

#### 4 Monkeys: Genesis and Expression

'4 Monkeys' derives from my study of context-free languages in Summer of 2007. This is a branch of logic that treats language in purely mathematical terms without recourse to meaning. Words are defined as a set of elements drawn from an alphabetic set,  $\Sigma$ . The set of all words, or  $\Sigma^*$ , is a product operation that generates every possible combination of words in an alphabet.

I found the  $\Sigma^*$  operation exciting on several levels. Though Noam Chomsky proposed the conceptual basis of context-free languages in support of his theory of generative grammars, the  $\Sigma^*$  itself suggested something very different to me. Chomsky describes our capacity for speech as the result of a deep grammar that is hardwired into our brain. Few theorists have successfully challenged Chomsky, but a few years back I read an essay that proposed an evolutionary model for language acquisition. By this theory the human brain produces a wide variety of potential sounds, but soon learns which are effective, and it filters the rest.

Taken as an operation the  $\Sigma^*$  series suggested to me the state of preverbal being posited in the evolutionary approach. What's it like to be a baby, or to direct experience our own unconscious state where codes appear with no meaning? Another intriguing quality of  $\Sigma^*$  is the way it encompasses every possible expression within a given alphabet. Like the proverbial monkey on a typewriter, a  $\Sigma^*$  application will eventually generate *Hamlet* and every other written work. Every book, article, caption, conversation or thought lies within its potential, and in time '4 Monkeys' will express everything that can possibly be expressed.

Language has its own rhythms. It's an acoustic and visual object, and the  $\Sigma^*$  gave me direct access to the fundamental expressions of speech, the parts of speech that prefigure meaning. Speech works primarily in one dimension, but experiments with generating a  $\Sigma^*$  revealed two dimensional qualities, beautiful patterns reminiscent of Apollinaire and the concrete poets. The cognitive dimensions of '4 Monkeys' are secondary to the experience. The installation is intended to be pure poetry, a clearing that suspends thought and plunges us into a preverbal state where meaning lies on the horizon, present but out of reach.

- Ali Hossaini