# Glossary of memory terms

Many of these terms are in common usage but many are defined through a systemized theory of memory systems that I put together. I have a great debt of gratitude for information discovered and discussed on [The Art of Memory Forum](https://forum.artofmemory.com/) and for Lynne Kelly who kicked off my obsession with getting the words right. – Doug Hoff

## A

**adventure** – a type of history visual memory system using a narrative traversal to recall a sequence of memory images. An imaginative background and repeatable traversal path are known from the places that are visited because all the locations are known. A real enactment or performance will create a journey.   
**Synonyms**: a narrative method of loci, a finished and repeatable script.  
**Examples**: your daily routine in your house between rooms, a video adventure game’s completion path. Plays, dance.

**aggregation –** independent memory image sequences are contained in a main memory image sequence.  
Synonyms: branching, containment, parent-child relationship, nesting, portal, Russian doll, zooming in, massive memory palace (MMP).  
**Examples:** memory images associated to a peg system, files in a filing cabinet.

**art form**– a type of journey visual memory system using a rule-ordered traversal to recall a sequence of memory images. An art form dynamically changes over time by adding more or different memory images for more knowledge.  
**Synonyms**: rule-ordered method of loci.  
**Examples**: Lukasas, winter counts.

**associate** – to store a memory image using an association.  
**Synonyms**: to tie, to link, to bind.  
**Examples**: a tie makes me think of a man with a suit, a man with a suit makes me think of a person doing business, doing business makes me think of making money, making money makes me think storing it in a bank, a bank makes me think of having armed guards with arm patches.

**association –** the logic between an image key and an image value by a consistent means.  
**Synonyms**: the glue, mortar, a pointer, a hook, storing an image value, a curtain-line between play acts.  
**Examples**: tie -> suit, suit-> business, business -> money, money -> bank, bank -> armed guards, armed guard -> stagecoach logo (Wells Fargo).

association memory image range – the number of memory images that are necessary to learn to use a visual memory system, used as a metric for visual memory system comparisons.  
Synonyms: breadth.  
Examples: the range of a peg system based on the alphabet is 26, the range of a 2-digit PAO peg system is 100.

association point – the connection of an association that is used for a metric of system process efficiency.  
Synonyms: links.  
Examples: a peg of a cow placed in a location of a castle where the dwarves live has two association points.

**association value** – the meaningfulness of the association.  
**Synonyms**: link strength. association relevancy.  
Examples: A dog with a name and breed you don’t know, a dog from a breed you know, a dog that you have seen, a dog you have owned recently, or a dog you grew up with and the association with another memory image. Also, the dog must have a believable interaction with the other image to be strong.

## B

**background** – the surrounding related and relevant details of a memory image which contain many locations for associations.  
**Synonyms**: a room, a memory palace, a locus (the original definition), the context, the environment, a theme, a station, a stage, a scene, a milestone, scenery.  
Examples: a shopping mall, a hospital, a church building, a park, under the ocean, a long time ago in a galaxy far, far away.

## C

**chunking** – breaking up a large number of item into meaningful groups. Groups often follow rules such as the same number of items in each chunk or having a similar background.  
Synonyms: structuring, superorder.  
**Examples:** 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 = (1,2,3,4,5), (6,7,8,9,10), (11,12,13,14,15).

**composition** – a memory image sequence is contained in a main memory image sequence and cannot be used separately making it dependent on the main image sequence.  
Synonyms: containment, parent-child relationship, nesting, Russian doll.  
**Examples:** fingers on a hand, locations on a memory object.

## D

**data** – values that communicate no useful meaning.  
**Synonyms**: characters, digits, glyphs.  
**Examples:** M O 5 G 6 A 3 W 4 / 6 / 2 0 2 1 ( 2 1 6 ) – 2 3 4 – 5 6 7 8 7 p m a b a 1101100 1101100.

**dreaming** – a type of history visual memory system using a narrative traversal to recall a sequence of memory images. An imaginative and dynamic background and traversal path develops out of the places that are visited because not all the locations are ever known. Dreamings often turn into adventures as the knowledge is completed and taught to others.   
**Synonyms**: a songline. A play, dance, or song lyrics being adapted by different artists.  
**Examples**: the Morning Star Ceremony songline, the *Hamlet* as a play or opera.

## E

**encode –** to transform a type of data into a different type of data.  
**Synonyms**: to encrypt, to cipher.  
Antonyms: to decrypt, to decipher.  
**Examples**: A -> 1, a -> 32, a -> aah.

encoding point – the mapping of a value that is used as a metric of system process efficiency.  
**Synonyms**: transformation count, translation.  
**Examples**: A = apple has one encoding point, A = 1 = tie has two encoding points, A = 01000001 = 65 = shell has three encoding points.

**encoding rule** – a description using variables and a result for transforming one data type to another non-image data type.  
**Synonyms**: to encrypt, to map.  
**Examples**: upper- or lower-case letters starting at A which encodes to one and increments by one until Z ends at 26-, upper- or lower-case letters starting at A which encodes to a type of fruit or vegetable starting with that letter.

**encoding system** – a set of rules used to map one data type to another non-image data type.  
**Synonyms**: a set of mappings.  
Examples: The Major system, number-peg system.

enhanced memory image– a memory image with some type of enhancing. Usually this means developing the full subject-verb-object-location memory image.  
**Synonyms**: rich memory image, easier to remember image.  
**Examples:** a ball -> a soccer ball -> a soccer ball hitting the goal keeper’s hand -> a soccer ball hitting the goal keeper’s hand in a Rio de Janeiro stadium.

**enhancement** - imaginary details added to a memory image that will not be decoded.  
**Synonyms:** window dressing, decorating, providing realism, increasing resolution or granularity. **Examples**: A party, an action, an object, location, a role/profession/costume, or other qualities.

## F

**feature –** a type of symbol visual memory system where a subject has an association with an object through an action and sometimes at a location. The information is relevant to the feature so it can be communicated well.  
**Synonyms**: Monument, memento, icon, tag.  
**Examples**: the new statue of Einstein is outside of the Einstein ballpark in Elgin, IL.

## H

**history** – a type of visual memory system using a narrative traversal to recall a sequence of memory images. Over time a history will change by adding more knowledge and can be blended with creation of an art form for reinforcement. If the knowledge ends, it will be transformed into an adventure or a marked path.  
**Subtypes:** adventure, dreaming. **Synonyms**: a narrative method of loci.  
**Examples**: A songline. Your daily routine in your house between rooms, a video adventure game’s completion path. Plays, dance.

## I

**image key** – a memory image associated with one or more memory image values in any visual memory system.  
**Synonyms**: a location, an anchor point, storage point, data point, an encoded image, a locus (improper use).  
**Examples**: a ball (the key) rolls on a tile floor towards Albert Einstein (the value) and knocks him down,

**image value –** a memory image associated with an image key in any visual memory system.  
**Synonyms**: a link.  
**Examples**: Albert Einstein (the value) gets up off the floor and sees the ball (the key) that rolled over and knocked him down.

**improvisation–** a type of story visual memory system where many memory images are traversed by narrative logic. Image values become image keys as the story is being traversed. Information is not organized due to time issues as in competition or a lack of planning, making the story seem bizarre.  
**Synonyms**: the mnemonic link system, the chain method, a doubly linked list, freestyle rap.  
**Examples**: a ball rolls over Albert Einstein in his classroom, who gets up and brushes off the crushed elves on his clothes.

**information** – multiple pieces of data that has an implied association so that meaning can be derived.  
**Synonyms**: field name, category.  
**Examples:** MO 5G6 A3W, 4/6/2021, (216)-234-5678, 7 pm, a ball.

## J

**journey** – a type of visual memory system using a rule-ordered traversal to recall a sequence of memory images. Over time, a journey will change by adding more locations for more knowledge from a dynamic art form to a more repeatable marked path.  
**Subtypes:** marked path, art form. **Synonyms**: rule-ordered method of loci.  
**Examples**: A room using a cube traversal method, a path around your house using significant locations to store object associations, a performance of an art form, a movie, a genealogy. Lukasas, winter counts.

## K

knowledge – aggregated information that has value for making a decision.  
**Synonyms**: know-how, smarts.  
**Examples:** My license plate number MO 5G6 A3W will expire on 4/6/2021, call me on my cell phone at (216)-234-5678 at 7 pm about our baseball game.

## L

**list –** a type of visual memory system where many memory images are traversed by an order based on rules. Lists are made up of sentences.  
Subtypes: pegs, pattern.  
**Synonyms**: sequence, table, ordered group.  
**Examples**: A is for apple, B is for banana; my language helper dog Verbo will be my friend first, then yours, then one of my neighbors, but then we all get together, until I leave and he’s stuck with you who I don’t know too well now and finally visits all the neighbors (top to bottom and left to right).

**locus, loci** (pl.) – (‘low-kus, ‘low-sigh) see background.

**lukasa** – a type of journey visual memory system encoding knowledge on a portable object covered with beads or shells, enhanced by carvings, used by the Bambudye, the memory experts of the Luba people in the Congo, mostly during the eighteenth century.  
**Synonyms**: a memory board.   
**Examples**: [Brooklyn Museum lukasa memory board](https://en.wikipedia.org/wiki/Lukasa_(Luba)#/media/File:Brooklyn_Museum_76.20.4_Lukasa_Memory_Board.jpg).

## M

**marked path** – a type of journey visual memory system using a rule-ordered traversal to recall a sequence of memory images. Marked paths are specific memory images for a repeatable performance of the art form system possibly recorded for replay.  
**Synonyms**: rule-ordered method of loci, a performance, a trip.  
**Examples**: A room using a cube traversal method, a path around your house using significant locations to store object associations, a performance of an art form, a movie.

**memory image** – a recalled visual depiction of words usually containing a subject, verb, and direct object or of a thing without using words to represent it. **Synonyms**: stored image, stored key, stored value, a brick.  
**Examples**: a ball sits on the floor, a baseball hits the pitcher in the head, a gigantic ball rolls over the Empire State Building.

**memory image association** – a type of visual memory system with a single memory image associated to some information or knowledge.  
**Synonyms**: an entry.  
**Examples**: a simple association (AE = Albert Einstein) or a symbol (a group of stars = Leo the lion).

**memory image composite** – a complex memory image that has associations to more than one subject, an action, direct object, and/or a location. Without a traversal system, some of the components may not be remembered completely. With a traversal system, this becomes a story or history using a narrative traversal or journey for rule by location traversal. **Synonyms**: rich image, enhanced image.  
**Examples**: a baseball hits the pitcher in the head who is wearing a rabbit costume and the ball gets stuck in his ear and makes him yell for help.

**memory image sequence** – a type of visual memory system with multiple memory images where one memory image triggers the traversal of the sequence.  
**Synonyms**: a movie, a story, a traversal of a memory palace.  
**Examples**: a narrative sequence (a baseball hits the pitcher in the head who pulls the ball out of his large rabbit ear and uses it to write on a blackboard) or a rule-based sequence (a baseball made of wood [1] hits a bearded pitcher on top of his ark [2] who falls over on to freshly mowed [3] grass).

memory image trigger – the memory image first in the sequence of multiple memory images of a visual memory system. Other sensory memories often trigger memory images.  
**Synonyms**: activation, cue.  
**Examples**: the smell of your wife’s perfume, the first words of The Gettysburg Address by Abraham Lincoln “Four score and seven years ago…”, the opening chord to The Beatles’ *It’s Been a Hard Day’s Night*.

**memory grid**—a rote memory system attributed mainly to 12th century scholastic Hugh of Saint-Victor. Numbers in the boxes were the keys to the contents of the boxes. The system does not use an encoding system but depends on repetitious memorization using a process of chunking down to about five words and associating the chunks with numbers and positions in a grid.  
**Synonyms**: chunking.  
**Examples**: https://forum.artofmemory.com/t/hugh-of-st-victors-memory-grid-system-a-quick-rundown/37903.

method of loci – one of four types of visual memory systems in which things are used instead of words to associate memory images in a background.  
**Subtypes:** history, journey. **Synonyms**: memory palace system.  
**Examples:** my kitchen and the shopping list items placed at specific positions in it.

**mondegreen:** a word or phrase that results from a mishearing of something said or sung.  
**Synonyms**: soundalike.  
**Examples**: (she) laid him on the green = Lady Mondegreen.

## N

**narrative** – one of four types of visual memory systems that uses association to traverse from memory image to another memory image without traversal by a rule.  
**Subtypes:** story, history. **Synonyms**: cumulative tale.  
**Examples**: the Iliad, This is the House that Jack Built.

**narrative logic** – associations that have relevant meaning for establishing the connections between memory images. Actions, events, intentions, thoughts, beliefs, values, and feelings of characters, narrators, or other enhancing details that elucidate details not included in the narrative of words or things.  
**Synonyms**: plot, motivation.  
**Examples**: Why did the chicken cross the road?

## O

**ordered list** - A naturally traversable set of elements.  
**Synonyms**: sorted items.  
**Examples:** positive integers, any alphabet, places along a favorite walk.

## P

**party** - any sort of person, group of people, someone in a role, or an organization, a fictional character. There are two types, one which is encoded, and another which is for enhancing.  
**Synonyms**: subject, rapscallion.  
**Examples**: Albert Einstein, famous members of the Prussian Academy of Scientists, a physicist, the Swiss Patent Office, my language helper dog Verbo.

**pattern –** a type of list visual memory system where many memory images are traversed by an order based on rules. The system is used for a short time until it becomes more formal and simpler when it becomes a peg system.  
**Synonyms**: list, sequence, table, ordered group.  
**Examples**: my language helper dog Verbo will be my friend first, then yours, then one of my neighbors, but then we all get together, until I leave and he’s stuck with you who I don’t know too well now, and finally he visits all the neighbors (left to right and top to bottom).

**pegs –** a type of list visual memory system where many memory images are traversed by an order based on rules. The system is used for many long-term pieces of information. A full style would use subject-action-object to help associations but is often reduced to just an object.  
**Synonyms**: list, sequence, table, ordered group.  
**Examples**: number pegs, PAO system, body pegs.

**projection –** a type of symbol visual memory system where a subject has an association with an object through an action and sometimes at a location. The information is combined on the fly without much relevancy and therefore not related well in the memory image. Over time it may become more related to turn it into a feature.  
**Synonyms**: imaginative image.  
**Examples**: the hair on that guy reminds me of Albert Einstein with a part where a ball rolled through it.

**phantasmagoria** - a sequence of real or imaginary images like those seen in a dream.  
**Synonyms**: dream.  
**Examples**: : [The Sleep of Reason Produces Monsters](https://en.wikipedia.org/wiki/The_Sleep_of_Reason_Produces_Monsters#/media/File:Francisco_Jos%C3%A9_de_Goya_y_Lucientes_-_The_sleep_of_reason_produces_monsters_(No._43),_from_Los_Caprichos_-_Google_Art_Project.jpg) by Francisco Goya.

## R

**recall –** to restore the original information that produced memory images.  
**Synonyms**: to remember.  
**Examples**: a safe with a gallon plastic container that holds water and 2% cream = a grocery list for Safeway to get a gallon of 2% milk.

Roman room - a method of loci with one background only.  
**Synonyms**: multi-feature object, one-room adventure, one-path trail.  
**Examples**: your living room with random objects sitting in it.

**rule -** a formal description of a decision made by using a set of variables and ending with a result for each unique combination of variable values.  
**Synonyms**: if-then statement, algorithm, policy item.  
Examples: if x is > 3 and y is < 5 then go right, if a word is alphabetically higher in value than the compared word and neither begin with a symbol then place it after the first word.

## S

**scene** – a structuring principle of narrative logic where the surrounding related and relevant details of a memory image contain many locations for associations.   
**Synonyms**: locus, background.  
**Examples**: the classroom of Albert Einstein with chalkboards filled with formulas.

**sentence –** a type of visual memory system where a subject has an association with an object through an action and sometimes at a location expressed in words. Logical types of sentences make sense, but random sentences don’t.  
Subtypes: logical sentence, random sentence.  
**Synonyms**: subject-verb-object.  
**Examples**: Albert Einstein drinks a can of energy drink, a ball rolls over Albert Einstein in his classroom. A ball sits on the floor, a baseball hits the pitcher in the head, a gigantic ball rolls over the Empire State Building

**soundalike**: a visualization of word sounds by related sounds to create a better memory image.  
**Synonyms**: substitute word, audionym (Dean Vaughn).  
**Examples**: Washington = washing a ton of clothes.

stencil – a custom peg or story interpretation system dedicated to a standard set of information and aggregated as needed within a method of loci.  
**Synonyms**: stamped features, feature set, information kit, template.  
**Examples**: any historical event background that contains memory images of major people all visualized by name or feature, the dates visualized by objects, and what kind of location he was in visualized by name or feature = History PDL stencil. Use: Napoleon born 1769 in Corsica = man climbing a pole to get away from a lion with one hand in vest which is strangling a duck in a ship sailing in a sea of apple cores.

**story –** a type of visual memory system where many memory images are traversed by narrative logic. Image values become image keys as the story is being traversed. Stories are made up of sentences.  
Subtypes: story interpretation, improvisation.  
**Synonyms**: the mnemonic link system, the chain method, a doubly linked list.  
**Examples**: Albert Einstein gulps down an energy drink in a can and sets it on the table. The can is so massive that it sinks into the table. The can hits a seesaw sending Albert and his desk up in the air hitting the light fixture (e=mc^2); a ball rolls over Albert Einstein in his classroom, who gets up and brushes off the crushed elves on his clothes. A fable, myth, book adaptation, novel, short story.

**story interpretation–** a type of story visual memory system where many memory images are traversed by narrative logic. Image values become image keys as the story is being traversed. Information is repeatably organized so that it can be communicated more easily. A story with rhythm and rhyming is poetry and is the beginning of overlaying music both of which reinforce the story.  
**Synonyms**: fable, myth, book adaptation, novel, short story, song lyrics, poetry.  
**Examples**: Albert Einstein gulps down an energy drink in a can and sets it on the table. The can is so massive that it sinks into the table. The can hits a seesaw sending Albert and his desk up in the air hitting the light fixture (e=mc^2); the book version of any movie.

subtizing - the ability to quickly grasp how many items there are in your visual field without counting.  
**Synonyms**: visual perception chunking.  
Examples: seeing five fingers on a hand, not being able to know in a glance there are nine nails on the floor.

**symbol –** a type of single association visual memory system where a subject has an association with an object through an action and at a location but not expressed in words. Many times, parts are omitted which weakens the symbol’s visual strength. Subjects can be encoded memory images of objects, numbers, emotions, concepts. Symbols are visualized in memory images before the words occur whereas sentences start with words to create a memory image.  
Subtypes: feature, projection.  
**Synonyms**: a background with an object, imaginative image, landmark.  
**Examples**: the hair on that guy reminds me of Albert Einstein with a part where a ball rolled through it, the new statue of Einstein is outside of the Einstein ballpark in Elgin, IL, the house just west of me.

## T

**tautology** - saying the same thing twice in different words.  
**Synonyms**: synonym.  
Examples: First president and George Washington, the apple state and the state of Washington.

**translate** – to transform a type of information into a different type of information.  
**Synonyms**: to map.  
Examples: English word to Spanish word, written word to visual image, narrative to song.

**traversal rule** –a rule for recalling the order of a sequence of memory images.  
**Synonyms**: direction, increment method.  
Examples: alphabetic, numeric, small to large, left to right, low to high pitch, clockwise.

**traversal system**– a set of traversal rules for a sequence of memory images so that all of them can be completely recalled.  
Subtypes: narrative, rule-ordered.  
**Synonyms**: completeness test, path.  
**Examples**: a narrative, an imposed sequence, hiking trail.

**traverse** – recalling an memory image based on a known memory image using a rule.  
**Synonyms**: changing focus, following the narrative, moving from link to link, traveling to the next location.  
**Examples**: seeing a sea of apple cores and then recalling the duck sailing the ship on the sea, then recalling the man choking the duck inside his vest.

## V

visual memory system – a method to convert non-visual information to memory images.  
**Synonyms**: memory system.  
Examples: Sentence, story, list, symbol, history, and journey.

visualization – creating a memory image using a visual memory system.  
**Synonyms**: a memory.  
**Examples**: a grocery list for Safeway to get a gallon of 2% milk = a safe with a gallon plastic container that holds water and 2% cream.

## W

wisdom – aggregated knowledge that has value for helping other people make decisions.  
**Synonyms**: governance, strategic decisions, fables.  
**Examples:** License plates are best renewed a month early, you should get in some extra baseball practice on bunts because of the pitcher that you are going up against, The Tortoise and the Hare.