# Memory systems summary

## Traversals

Traversal is a method by which you can make sure that all images in a related group will be recollected in order as they were stored. It is an ordered path from one memory image to another.

There are three types of traversals:

* no traversal (each memory image is independent)
* narrative traversal (each memory image depends on the previous memory image)
* rule traversal (each memory image is ordered by a memory image component rule)

If there is **no ordering** of memory images, then each memory image would be retrieved independently from any other memory image much like a dictionary is used to look up word definitions. Even though it is ordered, the word that follows is neither useful or in any way associated with the previous word and no one would be interested in knowing all the words that start with a certain letter (at least someone disinterested in pushing the limits of a mnemonic system).

The **narrative traversal** is a way to connect one memory image to the next by creating some imaginative logic that associates the two commonly found in literature and performing arts. The first memory image could be considered a key to the following value of a memory image. But then the value becomes a key to the next memory image. This system is sometimes referred to as a doubly linked list for the ability to traverse forwards and backwards in the chain.

The **rule traversal** method uses a pre-selected set of memory images to which memory images can be associate to. Any kind of data type can be used if the order is followed consistently so that the images can all be covered when being traversed. Traversal rules are unique to each type of memory system.

## Purposes

The first style of memory system that is usually needed is a **dynamic style** where information is stored and used as it is acquired and blended into a system. Pieces of information are understood and chunked using the imagination to organize it. It is a way to immediately respond to all the input in way that involves a **learning or creative** process as new pieces of information are blended in. The ordering can change and there could be an expectation of using the system for short-term timespans.

If a dynamic style system has been used for some time and stopped evolving or needs to be communicated, it must be formalized into a **static style** and made more easily remembered. This means that the knowledge being stored is known beforehand so is applicable to a previous dynamic system or a system where the information is an unchangeable body of knowledge. Then it is a system for long-term use **including using and teaching** others in a rational way and becomes an important knowledge tool.

# Visual memory systems summary

## Memory image components (SEA-IT)

* Subject (person, group, organization, role, living thing, fictional character)
* Subject enhancements (tools, costume, expression, shape)
* Action (a strong verb)
* Inanimate object or items
* Location or terrain.

Using all five memory image components creates a vivid image more easily remembered. It can also be called a visual sentence since it is directly related to the construction of a sentence in English. An association from a memory image can be made to any part of the visual sentence. But the tie to a subject, its enhancements, or its action is usually tied to all three.

The simpler the system is, the less components are used. Systems that associate consistently with a component are anchored to that data type or sometimes a rule is used to provide anchor guidance.

Some data types may evolve to be other data types depending on the need of the memory image. Inanimate objects are easily animated to be subjects and even a location can spring forth a type of character to activate a memory image.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Dynamic narrative** | **Static narrative** | **Static rule** |
| **Subject + Enhancements + Action** | **Interpretation**. Images suggest narrative logic driven by subjects. | **Story**. Images use relevant narrative logic driven by subjects for traversal. Ceremonies, literature, films, sequential art. | **Person pegs.**  Images are anchored to a set of ordered people. PA and PAO systems. |
| **Item-Object** | **Puzzle**. Images suggest narrative logic driven by object features. Objects at a crime scene. | **Memory object**. Images use relevant narrative logic driven by object features for traversal. Stonehenge, lukasas, winter counts, quipus. | **Object pegs.**  Images are anchored to a set of ordered object features. Number pegs. |
| **Terrain-Time-Location (method of loci)** | **Dreaming**. Images suggest narrative logic driven by locations. | **Journey**. Images use relevant narrative logic driven by locations for traversal. Songlines tied to Country. | **Palace**. Images are anchored to a set of ordered locations. Location pegs. |

## Visual systems by style and main data type

## Common traversal rules

* **pre-existing path**
* **sequence** (alphabetic, numeric, etc.)
* **peg system** (imposed sequence)
* path by proximity, alignment, contrast, or repetition of elements.
* small to large
* front to back
* left to right
* top to bottom
* external POV outside to inside
* internal POV low (starting near your feet) to high
* external POV high (starting near your head) to low
* internal POV: inside to outside
* clockwise (north, east, south, to west or 12, 1, 2, etc.)
* 6-sided die - turn right, rotate forward

# Musical memory systems summary

## 5 sound data types (PILTD):

* Pitch (frequency, note, scale)
* Intensity (volume)
* Location
* Timbre
* Duration

## Sound systems by traversal

|  |  |  |  |
| --- | --- | --- | --- |
| **Units / traversed by** | **single association** | **melodic sequence** | **rule-ordered sequence** |
| **Notes** | Interval / chord | Melody | Composition / song |

## Sound system structures by purpose

|  |  |  |
| --- | --- | --- |
| Type / purpose | **Using and teaching** | **Learning / composing** |
| **Chords** | **In key**. Subject performs relevant action with relevant object. | **Out of key**. Any subject acting in any way with an object. Competition. |
| **Melody** | **Interpretation**. Imaginary subjects and actions perform narratives on objects to achieve an outcome. Fable. | **Improvisation**. Subjects and objects follow narrative logic with relevant actions without knowing an outcome. Competition. |
| **Composition / song** | **Development type.** An ordered list of subjects performs relevant actions to a sequence of objects. | **Motif/riff based.** Seen as a whole, a group of objects suggest an order for subjects or actions of a sequence. |
| **Symbol** | **Feature**. A natural or created part of a background is associated in a relevant manner with an object. Monument, memento, icon, tag. Method of loci without a traversal rule. | **Projection**. An object acts on a natural or created part of a background for an imaginary reason. |
| **Note based repertoire** | **Adventure**. An existing background controls the narrative logic to the actions and objects without knowing the outcome. A method of loci with a narrative backing. You are standing in an open field west of a white house, with a boarded front door. There is a small mailbox here. What does the mailbox do? | **Dreaming**. A background is the result of a narrative of locations with imaginary actions and subjects to achieve an outcome. People or gods did stuff here to this object, who and what was it? Songlines. |
| **Chord based repertoire** | **Marked path**. An ordered set of locations within a real background are associated with actions and objects. A method of loci that follows traversal rules. Meter | **Music form.** An ordered set of locations using an imaginary background develops out of imaginary subjects doing actions on a group of objects. Plays, movies, dance. Lukasa, winter counts. Form |

According to the Oxford Companion to Music[3] there are several ways of developing a theme. These include:

* The division of a theme into parts, each of which can be developed in any of the above ways or recombined in a new way. Similarly, two or more themes can be developed in combination; in some cases, themes are composed with this possibility in mind.
* Alteration of pitch intervals while retaining the original rhythm.
* Rhythmic displacement, so that the metrical stress occurs at a different point in the otherwise unchanged theme.
* Sequence, either diatonically within a key or through a succession of keys.

## Common traversal rules

* low to high pitch
* slow to fast tempo
* soft to loud intensity
* simple meter to complex meter

# Taste/smell memory systems summary

## 4 taste/smell data types (FLAP):

* Flavor/scent
* Location
* Aesthetic (presentation)
* Physical traits (texture, temperature, sizes, quantity)

## Taste/smell systems by traversal

|  |  |  |  |
| --- | --- | --- | --- |
| **Units / traversed by** | **single association** | **flavor sequence** | **rule-ordered sequence** |
| **Ingredient** | Recipe | Meal | Tasting |

## Taste/smell system structures by purpose

|  |  |  |
| --- | --- | --- |
| Type / purpose | **Using and teaching** | **Learning / composing** |
| **Flavor pairing** | **Classic dish.** Subject performs relevant action with relevant object. | **Experiment.** Any subject acting in any way with an object. Competition. Food show. |
| **Meal** | **Standard fare**. Imaginary subjects and actions perform narratives on objects to achieve an outcome. Fable. | **Haute cuisine**. Subjects and objects follow narrative logic with relevant actions without knowing an outcome. Competition. |
| **Brigade de cuisine** | **Flight**. An ordered list of subjects performs relevant actions to a sequence of objects. | **Tasting menu**. Seen as a whole, a group of objects suggest an order for imaginary subjects or actions of a sequence. |
| **Symbol** | **Feature**. A natural or created part of a background is associated in a relevant manner with an object. Monument, memento, icon, tag. Method of loci without a traversal rule. | **Projection**. An object acts on a natural or created part of a background for an imaginary reason. |
| **Chef** | **Adventure**. An existing background controls the narrative logic to the actions and objects without knowing the outcome. A method of loci with a narrative backing. You are standing in an open field west of a white house, with a boarded front door. There is a small mailbox here. What does the mailbox do? | **Dreaming**. A background is the result of a narrative of locations with imaginary actions and subjects to achieve an outcome. People or gods did stuff here to this object, who and what was it? Songlines. |
| **Fast food kitchen** | **Marked path**. An ordered set of locations within a real background are associated with actions and objects. A method of loci that follows traversal rules. | **Art form.** An ordered set of locations using an imaginary background develops out of imaginary subjects doing actions on a group of objects. Plays, movies, dance. Lukasa, winter counts. |

## Common traversal rules

* Sweet to sour
* Bland to salty
* Cold to hot
* Weak to strong intensity
* American or European order of dishes