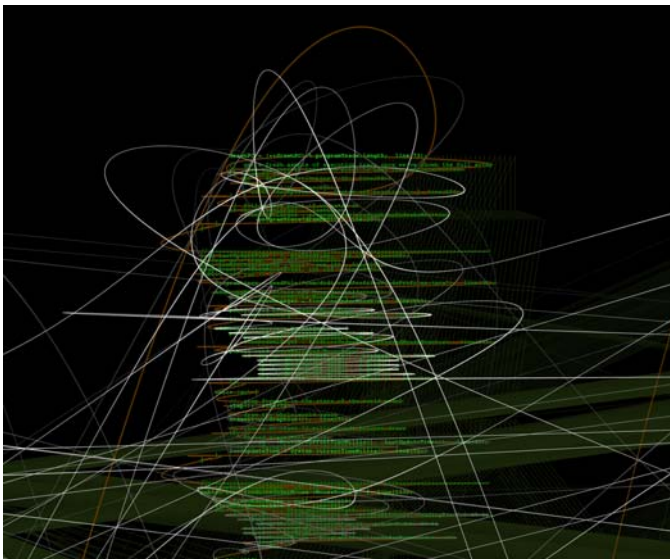


CodeProfiles looks at the computer program as text: how code is written by programmers, read by people, and executed by computers. This is a print recasting of work commissioned for the Whitney Museum's *CODEDOC* exhibition, in which curator Christiane Paul focused on the process behind computer-based art. Artists were asked to "move three points in space." This is the space of code itself: the program reads itself, prints itself on the page, and traces three points that moved through the code.

The written code stacks like unkempt piles of books; colored lines trace three different interpretations, binding it all together. A paper-white line traces the writer's *insertion point*. The lightest scribbles toward the middle-right show where the most recent code (that produced the print itself) was added. A warm amber line simulates a *fixation point*: where the eye might flow as it reads. And a cathode-ray-tube green line follows the *execution point* of the program; merging overlapping traces into wide swaths of light where the code was executed thousands of times, but scribing a barely distinguishable lace where the processor visited rarely.



CODEPROFILES: INTERACTIVE EXPLORATION OF CODE

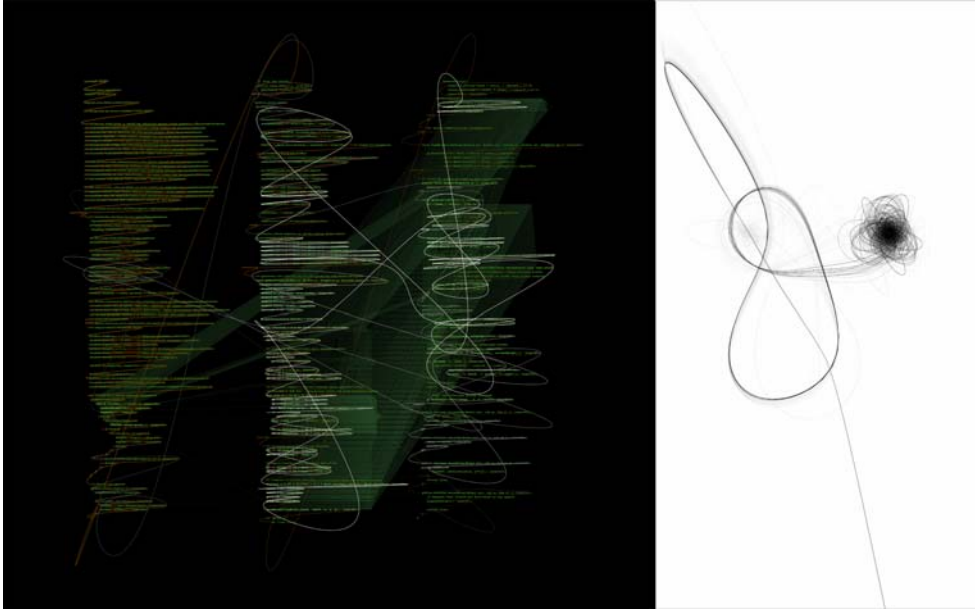


This interactive variation of CodeProfiles is a computer—matted and hung in a traditional frame. It plays by itself, but oversized touch-screen glazing lets people play with it, too. Stroke a line and it magnifies to readable size; tap it to restart all three traces. Each line has its own dynamic character, reflecting the nature of the process it traces: the green execution point jumps jaggedly from line to line; the white insertion point flows like the programmer's thoughts: character by character—calmly in one place, then surging to conform other parts of the code. The amber fixation point just plods along, reading every word with bookish rigor.

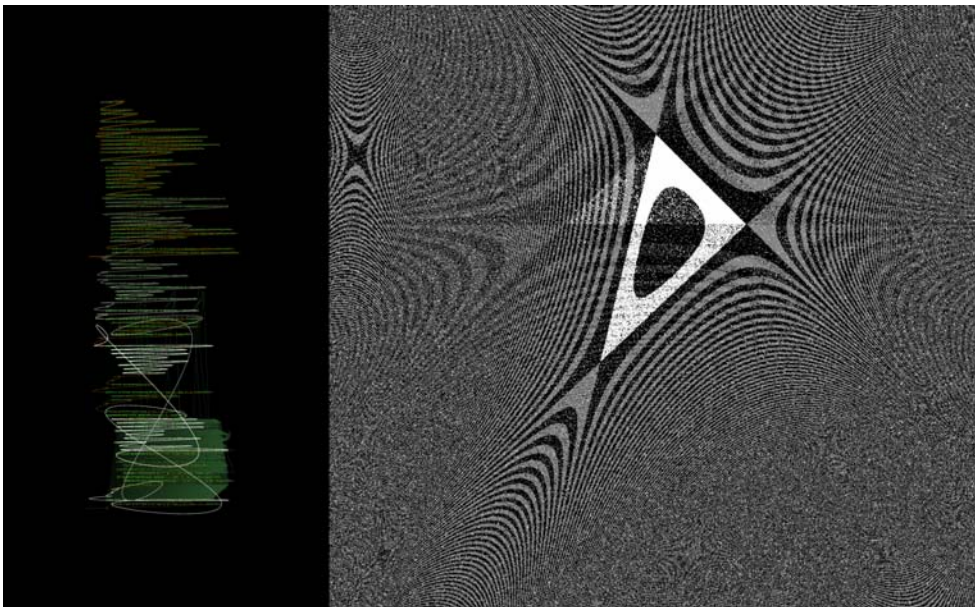


TWO MORE PRINTS FORM A TRIPTYCH, LETTING COMPARISONS EXPOSE A RICHER STORY

Part of the Whitney commission asked the artists to comment on one another's code. But CodeProfiles was itself a way to visually comment on code, so a variation was born: CodeProfiler traces the programs of two other *CODEDOC* artists. The programming "instrumentation" needed to do the traces was easily added to the other artists' code, since they made it available as a natural part of the exhibition. This instrumentation, a Java function named `line()`, can be seen throughout every print. Scott Snibbe and Martin Wattenberg joined in these almost unintentional collaborations by tweaking the instrumented versions of their code, adding numbers that recapitulated the sequence in which they wrote. Then two more prints were made, each showing CodeProfiler traces of the other artist's program on the left and the other artist's own program's output on the right—modified as little as possible to suit the new medium. The differing goals and visions of the artists become visible in the mindprint that good code represents.



Snibbe's work *TriPolar* shows how a pendulum moves above three magnets, a textbook chaotic system. As a simulation, Scott's code is shorter than *CodeProfiles*, whose complexity comes from interpreting nature (e.g. the writing process). His often-repeated inner loop, painted in green towards the center, does most of the work.



Wattenberg's *ConnectApplet* paints a shimmering moiré pattern, the application of a mathematical function to a triangle whose point has been shifted downwards. His code is tiny since the visual structure all comes from that single function. And the tight inner loop, which paints each point black, white, or gray, is tinier still. It glows with the green trace of intense repetition.