The Infinite Loop

John Maeda

My first encounter with a personal computer was twenty years ago in junior high school math. At the time, it was never made clear to any of us students what it might be useful for, beyond participating in the literal act of "using the computer." "Using the computer," of course, plainly translated into the passive act of sitting in front of the computer and staring at a small blinking green rectangle. Some days you would secretly hope that it would entertain you in the manner of loud graphics and sound, like its close relative the television. But such bliss would never come and you would be eventually driven to attempt to interact with the device through its tiny keyboard. However, anything you might type at the unit, be it your name, a happy thought, and even things not so dear, would be evaluated by the computer with great insignificance. "SYNTAX ERROR," it would retort. I surely would never have advanced beyond the foyer of computer programming if it had not been for my well-to-do classmate, who as evidence of his absurd wealth had a similar unit at home! He showed me how to teach the computer to display my name with a simple statement like "PRINT 'MAEDA'." The computer would dutifully display "MAEDA." With a few more instructions the computer would display my name twice, fifty times, on to a hundred, and then practically forever. The implication of this simple mechanism of repetition, by which the computer was clearly king, was further dramatized when we hooked up the computer to a printer. The printer would print and print until its paper supply was exhausted, still hungry for more. Upon seeing this and similar displays of the printer's athleticism and waste, my instructor would shout disapprovingly, "No infinite loops allowed!" Only a subsequent command to terminate the processing flow, the chording of two keys of the keyboard, would stop such madness.

Surely my instructor would disapprove of the situation we face today with computers of the 21st century. From the very moment its electric soul ignites at the touch of the power button, the computer drags you into an infinite loop of "yes-no-cancel" queries that hints at our future existence as a species requiring only one finger for clicking and a brain as optional accessory hardware. The common acceptance of the term "computer user" to

describe such daily interaction hides a fundamental philosophical question. Are we using the computers, or are the computers using us? In the complex infinite loops of today's highly interactive software, how far could a computer go without us, constantly tending to its incessant needs to confirm its manner of being?

Lastly, were we to let it go along its infinite ways without any need for human input, would we know which keys to press to terminate the madness?

Our modern civilization has always prided itself upon technological developments that have rendered activities once laborious or requiring manual skills into processes that are automated and require significantly less skill. Inevitably our computers will develop in a similar manner—forcing the paradoxical trend of making something that is already automated into a state of further automation. Such automated perfection eliminates the need for human input because the committee or individual who creates the system leaves their set of decisions as absolute knowledge that is prescribed as forever valid. All technological systems are thus human because they carry the roots of human thought, but they are not by definition humane.

The invention of humane technologies requires a simple catalyst—what I often refer to as a "humanist technologist." This is of course not a kind of computer technology that one can trivially trade on the stock exchange, but refers to a kind of person that bridges a sensitivity to the traditions of the past with an unbridled passion for mastering the skills of the future. Finding such people is not simple because today the process for growing people—the process of education—is biased towards developing people with a specific inclination towards either the creative side (arts, design, etc.) or the technical side (science, engineering, etc.) but never both. In other words, our modern academic system produces those who can think but cannot render their ideas as actual objects, and those who can create any object but cannot imagine what to make.

Over a decade of experimentation I have demonstrated that a single person can indeed bridge the gap between concept and construction. The results achieved never lack the critical synergy between idea and object because they are one and the same. In addition my experiments in educating more people to engage in a similar manner of creation have supported my constant hypothesis that there is nothing unique to what I do, and that there are many routes left to explore. However most recently I have had the disturbing sense that no matter what new digital territory may arise, we end up where we first began—back into the infinite loop. My instinctive response to this personal perception has been to proclaim a new effort to escape to the "Post Digital" which, although "Post" implies the future, I am certain lies in the past.

from: John Maeda, "Post Digital"; Tokyo 2001

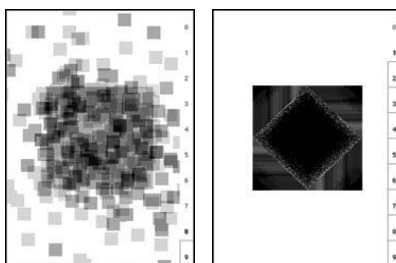# Reactive Graphics History
John Maeda
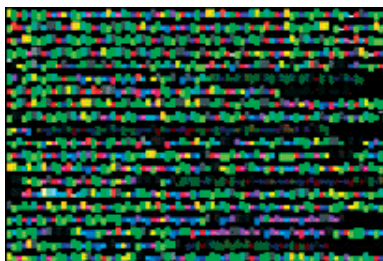
Color Typewriter (1994)
Abstraction of typing as color.
Click and drag over the color for the color-impaired

Concentric No. 3 (1994)
The large and small of interaction.
Move the mouse

Mirror Mirror (1997)
Select 1 of 10 TV channels
from the keyboard

Reactive Square (1993)
Select 1 of 10 squares to speak to

Single Pixel (1998)
No color, minimal interaction using a pixel

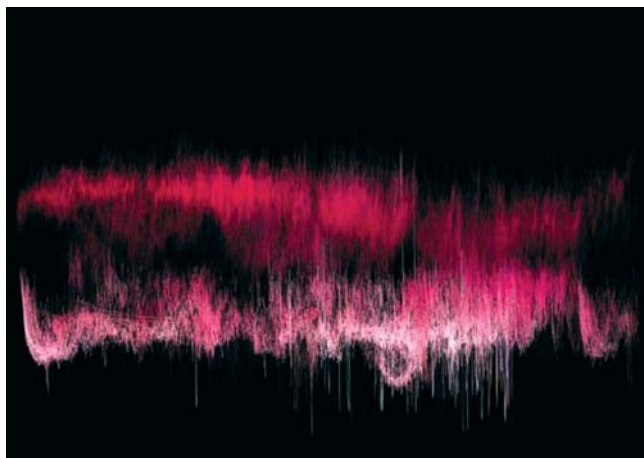*White Bottle* (1995)
Basic interaction study

Reactive Graphic No. 2 (1993)
An early attempt to make something small
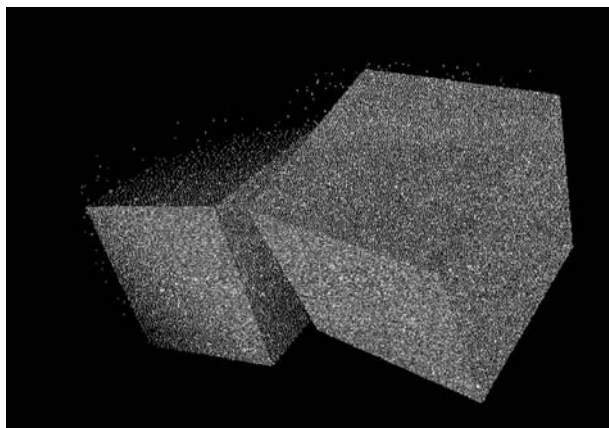yet overactive

Inverse Paint (1994)
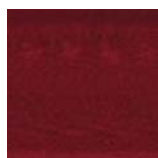Man versus machine

F00D
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Fat-Free / 30x20-inch Cibachrome Print

Veggie Soup inset in full-scale detail /
20x30-inch Cibachrome Print

Tea for Two inset in full-scale detail /
40x30-inch Cibachrome Print

RedBeet, BluePurpleTopTurnip and *GreenZucchini* from the "Smoothies" Series /
11x12.5-inch Plexi-Sandwich Mounted Cibachrome Prints