

Principles of New Media

From *Language of New Media*

Lev Manovich

2001

“We are in the middle of a new media revolution — the shift of all of our culture to computer-mediated forms of production, distribution and communication.”

Principle #1

Numerical Representation

New Media objects are composed of digital code. Therefore:

- New media can be described mathematically. Example: an image can be described using a mathematical function
- A new media object is subject to algorithmic manipulation. Example: image edited in photoshop. In other words, media becomes programmable.

Principle #2

Modularity

Media elements are represented as collections of discrete samples (pixels, polygons, voxels, characters, scripts).

These elements are assembled into larger-scale objects but maintain their separate identity.

Principle #2 (cont.)

Modularity

Example: When a media clip is inserted into a Word document, it maintains its independence and can always be edited with the program used to create it.

Principle #3

Automation

Numerical Coding (#1) and modularity (#2) allow to automate many operations involved in media creation.

“The human intentionally can be removed from the creative process, at least in part.”

Principle #3 (cont.)

Automation — 3 Types of Automation

- “Low Level” — Computer modifies or creates from scratch a media object. Example: Photoshop automatically corrects scanned images, improves contrast, removes noise
- “High Level” — Computers understand the meanings embedded in the objects being generated Example: Artificial Intelligence in video games, simulating human intelligence
- “Media Access” — Automation in how store and locate media. Example: Web search engine

Principle #4

Variability

A New media object is not fixed; it can exist in different, potentially infinite, versions. Example: different versions of a Website or QuickTime video based on a user's connection speed.

Principle #4 (cont.)

Variability

“The principal of variability also exemplifies how, historically, the changes in media technologies are correlated with social change.”

- **Logic of old media** corresponded with industrial mass society: everyone was supposed to enjoy the same goods
- **Logic of new media** fits logic of post-industrial society: value of individuality over conformity

Principle #5

Cultural Transcoding

New media consists of two layers:

1. The “cultural layer”: sentences; recognizable objects; story and plot; point of view; comedy/tragedy
2. The “computer layer”: process and packets; function and variable; computer language and data

Manovich: These two layers influence each other. “The result of this composite is the new computer culture: a blend of human and computer meanings, of traditional ways human culture modeled the world and computer’s own ways to represent it.

Second Article

“Consumers, Participants, and
Creators: Young People’s Diverse Use
of Television and New Media”

Brit Svoen

Lillehammer University College, Norway

Vanguard Study — April 2007

762 respondents, age 10 to 15

Favorite Media? Internet and Mobile Phones

- Boys: Computer (with Internet access)
- Girls: Computer and mobile phone

What about TV?

Television was most used medium (in terms of time). However, no respondent claimed it as their favorite or the medium they would miss most. The majority watched less television today than year before. Almost all went online more today than year before.

Vanguard

Other Findings:

- Online multiplayer games increasingly popular. More than 33% of girls and 54% of boys played monthly.
- Increase in media creation. Projects ranged from electronic photo albums to film parodies.
- 90% of girls and 83% of boys used online chat weekly.
- When face-to-face contact is not an option, messenger/chat is the preferred way of keeping in touch.

Vanguard Study