the author presents the first two key concepts in his overall discussion: 1) a delineation of the term "new media" itself, what it is and is not, and its relationships to traditional media and 2) an examination of the interface between the computer and user and how that interface has evolved over the history of the computer. With Chapter 3 of the text ("The Operations"), Manovich initiates a deeper probe into the nature of new media by focusing on the operations and software applications used to produce new media objects. This discussion is not simply a review of specific products (i.e., software applications); rather it is an elucidation of the tools, commands, and practices that are common to most applications and how these "operations" influence the perceptions and responses of both creators and users to computers and, consequently, to new media objects. Thus, although sometimes technical in nature in some areas, the discussion more importantly delves into an examination of the social and cultural implications of these operations to our perceptions and understanding.

**Menus, filters, and plug-ins. Chapter 3, pp. 116–35.** Operations ubiquitous in computer culture that allow for ease of operation but also for the standardization of choice and/or recycling of the information/data/elements used in the creation of computer-based objects and experiences.

- How has the ability/requirement to "select" from libraries of actions affected the creative process? The perspective of the user?
- How does standardization of actions influence our creation/use of new media objects?
- What are the relationships of this selection process to the creative processes applied in traditional media forms? Or, are these operations unique to the computer era?
- What are the implications of the menu/library "logic" for understandings/definitions of authorship?
- What is the role of "recycling" in the shift of cultural production to computer-based tools?
- How has the selection process changed our notions of the "object"?

**Compositing as a general action or technique. Chapter 3, pp. 136–60.** Compositing can be found in many areas of image/object making. According to Manovich (2001), however, the term is assigned a particular meaning in the creation of new media objects: "It refers to the process of combining a number of moving image sequences, and possibly stills, into a single sequence with the help of special compositing software" (pp. 136–37) the result of which is to create a "seamless object" (p. 139).

- What is the role of modularity in compositing?
- What is a "virtual space" and how does this concept relate to compositing and the creation of a simulated reality?
- How do the aesthetics of postmodernism (i.e., with regard to montage, pastiche, quotation, appropriation) relate to compositing? How are they similar? How are they different?
- What is the "aesthetics of continuity"? (Manovich 2001, 142–45)
- How and why has compositing become such a predominant presence in digital media?
  - History of compositing in cinema and video/role of montage
    - Temporal montage versus montage within a shot (pp. 148–52)
- Simulation of nonexistent spaces (pp. 152–55)
“Spatial montage” (p. 158)

Teleaction/telepresence. Chapter 3, pp. 161–76. Defined as “representational technologies used to enable actions, that is, to allow the viewer to manipulate reality through representations” (Manovich 2001, 165) and to do so in real time (167).

- The trajectories of modern media technologies (Manovich 2001, 162–63)
  - Representational (i.e., film, video)
  - Real-time communication (i.e., telephone, telex, television radio)
  - The convergence of real-time communications and representational technologies (i.e., radio and television)
- The concept of an aesthetic object as discrete object (p. 163)
- How do communications such as the Internet challenge conventional understandings of aesthetic objects?
- The difference between simulations such as Virtual Reality spaces and teleactions (that manipulate physical reality through an image)
- The concept of “image-instruments” (pp. 167–68)
  - Images as devices for control
- How do new technologies intervene or alter our perceptions of the world?
  - Walter Benjamin (i.e., camera, mechanical reproduction)
  - What is the significance of spatial distance in viewing?
  - How does in diminution (i.e., via film, telecommunications, and telepresence) alter our perceptions? (pp. 174–75)

The Quest for Illusion in New Media/Digital Art

March 19 – 26: Reading in The Language of New Media:

1. Chapter 4: The Interface, pp.176–211

Why has the quest for perfect illusionism become an obsession within new media? It is with this question that Manovich begins Chapter 4 (“The Illusions”) of The Language of New Media. Issues of illusionism (and how to achieve it) permeate the creative activities of designers, animators, game designers, etc. as well as the technological development of computers and software applications. The author (2001) writes: "The industry frames each new technological advance in image acquisition and display in terms of the ability of computer technologies to catch up and surpass the visual fidelity of analog media technologies" (p. 178). He then asks two essential questions: 1) Does the reality effect of synthetic images differ from that of optical media? and 2) Have our "standards of illusionism" (Manovich 2001, 178) been redefined by computer technologies? With these questions, Manovich shifts the focus of his examination to the appearance of new media objects and the ways in which “synthetic realism” affects our perceptions of natural reality.

Synthetic realism. Chapter 4, pp. 176–98. Manovich (2001) asserts that the presence of illusionism in new media objects does not in itself represent a radical departure from the history of image making (p. 184). The true "break," he claims, arises in the "moving synthetic image-interactive 3-D computer graphics and computer animation" (p. 184) because, in these kinds of representations, viewers can experience the sensation of "moving around a simulated 3-D space-something one cannot do with an illusionistic painting" (p. 184).

- In new media, an image is not merely to be looked at but acted upon and entered into
  - Image interfaces and image-instruments
  - What is the significance of spatial distance in viewing?
• How does the synthetic realism of new media objects relate to the realism of other image technologies such as cinema?
  o Cinematic realism of Bazin, Comolli, and Bordwell/Staiger (pp. 185–95)

• How to achieve synthetic realism?
  o Simulation of "traditional" cinematic codes of representation (pp. 191–92)
  o "[S]imulation of the perceptual properties of real life objects and environments (p. 192)

• How successful has this been?
  o How is the success of the "realism" of synthetic realism/animation signified or measured?
  o Human figure (skin, hair, facial expressions)
  o Various textures
  o Natural phenomena (i.e., water, sea spray, smoke, waves, etc.)

The synthetic image and its subject. Chapter 4, pp. 199–204. Beginning in the 1970s, the field of computer graphics has defined photorealism (on the computer) as "the ability to simulate any object in such a way that its computer image is indistinguishable from its photograph" (Manovich 2000, 199). Has the field accomplished this goal, technologically and creatively? If so, what are the implications of this achievement for both subject and viewer? Is it possible that computer images are too "real" (p. 199)?

• The hyperreality of computer images (pp. 202–4)
  o Absence of grain and noise, highly saturated colors, depth of field-computer graphics represent a type of augmented or perfect vision
  o Must be degraded (through filters) to match the imperfections of film
  o A form of "cyborg" vision—the "future of sight" freed from human limitations—more perfect than natural sight (pp. 203–4)

Illusion, narrative, and interactivity. Chapter 4, 205–11. In this section, Manovich examines the oscillating states of the computer between that of a window to a synthetic world and a machine that demands (i.e., controls) responses/input by users. It is a fluid, constantly vacillating state of transparency and opacity, illusion and awareness. Two essential questions for this section are "Does this constitute a new kind of realism?" and, if so, "What are its implications for new media artists?"

• "What effect does interactivity have on the reality effect of an image?" (p. 205)
  o New media objects remind us of their "artificiality, incompleteness, and constructedness" (p. 205) by requiring "viewers" to become "users"
    ▪ Web surfing
    ▪ Computer Games
    ▪ Interactive aspects of DVDs

• The computer oscillates between transparency and opacity
  o "Transparency"—falling into the "illusion" of the synthetic image (the window to virtual worlds)
  o "Opacity"—the "solid surface of menus, controls, text, and icons" (p. 208)

• Does this constitute a new kind of realism?
  o A "metarealism" (p. 208) of self-critique that moves between illusion and its destruction
  o Does this have connections to the larger culture?

• "Cognitive multi-tasking"—"alternating between different kinds of attention, problem solving, and other cognitive skills" (p. 210)
  o What are the implications of this for artists and art making?

Access to Information: Databases and Navigation in New Media/Digital Art

April 2 – 11: Reading in The Language of New Media:

1. Chapter 5: The Forms, pp. 212–85
This section of the curriculum focuses on two key aspects present in most new media designs/objects. They are: 1) the creation of an interface that permits access to collections of information (a database) and 2) the definition of "navigation methods through spatialized representations" (Manovich 2001, p. 215). The first is about gaining access to information; the second deals with the notion of immersion and/or psychological involvement or engagement. Traditionally, the first aspect was seen most commonly in the domain of the computer as a "work" space and the second when it served as the site or pathway for home entertainment and leisure (i.e., games). In recent years, however, the two "spaces" increasingly overlap and merge and the distinction has become much less valid. Computer users often "use" computers in the same ways at both work and home. Undoubtedly, a primary activity of the information age is attaining access to data or information. Yet, two key themes of the computer culture (lack of hierarchy and modularity) diminish the role of narrative in the processing and tying together of information (p. 216–17).

In Chapter 5 ("The Forms") of The Language of New Media, Manovich raises an intriguing assertion at the conclusion of the introduction to this chapter. Namely, that in an age of "too much" information and "too little" narrative, "we need something that can be called ‘info-aesthetics’—a theoretical analysis of the aesthetics of information access as well as the creation of new media objects that ‘aestheticize’ information processing" (p. 217).

"Why do new media favor the database over other forms?" (p. 218) and the database as a distinct cultural form (p.218). Chapter 5, 212–24.

- Database as structured collection of information about the world that is experienced by a user
- Like other ways of experience, a database represents a model of the world
- The advent of the Internet and the WWW has contributed to our perception of the world as a vast collection of data (collections of images, text, financial records, etc.)
- How and where does the database dominate new media objects? (pp. 219– 21)
  - Examples: Commercial CD-ROMs of such things as museum collections, recipes, photographs, etc.; multimedia works such as artists' projects (see Resource references for Chapter 5); web page
- Not all new media objects are manifestly databases (collections of information). Many are also algorithmic (operations) such as what we find in computer games
  - Most games are experienced as narratives because there is a "logic" (the algorithm) to the progression of the game
  - Discovering the "logic" is part of the procession of play, sometimes the goal
  - Play is a "continuous loop between the user (viewing the outcomes and inputting decisions) and the computer (calculating outcomes and displaying them back to the user)" (p. 223)

Manovich presents "database" and "algorithms" as the "two halves" of the world, according to the computer and software programs. Chapter 5, 225–43.

- "A program reads in data, executes an algorithm, and writes out new data" (p. 224) How to "present" digitized data
- Organizing, digitizing, visualizing
- Database is a list of unordered items (organization depends upon the filters applied by user)
- Narrative, by contrast, "creates a cause-and-effect trajectory of seemingly unordered items" (p. 225) Narrative imposes an order, a progression that must be discovered by users
  - Similar to the algorithm-like structure of games
- CD-ROMS, websites correspond to database structure, where narratives (such as computer games) correlate to algorithm
- "Do databases and narratives (algorithms) have the same status in computer culture?" (p. 226)
  - Manovich asserts that virtually all media objects are databases, either overtly or under the surface (accessed via an interface)
    - The database as the "center of the creative process in the computer age" (p. 227)
• "The new media object consists of one or more interfaces to a database of multimedia material" (p. 227)
• Reference the principle of variability (see Chapter 1)
• Redefinition of how we might conceive of "narrative" from a static, predefined linear trajectory to one where the user "traverses" a database (makes decisions according to what links are followed)
  o The concept of "hyernarrative"—the possibilities of multiple trajectories through a database
  o But is "traversing" a database enough to constitute "narrative"? (pp. 229–30)
• Why do new media employ a "language-like" sequencing (pp. 230–33) giving information "one screen at a time" (p. 232)?
  o Emulation of cinematic space—linear and sequential

Navigable Space. Chapter 5, 244–85.

• Spatial journeys: games as examples of navigation
  o Doom/Myst
• Narrative actions and exploration (pp. 247–48)
  o "Movement" propels the narrative of games
• Navigable space as culture form
  o "Transcends computer games...[and] like database, navigable space is a form that existed before computers, even if the computer becomes its perfect medium" (p. 248)
  o Tool of labor...a way to visualize and work with date (p. 249)
• Spatial constructions in new media refer to older traditions (e.g., architecture, urban planning, topology, etc.)
• "Why does computer culture spatialize all representations and experiences?" (p. 252)
• "What are the aesthetics of navigation through virtual space?" (p. 253)
  o In new media, virtual spaces are usually "collections of separate objects" (p. 253)
  o Computer space also comprises sets of places or levels (navigating games means moving through successive levels of play (rooms, corridors, arenas, etc.)
  o Computer space also tends to ignore space that is not "functionally used." (p. 258)
  o Computer space is isotropic, no axis is privileged (p. 262)
• "What artistic and theoretical traditions can the designers of navigable spaces draw upon to make them more interesting?" (p. 264)
  o Architecture
  o Modern art and the organization/treatment of a painting/space within a rectangle
  o Installation art and the use of surrounding space to envelop visitors/viewers
• Navigable space focuses on the viewer/user
  o New media designers/artists create a "viewer's experience in time and space" (p. 267)