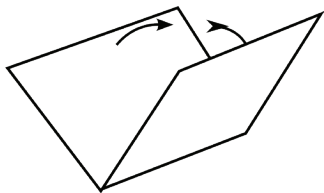


TO BEGIN, salt the page. Set it out in the moonlight in a nest of rosemary. Place eight stones of blue calcite at the cardinal points. *Rosmarine*, dew of the sea. Remember to remember. Evergreen, woody, blue. Fragrant, needle-like. From the Latin *Ros*, “dew,” and *marinus*, “marine” or, “of the sea.” Hardy, persistent, requiring little more than the damp of a coastal fog. Remember. Garlands braided into the hair of scholars in antiquity. It, “... helpeth the brain, strengthening the memory...” As string wound on a finger (Invisible. Knot.) or note to self (MARK.). And oil of, it has been demonstrated, enhances prospective memory, that is, memory of the future. Remembering to remember. And, “The sun claims dominion over it...”



FUGUE

VESTIGE. A set of impressions abstracted from the corresponding sensory inputs or sensations. A folding then, of the exterior into the interior through means iconic, echoic, haptic. A cognitive neuroscientist will refer to these impressions as experience-independent internal representations. They can be considered data, values of qualitative or quantitative variables. With this understanding, we can say that a memory can be encoded via technologies that are biological, analogue, and or digital.



READ WRITE. This very sweep of the pencil across the page is an act against forgetting, ensnaring ideas in webs of graphite, fixing them with thin pins against wings. But in Plato’s *Phaedrus*, King Thamus points out to Theuth, inventor of writing, “The fact is that this invention will produce forgetful-

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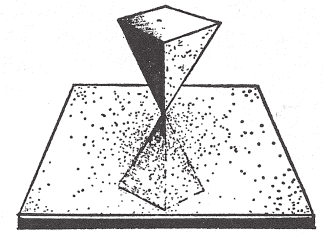
MNEMONIC. Lyric poet Simonides of Ceos invented the classical art of memory such that, “persons desiring to train this faculty must select places and form mental images of the things they wish to remember and store those images in the places, so that the order of the places will preserve the order

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ness in the souls of those who have learned it because they will not need to exercise their memories, being able to rely on what is written, using the stimulus of external marks that are alien to themselves rather than, from within, their own unaided powers to call things to mind.”

of the things, and the images of the things will denote the things themselves, and we shall employ the places and images respectively as a wax writing-tablet and the letters written on it.” (Cicero in Yates)

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47. *The yin reflects as the yang*

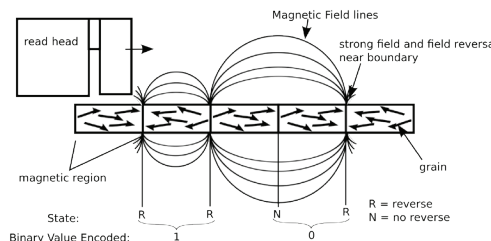


MEMORY. Short-term memory capacity of 7 ± 2 . Or approximately the number of times a common sheet of paper can be folded in half and half again. Fleeting. Subject to disruption. Supported by transient patterns of neuronal communication, dependent on regions of the frontal and parietal lobes. Consolidation of short- into long-term memory at the molecular level involves synaptic consolidation, a protein synthesis process in the medial temporal lobe, and system consolidation, which transforms medial temporal lobe-dependent memory into MTL-independent memory over months to years. Once consolidated, long-term memory is persistent, stable.

MEMORIOUS. Pliny the Elder lists those of prodigious memory including: Metrodorus of Scepsis, Cineas, Mithridates who spoke the languages of twenty-two nations, King Cyrus who knew all the soldiers of his army by name, Scipio the names of all the Roman people. “There was in Greece a man named Charmidas, who, when a person asked him for any book in a library, could repeat it by heart, just as though he were reading.” Recall Borges’ “Funes el memorioso.”

MIRROR. [In Shinto] the universe is, then, the mirror reflection of Infinity. The mirror, however, has reversed the nature of that Infinity. The latter is undifferentiated unity; the imaged universe is finite and endless differentiation. ... Within the mirror we find man and the universe. ...man as a microcosm because he contains within himself all the elements of the universe that preceded his emergence. (Stiskin)

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MARK. The first mark. The line. Commencing the outsourcing of memory, the employment of, reliance on, the prosthesis. Our marks have evolved through various foldings and duplications of that line, through Baroque permutations to this. Zeros and ones. Zeros and ones in fancy dresses.

FOLD. “The division of the continuous ought not to be considered as that of sand into grains, but as that of a sheet of paper or of a tunic into folds, in such a way that there can be an infinite number of folds, one smaller than the next, without the body ever dissolving into points or minima.” Always a fold within the fold, like a cavern within the cavern. The unit of matter, the smallest element of the labyrinth, is the fold, not the point, which is never a part, but only an extremity of the line. (Deleuze on Leibniz)

PRODUCTIVE POWER OF ALL THINGS. We are deliberately proposing a method which by no means concerns things but which treats, rather, the significance of things, a method in which may be easily ascertained that there exists beyond a doubt a productive power of all things, by those who will contemplate the word and characters of Nature in the usual way, who will call calmly to us from all sides and describe the species of things; since matter, less than idea and and form, seems to contribute to the specification of producing all things. For in this principle

GLITCH. The OED credits astronaut John Glenn with the first use in print of the word glitch. In 1962, he defined it as, “a spike or change in voltage in an electrical circuit.” Perhaps even by then its use had blossomed to include any sudden, short-lived irregularity in behaviour, a hitch or snag, malfunction. Possibly from the Yiddish, *glitsch*, “a slip.”

LABYRINTH. Such is the fundamental principle of the Aztec alphabet, each letter being in the image of a grotto, which ends up by being over-populated, for the

THE EDIT AND THE FICTION. Findings on the reconsolidation of long-term memory, however, fit with the behavioral evidence that

original bust is never alone, but is accompanied by its double and by its nearest neighbour (the trinity of man: the body, the mind and the heart) ... so that each grotto adjoins the adjacent grottoes (like a large town and its suburbs), which makes the writing dreadfully complicated, each satellite bust being, in its turn, specified by a secondary cavern of which it is the central personage, and where, in its turn, it evolves in the company of its own double and its nearest neighbour and in relation to the permanent elements which form the framework of nature, and so, step by step and image by image, to infinity, the microcosm reflected in the macrocosm and, in a counter-movement, the macrocosm in the microcosm, and so on until one reaches the idea of God, which is why each letter in this alphabet is called 'a holy city,' and the whole book, *The Sacred Book of the Holy Cities of the Lagoon* ... one of the most ancient systems of writing in the world, and when you unroll this papyrus, you have before your eyes the mirror of the universe. Trying to decipher it is like hypnotizing yourself, and to read it is to eat it. 'Eating the book' is the highest ritual of White Magic. (Cendrars)

INNER WRITING ... the images of the stars are intermediaries between the ideas in the super-celestial world and the sub-celestial elemental world. By arranging or manipulating or using the star-images one is manipulating forms which are a stage nearer to reality than the objects in the inferior world, all of which depend on the stellar influences. One can act on the inferior world, change the stellar influences on it, if one knows how to arrange and manipulate the star images. In fact the star-images are the 'shadows of ideas', shadows of reality which are nearer to reality than the physical shadows in the lower world. ... The book which

FRACTAL. Self-similar. Same from near as from far. Having the non-intuitive property of being everywhere continuous but nowhere differentiable.

CLINAMEN. An echo, a fold in sound. A mirror folds light. Mind folds sense into a whole, into memory. A fold in the line, a knot, a holdfast. What is idea, inspiration, or insight but a fold in thought? Like the Lucretian swerve, the *clinamen*, it is generative. "The fold is fundamentally erotic; it is enigma and intricacy; it complexifies, introducing detours, inflexions, and instabilities into systems." (McCaffery)

THE ANT. Here's another way to describe the third dimension: if we imagine an ant walking across a newspaper which is lying on a table, we can pretend that the ant is a Flatlander, walking along on a flat two-dimensional newspaper world. If that paper is now folded in the middle, we create a way for our Flatlander Ant to "magically" disappear from one position in his two-dimensional world and be instantly transported to another. We can imagine that we did this by taking a two-dimensional object and folding it through the dimension above, which is our third dimension. Once again, it'll be more convenient for us as we imagine

all things come together and are one; and truly in this and through this all things are distributed into the genus, the species and their numbers. ... Therefore, starting once again from the beginning, we say concerning matter and species that, after we have understood supernaturally one infinite being, an intensive whole discovered everywhere and completely in boundless immensity, in the same way we have placed before all eyes one extensive universe, which is physically visible, sometimes in some parts and at other times in other parts, and in one place at one time and in another place at another. Yet on the other hand the species of substance, what really are in substance, are discovered as accidents. The order of the cosmos is rational, as it is in the likeness of the natural, of which it is the shadow, as it is the image of the divine, of which it is the vestige. (Bruno)

ANAMNESIS. Neoplatonists considering this notion of *anamnesis*—psychic memory, relearning, or accessing memory external to one's experience—refer to our memories of the *world-soul*, or that pre-existing condition from whence all springs. Plato in *Meno* has the protagonist ask Socrates how we can imagine what we might want to know if we don't know what we don't know. "What will you put forth as the subject of enquiry? And if you find what you want, how will you ever know that this is the thing which you did not know?" Socrates answers that he's heard from "certain

suggests that retrieved memory is not a carbon copy of the initial experiences, and memories are updated during retrieval.

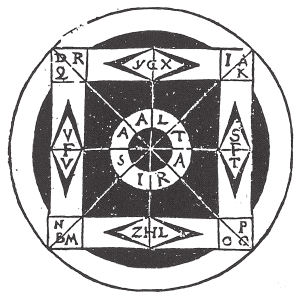
SWERVE. A slip. A swerve. Lucretius in *De Rerum Natura* describes the laminar flow of atoms, an Epicurean notion, "When atoms move straight down through the void by their own weight, they deflect a bit in space at a quite uncertain time and in uncertain places, just enough that you could say that their motion has changed. But if they were not in the habit of swerving, they would all fall straight down through the depths of the void, like drops of rain, and no collision would occur, nor would any blow be produced among the atoms. In that case, nature would never have produced anything." This indeterminacy provides the "free will which living things throughout the world have."

DATA CORRUPTION. Errors in computer data occur during writing, reading, storage, transmission, or processing. These errors introduce unintended changes to the original data. This often occurs when there is an interruption in the signal. Environmental conditions can interfere. Heavy clouds. Microwave ovens. Hardware and software failure are the two main causes for data loss. Hardware failures can be caused by background radiation, head crashes, and aging or wear of the storage device. Software failure is most commonly caused by bugs in the code.

Table 1. Average ion count, in number of ions per cubic meter of air

	NEG. IONS	POS. IONS	TOTAL
Clear mountain air	2000	2,500	4,500
Normal sea-level air	1,500	1,88	3,300
Before a storm	750	2,500	3,250
After a storm	2,500	750	3,250
Typical modern office	150	200	350
Closed moving vehicle	50	150	200

Hermes hands to the philosopher is the book 'on the shadows of ideas contacted for inner writing', that is to say it contains a list of magic images of the stars to be imprinted on memory. (Yates)



the higher dimensions if we can think of the third dimension in this way: the third dimension is what you "fold through" to jump from one point to another in the dimension below. (Bryanton)

INFINITY-INCREASER. It is the mirror of the human mind that can reverse all things in their quintessence and discover the element of oneness in the world of distinction.

The human mind creates an image of the world and in this way actively creates the world. This image is a new addition to the things of the universe, and since it would not exist without the human perceiving mechanism, the mirror, it is only after the mirror's emergence as subject that nature evolves this completion of itself. It is in this essential role as creator that man fulfills his nature as infinity-increaser and in this role he carries on and completes the original impulse of creation. (Stiskin)

READ-AND-WRITE HEAD. An HDD records data by magnetizing a thin film of ferromagnetic material on a disk. Sequential changes in the direction of magnetization represent binary data bits. The data is read from the disk by detecting the transitions in magnetization. User data is encoded using an encoding scheme. This scheme determines how the data is represented by the magnetic transitions. A typical HDD design consists of a spindle that holds flat circular disks or platters made from a non-magnetic material, usually aluminium alloy, glass, or ceramic, coated with a shallow layer of magnetic material typically 10–20 nm in depth, with an outer layer of carbon for protection. Information is written to and read from a platter as it rotates past devices called read-and-write heads that operate very close to the magnetic surface. The read-and-write head detects and modifies the magnetization of the material immediately under it.

NEGATIVE IONS ...The present study therefore sought to assess the cognitive effects of negative ion atmospheric loading in human volunteers.

Six ionization units were distributed roughly equidistant from each other in each room. The unity (invisibly) generated an individual output of over 10 billion negative ions per second...to produce an average concentration of at least 2000 negative ions per ml of air, about double of what is normal in "healthy" air.

...A special explanation is given here for the result of the memory tests. The significant main effect for groups in both tasks in the learning paradigm indicated the overall superiority of learning in the 'ionized' group. The significant main effect for trials indicated meaningful learning in both groups across trials. (Andrade et al.)

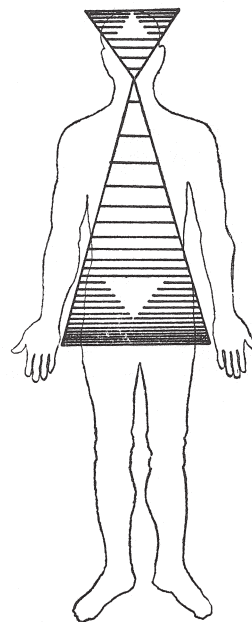
wise men and women...priests and priestesses," who'd questioned their own knowing as well as the inspiration of poets.

"The soul, then, as being immortal," Socrates says, "and having been born again many times, and having seen all things that exist, whether in this world or in the world below, has knowledge of them all; and it is no wonder that she should be able to call to remembrance all that she ever knew about virtue, and about everything; for as all nature is akin, and the soul has learned all things; there is no difficulty in her eliciting or as men say learning, out of a single recollection all the rest, if a man is strenuous and does not faint; for all enquiry and all learning is but recollection." (Plato)

Most soft errors in DRAM are caused by cosmic rays.

ERROR. In Giordano Bruno's 1591 work on mnemonics, *De Imaginum Signorum et Idearum Compositione*, he posited a methodology of employing a fiercely complex series of images, signs, and ideas for the purpose of mastering "universal invention, arrangement and memory." And while the "memory" aspect of this work has been emphasized, it is the constructive, or let's be honest, the magical aspect of the work that more than likely led to his execution.

There is God, nature, and art; and "three effects proceed from this, divine, natural, and artificial." Things in the world are forms or vestiges of ideas (in the divine). And reason, our understanding of things as we experience them, is the "shadow of ideas."



24. *The mirror-image end-state*

LOSSY. Lossy compression is a data encoding method that compresses data by discarding (losing) some of it. The procedure aims to minimize the amount of data that needs to be held, handled, and or transmitted. Does this sound familiar? How lossy our encoding.

Am I what I remember? Even amnesiacs have a sense of self, a sense that they are, and perhaps a sense of who they are. But the details that make me myself are inscribed in/drawn from my set of memories—edited, enhanced, repressed, rewritten. Read-write. Magnetic heads. Actions, reactions, decisions predicated presumably on a way of thinking and believing and doing must also be written in memory. But memories are rewritten as they are accessed. This is science. We are fictions. And documentation does not confound but encourage the brain's creative tendency.

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