INFINITY, ETC.

"A man who falls from a 100-story building will survive the first 99 unscathed" - E. J. Mishan, economist

Comedian Ricky Gervais often recounts a conversation with a friend about the famous model of an infinite number of monkeys working on an infinite number of typewriters. His friend balks at the notion that these monkeys would eventually type the complete works of Shakespeare. "They've had years already and we haven't had one publication from a monkey," he reasons, "… and they've been around a lot longer than us." That he misses the point entirely is entirely the point.

The notion of infinity is easy to fathom, and impossible to truly comprehend. Shortly after learning to count a child will invariably rattle off a string of numbers until their knowledge or attention span betrays them, and then speed forward and proudly announce "*infinity*!". As they struggle to grasp the parameters of the world children are often attracted to the largest of things, dinosaurs, for example.

The term for one of the largest numbers comes from a nine-year old. In 1938 Milton Sirotta, the young nephew of American mathematician Edward Kasner, coined the name Googol to stand for a one followed by one hundred zeros. In the last few years the term has quickly entered the vernacular as the brand name for the search engine Google.[1] Terms for larger indeterminate numbers are hyperbolic slang that may as well be a child's gooblegok - bajillion, gazillion, kerjillion, squillion, zillion, hojillion.

Aristotle claimed "Since no sensible magnitude is infinite, it is impossible to exceed every assigned magnitude; for if it were possible there would be something bigger than the heavens"[2], thus closing the book on the concept of infinity for 2000 years. It was similarly heretical to suggest that the world was round.

The idea of a boundless universe or endless time is hard to reconcile with our experiences of limitation and the absolute. That one can be added to any existing number makes the numeric system the most tangible way to grasp the concept of the infinite.

The artists in the exhibition have a long interest in counting and codification. Martin Creed titles all of his works numerically, essentially democratizing his output. Micah Lexier's work involves enumeration, often counting, comparing and contrasting his age lived and unlived - in prints, sculptures, coins and even performative dance. Kelly Mark documents her own passing years with a tattoo on her arm, updated annually, on her birthday. The four down, one across strokes resemble scratches made on a jail cell wall. On her other arm: an ellipsis. She has also maintained a punch clock since 1997, clocking her working hours as an artist.[3] Daniel Olson studied to become a mathematician and has published numerous volumes of numbers, several of which are included in *Infinity Etc.* Germaine Koh works like *Poll*, *Teams, Focus Group* and *Survey Field* all provide a vehicle for abstractly charting popular opinion. Claude Closky's numerous online projects parody the seemingly infinite world of web hyperlinks and satirize the multiple-choice question. His bookworks are obsessive lists, often of numbers or dates, frequently transposing one value system for another. His lists of days of the year arranged by length, for example, has an almost synesthetic quality.

Jonathan Monk's 2005 work *To Infinity and Beyond* sends laser lettering into space, spelling out the title phrase in blue letters projected against the blue sky. It's a mostly invisible futile gesture that conveys our desire to communicate with and understand the endless cosmos. Our need for order extends here, too, and we identify arbitrary patterns in the stars as constellations, a ridiculous grouping of things that are separated by millions of years.

In *Infinity Etc*. Closky, Lexier and Olson point to the absurdity of a numeric system and challenge the value judgment of the digits. Lexier resizes them so that they all possess an identical mass and surface area. Closky and Olson reorder them: Olson alphabetically and Closky by submitting them to a poll reminiscent of market research. His web-project *Top Ten Favorite Numbers*, invites visitors to vote on their favorite digit, and alter the numerical sequence based on popularity. The idea of a number more popular than another may seem absurd but, in fact, according to Benford's law, the digit 1 *is* number one. It tends to occur with 30% probability in listings and statistical data[4], rather than the expected 11.1% (i.e., one digit out of 9). Many Income tax agencies are now using detection software based on the phenomenological theorem to catch tax cheats.[5] It seems few people know the odds well enough to fake data. Dr. Theodore Hill asks his mathematics students at the Georgia Institute of Technology to flip a coin 200 times and record the outcome. He can always identify the students who fake their results. Honest numbers look different than numbers that lie.

The RAND Corporation[6] recognized that the human brain is also incapable of assigning truly random numbers. If someone was asked to rattle off a random number, they would be unlikely to select three 4s in a row, for example. In 1955 RAND completed 8 years of research and published *A Million Random Digits with 100,000 Normal Deviates*, a leather-bound volume of truly random numbers, a then-powerful reference tool. The volume reads like a ready-made On Kawara.[7]

Germaine Koh's *Counter* (2002) is a numerical counter which presents nothing more than a simple history of its use. It registers sabotage and boredom equally.

The twelve tones of western music (the seven notes and 5 sharps/flats of the chromatic scale) are to music what digits are to codification. Daniel Olson's *Factorial 12* is a foam-lined wooden box that houses the twelve notes in the form of coloured keys from a children's xylophone. These keys can be tossed onto a concrete floor to create different twelve-note melodies - 479,001,600 different tunes, according to the work. This figure vastly increases when rhythm, octave and other variables are introduced.

Music's most direct model of infinity is the feedback loop; the sound of a recording device capturing it's own amplified sound. Intentional recorded feedback dates back to the Beatles 1964 single *I Feel Fine* and its use in indie-rock is prevalent enough to warrant a sub-genre (My Bloody Valentine, Dinosaur Jr., Jesus and Mary Chain, etc.). But few artists have explored feedback as consistently and interestingly as Lee Ranaldo, both as a solo artist and as a member of Sonic Youth. His 1987 record *From Here To Infinity* combined guitar feedback with lock grooves to produce endless rhythms. His new work for the exhibition is a slow moving turn-table mounted on the wall like a clock. The unrecorded groove of the vinyl disk suggests a zen exercise or even the
dream machines of Brion Gysin.

Half of the songs on Martin Creed's 1997 record *Nothing*, recorded with his trio Owada, consist of simple counting. One two three four over and over again or from one to thirty (thrice), one to one hundred and so on. Conceptual structural formalism, for sure, but also winking to classic counting songs like *One Two Buckle My Shoe*, and *99 Bottles of Beer on the Wall*. The other songs on the record are lists or instrumentals. The only track with any semblance of a narrative speaks to the closed circuit of influence in the insular art world, particularly among the conceptualists:

> Stephen Willats thought that
> Art & Language were ripping him off
> Art & Language thought that
> Joseph Kosuth was ripping them off
> Joseth Kosuth thought that
> Lawrence Wiener was ripping him off
> on a recent trip to London
> Lawrence Wiener saw a show by Stephen Willats
> he said
> Fuck me this guy's ripping me off

Jonathan Monk, often called a meta-conceptualist, celebrates this closed circuit. Much of his work finds its roots in 60s conceptualism, and his responses, variations and updates of these classics strengthen, rather than challenge his predecessors. Monk's *Big Ben Piece* from 2003 keeps accurate time using postcard images of the famous London tourist attraction. The present pieced together from the past.

Kelly Mark's new neon work for the exhibition uses infinity the way a child might, as a trump card. The be all and end all as a way to win an argument. Many children's games and insults employ circular language as tactic. I Know You Are But What Am I? A common children's science exercise consists of two mirrors being held up to one another, to produce infinity. It's a fair approximation, and provides a beautiful accidental metaphor, as you can't see it because your head gets in the way.

1. Peri Fleisher, the great-niece of Professor Edward Kasner is considering suing Google on behalf of her son, who holds the copyright to Kasner's book *Mathematics and the Imagination*.
2. From *Book III* of Aristotle's monumental work *Physics*
3. In 1980 Tehching Hsieh performed *Time Piece* for exactly a year, during which he punched in and out every hour, on the hour. This required him to be near his home at all times and never sleep thru the night. I suspect Mark would consider this impractical.
4. Such as electricity bills, newspaper articles, street addresses, stock prices, population numbers, death rates, areas or lengths of rivers, etc.
5. *Following Benford's Law, or Looking Out for No. 1*, Malcolm W. Browne <u>The New York Times</u>, Tuesday, August 4, 1998
6. The RAND Corporation is an American think tank first formed to offer research and analysis to the U.S. government and commercial organizations. RAND employs a staff off 1600 employees, at six locations around the country.
7. Kawara filled volumes by counting back a million years from 1969 (*One Million Years [Past]*) and ahead a million years (*One Millions Years [Forward]*).