

# For, To, Print

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The Beginner's All-Purpose Instruction Code was invented in 1963 in Hanover, New Hampshire by two Dartmouth mathematicians searching for a simple teaching tool for undergraduates. The first program written in BASIC ran at approximately 4:00AM on 1 May 1964. While it is not known exactly what the first program executed was, it is believed to have been either an implementation of the Sieve of Erasthenes (an algorithm to identify all prime numbers up to a given limit), or the simple command "Print 2+2". The print command that may have run first is a simple, closed loop command. But iteration statements, components of programming that define a loop and its scope, are essential. The For command creates a system that can repeatedly check and loop itself defined by the limitations of the programmer. An endless loop is possible — a program repeatedly acting upon itself, cyclically, like the Ouroboros eating itself in endless repetition and regeneration.

Nearly all digital technology begins from, or ends in, human hands. Often that cycle — human to digital or digital to human — is a loop and that loop changes the outcome, whether the outcome is a digital program, or a printed artifact. At one point computing required both a digital component (the hardware) that was run by a printed component (punched cards) which held the code to be executed. Both digital and analog have inherent constraints; software, processing capability, paper, and ink are but a few. These constraints however are more advantage than disadvantage, after all "constraints are a way to limit the infinite to make way for the possible."

The "for...to...print" command posits a loop in which a certain calculation is executed, tested then printed in a repeating sequence until either a satisfactory result, or the one directed by the programmer, is obtained. The computer's approach is straightforward and unambiguous. Test. Result. Print. When the human factor is inserted into the loop, however, chance occurrence becomes possible. The loop can be paused, parameters shifted and unexpected results achieved. Images can be resequenced outside of the programmatic calculation thereby creating curious, meaningful or witty interactions.

## Workshop

This workshop will use digital technology to generate a printed accordion book and accompanying digital artifacts. The workshop will explore printing via letterpress and silkscreening methods to generate a book that incorporates the shared contribution and sequence of each participant. Concepts of chance, sequence and serendipity in both digital and printing processes are essential ways in which content can be rearranged, reimagined and reprinted. The book's construction (folded concertina) creates its own embedded "loop", a printed ouroboros, which will be re-translated into an animation both analog and digital.

## Collect

Gather 10-12 images that articulate your work, ideas or interests. Do you work with images on a daily basis? Maps? Photographs? Scientific data? How do images contribute to or define your work and in what ways do you use them? Bring these images to the workshop either in printed form or on a drive or computer so they are accessible for viewing and use.

