

School of Phenomenal Memory®  
It's not a gift. It's a skill.

# SECRETS of PHENOMENAL MEMORY

Vladimir Kozarenko / Ruslan M



[www.pmemory.com](http://www.pmemory.com)



## COPYRIGHT

School of Phenomenal Memory<sup>®</sup>. GMS Manual. Copyright 2006 by Ruslans Mescerjakovs. All rights reserved. No part of this book may be reproduced or transmitted in any form, by any means, (electronic, photocopying, recording, or otherwise) without the prior written permission of the author or Ruslans Mescerjakovs. No liability is assumed with respect to the use of the information contained within. Although every precaution has been taken, the author assumes no liability for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

---

## TABLE OF CONTENTS

<b>Copyright .....</b>	<b>1</b>
<b>Table Of Contents .....</b>	<b>2</b>
<b>Licence .....</b>	<b>8</b>
<b>Terms Of Use Agreement .....</b>	<b>9</b>
<b>Introduction .....</b>	<b>10</b>
<b>Part 1: Introductory Articles.....</b>	<b>11</b>
The Giordano Memorization System (GMS®) .....	11
Scientific Validity .....	12
Philosophical Aspects .....	13
Memorization Systems .....	13
Capabilities Enhanced by GMS® .....	15
Restrictions of GMS® .....	16
Order of Mastering the Memorization System.....	16
What is GMS®? .....	17
A Look inside a GMS® User's Head.....	20
Many-Sided Mnemonics .....	24
Popular Mnemonics .....	24
Classic Mnemonics .....	25
Pedagogical Mnemonics .....	26
Circus Mnemonics .....	27
Sport Mnemonics .....	27
Modern Mnemonics or GMS® .....	28
Who Needs GMS®?.....	30
<i>For Students</i> .....	30
<i>Professors</i> .....	30
<i>In Everyday Life</i> .....	31
<i>For Self-Education</i> .....	31
<i>For Public Speakers</i> .....	31
<i>For Businessmen</i> .....	32
<i>For Health</i> .....	33

<b>Part 2: Memory Mechanisms .....</b>	<b>34</b>
Memory – a Domain of Paradoxes.....	34
<i>A Result of Brain Activity.....</i>	<i>34</i>
<i>Objects of the Surrounding World.....</i>	<i>34</i>
<i>Connections, Connections, and Nothing but Connections ... ..</i>	<i>35</i>
The Brain’s Reaction to Different Types of Information.....	39
Images, Textual Information, Sign Information.....	39
Memory and Memorization.....	45
<i>Unintentional Memorization.....</i>	<i>45</i>
<i>Intentional Memorization .....</i>	<i>45</i>
<i>Over-Intentional Memorization (Meta-memory) .....</i>	<i>46</i>
Memory in the Psychical Processes System .....	46
<i>The “Memory” Process .....</i>	<i>47</i>
<i>The “Attention” Process.....</i>	<i>47</i>
<i>The “Representation” Process .....</i>	<i>48</i>
<i>The “Sensation” Process.....</i>	<i>49</i>
<i>The “Thinking” Process .....</i>	<i>49</i>
<i>Intellect .....</i>	<i>50</i>
<i>Imagination.....</i>	<i>51</i>
Sense of Memorization .....	52
Electric Memory.....	53
<i>Temporary Characteristics of Electric Memory .....</i>	<i>54</i>
<i>Holography.....</i>	<i>54</i>
<i>Stationary Wave.....</i>	<i>55</i>
<i>Hologram.....</i>	<i>55</i>
<i>Spatial Frequency.....</i>	<i>56</i>
<i>Visual Analyzer.....</i>	<i>56</i>
<i>Feedback.....</i>	<i>58</i>
<i>Resonance .....</i>	<i>59</i>
<i>The Spatial Frequency Filter.....</i>	<i>60</i>
<i>Directional Selectivity.....</i>	<i>60</i>

<i>Nerve Cell Background Activity</i> .....	63
<i>Nerve Cell Work Activity</i> .....	63
<i>Synapses</i> .....	63
<i>Electrical Connection Apparition Scheme</i> .....	63
<i>Conclusions:</i> .....	65
Reflex Memory .....	67
<i>Time Characteristics of Reflex Connections</i> .....	67
<i>Differences between Electric and Reflex Connections</i> .....	68
Reproductive Imagination .....	69
 <b>Part 3: Basic GMS® Concepts</b> .....	<b>73</b>
From the Whole to Separate Parts.....	73
Natural Associations .....	73
Artificial Associations.....	75
Memorization Skill.....	76
Memorization Skill Control .....	78
<i>The “Memorization Master” Description</i> .....	79
<i>“Introductory Test”</i> .....	80
<i>Use:</i> .....	80
<i>“Training”</i> .....	80
<i>Use:</i> .....	80
<i>“Exam”</i> .....	80
<i>Normative Indexes</i> .....	81
<i>Checking the Recognition Speed (checking the reflex)</i> .....	83
Images, a Memorization Tool .....	83
<i>How Visual Images Must Not Be in Your Imagination</i> .....	84
<i>Just How Do the Images Need to Be?</i> .....	84
The Mental Operation that Switches the “Memory” Process On.....	85
<i>Other Mental Operations</i> .....	86
<i>“Image Enlargement – Minimization” Operation</i> .....	87
<i>“Image Rotation” Operation</i> .....	88
<i>“Connection of Images” Operation</i> .....	88

<i>“Sub-Image Singling Out” Operation</i> .....	89
<i>“Image Modification” Operation</i> .....	89
<i>“Image Transformation” Operation</i> .....	89
Relative Sizes of Objects .....	90
Support (Stimulating) Images .....	91
Two Image Types.....	92
The “Information Message” Concept.....	93
Creating Associations.....	96
Rules for Creating Connections .....	99
What is Association Base Singled Out for? .....	100
Figurative Codes and Speed Memorization .....	101
Rules for Handling Figurative Codes.....	102
How to Regulate the Memorization Process .....	103
Mnemotechnical Effects.....	104
<i>Association Erasure Effect</i> .....	104
<i>The Associative Chain Turning Effect</i> .....	105
<i>First Image Effect</i> .....	106
<i>Immediate Anamnesis Effect</i> .....	106
<i>Associative Anamnesis Effect</i> .....	106
Characteristics of the Memorization Process .....	107
<i>Memorization Speed</i> .....	107
<i>Remembering (anamnesis) Speed</i> .....	107
<i>Memorization Quality</i> .....	107
<i>Memorization Volume</i> .....	107
<i>Memorization Reliability</i> .....	107
Four Stages of Memorization.....	108
<i>Encoding</i> .....	108
<i>Memorization</i> .....	108
<i>Sequence Memorization</i> .....	109
<i>Connection Fixation in the Brain</i> .....	110
 <b>Part 4: Encoding Techniques</b> .....	 111

The Alphanumeric Code (AC) .....	111
Word selection on the basis of consonant letters .....	111
Transforming Numbers into Images .....	112
Figurative codes for Two-Digit Numbers (00-99) .....	113
Figurative codes for Three-Digit Numbers (000-999) .....	114
A Number Sequence Encoding into Images .....	115
Figurative Codes for Months' Names .....	116
Weekday Figurative Codes .....	117
Figurative Codes for Alphabet Letters .....	118
Phonetic Figurative Codes .....	119
Other Figurative Codes .....	119
Word Representation with an Image .....	121
Symbolization Technique.....	122
Linking to the Familiar Information Technique.....	123
Encoding by Consonance Technique .....	125
Creating a Word from Syllables Technique .....	125
Method of Clue Associations .....	127
Encoding Images into Sounds .....	129
Encoding Signs into Images.....	130
The Distinctive Feature Technique .....	130
<i>Distinctive Feature Functions</i> .....	131
<i>Singling out a Distinctive Feature on a Photograph</i> .....	131
<i>Singling Out a Distinctive Feature of a Person You Know Well</i> .....	132
<i>Singling Out a Distinctive Feature of an Unknown Person Standing in Front of You</i> <i>("Meeting" Situation)</i> .....	132
<i>Singling Out a Distinctive Feature of a Person Whose Image is Unfamiliar to You</i> .....	133
<i>Singling Out a Distinctive Feature of an Interior</i> .....	133
<i>Singling Out a Distinctive Feature in a Car</i> .....	133
<i>Attention: False and Standard Distinctive Features</i> .....	134
The Information Compression Method .....	134
 <b>Part 5: Memorization</b> .....	<b>137</b>
Three Methods of Image Connection.....	137



Connecting Two Images .....	138
Creating an Association .....	139
Association Connection .....	142
 <b>Part 6: Sequence Memorization .....</b>	<b>145</b>
The Cicero Method .....	145
<i>Singling Out Support Images Using the Cicero Method .....</i>	<i>145</i>
The Free Association Method .....	147
Singling Out Parts of an Image .....	148
The “Chain” Method .....	149
The “Russian Doll” Method .....	150
Memorizing by Ordinal Numbers .....	152
Memorizing in Alphabetical Order .....	154
The Returning Method .....	155
Fixed Sequence .....	156
Invisible Image Parts .....	156
Numeration with Figurative Codes .....	157
 <b>Part 7: Connection Fixation In The Brain .....</b>	<b>158</b>
The Active Repetition Method .....	158
<i>An approximate repetition scheme: .....</i>	<i>159</i>
<i>Viewing Support Images and Association Bases in the Imagination .....</i>	<i>161</i>
Repetition with Complete Decoding .....	162
Inner Speech and Inner Drawing Techniques .....	163
<i>Fixing Figurative codes .....</i>	<i>163</i>
<i>Fixing Foreign Words .....</i>	<i>164</i>
<i>Fixing New Signs .....</i>	<i>164</i>
<i>How to Check the Reflex Level of Memorization .....</i>	<i>164</i>
Forming a Support Image System .....	165
<i>The Cicero method + Well fixed sequence + Singling out image parts .....</i>	<i>166</i>
 <b>School of Phenomenal Memory® Study Course .....</b>	<b>168</b>



## LICENSE

This version of the book is registered to:

**Public Version**

## TERMS OF USE

### You must accept this agreement to read this book!

This book is copyright 2006, with all rights reserved. It is illegal to copy, distribute, or create derivative works from this book in whole or in part, or to contribute to the copying, distribution, or creation of derivative works from this book.

If you wish to use this material for commercial purposes or for purposes other than those allowed for under fair use, please contact us. We license material for use in instruction, training, education, and commercial organizations.

### Terms of Use Agreement

This is a legally binding agreement between readers and **Ruslans Mescerjakovs (School of Phenomenal Memory®)**.

If you do not agree to any of the terms of use, do not read this book. If you do not understand this agreement, seek professional legal advice. If the country in which you purchase or use this book does not allow any part of this agreement, then the publisher does not offer this book for sale or use in your country. You should destroy the book or return it to the place of purchase for a refund.

Key terms of the agreement include:

This book contains ideas, opinions, tips, and techniques for improving learning performance. The author and publisher intend to provide helpful and useful material on the subjects addressed in this book. The author and publisher are not providing you with medical, health, or any other personal professional service. You should seek the advice of your medical practitioner, health professional or other relevant competent professional before trying or using information in this book.

It is your responsibility to maintain all legal, regulatory, company, and other applicable requirements while using (or attempting to use) any of the material in this book. These may be requirements relevant to your qualification, the activity you are undertaking, or the equipment you are using.

You agree not to hold, nor attempt to hold the author, publisher, or their agents liable for any loss, liability, claim, demand, damage, or expense (including legal fees) whatsoever in connection with the purchase, use, misuse or inability to use this material. You also indemnify the author and publisher from the actions of others affected by your activities. This includes the cases where the author or publisher has omitted information or included misinformation.

## INTRODUCTION

Welcome!

Thank you for your interest in our School and in “**Giordano Memorization System<sup>®</sup>**”.

This book was designed to help students of our school to understand how memory and our memorization system work. The “**GMS Manual**” is the theoretical base of the “**Giordano Memorization System<sup>®</sup>**”. You will learn all the basic techniques we use and why **GMS<sup>®</sup>** is so efficient. Enhance your success, your creativity, your life as you learn how to memorize all types of information including any numerical data, new languages, faces, texts, and more! Please note that some of the information is covered partially, as it requires a combination of advanced technical explanations and practical experience for complete understanding. All proper explanations and comprehensive training are available in **GMS Course** from the **School of Phenomenal Memory<sup>®</sup>**.

The **GMS Course** is a proven and solid studying discipline. Our Course is unique and cannot be compared with other systems or memory improvement products. The Course consists of over 400 pages of practical exercises - all designed to build your memorization skill.

Mastery of serious skills takes time, effort and a proper training plan with a coach. We have no time limits when it comes to assisting you! We teach and will work with you until you achieve the result: - real Phenomenal Memory. You cannot ride a bicycle without the proper training and practice, using only theoretical knowledge. In like manner, you cannot read the information from this book and suddenly maximize your memory instantly.

With Phenomenal Memory mastery, you can become anything you want! You can learn anything! If you have advanced memorization skills, there are no limits for you. Once these skills are acquired, you will not need to study at a university for five years to become, let's say, a programmer. You will be able to memorize entire manuals on programming – and implement that knowledge!

Please visit [www.Pmemory.com](http://www.Pmemory.com) to get more information about **GMS<sup>®</sup>** and the **School of Phenomenal Memory<sup>®</sup>**. You are also welcome to join our forum where you can communicate with our students directly and freely to get answers to any possible questions.

Ruslan Mescerjakovs, founder of the **School of Phenomenal Memory<sup>®</sup>**

## PART 1: INTRODUCTORY ARTICLES

### THE GIORDANO MEMORIZATION SYSTEM (GMS®)

Welcome to the "Giordano Memorization System", a system created in 1990 by Vladimir A. Kozarenko. It is the most developed, comprehensive, and practical system for memorization mastery. It is specifically designed for efficient memorization of everyday's useful information, including the information we encounter while studying different subjects. Unlike other memorization systems, GMS® is free of excessive procedures and inefficient techniques.

GMS® is the streamlined, efficient result of lengthy systematic research. Its practical basis applies principles of classic mnemonics with elements from the Giordano Bruno memorization system. The theoretical foundation of GMS is an original model of memory that was further developed on the basis of a modern conception of the quasiholographic nature of the brain's work.

After this compilation and research, we systemized and refined mnemonic techniques used by different memorization systems and schools around the world and then integrated them into a complete system that complies with the three main mastery criteria: simplicity, universality, and efficiency.

"Simplicity" means that the methods of memorization are both straightforward and easy to master with respect to understanding the principles of their use. By "universality," we mean that the system allows a student to memorize almost any type of information. Finally, the "efficiency" aspect guarantees that a practitioner will have full control over both the memorization process and storage of information in the brain.

GMS® is primarily aimed at the memorization of logically interconnected information which, for instance, can be phone numbers and addresses, names, precise dates and geographical locations, anecdotes and encyclopaedic data, texts, and written lectures and speeches. The system also allows you to remember seemingly unrelated and illogical information – sets of words, random numbers, maps and any combination of letters.

The majority of people do not understand that mnemonic techniques are just a small part of the scope needed for one to truly be able to memorize efficiently. The important things are: forming the memorization skill, achieved through methodical mastering of each individual technique; performing auxiliary psycho-technical exercises meant for the development of visual thinking and

improving attention span; and gaining meticulous control of nutrition, which influences not only the mind's ability to work but, also, a person's general health as well.

One of the most common misconceptions about practising mnemonics is that it is easy to overload one's brain with too much information. "**A Little Book about a Vast Memory**," by A.R. Luria, contributed to the propagation of this erroneous opinion. Written by the young psychologist, the book depicts the memory capabilities of mnemonics practitioner Shereshevsky. He allegedly suffered from constant headaches due to having to constantly focus on the wealth of data he was memorizing. The actual reason for these headaches would now be very difficult to diagnose. Certainly, our brains are not able to be overloaded with information: the information we have memorized only appears to take up space in our brain when it is actually being recalled. In other words, unless it is being recalled, it does not exist.

The fatigue that can appear during in the process of mental exercises is not a result of having a memory overload but is, instead, due to the general weariness our bodies naturally feel after performing any action that requires a certain amount of effort and expenditure of energy.

## SCIENTIFIC VALIDITY

Without knowledge of how information becomes 'fixed', remains brain the brain, it is impossible to create an efficient memorization system. A description of memory mechanisms is provided in the GMS<sup>®</sup>. Two mechanisms of connection fixation by the brain are singled out, namely "electric memory" and "reflex memory."

An understanding of the mechanics of written and oral information is described and a simple scheme of reproductive imaging provided.

Visual (figurative) thinking is believed to be a foundation of human mental process. Actual speech is seen as a means of communication with a goal of "output" of information from one brain and passing it to the "input" of another brain. Use of speech thinking (inner voice) is not recommended because automatic speech constructions often contain false interlinks that lead to erroneous conclusions. Speech thinking is slow and actually impedes memorization.

In addition, the GMS<sup>®</sup> system introduces the concept of “precise” or “sign” information, which is not yet distinguished in academic psychology.

Finally, we will cover the brain reaction to different types of information: why some data can be remembered automatically and other data seems to balk at being memorized.

## PHILOSOPHICAL ASPECTS

The word “logic” is specifically scrutinized. Every connection we make, either automatically created by the brain or knowingly established, is regarded as logical.

A concept of “information” is explained in a specific way. Two types of information are distinguished: One “for a person” and another “for the brain.” In general, information encompasses an endless variety of combinations of repeated elements, many of which can be limited and simplified.

A concept of “sense of memorization” is clarified to be a consequent connection of elements of separate information.

The word “understanding” is explained as a representation of a spatially organized group of visual figures in imagination.

## MEMORIZATION SYSTEMS

Different techniques of memorization are systemized and unified. Every type of information is memorized using a combination of a limited number of techniques. New methods (sequences of separate exercises) and techniques for memorization are built from these original methods.

The process of memorization is divided into four stages:

1. Encoding the elements of information into visual images;
2. The memorization process itself;
3. Remembering the sequence of information;
4. Fixation of the information in your brain.

The techniques for all memorization are systemized according to these four stages.

A concept of “association” is introduced as a group of images that serves to encode information. In GMS<sup>®</sup>, the “association” concept differs from the concept of “connection of images.”

The main thinking operation that leads the conscious activation of the memory process is clearly defined. We call this the “connection of images.”

Two possible ways for memorizing a sequence of information are outlined:

**1) Figurative codes are widely used as instruments of speed memorization. The system of encoding numbers into images is based upon the following alphanumeric code: 1 – N, 2 – THZ, 3 – B, 4 – WVK, 5 – FR, 6 – JPX, 7 – SD, 8 – GQL, 9 – C, 0 – M. Figurative codes for two-digit and three-digit numbers are provided in a reference book.**

**2) The creations of codes, such as creative PHRASES, SENTENCES, and STORIES to aid in the process of memorization is *not* used in GMS<sup>®</sup>. Also, the GMS<sup>®</sup> system does not use any emotional manipulation techniques but, rather, holds to the stance that emotions have nothing to do with memorization and, in fact, only further complicate the memorization process.**

In order to build a system of auxiliary supporting images, combinations of ten different sequence memorization techniques are used.

Actual texts are not memorized by heart in all detail and entirety, but very close to the original text, with paragraph sequence and all the precise information. Texts are remembered according to a “from-a-part-to-the-whole” principle. The more precise data a text contains, the more precisely it can be memorized. The most suitable and easy texts for memorization are those related to non-technical fields.

The concept of “a skill of memorization” is introduced as a dynamic of the processes of visual thinking and attention. A computer test is available which will allow you to check your progress. The test permits a comparison of the memorization skill of different people with considerable dispersion of speed, volume, and mistake parameters. The skill of memorization is measured by the practitioner’s increase in “memorization abilities” in comparison to the average, untrained person.



Ways of bringing information to the reflex level of remembering are elaborated upon, explained, and validated. A person must use these methods to memorize foreign words, new alphabets, and figurative codes. The system offers a method for checking their progress and assessing their reflex memorization skills.

A school standard of memorizing figurative codes is introduced: 6 seconds for memorizing one element. This allows calculation of the standard time required to memorize different types of information. Thus, to memorize a phone number, a student of this study course needs 24 seconds.

We will also explain memorization of larger quantities of information, which we refer to as the “volume” of data memorized at a time. This is data that is memorized in one take, without breaks nor any possibility to perceive elements repeatedly nor with consequent homogenous interference (abstractive exercises that include elements of the data memorized) following the memorization.

## CAPABILITIES ENHANCED BY GMS<sup>®</sup>

The system teaches you to accumulate hundreds and thousands of separate information messages (non-related phone numbers, historical dates, terms with their definitions, etc.) with a possibility of consecutive and instantaneous selective retrieval. The system guides you to find information that contains the same or similar elements in the brain, for instance, all dates related to one number.

One’s speed of memorization depends on how well each particular person is trained and upon the level of complexity of the information itself. When memorizing figurative codes (fixed images of two-digit numbers), it is easy to achieve an average speed of 3 seconds per two-digit number after just a short period of training. This means that the time required to memorize 100 two-digit numbers would be 5 minutes. A beginner’s standard for memorizing 100 two-digit numbers is 10 minutes (or 6 seconds per visual image).

Usually, memorized data is erased automatically after a certain time. Thanks to a special information fixation technique we will share, one can regulate the time that data can be stored in the brain – varying from 1 hour on up to a lifetime.

There also exists the option to overwrite the information in your brain (substitution of phone numbers, changes in timetable elements).

Data developed to the reflex level does not require repetition and is retained for a lifetime.

A method for accumulating a number of phrases in the brain (including foreign languages) and bringing them to automation, reflex use is looked at as well. This method relies upon visual images and takes some time to memorize and affix.

## **RESTRICTIONS OF GMS®**

The volume of memorized data is limited by:

- A number of auxiliary supporting images (previously memorized);
- The speed of memorization of a particular person;
- Any weariness that inevitably appears during the process of memorization;
- The necessity to fix and repeat previously memorized data.

Speed memorization is possible only if figurative codes for each element of memorized data are previously learned by heart. The speed of memorization of random information is considerably slower due to the necessity of meticulous encoding it into images.

All memorization in GMS® is based on thinking operations which utilize visual images in your imagination.

## **ORDER OF MASTERING THE MEMORIZATION SYSTEM**

First, it is necessary to get acquainted with theoretical matters of memory psychology and general principles of memorization in the present system.

Then, a rather dull stage follows: the stage of mastering separate techniques, memorization methods, and forming the memorization skill geared for logically unrelated information (a sequence of words, numbers, and letters).

At the same time, one should develop a system of auxiliary supporting images as well as a system of figurative codes for the most frequently encountered

elements (two and three digit numbers, names of months, days, weeks, and proper nouns, such as names, places, etc.).

Different memorization techniques for different types of information (phone numbers, dates, first and last names, terms and explanations, foreign words, and the like) are also studied. Although all memorization techniques share the same principles, memorizing a particular type of information has its own specifics.

During these initial stages, students should also make use of their free time to exercise and practice mastering the techniques in their everyday life: on a street, while shopping, at work, or in school.

The next stage is a specialty stage. You can choose an information type and focus your training around it. You will need to do special exercises depending on your chosen data type and its volume.

The last stage involves implementing GMS<sup>®</sup> to remember difficult information, such as a book summary the main concepts of a manual, report, or a lecture. To this regard, GMS<sup>®</sup> is gradually turned into rhetoric and connects you with other fields of psychology.

Memory mechanisms are universal. Not only do they give an understanding of the principles of memorization, but also expand to other areas, such as: applied psychology, hypnosis, psychology of thinking processes, and forming/changing an identity. Memory mechanisms may also lead to a better understanding of parapsychology. Certain phenomena in this field are easily realized by using GMS<sup>®</sup> techniques.

## WHAT IS GMS<sup>®</sup>?

GMS<sup>®</sup> is based on mnemonics. “Mnemonics” means a memorization technique. It is derived from a Greek word “mnemonikon” – an art of memorization. It is believed that Pythagoras of Samos invented the word in 6<sup>th</sup> century B.C.

The memorization art is called “mnemonikon” after a Greek goddess of memory, Mnemosine, the mother of nine muses.

The first surviving works on mnemonics date back to 86-82 B.C and belong to Cicero and Quintilian (see “History of mnemonics”).

Modern encyclopaedias define mnemonics in different ways:

**Mnemonics** – an art of memorization, a set of methods and techniques that ease the memorization process and help increase memory volume by creating artificial associations.

**Mnemonic techniques:** 1) the same as mnemonics; 2) circus or a stage trick based on the memorization art (guessing numbers, things, dates, or names). The trick is performed by two artists using a specially developed code.

Mnemonics is also defined in a way that reflects modern mnemonics more precisely.

**Mnemonics** – a system of inner writing that produces the ability to consecutively record information in to the brain, by transforming the information into a combination of visual images.

Mnemonics makes use of natural memory mechanisms and makes it possible to fully control the memorization, storage, and retrieval processes.

Initially, mnemonics appeared as an integral part of rhetoric art and was aimed at remembering long speeches. Modern mnemonics – or GMS<sup>®</sup> - has evolved both theoretically and technically, making it possible not only to fix a sequence of text material in the brain but, also, to memorize any amount of precise information that is usually considered impossible to remember accurately. Examples of the latter would be: lists of phone numbers, chronological tables, various number tables, questionnaire data, and sophisticated study texts which contain a large amount of terminology, numerical data, etc.

Mastering GMS<sup>®</sup> equates to mastering an instrument-based skill. Learning to use GMS<sup>®</sup> may be compared to learning shorthand. Obviously, in order to develop any skill, one needs to practice and do exercises. It is impossible to master GMS<sup>®</sup> without doing exercises. After a skill has been achieved, a person can choose to use it or not. The information itself will not be memorized. To memorize anything, one needs to *use* the formed memorization skill, practice the sequence of mental operations that leads to information fixation in the brain.

The quality of memorization can be compared to copying files to different folders on a computer. Still, the volume of each “mnemonic folder” is restricted – from one to ten phone numbers, for example. The memorized data can be reproduced in direct, reverse, and random orders, without recalling all the information contained in memory.

The duration of information storage is fully controllable. One can memorize data for only an hour or save it for a lifetime. Memorizing newer data over older can erase the older data from the brain, intentionally overwriting previously ‘saved’ data on purpose.

Psychologists used to compare a person’s memory to the memory of technical devices. Now, they have reversed this view. Creators of modern computers and software often find new ideas for better technology in the study of neurophysiology. As a result, computers become more and more intelligent. The well-known text recognition software, Fine Reader, serves as a striking example of this process: it operates via human-like, visual analytical system principles written into its programming.

It could be predicted that, in the near future, neuroprograms – those which model the associative memory of a person - will be created to possess unlimited memory and will even be able to think. This is possible because the associative memory processes are also the fundamental human mental processes.

Computer technology has been the advent of an unlimited amount of access to information sources. You can buy a CD with thousands of photos on it. One disc can contain 15 thousand literary works. Bookstores literally have stacks of books with information available to us, BUT... our brain capacity and capability remain the same; the majority of people simply cannot take in nor retain so much information. That is not because of lack of money, but because of and inability to work with information, to read quickly, and retain or memorize. A disastrous gap between technological development of technologies and human brain ability to assimilate the ensuing wealth of new information has been observed over the past few years.

GMS<sup>®</sup> will considerably increase your ability to study new subjects, enhance your ability to retain them, and provide you with the opportunity to keep up with technological progress.

So, what is GMS®?

It is the ability to accumulate large amounts of precise information in your brain. It conserves time during memorization because the process is fully controlled. It stores memorized data in your memory – you will not have to re-memorize what you have previously memorized. It involves intense training of your attention and thinking. It gives its students a real chance to master several trades at once and the potential to become a true professional in his or her field of work. GMS® enables you to have the possibility of using information, whenever needed, - at your beck and call is what GMS® promises: you can use the techniques we give to you to improve your life. Fact: one may only utilize the knowledge that resides within his or her head, correct? Imagine the edge you have against the market and over and above others... It is like finally having a form of advanced gymnastics for the brain. And, after all, the brain needs to be stimulated and trained lest it otherwise atrophy and become irrelevant, no? GMS® affords you the opportunity to raise the stakes, ensure that your qualifications are a cut above the rest.

Sherlock Holmes, a well-known intellectual, loved to repeat this phrase: “The most perfect mind in the world rusts when it has nothing to do.”

## A LOOK INSIDE A GMS® USER’S HEAD

In order to help you understand what to expect when you touch upon the mysterious art of mastering memory, I will describe what happens in the brain of a person who knows how to control memorization and retrieval processes. I will begin with anamnesis (the retrieval process)...

Imagine that you have a textbook in front of you, tons of information written on its pages. In the average man’s opinion, it is generally impossible to memorize everything in it: reference data, tables, difficult text extracts, names, chronological tables, lists of geographical names, terms, and concepts. Now, imagine you are holding this textbook in your hands, and a man is standing in front of you. He insists that he can recite the full contents of the textbook, without a single mistake, while maintaining the correct order of data in it. Then, sure enough, right in front of your eyes, this man, a GMS® user, really does recite it accurately. You follow along, and do not catch a single mistake; numerical data in the textbook is reproduced precisely up to one thousandth. First, you think that this man must have had several years to memorize the textbook. It also occurs to you that this amount of information seems completely impossible to memorize word for word. It is not poetry. A bit later, when a GMS® user reads you the contents of the textbook in reverse (literally, saying every thing in reverse order), you probably come to the

conclusion that the man has a phenomenal memory. The words “photographic memory” come to mind; you imagine what it must be like to see the literal contents of each page in your mind.

Nevertheless, you still suspect that the gentleman spent several years in preparation for this trick, years involving endless studying, retelling the same information. However, when the man asks you to write 200 random numbers down on a sheet of paper, to show you he can memorize them right then and there? And he does. The GMS<sup>®</sup> user memorizes all 200 in a matter of 5-10 minutes, and then reproduces them in both forward and reverse order.... and then by columns... At this point, your suspicions begin to disappear -- and you are sure that the man standing in front of you has a phenomenal memory.

It is important to note that a GMS<sup>®</sup> user does not see pages with text or numbers in his imagination as with so-called “photographic memory.” It is all much simpler. Let us take a look inside his head and see how information is stored:

The GMS<sup>®</sup> user reproduces an image of a radio in his mind and scrutinizes it, singling out its separate parts: radio strap, antenna, speaker, tuning scale, and tuning handle. There is no information written in these images. These images are auxiliary.

Now, he imagines a big image of the strap, increases it in size, and a new image appears in his mind – a bus, another auxiliary image. The GMS<sup>®</sup> user looks at the bus and sees the following images: a timetable on a headlight, Napoleon’s cocked hat on a window, a set of colors on the steering wheel, a dumbbell on a saddle, a set of books about first-aid. Then, the GMS<sup>®</sup> user sees a monitor on the roof of the bus.

When reproducing the images in his imagination, he is saying out loud, “... a timetable for Monday - mathematics, history, drawing, physical training, and literature.”

Next, his attention is shifted to the radio loudspeaker. He sees a lemur with a tin in its mouth, blue celery, incense and elixir. He says out loud: “In 1938, Timur invaded India and occupied Delhi town.”

He switches his attention to the tuning scale and sees a dumbbell on the draw-bridge. He says: “St. Petersburg was founded in 1703.”



On the tuning handle, he sees an image of a scale, the American flag, and a salad. He recalls a date using these images: 1787 – The year of adoption of the US constitution.

The GMS<sup>®</sup> user recalls all the information in direct order by scanning the images from left to right. To reproduce it in a reverse order, he simply has to read them from right to left.

This process of retrieving information from your brain strongly resembles viewing photos on a computer screen. With a click of a button, you can quickly look through the pictures. But, you can also fix your attention on one particular photo and study it more in depth.

Pictures that a GMS<sup>®</sup> user sees are not all that simple. Here are some examples of a rather peculiar combination of images: roller skates on a loudspeaker, donut on a shoe, pair of compasses, a graph, and a violin.

Here is how phone numbers look like in GMS<sup>®</sup> interpretation:

“Ward” movie theatre - 339-26-00. A GMS<sup>®</sup> user recalls the number as a combination of four pictures. A “tank” with images of a “bobcat,” “tape,” and two “urns.”

“Ankar” movie theatre - 123-77-58. A GMS<sup>®</sup> user remembers an image of a “hangar” and images of a “notebook,” a “dish,” and “film.”

“Paradise” movie theatre - 309-54-35. A GMS<sup>®</sup> user sees the phone number as a “coconut tree,” with “bronze mice,” a “rake,” and “beer.”

“Why all these difficulties and absurdities?” you may ask. “Can’t you simply remember these phone numbers in a normal way?” Memory theory and life experience prove that you usually cannot. The brain does not remember purely numerical combinations. You may not have noticed this because you were never forced to notice. If you don’t believe it, just write a set of 100 numbers on a piece of paper and try to memorize them all within any reasonable amount of time.

Encoding memorized information into visual images is a necessity. The brain cannot memorize anything except for visual images. You are accustomed to encoding sounds of speech into words – combinations of 26 letters. Every person who is in the process of mastering GMS<sup>®</sup> quickly gets used to encoding information into associations – combinations of simple visual images.

Thus, GMS<sup>®</sup> users encode information into visual images and connect those images between when memorizing. Basically, it is a direct recording of information into the brain, yet rather by means of visual images. Every image stands for something, either a two-digit or a three-digit number, or a combination of several images.

During anamnesis (information retrieval), a GMS<sup>®</sup> user reproduces a combination of visual images and reads them just like one would read a book.

As you will see further on, GMS<sup>®</sup> helps you to remember large amounts of information and has a whole set of other positive benefits.

For instance, when you have memorized 200 phone numbers, and can easily reproduce them in direct and reverse orders, you will instantly recall a number by name and a name by number. You will also be able to answer the question: “Which phone numbers have 25 in them?” If you follow and memorize the GMS<sup>®</sup> lessons correctly, your memory will instantly output all information containing 25.

This may seem impossible, but it is a proven fact. This also is a natural result of the holographic principles of the brain.

There are a huge amount of visual images in the GMS<sup>®</sup> user’s head. Some are auxiliary and help to find the right information; whereas others encode precise data, first and last names, and numbers.

Viewing information in the brain is like viewing slides. Mnemonic anamnesis is a sort of “story by pictures” – a familiar school exercise. The only difference is that mnemonic pictures fix the needed information very precisely.

Will a large number of visual images overload your memory? The answer is simple: no. A combination does not exist in your brain unless it is remembered.

Images appear only when they are reproduced. This is the artistic way in which our brain operates.

People who say that there is a danger of memory overload are absolutely mistaken. Memory is practically impossible to overload since numbers, images, and words are not really memorized by the brain. This seems paradoxical; yet, in truth, everything is quite simple. The following articles will help you understand the simple yet paradoxical mechanisms of human memory.

## MANY-SIDED MNEMONICS

Currently, there are several branches of mnemonics which can be identified. Books on memory training tend to mix up these different and often incompatible branches of mnemonics. The result is sort of a tossed salad - a mixture of memorization techniques which an unprepared reader finds hard to put together into a coherent system.

Another disadvantage of the many books on memory training is the complete absence of theoretical basis for the offered memorization techniques. Without theory, it is hard to create an efficient mnemonic system. Any statement where an author claims to have invented the Cicero method or even mnemonics itself should be taken very skeptically. Mnemonic techniques are so widespread that many do not even recognize them, due to their universality and general use in everyday life.

I have distinguished six mnemonic branches:

1. Popular mnemonics;
2. Classic mnemonics;
3. Pedagogical mnemonics;
4. Circus mnemonics;
5. Sport mnemonics;
6. Modern mnemonics.

Let us take a closer look at each of these branches.

## POPULAR MNEMONICS

This mnemonics branch contains memorization techniques that are so common that many people do not even notice them -- the techniques taught in schools and kindergartens, many of which are recommended by teachers and professors. During a lifetime, people normally develop their own method for proper memorization. Mnemonics is quite old; many methods and techniques are literally embedded in us at a very early age.

If you look at your computer screen, you will see many visual images. Thanks to the visualization of information, even a child who cannot read knows that he should click on the floppy disk icon in order to record to a floppy disk. Road signs are also good examples of mnemonic techniques integration into our daily lives. A person is unable to comprehend textual messages at a fast speed. Road signs (that are only symbols representing laws) are quickly perceived. A simple alphabet is also a mnemonic technique. In schools, young students learn to link sounds to their correlating symbols. Letters are encoded into combination of dots and dashes (Morse code) is yet another example of mnemonics.

The human brain cannot memorize numerical data. This is why everybody tries to invent their own techniques for memorizing phone numbers. However, these techniques are mainly very similar. Foreign words and terminology are often remembered by consonance. Oftentimes, we subconsciously use a method of connecting the information to other data or find a pattern in new elements.

The number of techniques in popular mnemonics is limited, though generally very similar. It appears this may be due to the fact that we were all taught to use them by our parents, in schools, and even in kindergarten. The techniques utilized are not usually very clear; their efficiency is very low; they do not have a scientific basis, nor do they comprise a system. Still, they do aid memorization. Every person can remember a number of historical dates, names, addresses, and phone numbers. Such things are remembered by using the popular mnemonic techniques.

## CLASSIC MNEMONICS

Classic mnemonics is the first branch of mnemonics ever recognized. It is believed to have existed in Ancient Egypt. Mayan tribes are believed to have taught their children to use mnemonics – a system of inner letters; yet, there are no documents to prove this. The first known works on mnemonics date back to 86 B.C. This date is regarded as the birthdate of classic mnemonics.

Classic mnemonics appeared as a part of rhetoric art and was used as an auxiliary to remember an order in which speeches were performed. The set of

techniques in classic mnemonics is limited. The mechanisms of memory were understood intuitively, but correctly. At the time, it was impossible to explain the principles of memory functioning due to the limited knowledge of the surrounding world.

The Cicero method is a perfect example of classic mnemonics: choosing an object in the street or in a familiar surrounding and using it as a “rack” for the data memorized. Other examples of Cicero’s concepts are still in use. Thus, classic mnemonics recommended memorizing information that has been previously transformed into images. The images themselves consisted of two groups: the ones that helped to fix a sequence of images and the ones that encoded the information itself. Classic mnemonics recognized that one could both memorize and erase images.

Classic mnemonics eventually broke into two branches. Some (Cicero) were perfect at memorizing using figurative codes. Others (Quintilian) did not recommend using figurative codes for this purpose. According to historians, people who rejected classic mnemonic techniques were those who had trouble with visual thinking. They could not imagine visual images and manipulate them in their imagination. Due to physiological constraints, classic mnemonic techniques were unacceptable for such people; they were forced to create their own alternative memorization systems which relied less on visual thinking. Even in Quintilian’s works, we can see the first seeds of pedagogical mnemonics, for those people who were incapable of effective visual thinking. Nevertheless, pedagogical mnemonics did not evolve until the 16<sup>th</sup> century.

## PEDAGOGICAL MNEMONICS

Petrus Ramus can be regarded as the founder of pedagogical mnemonics. During the 16<sup>th</sup> century in England, at Cambridge University, both classic (Giordano Bruno) and pedagogical (P. Ramus) mnemonics were taught. It just happened to be that pedagogical mnemonics, which was not based on visual thinking, was more acceptable to a larger group of students. What is more important is that they did not try to maintain a standard as high as that of classic mnemonics. To put it more simply, pedagogical mnemonics refused to use visual images for memorizing, which led to decrease in its efficiency and lowered academic standards. Pedagogical mnemonics did not force students to memorize chronological tables; the students simply did not have to do this. Pedagogical mnemonics places an accent on the natural memorization connected with intense frequent repetition of studied material. For example: repetitive reading of the same text, repetitive pronouncing of a text, rewriting texts from books, copying illustrations from books, approaching studies as a game, and creating a large number of auxiliary materials.

Back in the 16<sup>th</sup> century, pedagogical mnemonics was the absolute leader in comparison with the classic form. Pedagogical mnemonic methods are still being used in the official education system. Both classic and pedagogical mnemonics have their advantages and disadvantages. Classic mnemonics is undoubtedly much more efficient than the pedagogical, though methods of pedagogical mnemonics are incomparably simpler and clearer to the majority of people. The teachers' motivation is obvious: you have to be able to teach everyone, not only people with a developed visual thinking.

## CIRCUS MNEMONICS

Circus mnemonics utilizes classic mnemonic principles. What is typical of circus mnemonics is a meticulous preparation of encoding information. Information can be encoded into anything: gestures, postures, facial expressions, voice tones, or the order of words in a sentence. Oftentimes, nothing really needs to be remembered when showcasing a phenomenal memory. Masters of the technique simply pass along information using the code only the two of them know. The principal is to pass the information from assistant to performer (thanks to various gimmicks). Thus, circus mnemonics makes use of only one part of mnemonic techniques.

During such performances, mnemonics users try not to expose their ability to memorize. That is why telepathy illusion and ascertaining different things are based on a well-trained memory.

You should remember the fact that mnemonics users in the circus are initially circus artists... where cheating, i.e. trickery and illusion are regarded as the norm.

## SPORT MNEMONICS

You can encounter truly professional and honest mnemonics users at mnemonics competitions. Such competitions are held regularly – for instance, at Cambridge University since 1997.

Sport mnemonics has its own specific features. First, each participant specializes in a particular type of information. Some aim to beat records in memorizing two-digit numbers; others specialize in playing-card memorization championships; some have trained themselves to memorize spoken two-digit or three-digit numbers.

You will not surprise very few with your ability to memorize things at such competitions. To participate, you need to pass through a selection stage where you will have to prove your memorization skill before being allowed to compete.

Records belonging to champions strike your imagination, especially if you are not familiar with the principles of mnemonics. Still, even a trained mnemonics user feels a great deal of respect for the champions of such events, as they know from their own experience what it takes to memorize efficiently.

The most difficult facet of competition is usually the memorization of spoken numbers. This involves a competition when the mnemonics user is only presented with the number he or she had to memorize once.

In sport mnemonics, as with any other competition, participants strive for the best possible results. Mnemonics event participants compete in two main criteria: speed of memorizing and the volume of data remembered at one time.

## MODERN MNEMONICS OR GMS<sup>®</sup>

GMS<sup>®</sup> belongs to the modern mnemonic technique. Meanwhile, there are many systems whose authors do not limit themselves to reading ancient books but, also, try to fathom the mysteries of the mind and understand its working principles. The distinguishing feature of GMS<sup>®</sup> is its theoretical foundation. On the basis of memory theory, authors develop and unite the known memorization methods into a strict memorization system, one that is aimed at solving precise problems. There are also specialized systems whose goal is to study foreign languages.

GMS<sup>®</sup> is tailored to remembering PRECISE information - information that cannot be remembered close to its original form, information which people, consequently, tend to refrain from memorizing. GMS<sup>®</sup> is about memorizing unmemorable information.

GMS<sup>®</sup> is more focused upon utilizing the results of neurophysiological research and the exact methods of testing efficiency of any memorization technique.

Below is a list of the main principles of GMS<sup>®</sup>, facets which make it so different from other memorization systems. When using these concepts, following the link to the **“School of Phenomenal Memory<sup>®</sup>”** (<http://www.Pmemory.com>) website and GMS<sup>®</sup> is absolutely necessary.

The concept of “electric memory” is introduced – a process of connections between simultaneously working cell fixation by the brain. This is the process whereby our brain arrives at connections, forming them between simultaneously working nerve cells.



The main thinking operation that leads to efficient memorization is defined as the - “connection of images.”

A concept of “sense of memorization” is introduced: a consecutive connection of elements into one information message.

A concept of “precise information” is introduced; this includes information whose elements do not invoke any visual image when initially perceived.

The main memorization technique used in GMS<sup>®</sup> is creation of associations that contain a base and its elements. This memorization method is the only possible and correct method, and is a logical conclusion of the “sense of memorization” concept and the scheme of creating an electric connection. This method has not previously been described in mnemonic literature.

A concept of “fixed figurative codes” is introduced as well. Fixed figurative codes are substitution images for the most common elements of information that must be unique and remain unchanged.

The concept of a “system of inner brain stimulation” is introduced. It is a system of previously memorized images that - from a neurophysiological point of view – are spatial frequency filters. Created associations are linked to them. With their help, brain scanning is carried out, along with the reading/reviewing of previously composed image combinations.

Multi-level support image systems are put to use. Such systems are based on combinations of ten main sequence memorization techniques.

Connecting any two figurative codes together is banned. The use of figurative codes as support images is also prohibited.

The concept of “memorization skill” is introduced; a computer-based memorization skill-forming test is developed. Certain standards for those who study memorization techniques with the help of GMS<sup>®</sup> are introduced.

The concept of “phonetic figurative codes,” used to quickly memorize foreign words, is introduced.

A “logical link” is defined as any link that is created in one’s imagination between visual images.

“Understanding” is a concept of spatially-organized, visual images in one’s imagination.

Concepts of “reproductive imagination channels” and “space operator channels” are introduced. A scheme of reproductive imagination function is provided.

Four main memorization stages are sharply defined: elemental encoding into images (image connection), memorization (connecting images), association sequence fixation (directly or by using support images), and connecting fixation in the brain (three methods of mental repetition).

We could have gone further with the enumeration of novelties in the “Giordano Memorization System,” but just listing the above-mentioned concepts is sufficient for you to understand that you have a brand new form of mnemonics in front of you. Not only has it nothing in common with any other system, it contradicts them in every way.

## WHO NEEDS GMS<sup>®</sup>?

### FOR STUDENTS

Students often make ‘cheat sheets’ before exams. GMS<sup>®</sup> makes it possible to memorize those cheat sheets. You can now copy the answers from your own memory during an exam, which is much safer. If you want, information can be stored for a lifetime in your memory. This may be necessary if you want to become a high-class specialist or a professional in your field. Also note that this does not really involve cheating. If it is in your head, then you know it. This is exactly what teachers want to achieve.

GMS<sup>®</sup> will significantly reduce the time necessary to prepare for an exam. If you use GMS<sup>®</sup> during the academic year, you will hardly have to prepare for exams at all. You will simply remember the contents of your textbooks. (It is recommended that you memorize in small amounts throughout the entire school year.)

### PROFESSORS

Do not forget that mnemonics first appeared as a part of rhetoric art. The memorization techniques used to retain a sequence of course material are literally the most simple in the system. What effect will it have on his students when a professor needs to reference his own notes. How will he be able to teach, if he does not know the material himself?

Aside from this, you will memorize the course material only once - and will never again have to spend time preparing for a lesson or session. While your colleagues re-read their lectures for the zillionth time, you can indulge yourself in a nice chat over a cup of coffee.

## IN EVERYDAY LIFE

Every person has to memorize a certain amount of precise data. We are accustomed to writing such information down in our notebooks. Teach yourself, instead, to record necessary information directly into your brain. You will be completely independent of cell phone batteries and electronic notebooks. You will never again lose information. It cannot be stolen; no one will turn your computer on and be able to use your bank accounts. You will not need to look through cell phone memory to find information.

Try to use your memory every day. Remembering everything you need is both handy and not difficult at all! A hidden bonus is that you can record information in the brain much faster than into a notebook.

## FOR SELF-EDUCATION

Imagine that you have just read a book “300 Techniques to Make People Love You.” In a couple of weeks, perhaps only five of those techniques will remain in your memory. Within a month, you will have to read the book again. After a year, you will feel like that you are reading the book for the first time.

You cannot use information unless it resides in your head. Memorize basic concepts of a book whose information you need and use it. Now, the book summary is in your head and the information is available 24 hours a day. Moreover, if you memorize the information using the GMS<sup>®</sup>, you memorize it into your brain. Information is automatically “built into” your outlook. Your behavior will change according to memorized data.

If you decide to study programming, then you can do it in several ways. You can learn programming by using a reference book. You can study the discipline for 5 years so the basic commands will be memorized spontaneously. You can also spend a couple of weeks memorizing a programming language and write a program - without a cheat sheet - as would a professional programmer.

## FOR PUBLIC SPEAKERS

A public speaker simply must know GMS<sup>®</sup>. The art oration seems senseless without such knowledge. Professional public speakers, such as theologians, study mnemonics in seminaries; that is why their speeches are delivered so fluently. Have you ever seen a minister who read a sermon from a notebook? All ministers master mnemonics to a certain extent.

## FOR BUSINESSMEN

Businessmen possess a wide array of contacts. Quite often, when we do not have someone's phone number, we are unable to pursue a desirable transaction; this may result in revenue loss. Memorize information about people with whom you maintain relations. Be able to get in touch with them at all times, thus, or you may lose a deal.

GMS<sup>®</sup> is not only good memory, it is also a means of creating different illusions. That may be why it is often showcased in circuses and on stage.

How do you create an illusion? It is very simple. People tend to judge others by their own standards. Everyone thinks they are most clever, if not most powerful. When you see your business partner and call him by name, remember his home and work phone numbers, ask about his relatives (calling them by their names), and ask if he managed to be on time for a meeting on a certain date...? His thoughts will flow approximately as follows: The meeting was routine, and you could not refresh your memory using a notebook - so, you really remembered this information about him. He sees this as evidence that you are really interested in him. Normally, more developed intellectual abilities (memorization ability) are not regarded. In his opinion, everyone has the same memory as he has; but, in his mind, he perceives that you think he is important, special.

Say that, if, before signing a deal, you get to know that your partner is fond of aquarium fish, GMS<sup>®</sup> will help you get ready for the meeting. You can simply read a book about aquarium fish - and memorize a hundred different species. The terms you use will assure him that you have spent at least 10 years enjoying the same hobby. This will create an illusion of your sincerity. Your partner will be more apt to sign the deal just because he could speak about his hobby with you. You were able to present yourself as an excellent specialist in that sphere; hence, you are an interesting person.

Partner evaluation, based on what they people about, is seen from these examples. GMS<sup>®</sup> helps to tear down common perceptions by creating an illusion of expertise in certain areas.

The interesting aspect of this is that, when you learn and memorize facts about fish, you really do begin to be a specialist in this realm, especially if you put some effort into retaining the knowledge in your memory.

## FOR HEALTH

Memory mechanisms are universal. Everything in the human body and brain works according to the same laws. Nature operates by the same universal laws. All that is not used in our body, begins to atrophy. Imagine a person who spent a year in a cast. What do you think will happen to his muscles? They become weak and thin. What will happen if a person does not use his memory? The memory will start to deteriorate. Reasons for sudden illnesses spreading over the computerized society in some countries are still unknown. People have begun to lose their memory. Many people in their 40s and older are stricken with Alzheimers disease. This illness is first presented as a memory disorder. Later, the illness strikes larger brain sections; eventually, a person dies (about 5 years from the first symptoms onset). No inner viruses are found in deceased bodies: nerve cells of an organ responsible for memory, the hippocampus, are simply replaced with simple albumen; that is, they stop functioning.

By performing GMS<sup>®</sup> exercises, as with gymnastics, you will keep your memory in perfect shape for years to come. It follows that, if memory processes in your brain function normally, the other brain systems are more likely to function normally as well.

## PART 2: MEMORY MECHANISMS

### MEMORY – A DOMAIN OF PARADOXES

The principles of memory are very simple. Misunderstanding its mechanisms is connected with a lack of understanding what our brain views as information.

I have scrutinized numerous books on psychology and brain neurophysiology. What surprises me most is that no one has managed to locate where information resides in their brain. No one can simply and clearly explain how and where the information is stored there. By following simple logic, I came to the conclusion that, if no one manages to find the storage area, then the information is simply not stored in the brain!

This is the principal memory secret. The brain does not ever memorize what we usually call “information.” The brain actually memorizes something we usually fail to recognize it as doing so.

Let us clarify different types of information:

### A RESULT OF BRAIN ACTIVITY

There exists information which is a result of brain functioning. Such information is created by the brain and does not exist in nature. It does not exist without men. What is this information? First of all, it is words. The brain can create words; you can write these words down on a slip of paper, combine them as books, files, and records.

The brain is also able to create images. You can set images created by the brain down on paper, with a pen or paint. Then, future generations will be able to see the results of your brain functioning.

Some brains are capable of creating music. To save music, one can write it down using notation (music print) or record it directly onto a tape or a compact disc.

What we normally refer to as information for learning also belongs in this category... contents of study books, notebooks, etc. Someone came up with texts, dates, and formulas; all of this information is a result of many brains functioning together.

The above information is not fixed in the brain. It does not exist in your brain in any form – not in words or images nor in a form of electric impulses.

### OBJECTS OF THE SURROUNDING WORLD

Another type of information consists of objects in the surrounding world. Such objects radiate physical and chemical SIGNALS into space which effect our brains through other perception channels (eyes, ears, etc.).

This kind of information is not memorized by the brain either. When you look at an object, you see (reflect) it, but the object itself is not perceived by the brain.

I understand that this may sound paradoxical and may cause skepticism or even outrage. You can close your eyes and remember countless images! My statements contradict your experience. This is what is called a domain of a paradox. Remember the title of this article. My goal is to provoke a true revolution in your head with this short article. The memory phenomenon is indeed very paradoxical in the way that it contradicts what you feel and what you were taught during school or even in a psychology class. In order to examine and grasp memory concepts and GMS<sup>®</sup>, you will need to break down this psychological barrier of misunderstanding.

Please do not make any conclusions yet, and continue reading.

### CONNECTIONS, CONNECTIONS, AND NOTHING BUT CONNECTIONS...

There is also a third type of information that people tend to forget. When ancient wizards (scientists were once referred to this way) would say that information exists everywhere, always and about everything, they were not referring to words, images, phone numbers, and dates - nor did they mean objects that our brains reflect. What they meant by the term “information” was in fact “CONNECTIONS.”

Thus, the third information type is connections: the connections formed between objects, phenomena, and surrounding world events. Indeed, such information exists everywhere, always, and about everything one can ever possibly imagine, regardless of what philosophers or psychologists think about it.

Leaves grow on tree branches; **the sun is always in the sky**; fish swim in the sea. When there is lightning, expect thunder. If it rains, your clothes will become wet. Speech construction “if... then...” reflects the analyzed information type – connections. “If branch, then leaves.” “If sugar, then sweet.” “If fire, then smoke.”

This kind of information is very important for us since our brain memorizes only this particular type of information. Your brain memorizes the connections. When you see a vase with a rose in it on a table, your brain remembers the



connection between “vase,” “rose,” and “table”. The brain does not memorize the images by themselves.

Where does our brain get memories from? Do we still remember words or images?

We encounter simple examples of memory principles everyday in a kitchen. Why do you remove your hand from a hot kettle? What a silly question, you might say. This reaction does not just happen – it is the heat acting upon our skin receptors resulting in a CONNECTION that causes us to pull our hand away automatically. Image reproduction works the same way. When you see a vase, it acts upon your eyes, then a CONNECTION results, and your brain outputs the “rose” and the “table” images. When you hear “cat,” it acts upon your ears, then a CONNECTION results, and you see a cat in your mind.

The brain is not the information warehouse we think it is. The brain can only generate CONNECTIONS. With respect to any other type of information (words, images, music, phone numbers, etc.), the brain is only a generator of information. A “generator of information” sounds peculiar, but it is exactly the kind of device we have in our heads.

Analogically, no one will ever possibly try to find electricity in an electric generator. We all know that a generator CREATES electric energy. An attempt to find images, words, or phone numbers in the brain is hilarious – they are not *in* your mind; your brain generates them.

For the electric generator to create electric energy, it needs to be rotated. For the brain to begin creating images and words, it needs to receive signals (stimuli). Very diverse stimuli go to the brain and agitate previously created connections according to what the brain creates (generates) as information: images, words, or movements.

The most primitive type of connection, a reflex, is familiar to all of us. For a reflex to work, a stimulus is necessary. Human memory works according to “Stimulus-Reaction” (S-R) principle.

From this simple example, you can see that an attempt to memorize phone numbers and historical dates in their common appearance is an absolutely senseless thing to do. The brain is not capable of doing that in vast quantities. It is necessary to learn to memorize the connections that exist in phone numbers and historical dates. Using these connections, our brain will generate necessary data.

The described information types – objects of the surrounding world (like phone numbers) are results of brain functioning using such connections. An apple, a phone number, and a historical date have these connections in them. What is primary – an object or the connections in it? This is a difficult philosophical question, so we will have to leave it for another time. What is essential to know is that brain only fixes and retains connections. The rest is of no importance for memorization.

We can make a conclusion based on the fact that the brain is only capable of fixing connections: if there is no incoming stimulating signal, then a brain will not generate information – thereby, making anamnesis process impossible. The reflex of pulling your hand away will not work unless you touch something hot. You will not sneeze unless you have a speck of dust near your nose. You may have no idea of the innate genetic reaction programs you have unless you encounter a certain stimulating situation.

We will describe two brain connection fixation mechanisms in detail later. Yet, even now, it is important to note that stimulations coming from human body and its internal organs have a very strong effect on connections. These stimuli are a background frequency with which any other incoming stimulating signals mingle. Theoretically, this means that any change in body's sensitivity will make generating information, using connections created under normal circumstances, inadequate. If a body's sensitivity is drastically changed, then a person suffers from a loss of memory.

If one does not control the amount of alcohol consumed at a party, the feelings and perceptions of his body will change dramatically. When he sobers up, he will probably not be able to recall much that was happening at the party. Connections are reactions to stimuli. However, a person cannot get the same stimuli sober as he had while under influence of alcohol. Connections cannot react without stimuli. The person suffers from basic amnesia, a blackout. To remember the forgotten information, it is imperative to get the body into the same condition – or in this example - to get drunk again.

The most interesting thing about amnesia is that almost everyone is subject to this occasional loss of memory. However, we fail to notice when it happens since we cannot remember the actual forgetting itself.

The core of the Stanislavski system is based upon the connection between memory and body feelings. He called it the “method of physical action.” In order to get rid of a useless behavior and replace it with a new one, or to change an aspect of one's identity, Stanislavski recommends engaging in relevant physical activities because they lead to a quick change in body's sensitivity. Then, the body starts to send signals to the brain. Due to the change

of stimuli, other connections begin to occur in reaction, and previously blocked memory layers are activated. Other layers, now not needed, are blocked in turn.

To change your temper, habits, and attitude towards other people, it is quite enough to do some jogging, physical exercises, and strength training. The changes will be so considerable that people around you will notice; consequently, your relationships with other people will change as well.

Understanding what CONNECTIONS are all about - and that the brain memorizes nothing but connections - , is a key to the right memorization technique and also explains temporary and permanent losses of memory, drastic personality changes, and principles of memory illnesses.

A facet of “memory” is the key concept of psychology. Understanding brain’s connection fixation and information generation under the effect of stimuli mechanisms give offers an opportunity to understand other processes that occur in your brain as well, e.g. personality forming and mental activities.

Not only is “memory” a key concept of psychology, but also a universal principle that guides all processes in our physical world. Not only does the all-encompassing nature of memory extend to both our physical and psychological processes, it is, in fact, their guiding principle – the importance of which should never be underestimated.

Frequently, you may find an acknowledgement of the fact that psychology does cover memory mechanisms. Indeed, pure psychology neglects this matter. Memory can only be understood with the help of the neighbouring sciences: neurophysiology, neuropharmacology, physics, and mathematics.

We can now summarize this in a table.

What is remembered by the brain?

Information Type	Brain
Information as a result of the brain’s activity (words, dates, phone numbers)	Does not remember, generates.
The surrounding world objects (images)	Does not remember, generates.
Connections between events, phenomena	Remembers in two ways.

The essentials:

1. The brain can only remember connections.
2. The process of creating connections is “memory.”

3. The brain is an information generator. The generation process (anamnesis) happens by means of fixed connections after an appropriate stimulus.
4. Without stimulation, a brain cannot create information. The isolation of senses (sensory deprivation) leads to memory suspension and brain activity disorder.

## THE BRAIN'S REACTION TO DIFFERENT TYPES OF INFORMATION

In this section, we are also going to discuss information.

In order to avoid confusion between different interpretations of the word, let us define what information we are going to talk about.

The brain fixes only connections. The brain remembers this kind of information, the connections. The process that helps us to do this is called "memory."

We are also used to trying to recall information that our brain is not capable of remembering, the existing tangible objects of the surrounding world. This is what we study at school or a university and the kind of information we are now going to examine.

Let us, first, make it clear how a brain reacts to real objects, text information, and a very particular type of information, precise information.

These types of information: real objects, texts, phone numbers, and the like cannot be memorized by our brain. However, experience tells you that we can somehow remember some of these things. How is it that memorization and anamnesis of these objects can happen?

## IMAGES, TEXTUAL INFORMATION, SIGN INFORMATION

First, we will analyze the brain's reaction on existing objects. How does the brain manage to reproduce them when no researcher can find proof of visual images within it? Nature has accomplished this in her own cunning way. Every existing object has its inner connections. The brain is able to perceive and memorize these connections. Have you ever thought why humans need several senses... why can we smell, taste, see and hear?

Existing objects radiate physical and chemical signals into space. These are light (either reflected or radiated), air vibrations. An object can also have a taste, and its molecules can fly quite far away from it. If we only had one sensory organ, the reflex memory would not be able to memorize anything - because the reflex memory suggests presence of several analyzers. One integral information field coming from an object is divided into several constituents;

information comes to the brain through several perception channels. A visual analyzer perceives a silhouette of an object (like an apple). A hearing analyzer perceives the object's sounds: when you bite an apple, you hear a specific crack. A smell analyzer perceives smell: your nose is capable of catching molecules radiated by an apple over a distance of several feet. Information is brought to your brain through your hands (tactile perception).

As a result of breaking the information up into several parts, the brain is able to create connections. These connections occur naturally. Everything that is in our mind at one particular moment of time is connected and, thus, memorized. Consequently, as we scrutinize an apple, turn it in our hands, taste it, our brain distinguishes different specific features of the object and automatically creates connections between them while we are still studying it.

None of the features are memorized, as-is, separately. Only the connections are being remembered. Later on, when our nose catches the smell of an apple, the brain receives an incoming stimulus and the previously-created connections reappear in our mind and make the other features reappear along with them. We memorize the full image of the apple.

The natural memorization mechanism is so obvious that it feels strange describing it. Such memorization methods allow us to RECOGNIZE surrounding objects through only a part of the information available.

When you hear a squawking sound outside, you can tell there is a crow near you, not a goose. When you smell a specific smell, you can tell that your neighbor is making garlic chicken for dinner. You can easily tell a guitar from a violin by its sound, a plane from a car, and a kettle from a coffee-grinder.

Inner connections that exist between real objects are distinguished by the brain and remembered automatically. Later on, our brain creates an integral image of an object. Neither the object nor its features are registered by the brain.

Since the principal human analytical system is a visual system (not to be confused with the leading perception systems in the NLP), when speaking about real objects, we mainly speak about visual images. It is visual images that provide us with the main information about the surrounding world. Visual images also have another significant feature: when a person can control visual images in his imagination.

The connections that have just been described (connections based upon different analytical systems) are called hetero-modal connections. Modality is an organ of sense. Hetero-modal connections are created automatically by the brain when you study an object. All human experience relies upon hetero-modal connections, though they are not suitable for studying scientific data.

We use them only to be able to quickly recognize objects and orient ourselves in space. No one can teach you this. This process happens in a natural, spontaneous way. An animal's brain has the same, and even more so, developed ability.

However, the analysis of truly perceived objects is not yet finished at this point. Experience tells us that we can remember a sole, visual image of an object when information comes to our brain through only one channel, the visual one. So, how does our brain manage to create connections in this case?

This is where the most interesting part begins. The brain can create connections even if information is coming from only one analyzer. This process will be examined later in the book. At this stage, we will tell you only that your visual analytical system divides an object into several components, every one of which is sent to your brain separately. As a result, we think we see an apple. In your brain, the apple is broken into parts, which makes it possible for the brain to create CONNECTIONS between the perceived apple parts. Anamnesis occurs as was already described earlier: stimulus – reaction, according to the scheme you already know. Hence, you will only need to see one part of an apple for the already-created connections to react for the brain to reproduce an integral visual image of an apple.

Such connections (when our brain breaks visual images into parts and creates connections between the parts of the same object) are called mono-modal connections. Mono-modal connections are thus labeled because the connections are created due to one analytical system - in this case, the visual analytical system.

Mono-modal connections are created by the brain automatically, in a natural way. You do not need to do anything. Memorizing connections between image parts and between different images occurs without any effort on your part. It is because of the mono-modal connections that you remember your way to work or the placement of objects in your apartment.

Mono-modal and hetero-modal connections will be examined separately according to the way they are used in GMS®. Now, we will only explain the most important one we have mentioned.

Connections existing between the surrounding world and objects in it are automatically memorized in the brain. Genetically, the brain is attuned to distinguish different features of these objects and create connections between them. The brain creates hetero-modal connections (between signals from different analytical systems) as well as mono-modal connections (coming from

the same analytical system). However, the mechanics of these two connection types are different.

Anamnesis (generation, reproduction of an integral image in your imagination) only occurs when there is a stimulating signal that is a part of the previously perceived object.

If the stimulus perceived does not activate any connection in the brain, a person cannot identify the object, and an integral image of the object does not appear. Such signals inevitably attract your attention (the “What is that?” reflex). A person then wants to study the object and the unknown signal in more detail, to distinguish its separate parts and create connections between them.

Those who like to attract attention may specifically want to take a note of this. Make unclear sounds, wear extravagant clothes, behave in an unconventional way, and you will be in the center of everyone’s attention. But, do not get overexcited; you do not want to attract the attention of law enforcement institutions.

The next type of information that we try to memorize is textual or speech information. A human can perceive information verbally. In this case, the speech information comes in through ears and goes to the speech analyzer. We can also perceive speech information through texts; in this case, the information comes to the speech analyzer through our eyes. Such information is called verbal information.

It is more difficult for our brain to memorize textual information. Understanding of a text or a speech happens due to our imagination’s reproductive mechanism. We will review this mechanism later in more detail but, at this point, let me illustrate it using the following example: “A dragonfly is sitting on an apple.” How does one understand this message? The connection between the word “apple” and the image of an “apple” as well as the connection between the word “dragonfly” and its corresponding image have been previously generated by the brain in a natural way. These connections are reproduced automatically when you perceive the words and your imagination shows their corresponding visual images. When you hear this phrase, you see a combination of images in your mind, and that is the reason why you can understand it. If you hear a phrase with previously unregistered connections, you will not see anything in your imagination and, subsequently, will not understand it. Read this: “Anatawa gakusei des ka?” Do you understand it? The speech understanding mechanisms are also quite simple. Speech comprehension is carried out by means of a visual analytical system using one’s previously created connections between words and visual images.

Textual (speech) information is harder to memorize than image information. Visual images which appear in the imagination under the stimulating effect of words are not as vivid as the actually perceived objects. Not every word read causes a visual image to appear, and some amount of textual information is never transformed into visual images. If there is no image, the brain cannot create connections and, consequently, fails to memorize the information. Moreover, the human brain would fail to memorize a sequence of information. This is one more reason why textual information can be so hard to remember.

If you carefully investigate how you remember a text you have just read, you will see that summarizing it equates to retelling the story by pictures. It is a group of images appearing in your imagination that you remember, and these images that will be transformed back into speech.

There is one more type of information, one that is fundamentally different from the visual and the speech information. Interestingly enough, psychologists failed to categorize it. Contemporary psychology only distinguishes verbal and non-verbal information (that is, speech and non-speech information). Sign information is usually seen as verbal, or speech information, which is wrong. This is a very particular type of information. The particularity is that the human brain is absolutely incapable of memorizing such information.

What is this information? It is phone numbers, historical dates, names, terms and concepts. It is first and last names. It is formulas and constant values. It is long rows of numbers or senseless syllables. It is addresses and car VIN numbers and the like. Everything that we usually call EDUCATIONAL information belongs to this category.

If the human brain could memorize such information, students would never need to use cheat sheets. If you could memorize a phone number, you would not need a telephone directory. If you have one, it unquestionably proves that you cannot remember phone numbers!

So, why is it that at schools and universities, they expect people to do the impossible? They demand that students memorize things our brain is incapable of memorizing due to physiological reasons? How does anyone pass the exams? To do this, you avoid memory's "sharp angles." No one asks you to recall a wealth of precise data for exams. This is the secret of good results: no one tests the presence (or memorization) of precise information. What is usually demanded from a student is an approximate retelling of information, which our memory is capable of as speech information is more or less easily memorized.

Did anyone demand your recollection of the table of elements or an entire physics reference book? Did anyone demand that you recount history's chronological tables? If someone began to test the knowledge of such precise



information, it could negatively affect the statistics of students' results. (The subject of memory and education is fully covered in one of our articles at: ([http://www.pmemory.com/Fake\\_Studying\\_for\\_Fake\\_Education.html](http://www.pmemory.com/Fake_Studying_for_Fake_Education.html)) What is the particularity of precise (sign) information? Let us examine one extreme case of precise information, a random sequence of numbers.

**26475968503984720694874179604866039275067046378123**

We already know that our brain memorizes only connections, and that everything else is generated from the basis of these connections. However, the connections are created either between visual images or between signals from different analytical systems (image + word + smell + taste). We will now concentrate on connections between visual images.

When perceiving an array of numbers, no image appears in your imagination. Consequently, the brain cannot create connections. This information is fundamentally unmemorizable.

We will now give a definition of precise (sign) information:

**PRECISE (SIGN) INFORMATION IS INFORMATION THAT DOES NOT CREATE A VISUAL IMAGE WHEN PERCEIVED.**

Another particularity of this information is that it, unlike a text, cannot be reproduced approximately. Imagine that you reproduce a phone number or a historical date, the structure of an atom, or a mathematical formula approximately! Or imagine that you remembered a first and a last name approximately!

Precise information needs to be memorized precisely, and GMS<sup>®</sup> actually allows you to do so! In addition to that, it is the precise information that is the primary study focus of GMS<sup>®</sup>.

Here is the summary of the described above information in the form of a table:

The brain's reaction to different information types (sorted by the figurativeness of information).

Information Type	The Brain's Reaction
Visual information	The connections are fixed automatically.

	Well-memorized
Textual (speech) information	Easily memorized.  Only a small portion of words is transformed into images.
Precise (sign) information	Never transformed into images. Creating connections (memorization) is impossible without special training.

## MEMORY AND MEMORIZATION

The “Memory” concept is different from that of “Memorization.”

Memory is a cerebrum, psychic process. Psychologists distinguish five psychic processes: memory, attention, thinking, sensation, and representation. Imagination is a process of interaction between thinking and representation. The memory process is responsible for the fixation of connections between different signals appearing at the same moment. All that is put into the brain at one moment is connected, united. The brain can fix connections in different ways. From this moment on, we will distinguish between two memory processes – two different ways the brain fixes connections.

What must be understood about memorization is that it is a complex process of accumulating a system of connections in your brain, through which a person is able to reproduce the information he needs. All the above-mentioned processes (memory, attention, thinking, sensation, representation) take place during the memorization process. A disorder in any of the processes will affect memorization, even if one’s “Memory” process is absolutely perfect.

Psychologists distinguish among three types: unintentional memorization, intentional memorization, and over-intentional memorization.

## UNINTENTIONAL MEMORIZATION

When you are in your house, your brain automatically fixes connections between perceived objects with their inner connections. Here, memorization occurs unintentionally, and you do not need to make any effort to memorize. The brain is “attuned” to fix the connections between existing objects (images, taste, sounds, and others).

## INTENTIONAL MEMORIZATION

Suppose you try to memorize a poem. Intentional memorization implies the presence of the control (checking) stage. After you read a couple of lines, you try to repeat the extract by heart; if you fail you will read it again and again, trying to repeat it correctly each time.

Although you put some effort into the memorization, the memorization process happens blindly. In this case, a person does not realize the memory mechanisms occurring and does not use special memorization techniques.

### **OVER-INTENTIONAL MEMORIZATION (*META-MEMORY*)**

An example of over-intentional memorization can be the memorization of phone numbers. A person gets acquainted with a list (say, containing 50 phone numbers) and claims that, to memorize the whole list, he will only need 30 minutes.

In this case, a full realization of memory mechanisms is required, as well as the intentional use of special memorization techniques.

The memorization and storage processes are fully controlled in your brain.

For most people, the ability to memorize is situated at the intentional level.

The over-intentional memorization level is only possible through special mastery of GMS<sup>®</sup> techniques.

It is worth noting (and we will look into it later in the book) that, first and foremost, the ability to remember depends not on memory, but on THINKING and ATTENTION. A disorder in the two psychical processes would make INTENTIONAL and OVERINTENTIONAL memorization almost impossible.

MEMORY Process		MEMORIZATION		
		UNINTENTIONAL	INTENTIONAL	OVER-INTENTIONAL
		Automatic memorization, based on the “Memory” process.	Deliberate memorization, based on interaction between several psychic processes, mainly thinking and attention.	Realizing memory processes, deliberate use of memory mechanisms, and the use of special techniques to memorize the “unmemorizable” data.
Fast connection fixation	Slow connection fixation			

## MEMORY IN THE PSYCHICAL PROCESSES SYSTEM

As you already know, psychology recognizes several psychic processes: memory, thinking, attention, representation, and sensation. The process of interaction between representation and thinking is called imagination.

We will now briefly examine these processes and the way they influence the memorization process. We should always keep in mind that memorization can be of three types: unintentional, intentional and over-intentional.

### THE “MEMORY” PROCESS

By the “Memory” process, we mean connection fixation by the brain. The brain can fix connections in two main ways - more on this later. All that comes into the brain at any given moment is united and connected. This is where the “Memory” process ends.

Memorization becomes impossible when there is a disorder in “Memory” process. Any such disorder is regarded as pathology. The ill suffer either from a short-term memorization disorder (greeting a doctor several times a day) or a long-term memorization disorder (gradual loss of lifetime-achieved habits and skills – reading, writing, unintentional and automatic movement skills). Memory disorders can be both reversible and irreversible.

If you remember your name and your relatives’ names, then you probably have no problem with the “Memory” process; any reason for memorization problems should be researched as a possible disorder of other psychic processes, but not of memory.

### THE “ATTENTION” PROCESS

Attention realizes the selection of incoming information. If one’s attention becomes extremely unfocused, a person is then unable to concentrate on a cognitive task. Such a patient will not be able to remember a page of text due to his inability to read – unstable attention span and focus do not allow him to do this.

Attention span disorder and attention deficit disorder are two of the reasons for poor performance at school. They can become extreme, to the point where memorization disorder occurs and one becomes unable to think purposefully. Along with such behavior, program realization is harmed. Behavior disorganization occurs. The reason for this behavioral dysfunction is evident when an individual can not complete a desired task due to lack of focus. For example, a man can go shopping for a box of matches in the morning, and return back home in the evening without matches.

In neuro-psychology, pathological attention disorder is called “field behavior.” Such patients make many unnecessary movements; their eyes are always wandering.

On the other hand, an extremely stable level of attention is also viewed as pathology. A patient’s thought is “glued” to something, and he cannot switch it to necessary actions. For instance, a patient can sit up on his bed after awakening and spend several hours staring at one spot.

Pathological and controlled attention span should never be confused. In the first case, a patient does not control the process; in the latter, a person intentionally concentrates his attention for a long period of time and then reverts back to a normal state of mind, medium attention instability, and automatic switching of attention.

Psychologists connect attention and will. Although attention and will are two different words, they reflect the same phenomenon. A strong-willed man has a particular ability to control the direction of his attention and is practically never subject to random external signals.

If no pathological disorders exist, one’s attention is easily trained. By training your attention, you train your ability to memorize, think in desired directions, “execute” your plans, and train the will.

Painful attention disorders are most often related to chemical and physical irritation (agitation) of brainstem and reticular formation, those responsible for general brain activation. Chemical disorder of attention span can be a result of excessive use of stimulants (tea, coffee, cigarettes). Physical irritation can be caused by residue that appears in the brain as a result of a trauma (e.g. micro-stroke) in the proximity of the brainstem (occipital part of the head).

## THE “REPRESENTATION” PROCESS

The representation process guarantees the invariance of perception. Due to this process, a person can recognize the letter “A” written in thousands of different fonts. We recognize a cat whatever is its size and color, and from any angle.

Computer neuro-program creators have succeeded in modeling representation functions since the neuro-physiological mechanisms of the process are very meticulously described in specialized literature.

The following experience can help others to understand the essence of the representation process: Imagine that you have a thousand pictures of Chinese men. You scan the photos, recording each one on a computer hard drive. Next,

you write or install a program that analyzes all of the photos and finds only the similar features in them. Then, the program eliminates all the differences. Only the similarities in these photos remain; this is what psychology defines as the representation. In other words, representation is a rather generalized visual image that contains the most typical features of a group of similar objects.

When you remember visual images, you remember representations, sort of like prototypes or “dummies” that you can do whatever you want with in your imagination.

Why does an awake person not remember very vivid images, but does remember representations? You will be able to answer this question when you become familiar with the holographic principles of how the visual analytical system functions.

A disorder in the representation process is a very serious pathology. Such patients lose the ability to perceive invariably. In other words, they lose the ability to recognize visual images. There is no way they can memorize intentionally and learn things.

## THE “SENSATION” PROCESS

It is this process that helps us to understand how external (and internal) physical and chemical stimuli are transformed into electric impulses. All you perceive – see, hear, touch – is encoded into electric impulses. There is nothing retained in the brain except for electric impulses that run through nerve cell fibers.

Temporary changes in analytical system’s functioning will lead to forgetting what happened to a person in the altered state, i.e. when an organ’s work was impaired or disordered. In order to begin remembering, one will need stimuli. A person cannot receive the same stimuli he experienced in an altered state, so the connections are blocked out and unreachable.

People with certain organ defects of the analytical system or perception are able to memorize and be taught, but such people have to attend special study programs.

## THE “THINKING” PROCESS

Thinking is an intentional operation which utilizes visual images in one’s imagination. Thinking can be direct, when visual image management occurs without vocal assistance. Thinking can also be a mediator, when a person handles visual images with the help of inner speech. For our purposes, reproductive imagination mechanisms are used to automatically transform words into images.

Thinking can be intentional: a person consciously performs operations utilizing visual images.

Thinking can also be unintentional: images appear randomly in the imagination under the influence of different stimuli.

In neuro-psychology, patients with thinking disorders are said to suffer from Frontal Lobe Syndrome, and are often called “forehead ill.” The forehead ill are not capable of memorizing more than four words out of ten, no matter how much time they spend.

Note the fact that thinking, in neuro-psychology, is tested through memorization. Intentional memorization is directly connected with thinking; its efficiency depends on the level of development of mental processes.

Any other mental operations, the so-called logical operations, (comparing, analysis, generalization, etc.) are based on the simplest operation using visual images in the imagination.

A mental processing disorder leads to unintentional memorization, an automatic memorization of perceived connections. People with a processing disorder can orient themselves in the streets and perform the kind of work that does not entail sophisticated intellectual skills. However, intentional and over-intentional memorization become virtually impossible with a mental processes disorder. The memorization system is based on visual thinking. It is with the help of mental operations that an intended control of memorization and the anamnesis with information storage processes are performed in the brain.

If there isn't any pathology, training our thoughts is easy, though the word “training” is not really appropriate here. The thinking process is not trained when one learns to memorize. A person is trained to perform certain algorithms, operation sequences in the imagination, which lead to memorization.

## INTELLECT

“Intellect” is a totality of a thinking process - action algorithms aimed at certain tasks realization. You can teach a person to perform a sequence of actions that lead to solving a quadratic equation. You can teach a person to play chess. Obviously, one cannot develop his or her intellect in general. If you learned to solve crosswords or puzzles, you can only become better at solving puzzles or crosswords.

The more programs or action algorithms put into the human brain, the more powerful intellect becomes. Intellect is not a quality, but more of a quantity concept. Let us compare it to a computer... One computer only has a Word program installed in its hard drive memory and nothing else; this computer has low intellect, yet perfectly performs its work. Another computer has hundreds of professional programs installed and has a higher intellect as it is able to perform hundreds of tasks.

You can see now that intellect, or the “number of programs installed,” depends directly on memory. If a computer does not have enough memory, you cannot install a more or less sophisticated program on it. Similarly, if a person cannot memorize, different intellectual programs will be “installed” and will run at a very slow pace, if at all.

We can make an important conclusion here: advanced memorization skill is an important precondition to enhancing our intellect. The level of the human intellect depends on how fast and how efficiently it is able to master new algorithms (mental or movement).

It becomes crystal clear that you will not learn to memorize things by solving mathematical equations. When you learn to memorize, you will not become richer. When you learn to earn money, you will not learn to play the piano. You need to master GMS<sup>®</sup> in order to learn to memorize. To be rich, you need to know schemes and methods of money-making. To play a piano, you need to attend music classes. One cannot become more intelligent in general, in every aspect. However hard you work to develop yourself, you will always find a person who is more intelligent than you are.

## IMAGINATION

Imagination is a process of modeling the past, present, and future on the basis of “Representation” and “Thinking” processes.

To learn to “imagine,” you need to place a representation in your imagination – say, a generalized image of a cup. Then, you switch on the thinking process and begin to alter the image in your imagination. You can imagine a red, blue, or green cup, with one handle or four handles, with milk or tea in it or both.

You can now “output” the result of mental activity from your brain – for instance, by describing a picture in your own words or drawing it.

If there is a disorder in the thinking, understanding, and representation areas of the mind, it will cause a disorder in the imagination, your ability to recall, and the ability to analyze the present and forecast the future.



## SENSE OF MEMORIZATION

Imagine a teacher saying to her students: “Kids, please remember, green.”

Or think of a history teacher telling his class to remember the dates 863, 1054, and 1302.

Or an astronomy lesson: “The subject of the lesson is variable stars and the Kuiper belt. Write these words down and memorize them.”

Obviously, there is something missing in these exercises. There is certain emptiness. They all lack a certain something, a connection.

Memorization of a one-element message is senseless.

It is senseless to remember the word “green”. Sense (CONNECTION) appears only when the second element of the message is present. “You can cross the street when the light is green.” (If green, then walk).

It makes no sense to memorize the date: 1302. It will only make sense if you link it to an event: “1302 is the year of the General States summit in France.” (If 1302, then General States and France).

Memorizing a one-element message is irrational for two reasons:

1) The brain remembers only connections. To create a connection, you need two elements – so, from the theoretical point of view, it is impossible to remember one element.

2) Sense of memorization occurs in the very connection between several information elements. It is essential to memorize not the word “police,” but the connection between the word and the police phone number. Only when there is more than one element will anyone be able to use the INFORMATION, that is, make a CONNECTION.

For people who study GMS<sup>®</sup>, it is vital to comprehend the simple and obvious principles of human brain functioning. Human memory works according to the general “Stimulus-Reaction” (S-R) principle.

Unfortunately, the brain fixes every connection - adequate and inadequate (correct and incorrect). Here is an example of an inadequate connection: “If you throw snow into the fire, it will turn into ice.”

False connections make human behavior and thinking inefficient. A false reaction follows the perceived signal. Let’s say you remember a connection: “If a black cat crosses your way, misfortune will follow.” Then, one night a

stimulus enters your brain: you see a black cat. Acting according to the connection you have in your brain (S-R), you turn into an alley - and here is where you can encounter real trouble.

Before you memorize information (connections), make sure the connections are true. Otherwise, you will turn your brain into a “landfill” of false connections and erroneous reaction programs.

Memory theory is closely connected with human thinking and personality formation theories. J. Kelly’s “Personality Constructor theory” fits in perfectly here. This scientist intuitively perceived the personality forming, conscious and subconscious mechanisms. Kelly elaborated upon precise methods for exposing the CONNECTIONS SYSTEM in the human brain, based on how a person reacts to different external influences. The classic J. Kelly method allows us to determine the interaction between a person and the surrounding society. Those of you who are keen on the personality constructor theory can read books by Fay Fransella.

The “Repertoire Grate” method is very popular. It is often used in psychotherapeutic practice to expose inadequate (false) connections in the human brain, those which cause various problems, and correct them later on under deep hypnosis.

Having tested several dozens of people according to this method, one realizes, with great surprise, different people’s reactions towards events. As people’s values and opinions are so different from one another – so, too, are their reactions.

Understanding the real memory mechanisms will allow you to understand how the human global reaction system “unveiling” method is formed and how it works, i.e. how your personality and consciousness are formed.

Memorization techniques work very efficiently for retaining both a phone number and a rule. If you, using GMS<sup>®</sup>, write a certain number of similar rules in your brain, you can instantly change your attitude toward people around you. If you read a book and do not memorize the written rules, you will stop using the information in a matter of a few days as the rules will be forgotten.

Information is a combination of several interrelated elements; each one can be either a stimulus or a reaction. The sense of memorization is in making the connections between such elements. Basically, all information lies in these connections, because separate elements are never memorized on their own.

## ELECTRIC MEMORY

GMS® distinguishes two ways of connection fixation in the brain and, consequently, two memory types: the electric and the reflex.

Electric memory helps us to understand connection fixation. This memory type is called electric because there is no tangible carrier of this connection in your brain. A connection is stored in the brain in the form of a coordinated electric activity of a group of nerve cells.

### TEMPORARY CHARACTERISTICS OF ELECTRIC MEMORY

Time of connection fixation varies from 0.8 seconds per connection (the officially registered speed memorization record) to 6 seconds per connection (standard for those who completed a GMS® training course). In theory, the minimal time for creating a connection in electric memory cannot be under the human reaction time (about 0.14 seconds).

Connection storage time without repeated activation (memorization at one take) is about 40-60 minutes.

Connection storage time with repeated fixation over a period of 3-4 days is approximately 1.5 months. Repeated fixation is performed by repeated activation (remembering information).

If created and fixed connections are activated at least once every 6 weeks, one can store these connections for a lifetime.

Characteristics of electric memory are obtained in a variety of ways: empirically, via experience (experimentally), proven by neurophysiological/psychiatric data, etc.

Before we analyze the connection fixation mechanism, you will need to become acquainted with the following concepts: holography, spatial frequencies, nerve cells direction selectivity, reverse connection (feedback), types of cell activity, and a few others.

### HOLOGRAPHY

Holography is a process of breaking down complex oscillation processes into an array of simple components via subsequent recording of these components.

We often encounter the phenomenon of decomposing a complexity into several parts in our everyday life. You can decompose piano chords into notes. Every compound number can be decomposed into a set of prime numbers (number that can only be divided by one and the original number itself). Complex oscillatory movement of an autumn leaf can be broken down into an array of simple sinusoids.

That works both ways. You can also obtain the compound number you might need from a set of prime numbers or a piano chord from a set of notes.

$$5 \times 7 \times 11 \times 13 \times 17 = 85085 \qquad 85085 = 5 \times 7 \times 11 \times 13 \times 17$$

## STATIONARY WAVE

Imagine that there are two rafts moving on a water's surface. Both rafts are moving vertically, but with different unstable frequencies. The rafts cause circles to appear on the water. Circular waves will intersect and create a pattern on the surface. If the rafts' movement frequencies are unstable, the junction zone of these waves, where they intersect, will be changing constantly. Hence, we will not be able to distinguish any particular pattern.

However, if we make the movement frequencies stable, constant, a standing wave will appear in the junction zone - a stable pattern that results from the wave's composition. Stationary waves appear when a wave source has stable (coherent) frequency.

## HOLOGRAM

To make a hologram, it is necessary to have a source of coherent radiation with stable frequency, specifically, a laser.

Imagine that you have a laser on your left side and its rays are directed to your right. In the middle of a table there is a photographic plate and the laser's rays pierce it. To your right, on the table, there is a simple key that you want to make a hologram of. Having pierced the photographic plate, the laser ray falls onto the key, is reflected, and falls back on the photographic plate. The result of a temporary delay of the light being reflected back from the key causes a slight lag.

Light waves that come from the laser are mixed with the light waves reflected back from the key. A standing wave will appear on the light-sensitive plate – an infrared image that is fixed by the plate.

After we expose the plate and whiten it, we receive a hologram – an exact light copy of the key. Now, if we illuminate the hologram with a laser ray of the same frequency or expose it to the sunlight, we will clearly see a key on it. In truth, though, there is no actual image of the key on the hologram. What you actually see is an array of strips similar to the patterns on our fingers. You can turn the hologram and see it from different angles. If we break the hologram into four parts, we will have four copies of the key. We will see an integral image of the key on each of the four holograms. The same will happen if we

break a mirror into four parts. We will have four separate mirrors with your reflection in each one of them.

## SPATIAL FREQUENCY

Imagine a thin slip of paper that is divided into three parts: the middle is white and the edges are black. This is a very low spatial frequency.

Now imagine a slip of paper divided into five segments, three black and two white ones intermingled. Black – white – black – white – black. This is a higher spatial frequency.

Now imagine a slip of paper divided into thousands of black and white segments... a very high spatial frequency.

Spatial frequency is a number of changes between the dark and the light per one unit length.

Why do we need spatial frequencies? It is spatial frequencies that our brains, our visual analytical systems, utilize to operate.

## VISUAL ANALYZER

On the pictures below, you can see a scheme of visual analytical system (picture taken from “Eye, Brain, and Vision” by D. Hubel).

Our analytical system includes: an eye (with retina consisting of six types of cells), optic tract, lateral geniculate nucleus, visual radiation, and primary visual cortex (zones 17 & 18).

The picture to the right shows a trajectory of an eye movement. An eye performs micro movements and receives data as a result of this process (micro movements are shown as zigzag lines in the picture). Next, the eye makes a leap (straight line); at this moment, the data transfer is stopped, and the eye temporarily becomes blind. Then, everything repeats. Micro movements only last a quarter of a second.

During the micro movement, eye oscillation information from the eye retina moves to the lateral geniculate nucleus (LGN), marked with a black arrow on the picture. It filters spatial frequencies. Imagine a picture with a chess-board-like rectangular net on it. With every eye micro movement, the lateral geniculate nucleus sends the spatial frequencies to the primary visual cortex in an organized way – from the lower to the higher frequencies. Thus, initially, a brain receives a picture that is broken down into segments (squares). At the end of retinal micro movements, the brain receives a picture that is split into many small squares.

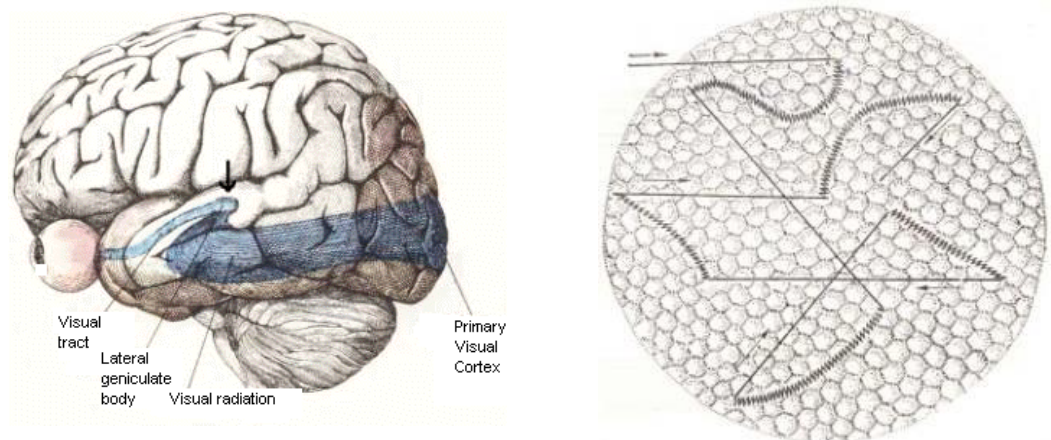
In a quarter of a second, the lateral geniculate nucleus breaks the incoming picture down into about 260 spatial frequencies that are consecutively sent to the eye cortex.

The information processing continues in the eye cortex. Each of the 260 pictures, every single one with a different resolution, is processed further. The brain analyzes regions with brightness drops and “cuts out” the contours.

The result of all these artful transformations looks approximately as follows:

When you see a visual image, say, “a radio,” the image is split into sub images, which range from very rough contours to very precise contours of small details. Every part of an image is consecutively sent to the brain: contours of the radio itself, then contours of the strap, the loudspeaker, antenna, tuning scale, brand, letters, numbers, scratches, and so on.

The image is then put back together into one integral image in other parts of the cerebral cortex. Still, we see this image as we are used to, composed from tiny parts and details.



If our brain was unable to perform such crafty transformations with perceived images, we would see the surrounding world as an array of bright blurs of different colors and intensity. The visual images to which we are accustomed – are illusions created by the visual analytical system. For us to see objects divided into precise details, our brain splits the uncertain color blurs by their spatial frequencies, distinguishes contours, and separately sends each one of them to the higher departments; it is there that the overall image is recreated from the parts.

The brain is a homogenous system. At any given moment of time, there can only be one contour in the primary visual cortex, only one part of an object

perceived. Visual analytical systems work at very high frequencies (about 800 Hz), so a person does not notice the consecutive processing of information.

The amount of analyzed spatial frequencies is often related to different factors, lighting in particular. In dim light, our analytical system sharply decreases the number of stages of spatial frequencies analysis. As a result, our brain receives only low spatial frequencies and can only distinguish approximate contours. That is why a person cannot see exact details in the dark.

In the case of lateral geniculate nucleus disorder, a very rough spatial frequencies analysis occurs, and the brain receives only low frequencies. A person thus afflicted is unable to distinguish similar objects that differ only in minor detail (faces of people, for example - all people look “the same” to such patients).

## FEEDBACK

By “feedback” we mean the visual analytical system’s ability to perceive signals not only from the eye retina, but also from the higher sections of the brain. Logic tells us that brain nerves must be connected to the lateral geniculate nucleus. That is, brain nerves must enter the lateral geniculate nucleus. D. Hubel in his book “**Eye, Brain, and Vision**” writes: “They (lateral geniculate) receive fibers not only from the optic nerves, but also back from the cerebral cortex to which they project, and from the brainstem reticular formation, which plays some role in attention or arousal.”

This is your “third eye” – an inner vision organ that many do not believe exists, failing to notice an unquestionable proof – dreams. How does a person ‘see’ dreams, if not with visual analyzers? Nature does not create superficial constructions. Information from the brain goes to visual analyzer at the level of a lateral geniculate nucleus. When a person sleeps, his or her eyes are closed and physiologically switched off. The visual analyzer is free from external information. At night, signals are meticulously analyzed, and broken down into an array of spatial frequencies. This is why we are able to see images in color and often in great detail in our dreams.

When a person is awake, information from the brain continues to go to visual analytical system. However, powerful stimuli and signals from the brain sent by the eyes are blocked. The lateral geniculate nucleus distinguishes only low spatial frequencies from the brain. That is the reason why, when awake, a person can imagine (reproduce, remember) images only vaguely, as if in shadow or through a fog.

When we do not sleep, signals from the brain are superposed on signals from our eyes (from the external world). We can draw an important conclusion



based on this fact. If you want to learn to imagine bright and precise images, you do not need to stare at one spot for hours. You need to remove low spatial frequencies from your brain. This means that when you are imagining a visual image, you need to imagine it as detailed as possible and try to notice its tiniest details. As a result of such an exercise, you will soon learn to imagine vividly.

Understanding the feedback mechanism is essential for understanding the connection creation mechanism involved in electric memory. A disorder (a breakdown) in the feedback system must, theoretically, lead to a person's inability to fix the information he or she perceives. Such illnesses really exist – for instance, Alzheimers and Korsakovsky syndromes.

## RESONANCE

Everyone is familiar with the resonance phenomenon.

Imagine that you have two identical tuning forks in two corners of a room. Since they are identical, they will produce the same sound, the same frequency, if hit with a metallic stick.

If you hit one of the tuning forks with a small hammer and then cover it with your arm, you will hear the second tuning fork begin to sound. The first sound reached the second tuning fork through the air, across the room, and made it hum due to resonance agitation. Different objects that have the same frequency are able to resonate and agitate one another. If nothing troubles the resonance, then one more specific feature is exposed – resonance leads to spontaneous amplification of oscillatory movement amplitude.

Resonance is not only useful, but also a dangerous thing. A case described in the media recalled an event when the rotation speed of one of the machines in a factory coincided with the building frequency; this led to resonance and self-amplification of oscillation amplitude - and the building disintegrated!

When you tune a guitar, you tune the strings to sound in consonance, that is, to resonate with each other. Resonance caresses our ears, and we hear a slow beating of frequencies.

If you move a microphone close to a loudspeaker, you will hear a screeching sound, which is another case of frequency resonance.

Both living and non-living objects can resonate. If there is any oscillatory (cyclic and possessing stable frequency) process – resonance is possible. Moreover, resonance is able to “pull” in other oscillation processes with close and unstable frequency, pulling whole systems into single oscillation rhythm.



Arthur T. Winfree's "The Timing of Biological Clocks" is dedicated to this subject. This is a brilliant popular synopsis of a very complicated and interesting phenomenon – phase singularity.

## THE SPATIAL FREQUENCY FILTER

We use the spatial frequency filters to extract images from our brain. No, you will not have to buy them at a store! You will learn to make them yourself. You will not be able to memorize anything without them.

First, let's draw a simple parallel with a piano. Imagine that all piano keys have been pulled away and the strings have been misplaced. How do you find a string that sounds at a 440 Hz frequency? You might have already guessed – you will need a tuning fork that sounds at the 440 Hz frequency. If we are near the piano with this tuning fork and hit it with a hammer, a string having the same frequency will begin to sound. You will even see the vibration with your eyes. Useful, isn't it? You need not check every string. Further, this method allows finding the right string instantly, without checking each and every one.

Remember the key hologram. Imagine a hundred keys lying in front of you, with edge configuration being their only difference. From a distance of few meters, our eye is incapable of distinguishing them. How do you quickly find the key from the hologram? It is simple: you need to expose the table with the keys to a laser ray and look at them through the key hologram. What will happen? A bright point will appear, as if saying: here is the right one. Again, we do not have to check every key and can instantly perform our search. A filter of spatial frequencies, the key hologram, helped us.

How are spatial frequency filters related to GMS®?  
Directly.

Every perceived or imagined visual image is a spatial frequency filter for your brain.

To extract something from the brain, one needs to use an appropriate filter. Let us see if this is true. Imagine a "swimming mask and a snorkel." What did your brain reproduce? I am 99% sure it is either the ocean, a lake, or a swimming pool. A few minutes ago, you were not even thinking about any of those and would probably not think to do so at this moment until random STIMULUS made you think about it.

## DIRECTIONAL SELECTIVITY

This difficult and seemingly incomprehensible word combination, in fact, represents a very simple phenomenon. As scientists have proved, visual

analytical system nerve cells do not react to everything they see. Each cell is genetically attuned to react to *certain* visual stimulus. One nerve cell begins to work only when an eye sees a vertical line. If you turn the line by 6 degrees, another cell comes into play and the previous one stops reacting. If an eye sees a horizontal line, a cell responsible for horizontal line reacts. There are cells responsible for lines of particular length, cells responsible for particular angle, and cells responsible for arc images. Visual analyzers have many nerve cells; the majority of them only react at the simplest visual stimuli. If an eye sees a triangle, three cells react since a triangle consists of three lines with different angles. Two cells react at an image of a circle since it is made up from two semi-circumferences, and so on.

It is also interesting, that for a visual picture to appear in a person's imagination, you do not need to show it to an eye. If you artificially agitate the cells adjusted to react at a triangle image (say, by electricity), they will start working, and an image they GENERATE will appear in your imagination.

In other words, the brain is able to react to every perceived visual image by switching on a combination of nerve cells attuned to react to the primitive details of the image. It is important to understand that a person does not see the world through his eyes as he would through a peephole in a door. Even the comparison with a camera and a screen is incorrect. Think about the fact that the images you see while asleep and dreaming OR when you are awake are generated by nerve cells. It may seem that reality is hard to separate from a dream. There are dreams as bright as reality to the extent that a person asleep does not even realize he is asleep. Everything is natural: images, sounds, smells, taste. It is only when you awaken that you realize you were sleeping. And what if you did not wake up? Would we believe we live in reality?

The fact that the "picture" you see is not a reflection of reality, but is one generated by nerve cells, has been proven via experiments with people under deep hypnosis.

A person under hypnosis, sitting in a small room with a few people, can be convinced that he is not asleep. Further, he will act as if he is not sleeping. He will talk to the other people; he will see them and answer their questions. Yet, if one new person enters the room, he is invisible to the person under hypnosis; he will not be seen nor heard by him, not noticed even if he touch the person's shoulder. The person in hypnotic state will look at the hypnotist and tell him he felt as if someone had touched him.

If your brain reflected reality, such tricks would be impossible. The brain generates, creates images. It CREATES them on the basis of signals coming from a person's eyes while he is not asleep. When we sleep, the brain CREATES images based on signals coming from... well, maybe even coming

from another brain. For example, connected with electric wires, people often see “foreign” dreams with unfamiliar places and people. This subject falls a bit out of the officially recognized scientific research field, but we will look into it nevertheless. We will do this in a special section of the [www.Pmemory.com](http://www.Pmemory.com) website (see “**Parapsychology**”).

The most important thing to remember about directional selectivity is that we do not remember images. It is the brain that generates, creates images. Also, anyone can control the image generation process in his or her own imagination.

Images are not stored in the brain. The brain generates images when a signal comes into it. The brain’s analytical system is able to create visual images of any level of complexity from millions of primitive elements automatically generated by nerve cells genetically adjusted for this.

Here is one more simple proof: a limit of imagination, consciousness volume. All that you see in your imagination is created by a limited set of nerve cells. A person cannot remember two phone numbers simultaneously; he cannot imagine ten visual images at the same moment. To remember a new image, he will first have to erase the previous one and FREE up the nerve cells. Information is generated in small portions.

A comparison to the “Lego” toy is very appropriate here. Say, you have 600 pieces of Legos from which you can build a house. To create another construction – say, a plane – you will first have to deconstruct the house to free up some of the pieces (since their number is limited, even though very large). To build a car, we would need to deconstruct the plane, and so on. Principally, we can build an unlimited number of constructions from the limited number of pieces but, each time, we will have to decompose previous constructions.

Watch your imagination work – that is how it works. This is OBVIOUS. No memory would be enough to store the endless variety of existing objects. It is much simpler not to save them, but to create if such necessity appears.

One often encounters a statement in psychology books saying that the volume of short-term memory equals five to nine units. These “5-9 units” are not related to the memory; this is the volume of human consciousness: the number of images that the brain can generate at any one given moment; memory does not have anything to do with this.

When studying GMS<sup>®</sup>, you will comprehend that every person, after a period of training, will be able to memorize tens and hundreds of images at one take. There is no such thing as the “short-term memory volume.” One of the recent records is 2,750 numbers in 30 minutes!

## NERVE CELL BACKGROUND ACTIVITY

Even in its calm state, an outer skin of a nerve cell has potential. The potential inside and outside the cell differ by 1/10 of a volt – the outside has more potential. The precise value is about 0.07 volt, or 70 millivolts. It is not constant, and its value fluctuates.

## NERVE CELL WORK ACTIVITY

When a nerve cell switches on, which happens when an eye perceives a stimulus or a signal from other cells, there is work activity that appears on it. A reversed region appears in its fiber. Outside this region, the potential is about 40 millivolts with a minus sign before it. In the reversed region, the potential changes its polarity and value: from +70 millivolts to –40 millivolts.

Such reversed regions “run” along nerve fibers and agitate other nerve cells. A nerve fiber can only have one impulse in it at any given moment. Before this impulse has reached the end of the nerve fiber, the next one will not appear. The frequency of impulse generation by nerve cells does not exceed 1000 Hz (1,000 times a minute).

Many cerebrum cells are able to generate impulses even when stimulating signals no longer influence them. This kind of activity is called “slow synaptic transfer.”

## SYNAPSES

Nerve cells are not connected directly, like electrical wires. There is a small gap where the cells are joined – a synaptic gap, a tiny bridge to be crossed. When an impulse reaches the end of the fiber, nerve cells emit different substances to the synapse zone. These substances have an impact on the neighboring cell and an electric impulse appears in it.

Signal transmissions happen electrochemically. Impulses run through the nerve cell fiber, and the cells “talk” with each other with chemical substances.

If you are particularly interested in the brain functioning, you can read D. Hubel’s “Eye, Brain, and Vision.”

## ELECTRICAL CONNECTION APPARITION SCHEME

Let us examine the connection fixation process on a rather simplified scheme that allows understanding of the general principle (scheme 1).

Let there be three nerve cells that are genetically adjusted to react via work activity on the following stimuli: a triangle, a square, and a circumference.

When an eye perceives the “square” stimulus, the appropriate nerve cell will react to it, and an image of a square will appear in the imagination. If you remove the stimulus, the cell activity stops, and it stops generating the square image in the brain.

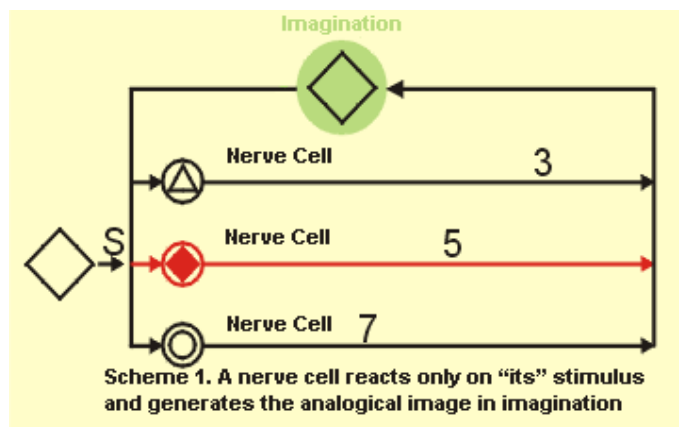
If this cell is artificially agitated (with a needle or electricity), it will start generating impulses; the image will appear in the imagination, even though it does not really exist nor is there stimulus.

Through imagination (the big circle on the top of the picture), the nerve cells are locked on themselves. This is thought to happen because of the lateral geniculate nucleus.

There is some background frequency on every nerve cell, but its amplitude is not enough to switch the cell on and, hence, cause an image to appear in the imagination. For clearness, we will mark the cells with numbers: 3, 5, and 7.

Please note the fact that the background and working frequency of a cell can change, but the image generated by the cell remains untouched. This is the “trick.”

Now, we have all the data necessary to explain how a connection is fixed in the electric memory.

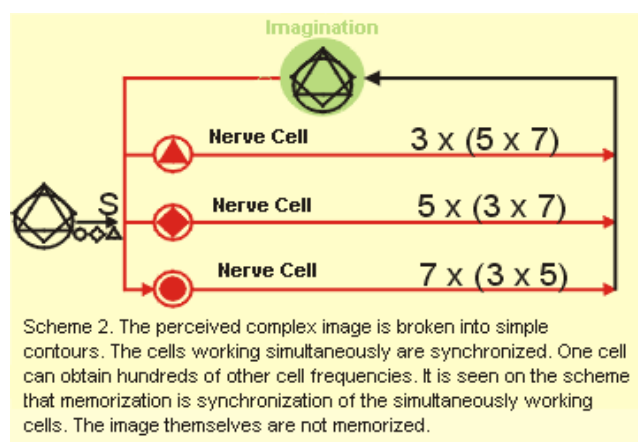


Let us again assume that an eye perceives a figure consisting of several primitive elements: a triangle, a square, and a circumference (scheme 2). The perceived visual image is decomposed into simple images, and each image is sent to the brain. Nerve cells that are adjusted to react on these images are switched on and begin generating their images.

Thanks to the feedback channel, different frequencies of simultaneously working cells mix together, and the frequency combinations in every working cell become identical.

That is basically it. A synchronization of the simultaneously working cells' frequencies has occurred - and the cells responsible for different images, memorized connections between them, are now synchronized.

Formula: connection fixation in the electric memory is realized by synchronizing the frequencies of simultaneously working nerve cells.



Obviously, information reproduction within this memory system is only possible when there is a stimulating signal. Let's now analyze the anamnesis process (information generation by the brain) in scheme 3.

When a triangle image is at the entry of a visual analyzer, it switches a nerve cell on and begins generating impulses to create an image of the triangle in the imagination.

But, if there are active cells working in the background with the same frequency, the pulsation amplitude increases, and the cells will start generating their images due to the frequency resonance principle – that is, a square and a circumference images.

It will seem that we remember the image combination we have memorized.

Formula: image anamnesis (generation) in the electric memory is realized due to the frequency resonance when a stimulating (activating generation process) signal is present.

## CONCLUSIONS:

Visual images are not remembered by the brain. The anamnesis process that you are accustomed to is, in fact, a process of image generation in your imagination.

Time contiguity of several stimuli is a necessary factor for memorization.

Information (connections) is stored in the memory as a harmonized electric activity of a group of nerve cells.

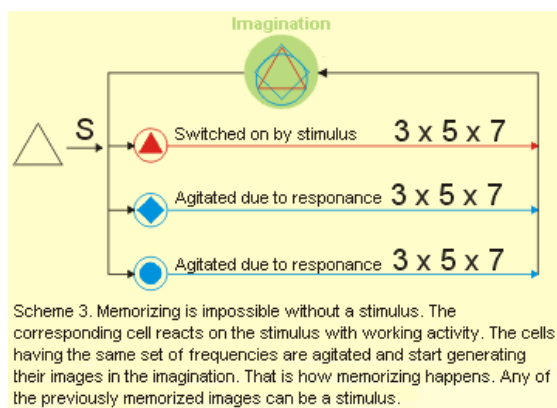
The information generation process is only possible if there is an incoming stimulus at the system entry.

One nerve cell can have electric resonance connections with many other nerve cells and can contain a large amount of simple frequency combinations.

The described memory model is perfect for explaining all that is “strange” in the human memory. This model is straightforward; anyone can implement and test it. When memorizing using methods based on this memory model, 100% reproduction is guaranteed.

If you “break” the feedback channel in the connection fixation scheme, the brain stops synchronizing cells that are responsible for the perceived stimuli. This means that a person will stop fixing the information perceived and may end up greeting you ten times a day, each time he sees you. He will also be unable to count money.

Illness will express itself differently and have different names according to the place of the feedback channel rupture, whether Alzheimer illness (hippocampus damage) or Korsakovsky syndrome (neural tract damage). The



described memory model demonstrates mechanisms of these illnesses –

feedback channel rupture and the related inability to synchronize electric activity of nerve cells, that is, the inability to create connection.

## REFLEX MEMORY

A human being has the same amount of analytical systems as he does sense organs. You are already acquainted with the visual analytical system. Aside from the visual analyzer, the brain also has hearing, speech, taste, smell, and movement analyzers along with as other analytical systems.

Supposedly, every analytical system has an electric memory mechanism in it. We are mainly interested in the visual analytical system since the primary memorization method in GMS® is memorization through visual representations. It is the visual representations that everybody can most easily, consciously control in their imagination. Other analytical system representations are harder to control internally.

There are association zones in the cerebral cortex. These are zones where nerve fibers from different analytical systems intersect. Other types of connections are established in association zones: reflex connections. Note: cells from different analytical systems establish reflex connections.

To create a reflex, there needs to be time contiguity and multiple repetitions (activation).

## TIME CHARACTERISTICS OF REFLEX CONNECTIONS

Reflex connection is formed in about 3-4 days; when it is stored, it lasts for a lifetime.

Reflex connection works automatically. One does not need to willfully remember the information.

In GMS®, the use of a reflex connection is necessary for memorizing foreign words, developing a sign system for a foreign language, and for various figurative codes memorization. Any other information (phone numbers, addresses, names, etc.) is memorized through the basis of the electric memory mechanism and is reproduced as a combination of visual images. These images then need to be encoded into familiar forms – numbers and words.

For a reflex connection between nerve cells to be created, the nerve cells have to work intensively for a certain period of time. It is only in this instance that nerve-ending appendages literally begin to grow and stretch towards other such appendages. Obviously, this requires time. Direct reflex connection between nerve fibers can only be created when nerve fibers are already in close proximity to one another.



Nerve cells are linked together by creating a synapse zone. This is a zone of chemical transmission, where a chemical impulse from one cell to another occurs. If you are interested in the details of synaptic transmission, you might want to read an article about the Nobel Prize honorees of 2000 in the “Scientific Articles on Memory” section.

Similar to electric connection, reflex connection is only reproduced when there is an incoming stimulating signal.

When you touch a hot pan, your arm automatically pulls away. This is an example of an unconditional reflex, genetically “built into” your brain.

When you hear the word “phone”, your imagination instantly suggests an image of a telephone. This is an example of an unconditional reflex formed through life experience. Due to the fact that our word perception is so quick, images appear very quickly in your imagination. Many people do not even realize the reflexive nature of understanding written and oral speech.

If you perceive words that do not have a connection with visual images in your brain, you will not understand them. For instance: inu, mise, teiburu. You do not understand these words - not because you do not know them, but because the connection between these words and the appropriate images has not yet been established in your brain.

In GMS<sup>®</sup>, every kind of information is first remembered via the electric memory mechanism; it is only then that the necessary data is developed into a reflex (automatic state) if necessary.

A disorder (blockage) of the synaptic connections (reflex memory) leads to a temporary or permanent destruction of stable automatic skills, such as intentional and automatic movements in speech, writing, and in reading. To see an effect of temporary steady reflex destruction, let someone consume a few drinks of hard liquor.

Memory mechanisms in speech and movement analyzers have their own specific features, but are also fully explained by the electric and the reflex memory concepts. These specific traits are outside the GMS<sup>®</sup> sphere of interest. Only the memorization methods for educational data are examined within the pages of this book.

## DIFFERENCES BETWEEN ELECTRIC AND REFLEX CONNECTIONS

First of all, these two memory types differ in their connection creation time. An electric connection is created very quickly – in a few seconds; whereas a reflex connection is created slowly – over the course of a few days.

A reflex connection goes one-way, with an impulse running through the nerve fiber only in one direction. If you touch a hot iron, your arm muscles will contract. If you intentionally flex your muscles, you will not have the hot iron sensation.

An electric connection is a two-way connection: if you connect two images in your imagination, each one of them can be a stimulus for the other. The reaction is that you see both images – the stimulus and the connected image - simultaneously.

Electric memory is intrinsic in certain analytical systems. Meanwhile, reflex connections are created between nerve cells from different analytical systems. You cannot instantly create a connection between an image and its mutual representation (a word), or between a sound and smell.

Electric connections are very flexible. They can be quickly erased or altered, but they can also be stored for a long time. Reflex connections remain unchanged and do not require any special maintenance.

## REPRODUCTIVE IMAGINATION

Reproductive imagination is a process where one transforms perceived verbal or written speech (words) into visual images, using a spatial organization of images in the imagination.

With this connection, bear in mind that your thinking can be either unintentional (automatic) or intentional (conscious).

When you consciously manipulate visual images in your imagination – enlarge, rotate, or disassemble – this is called arbitrary conscious thinking.

When you perceive an oral statement and images automatically organize themselves in your imagination, it is called unintentional or automatic thinking. In other words, another person's speech toggles your imagination (an example: a raven holds a piece of cheese in her beak).

Thinking may be direct or indirect.

Direct thinking occurs when you operate visual images in your imagination in perfect silence.

If you use speech, inner or vocal, to arrange these images in your imagination, you do not operate them directly, but by using speech as a mechanism of your reproductive imagination.

Direct thinking is much more efficient simply because it is faster. When you operate images using your inner speech, your thinking speed is limited by the speed of your speech. This is the first big disadvantage of “verbal thinking.”

Another drawback of verbal thinking is a possible presence of errors in phrases you have learned by heart. False connections, often call “bias” or “misconception” or “prejudice,” are often “frozen” into phrases you learn as a child; preconceived notions – whether true or false can limit memory. People who verbalize most of their thinking can deprive themselves of understanding obvious phenomena.

Heavy encyclopedias explaining thousands of “misconceptions” (false connections “frozen” in the subconscious of millions of people through fixed, set expressions) - often thanks to some journalist with a good sense of humor - are sold daily.

Okay, back to the topic at hand. Two parallel channels can be distinguished in reproductive imagination. The first is the channel of reflex transformation of words (nouns) into visual images. The second one is the channel of spatial image organization in imagination or the spatial operator’s channel.

Nouns are transformed into visual images at a reflex level: a table, a chair, a pen, an apple or a shirt.

Verbs, adjectives, suffixes, prepositions, declensions are all spatial operators. Their task is to operate the images (nouns) in your imagination. A cup IS STANDING ON a table; a cat IS LYING UNDER the TABLE; BLACK cat; and RED cup.

Only four combinations can be obtained from the two channels, four possible variations of reproductive imaginative work. Carefully observe your how your imagination works and analyze what influences speech understanding and how this occurs.

**The first variant:** complete understanding. Information goes through both reproductive imagination channels: a vase with a red rose is on a table.

**The second variant:** incomplete understanding. The spatial operators channel is turned off: a spoon, a leaf. (The brain does not know how to spatially organize the objects).

**The third variant:** incomplete understanding. The channel of reflex transformation of words into visual images is turned off: tany with draginbird fooffers at nead (The brain is ready to spatially organize the images, but there are no images to organize).

**The fourth variant:** complete incomprehension of speech. Ghturh tyu nahj kiopl treyud. (Both reproductive imagination channels are blocked – there are no image words and no spatial operators). The brain DOES NOT REACT to this speech message. You will not even be able to repeat it correctly.

Speech (or text) unintentional memorization and anamnesis are carried out on an electric memory basis. When you hear a speech, not only do the words of the speech cause images to appear in your imagination, but they also CONNECT them. Connection creation between visual images (electric memory) happens automatically. An example: instead of leaves, candy hangs on the branches of a birch tree that is painted red. The words of the text not only made images appear in your imagination, but also connected them into a spatially organized picture. It is due to the automatic image connection that you memorized the picture.

Speech anamnesis happens the other way round. You remember (generate) visual images by fixed connections and then “translate” them into speech. That is why textual information is always remembered this way.

SENSE is a spatially organized picture that appears in your imagination. When a person says, “Your statement doesn’t make any sense,” it means that their brain failed to generate a spatially organized combination of images. If we change the word order in the phrase: “a red vase is standing on a table,” and say instead “there is a vase, which is red, standing on a table,” the SENSE, a spatially organized combination of visual images, will not change.

GMS® training is a very powerful tool for developing your attention and visual thinking, the ability to imagine and operate images in your mind. Visual thinking is the foundation of UNDERSTANDING. If a person does not have any images in his imagination when reading a book, then he DOES NOT UNDERSTAND the text.

It is a well-known fact that people trained to memorize, often work as art or scientific directors due to an almost paranormal ability to understand textual information and see mistakes and text incoherence.

Albert Einstein, no doubt a thinking man, once said: “Apparently, language words in their written or oral form do not play any role in the thinking mechanism. Psychic essences that probably act as the elements of thought, are

particular signs and more or less clear images that one can reproduce and combine intentionally...simple words and other signs have to be searched for with great effort only at the second stage, when the mentioned association is stable and can be reproduced on purpose.” In other words, speech, at a certain stage of thinking, is only a mechanism of outputting and inputting information into another brain.

During memorization with the help of GMS<sup>®</sup> techniques, you will see that speech has to be switched on only when there is a necessity to transmit information to another person. Many images used as auxiliary images in memorization often do not need to be labeled or have a name since they never leave the brain; you only need to see them in your imagination.

In my opinion, academic psychology exaggerates the role of speech in the thinking process. Moreover, it looks suspicious when people think out loud and speak to themselves.

## PART 3: BASIC GMS<sup>®</sup> CONCEPTS

### FROM THE WHOLE TO SEPARATE PARTS

Everything consists of parts. Words consist of letters; sentences are made up from words; paragraphs are created from sentences. Any substance of nature contains a limited number of elements. A musical piece is a set of combinations and sequences of only 7 notes. Any numerical data is presented with ten ciphers.

By combining a limited set of simple elements, by changing CONNECTIONS between the elements and their SEQUENCE, one can obtain an endless diversity of ELEMENT COMBINATIONS, i.e. new information. INFORMATION is a COMBINATION OF PRIMARY ELEMENTS. Information cannot contain only one element. Information must, by its very nature, contain at least two RELATED elements. The sense of memorization is in recalling, being able to reproduce these connections.

To learn to memorize difficult data – tables, lists, and texts – you will first need to learn to memorize the simplest elements found in all information consists. You will not be able to memorize phone numbers if you do not know how to memorize separate individual ciphers, or memorize lists of geographical names without knowing how to memorize names. You need to memorize simple elements within a text in order to remember the textual information precisely.

The main GMS<sup>®</sup> principle is that memorization goes from the whole to separate parts. To memorize a list of phone numbers, you first need to memorize separate numbers, then, separate phone numbers and, finally, a list of phone numbers. When you memorize a text, you first fix a sequence of paragraphs in your brain, and then memorize precise data in each of the paragraphs.

That is why, before you study memorization techniques for different types of information, you need to master transformation methods for the simplest elements that are inherent in every type of information. These are two and three digit numbers, syllables, words and senseless letter combinations, names, the names of months and weekdays, terms, concepts, and more. Only by transforming the simple elements into visual images will we get a chance to memorize them, that is, to create connections.

#### NATURAL ASSOCIATIONS

Natural associations are connections that actually exist between perceived objects. Thanks to the fact that these connections already exist, our brain

memorizes them automatically. An existing connection between objects is a signal to memorize them.

Natural associations are used in the following memorization techniques:

**The Cicero Method.** In this method, only connections between objects found in familiar situations or in their familiar settings are used for memorization. These connections do not need to be created; that is, they do not need to be memorized. They are created automatically in our brain, due to multiple and regular perception of the objects of your house, room, or street.

**The Free Association Method.** A human being never memorizes an isolated image. Images have stable connections between them, and these connections are remembered automatically if perceived regularly. For example, a cup is always connected with a teaspoon. A computer monitor is always connected with a keyboard and a mouse. A cupboard is always connected with plates.

**The Method of Singling Out Parts of Objects.** Even when we see a single object, the brain “reacts” to its parts and automatically fixes the inner connections of the object. Every image consists of parts (sub images). A radio receiver consists of a body, an antenna, a tuning scale, a regulator, a strap, and a speaker.

**The Method of Singling Out the Invisible Parts of an Object.** People often disassemble devices in order to know what is inside them. Since different internal elements of objects are interrelated, these relations are automatically fixed by the brain. For instance, where there is a loudspeaker, there are wires, batteries, transistors, resistors, and condensers.

Note: natural associations DO NOT HAVE TO BE MEMORIZED ON PURPOSE, DELIBERATELY. They already exist in the brain. The goal of the mentioned techniques is to create a system for all the connections in our brain, so they can be used to memorize other types of information.

**The Method of Finding a Distinctive Feature.** The natural association creation mechanism *can* be used consciously. In particular, you will get to know this method through the “faces memorization” technique. The “faces memorization” method is very simple. You need to examine a photo for a few seconds and pay attention to the **DISTINCTIVE FEATURES** you see. No other special actions are required. Your eyes perceive the images that are already connected due to automatic connection fixation. Your brain will reproduce the face image on the basis of distinctive features. It is that simple. One can also memorize illustrations in a book by using the same mechanism of automatic memorization of perceived interrelations.

Basically, in GMS<sup>®</sup>, natural associations are used to form a large number of auxiliary (support) images in our memory which will later help us to memorize and remember any other type of information.

## ARTIFICIAL ASSOCIATIONS

Artificial associations can be monomodal and heteromodal, just like natural associations.

Monomodal association is a connection only between visual images, a connection created *within* the visual analytical system.

Heteromodal associations in GMS<sup>®</sup> are connections *between* different analytical systems. As you already know, connection between different analytical systems is automatic and is called a reflex. That is why such connections are created intentionally only when memorizing certain types of information: foreign words, signs, and figurative codes. Such connections are created using intentional “input” of signals from visual analyzers, speech analyzers, and movement analyzers within one moment of time. Other analyzers (modalities) are not being utilized in intentional memorization.

Artificial association is an artificial connection. Anyone can control the recording process in their brain. If we take visual images as an example, we only need to connect two or more visual images to turn on the “Memory” process. At this moment, very fast, simultaneously working “nerve cell electric activity synchronization” occurs, with the cells generating the images in your imagination. The time needed to create artificial associations is equal to the time needed to fix connections in electric memory, roughly 1 to 6 seconds.

Pay attention to the fact that artificial associations have nothing artificial in them. A natural (and unique) mechanism of quick connection fixation is used. When you create a connection between images in your imagination, you simply IMITATE the natural process of perception of connected images. You imagine them as if they were connected previously. The brain is “tricked,” because it does not care whether you actually see the connected objects or connect them in your imagination. Remember, we know this is possible because of our dreams when asleep. In both cases, a signal is put into a visual analyzer. The presence of such connections between different contours is a signal for memorizing the connection.

Heteromodal artificial associations are used to memorize foreign words, signs, and figurative codes. To create a connection between signals from different analytical systems, these systems need to work simultaneously for about 3-4 days. Thus, when you imagine a visual image, you need to label it and write its name on the image itself.



The concept of “artificial association” is the key concept in GMS<sup>®</sup>. Usually, only the connections between visual images are created to memorize things. GMS<sup>®</sup> gives you an edge by taking that extra step further.

One can easily read about logical and illogical connections in books on memory training. Authors state that, to increase memorization skills, you need to create illogical connections. Apparently, they do not understand the word “logical” quite correctly.

As you know, every connection is logical. Logic IS the connection: one thing leading to or resulting from another.

Another thing is that there are COMMON connections that we see between the objects of the surrounding world and UNCOMMON connections we do not encounter during the course of an average day. A sandwich is an example of a common connection (bread and cheese); a fried egg with nails is an example of an uncommon connection.

A connection can be correct (adequate) and incorrect (false), but this is related to education prior life experience, and even culture. For instance, “If a cat crosses your path, something bad will happen” is a false connection. Maybe this is the sense that authors put into their words when they write about logical and illogical connections? Maybe what they understand by “illogical” is false, incorrect? It gets rather confusing, doesn’t it? Regardless, they do not bother to explain their understanding of “logic.”

The essence of connections remembered is of absolutely no meaning for your brain. The visual analytical system distinguishes among and fixes connections. If there is a connection, it is fixed. No connection = nothing to memorize.

Authors of books on memory training often write about emotions. They claim that the more emotion-filled the material you memorize is, the better and faster it will be memorized. This is incorrect.

When you memorize a sequence of a hundred numbers, you will not have the time to think about emotions. Every distraction from the process will sharply decrease memorization speed and quality. Every emotion (which actually is an attention distraction) has to be suppressed when memorizing.

Forget about the “logical” and “illogical” connections, as well as emotions when memorizing – they are subjective. When memorizing, your brain only cares about connections.

#### **MEMORIZATION SKILL**

The brain can remember connections unintentionally and automatically. In such cases, a person does not have to make any effort to memorize. The way

back home or the arrangement of a house interior is memorized automatically as well as the inner connections of those objects. Connections between images and words are created unintentionally due to multiple repetitions during our lifetime.

However, when we speak about memorizing sign (precise) information, it does not cause any visual image to appear in our imagination. The automatic, unintentional memorization does not apply. If there is no image, the brain does not create connections.

During the over-intentional memorization process, a person must make an effort to memorize, performing some inner action to transform the sign information into image form. He may, perhaps, repeat small fragments of the information several times until it is memorized - the so-called learning by heart or 'rote method.'

When we speak about memorization skill, we mean the over-intentional memorization, that is, the memorizing of information that our brain does not perceive automatically. That is why, further on in this article, when speaking about memorization skill, I will mean memorizing the precise information for which the brain does not suggest any visual images.

So, over-intentional memorization involves an action, an action that requires attention, concentration, and an expenditure of energy. It is work. Precise information is never memorized "as is," even if you know the GMS<sup>®</sup> techniques. Memorization skill, for our purposes, is defined as the automation of mental operations that lead to memorization. If memorization skill is not developed enough, these operations will be slow and of poor quality. Developing the memorization actions to the required or desired automation level will result in better memorization speed and higher quality, with less effort and trouble during recollection.

An example of this is writing might be using a computer keyboard. A beginner many find it hard to type, since the speed is low and there are many mistakes. When typing skill is developed, the same person can type quicker, make fewer mistakes, and find that the actual typing process does not cause any difficulties. Also, the person gets satisfaction from implementing and developing his skill. A professional typist who has achieved a developed and automatic skill can type and speak on the phone at the same time and does not even have to understand the typed material.

It is the same with GMS<sup>®</sup>. When the memorization skill is automatic, not only does it work efficiently and quickly, it also guarantees good memorization and provides satisfaction to the person who uses his or her skill.

The memorization skill includes several components:

- Having figurative codes in your brain which allow for fast encoding of information.
- Being able to quickly encode memorized data and images into associations.
- Being able to quickly connect images in your imagination
- Being able to store connected images for about an hour in your memory.
- Enjoying a high stability of attention that allows you to perform memorization and anamnesis operations efficiently and for a long time without a trace of weariness.
- Being able to repeat large amounts of remembered data in order to fix it in memory.
- Having a presence of support (stimulating) images which allow for memorizing consecutive information.

It is important to understand the difference between the GMS<sup>®</sup> (over-intentional) and simple (intentional) memorization. The GMS<sup>®</sup> memorization is memorization of 100-200 information elements at one take.

For example, a person without special training is able to memorize only five information elements if he reads them only once. Surely, the precise fixation of the remembered data sequence is expected.

#### MEMORIZATION SKILL CONTROL

The quality of the formed memorization skill can be evaluated with high precision, up to 1/100. With the appearance of a precise memorization skill evaluation system, the times of uncertainty, when people believed that the memory topic was a vast field for proposing philosophical conceptions because no one knew exactly how memory worked and how to measure it, are over.

Now, anyone claiming the ability to memorize things can sit in front of a computer and be tested. Thanks to the existence of a precise memorization skill control system in the GMS<sup>®</sup>, it can be transferred from “supplemental education” status to the “precise disciplines” category. Standardization of GMS<sup>®</sup> techniques and implementing “precise results control” methods is becoming vital.

Below is a brief description of the “Memorization Master” program. You can download it free of charge at:

**[http://www.pmemory.com/improve\\_memory\\_software.html](http://www.pmemory.com/improve_memory_software.html)**

## THE “MEMORIZATION MASTER” DESCRIPTION

The examination program “Memorization master” is used for precise control of memorization results.

It can be used:

- As a memorization technique training tool;
- To determine if a person who followed a special memorization training course, has the proper memorization skills;
- To determine a newcomer’s primary memorization skill;
- To certify and attest to the abilities of lecturers of the courses aimed at developing general memorization capabilities;
- To organize GMS® competitions. By using the program, you can also compare your memory speed capacities with the officially recorded results.

The program tests:

- Memorization volume;
- Memorization reliability;
- Memorization speed.

These characteristics are automatically summarized in the “memorization skill increase” index (and compared to the norm).

Testing is performed using two-digit numbers suggested randomly by the program. Numerical information is the simplest type of information for memorization using GMS® techniques. An input of a number does not require any special typing skills. (Note: the program is designed to work with any type of information.)

The “Memorization Master” has three modes of work:

- “Introductory test”
- “Training”
- “Examination test”

## “INTRODUCTORY TEST”

The amount of information memorized is constant and equals 20 two-digit numbers. Numbers appear automatically at the speed of 6 seconds per number.

### USE:

Determining the primary memorization skill of a newcomer (a person who has not been trained to use the GMS<sup>®</sup> techniques).

Access to the examination test. People trained to use memorization techniques must pass an introductory test (with a grade of 3.6 to 4) before moving forward.

## “TRAINING”

The amount of memorized information consists of 20 two-digit numbers (of your choice). Appearance of numbers is controlled manually, by pressing the “Next” button with a mouse or the “Space” button on the keyboard.

There are no strict limits for memorization speed and number of mistakes. It simply outputs the memorization results (volume, speed, mistakes). The evaluation you get in this mode (training) will only be assessed if your mistakes rate is less than 10%.

### USE:

Mastering different methods and techniques of memorization.

Possible gradual increase of memorization volume and speed.

Fixation of support images system in memory.

## “EXAM”

The amount of memorized information consists of 20 two-digit numbers (of your choice). The appearance of numbers is controlled manually by pressing the “Next” button with a mouse or the “Space” button on the keyboard.

Strict limits on memorization speed and number of mistakes are introduced.

The test shows your “memorization skill increase” index (compared to the norm) and puts a mark according to the obtained index (see the table below).

Mark depending on volume:

Index	Mark	Minimal number of numbers memorized
0 – 3.6	2	0
3.7 – 11.3	3-	18
11.4 – 18.8	3	57
18.9 – 28.4	4-	95
28.5 – 37.8	4	143
37.9 – 47.4	5-	190
47.5 – 56.9	5	238
57 and more	Master	285

## NORMATIVE INDEXES

“Norm” is defined as a memorization capacity increase coefficient, equaling 1 (memorizing 5 numbers out of 20). This is an average result in the “Introductory test” for people who are not familiar with memorization techniques.

“Memorization volume” is the amount of two-digit numbers that you “order” before the test.

“Memorization reliability” is the amount of mistakes in entering numbers. The fewer mistakes you make, the higher the reliability index.

“Memorization speed” is the average time spent on memorizing a two-digit number.

“Memorization speed norm” is equal to 6 seconds per one two-digit number. If your speed is over 6 seconds, the program will decrease your index; if your speed is under 6 seconds, the index will be increased.

“Mark depending on index”: the interval from 0 to 60 is broken into equal parts, each one estimated with a mark, from “2” to “Master.”

Reference the data of the mark depending on the memorized information volume in the table.

“Mark depending on mistakes made”: the mistakes made during memorization (within 10 %) will decrease your index.

Limits of memorization time: if you exceed the average speed rate by more than 6 seconds, the program interrupts testing without reporting the results (“Test is not completed. You are memorizing too slowly!”).

Mistake limits: if your mistake rate becomes higher than 10 % while taking the test, the program interrupts testing without reporting the results (“Test is not completed. Too many mistakes!”).

“Memorization master” is specialized software and can only be used to test memorization capacity of people who have completed a special GMS<sup>®</sup> study course. The normative indexes have been obtained through testing and approving the system built into the program on a large number of people. Almost everyone who has finished our memorization study course can receive a “4.” To obtain higher results, students must show perseverance in performing difficult tasks.

The “norm” index (coefficient 1) is easily examined in the introductory test. Sure, people who are not familiar with GMS<sup>®</sup> will not be able to memorize numbers very well. They also will not be able to memorize sequences of terms, phone numbers, historical dates, and similar precise data when shown them only once.

The present program tests the formed memorization skill in its pure form (the stage of encoding into images is omitted) and reflects the dynamics of thinking, as well as visual thinking processes.

Since one mental operation, the “Connection of images,” is the foundation of every memorization technique, the ability to efficiently memorize a set of numbers at one sitting proves that the other types of information can be memorized just as efficiently.

It is necessary to note that the normative indexes built into the program are rather strict. I think that, after a first completion of the GMS<sup>®</sup> course, a student needs to receive a “5” which can be regarded as “perfect.” An instructor of a good level must obtain a “Master” on the test. If a person gets the highest possible grade in the “Memorization master” test, he can surely participate in the first round of Cambridge mnemonic competition; the highest grades in our test correspond to the introductory test for the world mnemonic championship (competition type: recalling pronounced numbers).

### CHECKING THE RECOGNITION SPEED (CHECKING THE REFLEX)

When memorizing visual images, signs, symbols, and foreign words, mere anamnesis is not sufficient. Anamnesis has to be automatic with respect to these elements. For instance, when perceiving a sequence of two-digit numbers, the corresponding images must appear in your imagination very quickly and with no effort on your part – similar to your hand pulling away from a hot iron, regardless of whether you want it or not.

To check the recognition, special training cards and special software are used which show figurative codes in random order and determine the speed of recognition (apparition of the image in consciousness). When checking recognition speed, figurative codes have to appear in random order to avoid any additional interrelation created during the primary memorization of figurative codes (in a sequence).

To determine the recognition speed through the use of cards, you control the beginning and the end times of your figurative code recognition. Then, you divide this time by the number of cards. The test is used for self-control; no one will artificially increase the results, since cheating yourself does not make any sense.

When evaluating the quality of memorizing figurative codes, you can orient yourself at the time equal to 0.35 seconds. This is the average amount of time needed for image apparition when perceiving two-digit numbers. For a person well on their way to mastering GMS<sup>®</sup>, the reaction speed is around 0.14 seconds.

### IMAGES, A MEMORIZATION TOOL

Everybody constantly performs the encoding and decoding of information. Oral speech is transformed into written speech, written speech into oral speech. Driving rules are encoded into road signs. Sounds are encoded into letters, music into notes. You can send letters through wires if they are encoded using the Morse code. Information can be encoded into gestures, and every person



understands body language. To record information into computer memory, it has to be transformed into “0” and “1” symbols. Mathematics, physics, and chemistry are encoded to such an extent that a person has to study several years in order to understand the system of encoding mathematical concepts.

Studying one particular encoding system is, in fact, a process of studying multiple disciplines. To master any code system, one has to make an effort and spend some time on it.

Every type of memorized data is encoded into the brain language in GMS®. The brain language consists of visual images. The brain will not be able to memorize numerical data unless it is encoded into visual images the brain can understand. The brain cannot memorize numbers. The same can be said about any other type of sign information.

Let me now remind you that in GMS®, sign information is any sort of information that the brain is not capable of transforming into visual images. That is the only reason why such data is not memorized. To learn to memorize such data efficiently, you need to *transform* the elements that it consists of into visual images.

Visual images lose their rationality in GMS®; they are nothing but a memorization tool, like a set of wrenches for a plumber, the binary system for a programmer, or Morse code for a telegrapher.

For the connections between images to be remembered well, the images have to be COMFORTABLE TO MEMORIZE. They also have to comply with certain requirements.

## HOW VISUAL IMAGES MUST NOT BE IN YOUR IMAGINATION

It is not necessary to memorize over-simplified images. Connections between such images are difficult or impossible to memorize. Here are a few examples of images non-conducive for memorization: a triangle, a square, a circumference, any letter of any alphabet.

- The image must not be plain, as if written on a sheet of paper.
- Over-complicated images that contain a large number of other images inside of them are not fit for memorization (examples: a street, a forest, a beach, a room, etc.).

## JUST HOW DO THE IMAGES NEED TO BE?

Images have to be **LARGE**. All visual images must be of the same size, whatever their real dimensions are. If you imagine an ant, it should be enlarged to a watermelon's size. If you then imagine a plane, it needs to be of the same size. You should never imagine small images, because connections between such images are very hard to fix.

Images must have **VOLUME**, dimension. An example of such an image is a holographic image or an image created using 3D software. Such images can be turned and examined from different angles.

Images must be **IN COLOR**. If you imagine a leaf on a tree, it must be green, and the tree a dark brown. If you imagine streetlights, try to imagine green, red, and yellow lights. Some people see colors very well, some – not so well. Whatever your case is, try to imagine the color. This is an easy skill to develop. Non-smokers do not usually have any problems with representation of colors. Smokers on the other hand are known to have a lessened attention span. Smoking, contrary to what smokers might claim, does not calm; in fact, it excites the brain... while removing oxygen supply **FROM** it! Both lead to diminished attention span, let alone reduced desire to be aware and memorize in the first place.

Images that you see in your imagination must be **DETAILED**. If you imagine a “telephone,” you need to examine it in your mind and see what parts it consists of. If it is a mobile phone, you can distinguish an antenna, a display, buttons, a strap, a cover, and a battery compartment.

All visual images that you encode **MUST** comply with these requirements. Images must be: **LARGE, THREE-DIMENSIONAL, IN COLOR, and DETAILED.**

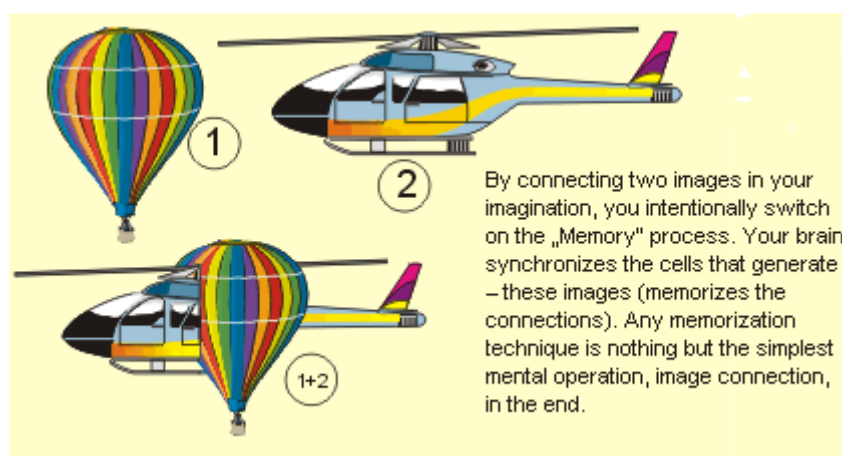
The images fit for memorization are images that you can literally hold in your hands, such as a pencil, an eraser, a book, a phone, a mouse, and the like. These items are represented by words that have stable and simple connections with visual images that already exist in your head.

### **THE MENTAL OPERATION THAT SWITCHES THE “MEMORY” PROCESS ON**

It is easy to intentionally switch on the “Memory” process; people have known how to do this for ages. Yet, only recently has the understanding of how it works been achieved (See the following articles: “**Memory – a sphere of paradoxes**” and “**Electric Memory.**”).

The primary mental operation in GMS® is the “Connection of images.” As you see, memorization is not performed using memory, but by using controlled thinking. Every time you connect two images in your imagination, you force your brain to remember this connection – you intentionally control and manage the memorization process.

When you connect two images in your imagination, you imitate the natural perception of the images already connected. And, the connection between artificially connected images is remembered just as well as (or even better than) a connection between the actually perceived connected images.



Images can be created in different ways. This depends on the chosen memorization method. In every case, remember the following rule:

*Whatever type of information you memorize, whatever method you use, only two images can be connected in your imagination at one moment.*

## OTHER MENTAL OPERATIONS

GMS® examines and uses only visual thinking operations.

Speech (or logical) thinking is regarded as being derived from intentional visual (image) thinking. Speech (verbalized) thinking is secondary, slow, and less efficient. Also, it often disrupts solving logical tasks, since false connections are “built” into many speech constructions.

Visual thinking, unlike verbalization (which is sort of a medium), is direct. Actual speech’s main task is the information output from the brain into oral or written form in order to be able to transfer it to another person or to trigger another person’s thinking. When a person uses inner speech to operate visual images, he makes use of the reproductive imagination mechanisms. Thus,

speech thinking is a process of operating visual images using inner speech on the basis of reproductive imagination mechanism.

Every so-called logical operation (comparison, ranging, analysis, summarizing, classification, etc.) is based on the simplest operations of visual thinking and is not possible without them.

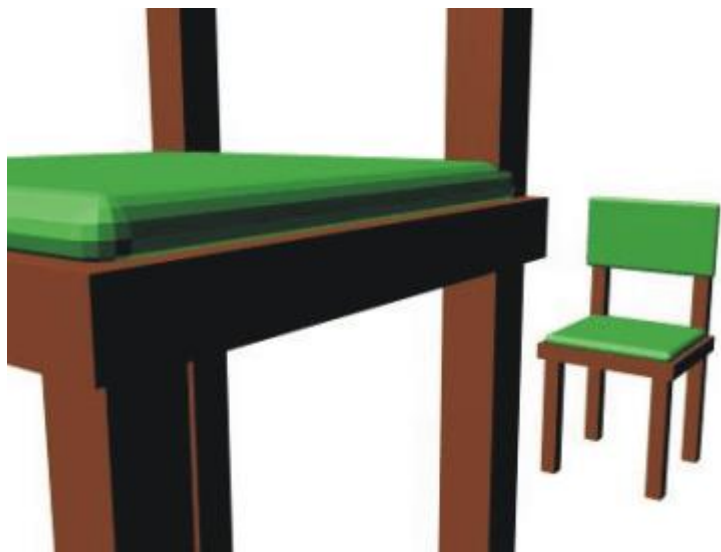
If a person's visual thinking is not developed well enough, both speech comprehension and the expression of one's own statements in oral and written forms will suffer. Such a person often uses inappropriate words because he does not see (understand) their meaning.

That is why the cause of COMPREHENSION disorder should be looked for in the disorder of the ability to imagine visual images and operate them in the imagination. Since memorization function is connected with the development of visual thinking, when a person studies GMS® techniques, the function of understanding the speech information is improved. Memorization is impossible without understanding. They are practically one and the same.

The following mental operations are used in our memorization technique:

### **“IMAGE ENLARGEMENT – MINIMIZATION” OPERATION**

This mental operation can be regarded as the act of consciously operating the spatial frequency filter. When you imagine a small mobile phone, you only see its general contours. When you enlarge the image in your imagination, other parts of the phone also become available for perception. When you switch your attention to a particular part of the phone and imagine it in detail, you tend to single-out a particular spatial frequency and increase its amplitude (size).



By enlarging an image, you get the chance to single out sub images from an integral image (remember the analogy with prime numbers 3 x 5 x 7). When you minimize the image, you basically mix up the frequencies of its assembly into one common frequency (analogy with prime numbers: you get 105).

### “IMAGE ROTATION” OPERATION

By rotating a visual image in your imagination, you are able to examine it from different sides and angles. Thanks to this operation, you can single out a large number of its component sub images from one integral image.



It is interesting to note that, with the help of training, you can achieve an unintentional image rotation in your imagination. Experience shows that exercising visual thinking when you are not asleep results in the ability to operate the images you see in your dreams intentionally, as with lucid dreaming.

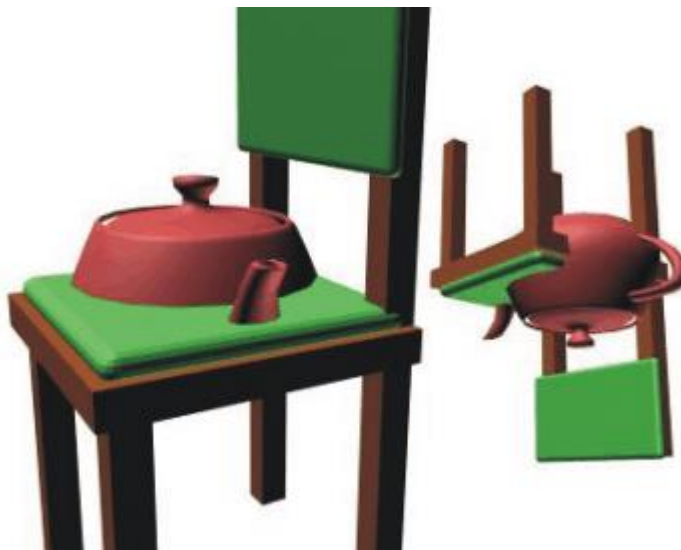
This is a similarity between GMS<sup>®</sup> and psychology with its parapsychology branch since controlled, lucid dreams are one of the subject matters in parapsychology. More information is available in a specially dedicated section of the [www.Pmemory.com](http://www.Pmemory.com) website (see: “Parapsychology”).

### “CONNECTION OF IMAGES” OPERATION

You became acquainted with this mental operation in the previous section. Let us now focus our attention on the principal.

We start with the premise that, at any given moment of time, our imagination can join together only two images. These images must be large, that is, to occupy all the volume of your imagination; they also must be as detailed as

possible, since the clarity or vivid nature of the images you see depends on this.



The connections are the “triggers” which make it possible for you to switch on the “Memory” process.

### “SUB-IMAGE SINGLING OUT” OPERATION

This mental operation is used to “deconstruct” an integral image into its various components and get a larger quantity of simple images. For example, an image of a “tape recorder” can be deconstructed into its components and each part represented separately: a knob, a regulator, a button, a cassette, etc.

### “IMAGE MODIFICATION” OPERATION

One word can correspond to different visual images. For example, “a light bulb” can be represented in different versions. It can be a simple electric light bulb, a neon light bulb, a halogen light bulb, and so on. This operation is used to create a variety of images during memorization.

Images can be used several times for memorization repetitive information. Images can be used for long-term memorization. In this case, nothing can be memorized over the occupied, already-connected images. That is where an “Image modification” operation is used.

### “IMAGE TRANSFORMATION” OPERATION

This operation has the same goal as the previous one: creation of a variety of visual images.

An example of a transformed image of a “pencil”: simple pencil, short and long pencil, or thin and thick pencil, a spiral pencil (like a drill), a pencil bent into a circle, a pencil twisted into a knot, etc.

When you use modification and transformation, you should understand that the brain mainly pays attention to a CONTOUR. That is why a change in an object’s color should not be regarded as a transformation or modification.

### RELATIVE SIZES OF OBJECTS

When memorized, images unite into associations, into combinations of visual images. Depending on the memorization method used, images can be of different sizes within an association.

Three main sizes are distinguished: small, medium, and large.

Imagine a cat in your imagination. This is a big image made up of several parts: “ears,” “back,” and “tail.” Now, imagine images of “a cube,” “a ball,” and “a bolt.” Create the following connections in your imagination: “ears – a cube” (a cube in the cat’s ears), “a back – a ball” (a ball on the back of the cat), and “a tail – a bolt” (a bolt on the cat’s tail).

When you create connections between images in your imagination, you should imagine solely the connected images: “ear – cube,” “back – ball,” and “tail – bolt.”

First, look at the cat in general. The cat image is large in this association, but the “cube,” “ball,” and “bolt” images are medium-sized in relation to the cat’s image.

Now, find a small detail in the image of the cat, say, a claw. Picture this image as “large” by using the “Image enlargement” operation. Create a connection “a claw – a cake.” Both images should be big and take up all the volume of your imagination.

Imagine the cat once again. In this association, the cat is a large image; the “cube,” “ball,” and “bolt” images are medium-sized; and the “cake” image is small in comparison with the cat image.

Note once again that when you join two images, the connected images must be large, regardless of their size relative to each other.

To imagine what should happen in your brain during image enlargement, imagine that the cat image is on the screen of your computer. To single out the ears from the integral image, you need to choose the necessary part with a

frame and enlarge it. Now the ear occupies all the free space on the screen. The rest of the image is not to be seen on the screen. That is exactly what happens in your imagination when you single out some part of an image. Just like on a computer screen, the connected images must take up all the free space of your mind's eye, your imagination; the rest of the images are left out.

## **SUPPORT (STIMULATING) IMAGES**

Support or stimulating images are additional images that help with finding information in the brain.

Let me remind you of the analogy with the piano strings. How do you quickly find the string you need among many similar strings? You need a tuning fork attuned to the frequency of the string. If you hit the tuning fork and bring it near the strings, the string with the frequency we want will be agitated through resonance and begin to sound; you will even be able to see it vibrating.

There is no precise place of localization for remembered connections in the brain. All connections are always found in the same area – the cortex is the device that remembers everything. The only way to extract the connection you need from your brain is to show one of the previously memorized images to the brain.

If you memorize one or two phone numbers, you can easily remember them without using any special technique. But if you memorize dozens of phone numbers, each encoded into a combination of visual images, it is practically impossible to remember them. Anamnesis always happens when certain stimuli, which turn on the information generation process, enter the brain.

Support (stimulating) signals are simply visual images that a person can easily remember in the same order. Any data memorized is INEVITABLY fixed on support images. This is true even if you memorize only one phone number a day, since you will have 30 numbers stocked in your brain within a month's time.

Later, the information anamnesis occurs, using the auxiliary support images. From the neurophysiologic point of view, support images are SPATIAL FREQUENCY FILTERS. When you remember and envision such filters in your imagination, the mechanism for finding necessary information in your brain is similar to the piano and tuner fork example. A support image is a sort of a tuning fork in your brain, with the brain itself being akin to a random set of strings. As a result of a resonance, support images quickly find and output the "frequency" they seek as well as all objects previously connected to them.

When consecutively remembering support images you have learned before, you make your brain generate information in the order in which it was



memorized. This allows for absolute precision in remembering previously memorized data.

The system of support images allows for moving freely amidst the information contained in your brain, as if browsing through files and folders on a computer.

Forming a support image system in your memory can be compared to the process of formatting a computer hard drive. If a disc is not formatted, nothing can be recorded onto it. If memory does not have support images, you will not be able to memorize and consecutively remember information.

So, how did you memorize information before since you did not have these support images in your brain? The answer is simple: you did not memorize information the way it is memorized by the brain, that is, faultlessly and in large amounts.

Support image systems are based on a combination of different memorization methods for a sequence of images. You will find a more detailed description of eleven memorization methods for memorizing a sequence in the “**Memorizing a Sequence**” section.

Due to the fact that support images are auxiliary, there is no need to output them from the brain during memorization. These images do not have to be transferred to other people. Consequently, thinking can be (and must be) totally turned off during operations with auxiliary support images. Support images do not need precise wording, even at the inner speech level. Inner speech can, of course, be added, but it will only lead to a decrease in memorization speed; such memorization will lack positive results.

## TWO IMAGE TYPES

Visual images are divided into two types in GMS®.

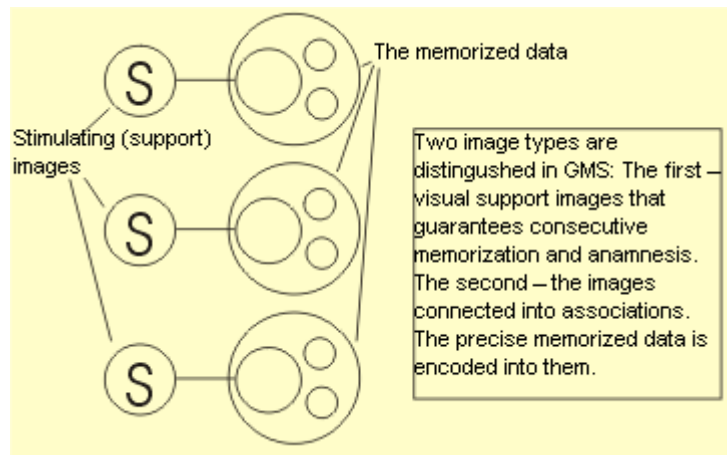
The first is a support image type. Such images do not contain any information. They serve to help memorize and remember information consecutively, as well as for system memorization. A sequence of support images is well fixed in memory beforehand; anamnesis of any information happens through the support image system.

The second type, associations, denotes a combination of visual images that encode the memorized data: phone numbers, addresses, names, historical dates, and other precise information.

Associations and the data encoded in them can be remembered without using support images and without running through all sequences. In this case, a

reproduction of an association only occurs when the brain perceives one of the association elements (various questions of the memorized data). From the GMS® point of view, any question is a direct hint, since it AUTOMATICALLY activates the association that contains both the question and the answer in the brain.

In this type of connection, it seems that one can limit his brain to memorizing associations because they are reproduced like a reaction to a question. This is incorrect. Sequence memorization based upon a system of support images is necessary, due to the fact that connections created anew are spontaneously erased. The support image system is used not only to allow consecutive anamnesis, but also to allow compulsory uniform activation of all memorized data in order to AFFIX it in the brain.



## THE “INFORMATION MESSAGE” CONCEPT

An information message is a group of primary information elements that have internal interrelation.

The sense of memorizing any sort of information is to expose such connections in information messages and, subsequently, memorize them.

An information message consists of multiple information message elements. It cannot contain a single element because it would make no sense. A connection can only be created if at least two elements exist.

Here are examples of information messages:

- The Angel waterfall is located in South America; its height is 1054 meters.
- Quicksilver critical temperature is 1460 degrees.
- “Ocean” cinema phone number is 337-26-00.

- John Michael Jackson.
- 40 Palm Street, apartment #2.
- License plate number of the car belonging to Anthony Lee Smith is 1232PR.
- Battle of Crecy took place on August 26, 1346.
- Aluminum ordinal number in the table of elements is 13; its atomic mass equals 27.

Any precise (sign) information belongs to the “Information message” concept. If a person cannot memorize sign information, memorization will be superficial. What good is a memory that is unable to reproduce information precisely?

All memorized data contains a number of information messages. If it is a table of the world’s waterfalls, to memorize that table will require memorizing several information messages. If it is a list of 50 phone numbers, one will need to memorize 50 information messages to fix it in his or her brain.

Any educational text (geography, history, anatomy, pharmacology, programming, etc.) contains a large number of separate information messages.

In letters, there are practically no precise data. In science fiction, a small number of precise data is usually present. Scientific and educational literature contains the largest amount of precise information, i.e. separate information messages.

GMS<sup>®</sup> allows one to memorize not only precise data organized by theme (chronological tables, lists of phone numbers), but also texts of any level of complexity. The more difficult the textual material is from the normal memory point of view, the more precisely it is memorized, since text memorization is realized according to the same principle: from the whole to the parts. Parts are separate information messages. The more such messages there are, the more thoroughly the text is memorized.

The sense and the goal of memorization are easy to illustrate with the “Information message” concept. Let us look at the following information as an example: the Angel waterfall is located in South America; its height is 1054 meters.

What does “to memorize” this message mean? You already know that the brain does not memorize names and numbers (nothing but connections). The sense of memorization is to connect SIGNIFICANT PARTS (elements) of an information message. In the example we have, it would be: Angel, South America, 1054. We must know that “Angel” is related to the South America, not any other continent, and to the number 1054, not any other number. If a connection is fixed incorrectly, this will amount to false information.

When elements of information messages are transformed into visual images and connected together, anamnesis is possible in two ways: either by using the auxiliary support images that fix all memorized information messages, or when a question-stimulus enters the brain. Thus, if you are asked, “Which waterfall is 1054 meters high?” the perceived number will turn on the corresponding image in your brain; the connections created beforehand will react; and other images, the ones encoding “Angel” and “South America”, will appear in your imagination.

If there is no question, you can intentionally activate the created connections using a system of support (stimulating) images.

In the above-mentioned information message examples, we will highlight **SIGNIFICANT PARTS** of the messages, that is, **ELEMENTS** subject to connection (memorization), in bold.

The **Angel** waterfall is situated in **South America**; its height is **1054** meters.

**Quicksilver** critical temperature is **1460** degrees.

“**Ocean**” cinema phone number is **337-26-00**.

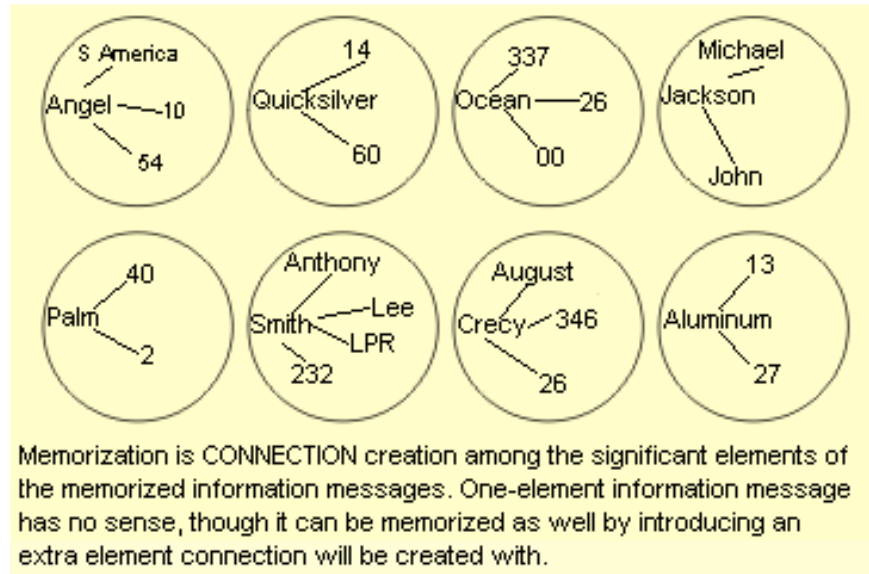
John Michael Jackson.

**40 Palm** Street, apartment **2**.

License plate number of the car belonging to **Anthony Lee Smith** is **1232PR**.

Battle of **Crecy** took place on **August 26, 1346**.

**Aluminum** ordinal number in the table of elements is **13**, its atomic mass equals **27**.



• The main memorization method in GMS® is the creation of an artificial association. Associations can contain from 2 to 6 images. One information message is fixed in one association.

#### CREATING ASSOCIATIONS

Any information message is fixed in the form of an association in the brain, as a combination of several visual images.

At one given moment of time ONLY TWO VISUAL IMAGES, viewed (enlarged) in the brain to take up all the space of your imagination, can be connected.

Imagine a watermelon hanging in the air one meter (3 feet) away from you. Imagine all images as large as this watermelon or even larger.

An illustration of how you should create an artificial association is provided in the pictures.

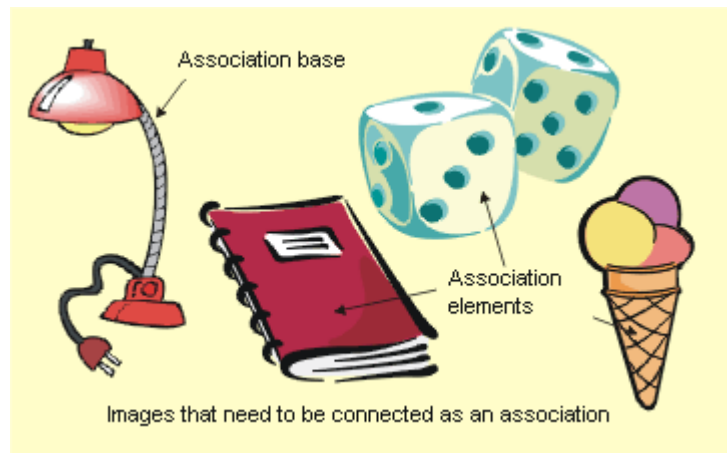
Let us imagine we need to connect four images into one association: a cap, a cube, ice-cream, and a notebook. We need to choose an ASSOCIATION BASE using these images.

The ASSOCIATION BASE is a large image representing the main part of the information message we are trying to memorize. Figurative codes cannot be an association base.

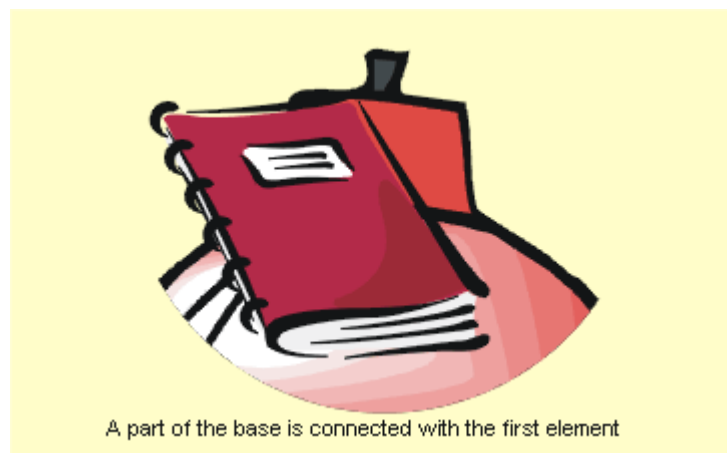
Other images will be ASSOCIATION ELEMENTS.

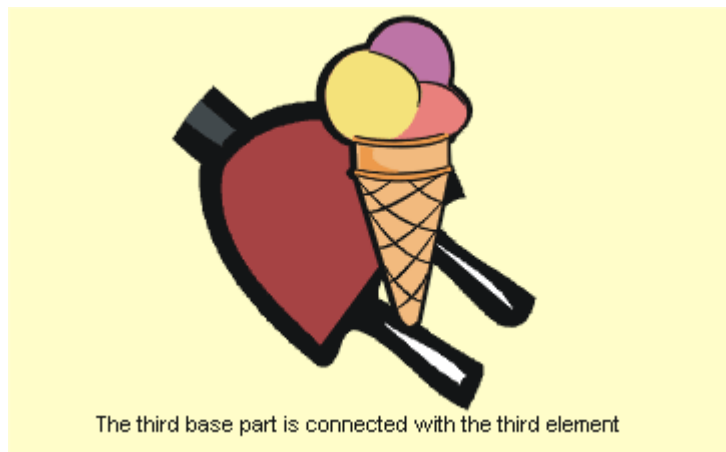
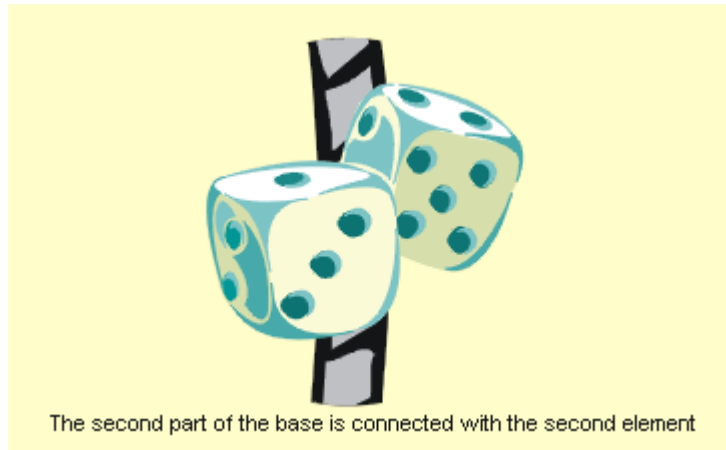
ASSOCIATION ELEMENTS are other images which represent the rest of the elements of the information message. Normally, these are different figurative

codes (numbers, months' names, weekdays, last names, etc.). Relative to the association base, association elements are MEDIUM-SIZED images.

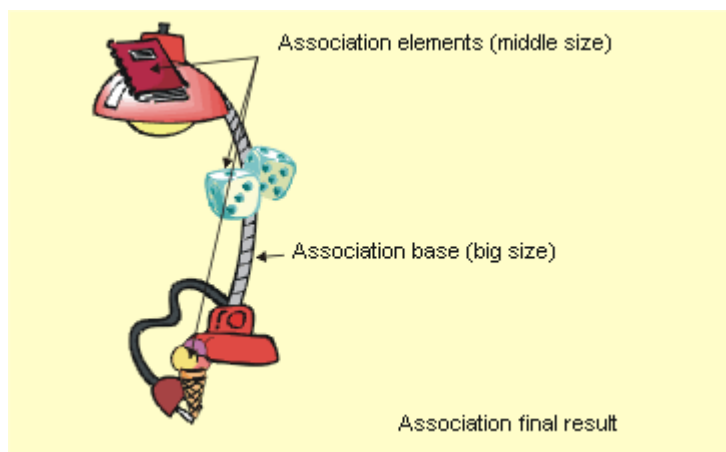


In this case **THREE SEPARATE CONNECTIONS** have to be created. To do this, the necessary images are joined in the imagination and are held together for about 3-6 seconds.

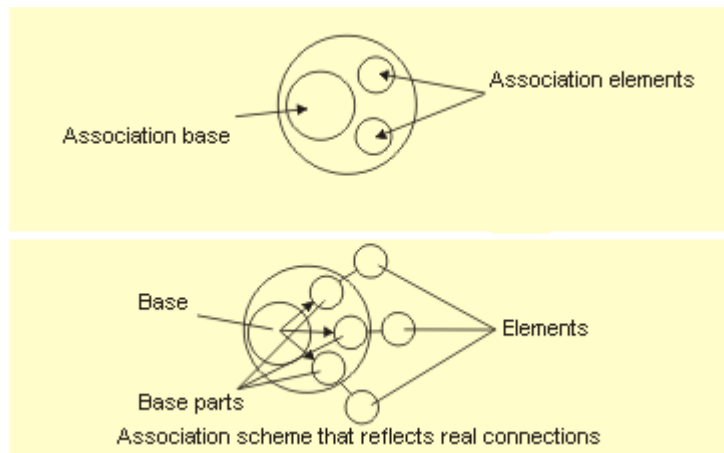




After the consecutive creation of three connections, we need to imagine the association as a whole. Images that represent the information message are **DIRECTLY** linked in it. Pay attention to the fact that association creation is a direct recording of information (connections) into the brain.



Below is a schematic representation of an artificial association that will be used to illustrate different memorization techniques.



When you need to memorize not only connections, but their order as well, this will be simple to do. Association elements are always “hung” on an association basis in the same direction: from left to right, from top to bottom, like we usually write or read.

It is recommended to create connections consecutively at all times, even if the connection order is not important for memorization.

## RULES FOR CREATING CONNECTIONS

Visual representations must be simple and precise. You should learn to see images as precisely as possible in the imagined space within a meter around you. Whether your eyes are open or closed at this point is not important. Those who learn to use GMS® mostly prefer to create connections between images with their eyes open and fixed on a monotone surface.

The produced images must be large enough, but must also be fit to enlarge (zoom in) or minimize (zoom out).

If you linked an image to some part of another image, you will not be able to link a third image to this part. In this case, the preceding image will be erased from the memory (See “**Association Erasure Effect**” for more details.).

Images should be connected in such a way so that they can be encircled with a continuous line. In other words, the images must have common points with each other.

If the images are hard to connect, you must try to make them fit together using mental operations like rotation, enlargement or minimization, modification or simplification. You can connect any images in your imagination.



All parts must be clearly viewable in an association you create. You cannot hide one image behind or inside another.

While creating a connection, images can constantly be in motion in your imagination. After the images have been connected, stop mental manipulations with them, and fix your attention on the picture you obtained.

The type of pictures you get (funny – sad, dumb – clever, kind – evil, etc.) does not have any impact on the memorization process. The brain only reacts to connections. The brain distinguishes only a general contour.

### WHAT IS ASSOCIATION BASE SINGLED OUT FOR?

Association base is a large image with parts that are connected to other, medium-sized, association images.

An image that is an association base is an image where the most significant parts of the memorized message are encoded. For example, when you memorize a phone number of the “Palm-tree” cinema, 301-90-83, you will certainly take the palm-tree image as the association base. Other images that represent the digits of the phone number will be elements in this association, medium-sized.

Figurative codes (fixed visual images that represent highly common elements, i.e. numbers, names, months’ names, weekdays, etc.) should never be used as an association base.

Every created association must always have an association base that complies with these main concepts.

Association is put together on an association base as one would similar to using a framework. Other association images are connected with images that are parts (sub images) of the association basis.

The connection creation technique, when singling out an association base, allows for the memorization of the same visual images several times. However, they are never mixed up and are remembered perfectly. For example, number 26 (a tape) can be present in tens of phone numbers and have connections with tens of different images. Any other method of image connection creation does not make possible the memorization of information with often-repeated elements.

We should note here that only the understanding of electric memory connection fixation principles allows for utilization of the right memorization technique for memorizing information with often-repeated elements (e.g. two-digit numbers are often encountered in European phone numbers).

A sequence of associations is remembered by their base. Only two variations are possible here: either association bases are connected with additional stimulating images or association bases are connected directly to each other.

## FIGURATIVE CODES AND SPEED MEMORIZATION

Elements of any information message must be transformed into simple and easy-to-use visual images before memorization can occur. The information message element's transformation into a visual image is accomplished via a process called encoding.

Memorization speed depends on encoding speed. Those who have just begun studying GMS<sup>®</sup>, encounter numerous difficulties during the encoding stage. Different figurative codes allow one to increase memorization speed of different information types.

- **The main functions of figurative codes are to eliminate a long stage of encoding in the memorization process and allow for a higher speed of information memorization.**

As you already know, different types of information often consist of identical elements with those elements being repeated many times. For example, when you memorize phone numbers, you will do so with a high frequency of two- and three-digit numbers. If, every time you memorize, you search for new visual images for those two- and three-digit numbers, the memorization process will be lengthy and strenuous. It is much better to find an image for every two- and three-digit number only once, learn them by heart, and utilize the same images when memorizing corresponding numbers.

- **A figurative code is a comfortable visual image that represents repeating element of information.**

The following elements of information messages belong to the category of figurative codes in GMS<sup>®</sup>:

- Two-digit numbers (00 - 99);

- Three-digit numbers (000 - 999);
- Months' names (January, February, March, etc.);
- Weekdays (Monday, Tuesday, Thursday...);
- English alphabet letters (A, B, C...)
- Names (James, Robert, John...)
- Subject names (algebra, geometry, history, physics...);
- Transcription signs (international phonetic transcription);
- Sounds of syllable alphabet (Japanese hiragana);
- Sine, cosine, tangent, plus, minus... (when memorizing mathematical formulas);
- Constant values (Avogadro constant, gravity constant, etc.)
- Units of measurement (inches, feet, yards, miles or centimeters, meters, kilometers...);
- Geographical names (continents, countries, states, cities and towns...).

Other figurative codes can be formed as well.

There is no need to learn all the codes at once. The majority of the mentioned codes are introduced gradually, according to the frequency of one element in the memorized information. Still, there exist those figurative codes which are absolutely essential to learn before you can begin using the majority of GMS<sup>®</sup> techniques. These are the figurative codes of two digit numbers (from 00 to 99). It is compulsory to learn these by heart and master them to an automation (reflex) level. Other figurative codes can be learned gradually, by using the figurative code's reference book or by inventing them according to the above-mentioned rules.

## RULES FOR HANDLING FIGURATIVE CODES

Figurative codes must not repeat themselves. Every image code is unique.

Figurative codes must be fixed. Each element must *always* be represented with the same visual image. For example, the number 26 is designated with a "tape" image. This will give you a possibility to find information that contains identical elements in your brain instantly. You will be able to remember all events that refer to a particular date or all phone numbers that contain number "26". You must always imagine the "tape" image identically.

Figurative codes must never be an association base – this is a very common memorization mistake. Nothing is recorded on figurative codes.

Figurative codes are always elements of an association. Figurative codes are recorded on an association base.

Figurative codes **MUST NOT BE CONNECTED AMONG THEMSELVES**. This leads to self-destruction of information already at the memorization stage. Thus, you must not memorize a phone number by consecutively connecting images that represent numbers (another common mistake). Figurative codes are always memorized through an intermediate image. Usually, this is an association base. If an information message does not contain an element that can be an association base (for instance: for numbers), then an association base is introduced in a compulsory way – any random image.

If figurative codes are present in textual information then, in the process of memorizing these texts, figurative codes are memorized separately (combined technique: “return technique”).

Any figurative code can represent a random visual image. Thus, you can take thousands of random images and enumerate them with their figurative codes (from 001 to 999). As a result, you will get a structured system of images.

You can only memorize other images over figurative codes at the stage of performing special exercises (unless you require a long-term memorization).

## HOW TO REGULATE THE MEMORIZATION PROCESS

The memorization process is fully controlled. You can memorize with 100% precision or not memorize at all; memorize for a few hours or forever; you can erase the memorized data and overwrite it.

You can see how to regulate the memorization process in the table below. Let us imagine you need to memorize an array of random, two-digit numbers.

25 47 38 56 47 68 57 69 39 46 58 79 36 47 12 98 46 37 04 27 40 98 47  
12 42 59 54

Action	Result
Simply look at the numbers.	The last 5-7 numbers will be memorized and will be forgotten in a few minutes. (They are memorized due to high inertness of the speech analyzer – the so-called “echo memory.”)

Transform numbers into images and memorize their order.	All numbers will be remembered; in about an hour, the majority of them will be lost (spontaneous erasure of connections).
Repeat the memorized numbers a few times, by extracting them from memory. That is, try to remember them.	Numbers are stored for a long time (about 6 weeks with a repeated fixation after 3-4 days).
Connect the numbers to a system of support images and ensure their periodical recollection (at least one time every two months).	Numbers are available for remembering at any moment. Lifetime storage.

When you simply view the information (say, a list of phone numbers), you do not memorize it. For it to be memorized, you transform the data into image form and create associations. Memorization is an active process requiring both attention and a thinking effort. After you have memorized the data in an image form, it will be stored in your memory for some time. If you do not return to it, it will be erased. If you repeat/review the information, it will be stored for a long time.

### MNEMOTECHNICAL EFFECTS

The regularities of memory functioning become obvious when one uses the GMS<sup>®</sup> system to memorize. The knowledge of these regularities allows one to avoid mistakes during memorization and makes the process more effective.

### ASSOCIATION ERASURE EFFECT

This is expressed in two forms:

First, when a created association is not activated, it is erased spontaneously. Thus, connections created only once begin to deconstruct after about an hour. This effect allows for performing a large number of training exercises. All memorized data (connections) is automatically erased.

Second, only one connection can be created with one image. If you can memorize 60 random numbers on 60 support objects and, the next day, you memorize another 60 numbers on the same images, you will not remember the first ones.

If you want further details with regard to this interesting effect, you will need to examine the electric connection creation scheme. The point is that previous

connections are not erased; they simply become unavailable for remembering. In reality, one image can be connected to tens of other images. Yet, to read these connections, you will need to use special memorization and anamnesis techniques. In order to read these multiple connections of one image, a special association technique for singling out an association basis (the main technique of the present system) and the "Matrix" memorization technique were developed. Even so, the spontaneous erasure effect remains in force, and the memorized data has to be fixed in the memory.

Information is erased spontaneously or under the influence of other information in the brain. The effect is easy to observe when memorizing 30 or more information units. This effect is used in GMS<sup>®</sup> study course. As a result of this effect, one can memorize new data in exercises by connecting them with one of the same support images. The previous information is erased. For a long-term memorization, you need to keep this effect in mind - and avoid using support images that are already occupied.

## THE ASSOCIATIVE CHAIN TURNING EFFECT

This effect is observed during anamnesis. If, during the memorization process, a person is distracted, he or she will no longer be able to remember the place where they stopped and, hence, will need to go back to the sequence start point. Sometimes fast flashes of images can be seen in the imagination when a person is disturbed. The chain of images, after having revolved, stops on the last image.

During a delayed memorization, after one or two months, (if a person did not have the goal to repeat things intentionally), when a person remembers the first word of a chain, the first two or three words are usually remembered as well, along with only a couple of the very last words. Other chain images are never remembered again (even when given a hint). Meanwhile, after memorization, a student could reproduce the whole set of (60-100) images effortlessly.

This effect is somewhat similar to the one described in the H. Ebbinghaus "Edge Effect" book. In this case, it is observed during delayed memorization. In my opinion, the importance of the effect is much more significant than usually believed.

This can hinder intentional memorization, since a deletion of the previously recorded images occurs. The erasure effect is easy to neutralize, however. Breaking an information sequence into small pieces of no more than 5 images in each, instead of memorizing long sequences of images, is enough. In the "Giordano Memorization System," memorization of long sequences is not used at all. The main memorization method is to create associations. In an association, any sequence is limited to two images.

The brain does not sacrifice information in vain. I believe that this effect is one of the mechanisms that helps the brain to automatically form turned-down reaction programs (like that of the “If...then...” type). Intermediate links between “if” and “then” are erased in order to speed up the response reaction. Thanks to this mechanism, the brain can form constructions (J. Kelly’s theory of Personality Constructs) which organize themselves into complicated, hierarchic construct systems and, basically, comprise a global reaction program whereby a person constructs his/her behavior accordingly (consciously and unconsciously).

I also think that the main part of turning down the associative chains is performed by the brain while asleep. Compression occurs in every analytical system separately; it is a well-known fact that, during sleep, both speech and visual analyzers are separated and function separately – thoughts meander and mingle when a person falls asleep). The brain shows the results of information compression as dreams. One of our dream functions might be the recording of the “archived” information into the brain.

### FIRST IMAGE EFFECT

Doubts about the choice of image often appear during memorization. The correct one is usually the first one to appear, even if you feel certain it is an incorrect image.

### IMMEDIATE ANAMNESIS EFFECT

First, information is grasped by the brain as a combination of visual images. Later, if you use the active repetition method, the memorized data will be remembered in the form that it was perceived when first memorized. It is extremely important to achieve this effect when studying foreign languages and their sign systems.

### ASSOCIATIVE ANAMNESIS EFFECT

This effect is easy to observe: it becomes evident in the fact that one perceived image instantly causes additional information to appear, according to the previously created connections.

The possibility of remembering all the information messages containing a stimulating element (for instance, the number 35) must also be related to this effect.

GMS® demonstrates that the human memory works according to one principle: “Stimulus – Reaction.” A reaction to a stimulus can be a separate image, an association, or a little program, i.e. a sequence of reactions, such as a phrase.

## CHARACTERISTICS OF THE MEMORIZATION PROCESS

### MEMORIZATION SPEED

This is the average time spent on memorizing one information element (creation of one connection). If you memorized 40 numbers in 4 minutes, your memorization speed equals 6 seconds per one two-digit number memorized as one image.

### REMEMBERING (ANAMNESIS) SPEED

This is the average speed of remembering information. If you could reproduce 40 numbers in 1 minute, your remembering (anamnesis) speed is 1.5 seconds per number. The memorized information can be remembered very quickly, much faster than it is memorized.

### MEMORIZATION QUALITY

This characteristic reflects the amount of correct answers you give immediately after memorization. If you could remember 90 numbers out of 100, your memorization quality is equal to 90%.

### MEMORIZATION VOLUME

This is the amount of information that you could memorize at one take, without breaks. For example, if you memorized 60 numbers with three attempts, your memorization volume equals 20. Memorization volume is similar to push-ups. Obviously, only the number of push-ups done in one set has any significance, not the sum of all the push-ups you do during a day.

### MEMORIZATION RELIABILITY

This is the number of correct answers that you give after a considerable period of time post-memorization – for example, 2 months.

Memorization reliability reflects your ability to store information in the brain. If you reproduce all the foreign words you need to know at a foreign language exam, you will get an “A.” However, this will not matter, as you will probably forget all that you knew at the exam within a couple of days, unless you know how to affix the new information.



## FOUR STAGES OF MEMORIZATION

The memorization process is divided into four stages in GMS<sup>®</sup>: encoding, memorization, memorizing the information order, and fixation.

### ENCODING

Any information message that you memorize consists of elements. In order to connect elements of one information message, every such element has to be transformed into a visual image.

Please note that encoding information into visual images DOES NOT EQUATE TO MEMORIZATION. It is only a preliminary memorization STAGE.

Encoding information message elements into visual images is achieved through a number of encoding methods which are described in detail in the “**Encoding Techniques**” section.

You will also see several familiar methods among the ones described in the section. For years, you may have used them for memorization often, without even realizing that you use GMS<sup>®</sup> technique elements.

For example, let’s say you need to transform the following information: “The battle of Crecy took place on the 26 of August, 1346” into images.

You need to single out the parts of the information that need to be transformed into images: Crecy, 346, 26, August – only four elements. They are transformed into the following visual images: a fleecy crab, a bronze viper, a tape, and mustard (according to the figurative codes system accepted in this memorization system).

Now the information is *prepared* to be memorized, and you can go on to the next stage – memorization itself.

### MEMORIZATION

Memorization is the creation of connections between elements of one information message. When you have transformed elements into visual images, you get a chance to perform direct recording of these connections, since visual images are easy to connect directly in your imagination.

Before you connect images in your imagination, you will need to single out an association base. Figurative code cannot be used as an association basis. Among the memorized elements, the figurative codes are: 346, 26, August. Only the “crab” image is left and it is the image we should take for the association basis.

Imagine a crab in your imagination. Single out its three parts: claw, head, and shell. Then, you must consecutively create three separate connections: “claw + bronze viper,” “head + tape,” and “shell + mustard.”

After you have created three separate connections, imagine the integral association. In the association, the “crab” is a large image; the rest of the images are middle-sized when compared to the “crab” image.

The information is memorized. Any of these association images will trigger recollection of the whole association in your imagination.

According to the “Giordano Memorization System” standards, one needs 18 seconds to create three connections (6 seconds per each connection).

## SEQUENCE MEMORIZATION

Let us suppose that you need to memorize not just a single historical date, but a chronological table containing 50 dates. Consequently, you will have to create 50 separate associations. It is practically impossible to remember this amount of associations without a hint (a question). Moreover, if you do not remember them regularly, they will be erased; that is, the connections you created will desynchronize gradually. You will remember the “crab,” but you will not be able to remember the rest of the images connected to it.

That is why association sequence fixation is the next obligatory stage of memorization.

Association sequence is fixed in two ways:

1. Each association base (the “crab” in our case) is connected to an additional support (stimulating) image. Consequently, in order to fix 50 associations you will need 50 support images, the sequence of which you memorize without mistakes.
2. Association base can be connected directly to another such base. In such a case, it is forming an INFORMATION BLOCK.

An **information block** is a group of monotype data gathered “in a heap” and fixed upon one support image. Associations are connected directly in an information block, according to their base (large images).

When you connect every association to a support image, it will be possible to remember all the historical dates you memorize without hints, and in the correct order. For this, you will need to consecutively remember the support

images you learned by heart, so they will “pull” the created associations that encode particular historical dates out of your memory.

## CONNECTION FIXATION IN THE BRAIN

When you connect visual images, electric memory is utilized. Such connections are created quickly, but are also deconstructed just as quickly in your brain. To store information in the brain, the created connections need to be activated – intentionally processed in the imagination according to a specific system. This information fixation technique is called the “**Active Repetition Method**” in the GMS®. It will be examined in the “**Information Fixation**” section.

After fixing information, the data will be stored in your brain. You are able to remember them not only consecutively, but selectively as well, without having to run through all the information. Any question concerning the previously memorized data will help you recall the full association in your imagination. For example, if you are asked: “What happened on the 26<sup>th</sup>?” you will instantly be able to answer: the battle of Crecy happened on the 26<sup>th</sup> of August, 1346. You will also be able to remember all other dates that are connected to the 26<sup>th</sup>, if such dates have been fixed in your brain.

The encoding stage is the lengthiest and the most difficult of all the described memorization stages. Your memorization speed depends on the speed of information encoding into visual images. The skill of encoding into visual images is trained and quickly becomes automatic. This is why you should not feel sorry for the time you spend on performing exercises that will help automate the encoding skill for different types of data.

The “**Encoding Techniques**” section is fully dedicated to this topic.

## PART 4: ENCODING TECHNIQUES

### THE ALPHANUMERIC CODE (AC)

Alphanumeric code in GMS<sup>®</sup> is used to transform two- and three-digit numbers into words.

Every cipher is represented by consonants:

**1 – N, 2 – THZ, 3 – B, 4 – WVK, 5 – FR, 6 – JPX, 7 – SD, 8 – GQL, 9 – C,  
0 – M**

Number 25 is thus encoded the following way: 25 – THZ FR.

Number 390 is encoded with a combination of letters: B C M.

You should then find the words that represent visual images by the consonants that are also easy to memorize: 35 = **B FR =BeeR**.

#### WORD SELECTION ON THE BASIS OF CONSONANT LETTERS

After you have transformed a two- or three-digit number into a combination of consonant letters, you need to choose the variant among all the possible combinations that allows you to create a word containing all the necessary letters. Significant letters must be the first in a word. The rest of the letters are ignored.

25 = **THZ FR - HR = HaRe**

828 = **GQL-THZ-GQL = GZL = GaZeLle**

444 = **WVK-WVK-WVK = Wood WaVe**

You may often encounter a combination that makes it impossible to create an appropriate word. Say, WVK-WVK-WVK (444).

In this case, you need to find a visual image that is represented by two words – an adjective and a noun. Below, the first letter of the adjective and the two first letters of the noun will be significant.

444 = **WVK-WVK-WVK = Wood WaVe**

470 = **WVK-SD-M = Wood SaMurai**

In rare cases, when an absolutely inconvenient consonant letter combination appears, non-standard encoding methods are acceptable. Such images must be simply learned by heart.

502 = FR-M-THZ = ReMoTe

#### TRANSFORMING NUMBERS INTO IMAGES

Any numerical data must be transformed into a visual image before being memorized. This is realized using a figurative code. A word is chosen according to the corresponding numbers, a word that results in an image convenient for memorization to occur in imagination.

Transforming numbers from 01 to 09 into images:

In these cases, “0” is ignored during memorization and is added only at the remembering stage. The point is that one-digit numbers are practically never encountered in memorization. Thus, if you memorize a phone number: 356-09-90, you need to memorize either 09 or 90.

(0)1 = 1 = N = Nose = the visual image of a nose

(0)4 = 4 = WVK = Wvk = W = Whale = the visual image of a whale

(0)9 = 9 = C = Cookie = the visual image of a cookie

Transforming numbers from 10 to 99 into images

10 = NM = aNiMal = the animal visual image

35 = B FR = B fR = BR = BeeR = the beer visual image

Transforming numbers from 000 to 999 into images

006 = M-M-JPX = M M jPx = Marble MaPle

228 = THZ-THZ-GQL = tHz thZ gqL = HaZeLnut

238 = THZ-B-GQL = Thz B gqL = TaBL~~e~~

612 = JPX-N-THZ = jPx N Thz = PaNTies

The process of transforming two- and three-digit numbers into visual images is lengthy and requires a lot of effort. This is why students use the “Figurative codes reference book” that provides figurative code for every two- and three-digit number, plus all the letters of the English alphabet, months’ names, and weekdays. The reference book provided by School of Phenomenal Memory® is unique. Created by Ruslans Mescerjakovs, founder of the School of Phenomenal Memory®, it is the only list of image codes for three-digit numbers offered in English today.

#### FIGURATIVE CODES FOR TWO-DIGIT NUMBERS (00-99)

Every number from 01 to 99 is connected to a corresponding word according to a figurative code. Zero in numbers from 01 to 09 is not encoded into letters. These numbers are correspondingly remembered as 1, 2, 3, 4, 5, 6, 7, 8, and 9. The zero is added during anamnesis.

01 = 1 = N = Nose, but 10 = NM = eNeMa

02 = 2 = THZ = tHz = Hair, but 20 = TBZ-M = Tbz M = aTM

In other numbers from 10 to 99, both ciphers are encoded:

45 = WVK-FR = Wvk fR = WR = WeRewolf

99 = C-C = CaCao

Here are some rules for using figurative codes for two-digit numbers.

- When memorizing phone numbers, only their second and the third numbers are memorized by two-digit figurative codes: 365-99-45.
- Four-digit numbers are memorized by breaking them into two two-digit numbers: height of the Angel waterfall is 1054 (10 + 54) meters.
- When memorizing precise dates with these codes, the day of a month is remembered: battle of Crecy happened on 26 August 1346.

- When memorizing addresses, figurative codes help memorize a number of a house, a block, and an apartment: Ocean Street, 19, block 3, apartment 89.
- A long array of numbers is memorized by breaking it into two-digit numbers: 34762387549864758358 = 34 - 76 - 23 - 87 - 54 - 98 - 64 - 75 - 83 - 58.
- Two-digit number figurative codes, like any other figurative codes, must not be connected with each other. This leads to connection destruction (the association erasure effect).

For example, if you consecutively memorize images 54 - ~~43~~ - ~~54~~ - ~~87~~ - ~~32~~ - ~~54~~ - ~~65~~ - ~~43~~ - ~~54~~ - 87 - 64..., the sequence part written in red will be forgotten, you will remember the last connection with the image of 54: 54 - 87 - 64...

For the same reason, it is impossible to consecutively memorize numbers of a phone number. If any numbers repeat, the newly created connections will destruct the previous ones.

356 - 34 - ~~98~~

635 - 34 - ~~54~~

743 - 34 - 23

The numbers written in red will be reproduced incorrectly, because they will be overwritten by the last connection – 34 – 23.

The association erasure effect (as well as others) is observed when trying to memorize a large amount of information and during the delayed anamnesis. This can occur, for instance, when you memorize a sequence of 50 two-digit numbers (within the time of 50 – 6 seconds = 300 seconds = 5 minutes), and when repeated perception is not allowed.

### FIGURATIVE CODES FOR THREE-DIGIT NUMBERS (000-999)

Pay attention to the fact that encoding three-digit numbers into figurative codes also begins with zero:

01 = N = Nose

001 = ~~M~~ ~~M~~ ~~N~~ = e~~M~~blem of ~~Ma~~Ndarin

02 = T~~H~~Z = t~~H~~Z = ~~H~~ = ~~H~~air

002 = **M-M-THZ** = **M M Thz** = i**M**age of **MeaT**

In figurative codes of three-digit numbers, all numbers are encoded - with no exception. There are 1000 meticulously chosen images on the list defining the figurative code.

Below are examples of three-digit number figurative codes:

A year in historical dates: 15 June 1389 – battle on Kosovo field (389 – a visual image of a BLaCkberry).

Famous people's life dates: Newton (1643 – 1727) – figurative codes are JaWBone and SHoeString.

Automobile license plate number memorization: 1 244 pr – figurative code is HaWK.

Number sequence memorization: 019025 = 019 – 025 = MoNoCle – MeTeoR.

Memorization of three-digit numbers in a phone number: 8 – 911 – 735 – 65 – 35 – figurative codes are CaNNon and SaBRe.

Memorization of articles in Criminal and Civil Codes.

Memorization of any other numerical data.

Three-digit number figurative codes, like any other figurative codes, are prohibited from being connected with each other, since this will lead to the erasure of other data.

## A NUMBER SEQUENCE ENCODING INTO IMAGES

Any number sequence is regarded as an information message and is required to be broken down into elements of two- and three-digit numbers.

5 1 0 4 7 0 4 5 7 5 4 2



510 + 470 + 457 + 542

oRNaMent + Wood SaMurai + oVeRShoe + RiVeT

5 1 0 4 7 0 4 5 7 5 4 2

51 + 04 + 70 + 45 + 75 + 42

FiN + Whale + DoMino + WeRewolf + DRagon + WaTermelon

If the number of numerals in a set is uneven, such a set is broken into a combination of two- and three-digit numbers.

When memorizing, one should always try to minimize the number of elements in the memorized information; that is why breaking a number array into three-digit numbers is more rational and preferable.

Breaking an array of numbers into one- or four-digit numbers is senseless. In the first case, you would only get ten images that correspond to ten numbers. This would result in high frequency of the same images in association which, in turn, would make it almost impossible to memorize numerical information.

In the second case, the choice of appropriate words becomes extremely complicated. It is almost impossible to find a word that would correspond to four numbers. You would need to make up 10,000+ words, and such a number of word-images simply does not exist in any language. You should also keep in mind that, in order to encode numbers, only simple nouns are suited, such as “map,” “pencil,” and “iron.” Other words, like “run,” “comfortable,” and “astonishing,” are not convenient for encoding numbers. Such words require extra transformation because they themselves need to be transformed into images which are simple and easy to memorize.

### FIGURATIVE CODES FOR MONTHS' NAMES

Figurative codes for months' names are chosen using either the Symbolization method or the Connection to Familiar Information method.

Such figurative codes are used to memorize months' names in precise dates, as well as in some other techniques. For example, in the “Calendar” technique, fixation of events of each day in the memory makes it possible to memorize dates by events and events by their dates.

01	January	Champagne (31 December)	
02	February	Polar Bear (National Polar Bear Day)	February 27
03	March	Eggs (Easter)	
	March 27		
04	April	Drop (thawing)	
05	May	Civil War Memorial (Memorial Day)	May
30			
06	June	American Flag (Flag Day)	June
14			
07	July	Firework (Independence Day)	July 14
08	August	Mustard (National Mustard Day)	
	August 6		
09	September	Protractor (1 September, school)	
10	October	Ice (first ice appears)	
11	November	Snowman (first snow falls)	
12	December	Christmas tree	

The presence of figurative codes for months in an association instantly allows understanding of what type of information is encoded in the image connection. Obviously, if an association you see has the figurative code of a month, this is either a precise date or a timetable or a holiday.

**• You cannot represent months with figurative codes of two-digit numbers (01-12) – this leads to confusion when remembering and is a very severe mistake.**

## WEEKDAY FIGURATIVE CODES

Weekday figurative codes are handy for memorizing different timetables and schedules. For example: school or university curriculum, training timetable, bus schedule, etc. These figurative codes may be used to memorize your own plans for the week.

Let me remind you that information can spontaneously erase in your brain; this allows you to edit timetables in your brain just as you would in a computer file or an electronic organizer.

A timetable that has become useless will be erased automatically, simply because you do not use it anymore.

Weekday figurative codes are chosen according to the well-known abbreviations: Mon., Tues., Wed., Thu., Fri., Sat., Sun. You need to choose any word that contains both consonants of an abbreviation.

MoNday	MN	MoNitor
TueSday	TS	ToaSt
WeDnesday	WD	WooDpile
THursday	TH	THermos
FRiday FR	FRuit	(for example: dragon fruit)
SaTurday	ST	STarfish
SuNdaySN	SNowmobile	

Different figurative codes (weekdays, months' names, numbers, and letters) **MUST NOT CONTAIN IDENTICAL FIGURATIVE CODES**. That is, the figurative codes system must be organized and arranged.

For example, if you use the Sun to represent Sunday, this image cannot be used to represent numbers like 70 or 710. Other words should be chosen for these numbers: 70 – DoMino, and 710 – DyNaMite.

As you see, creation of a **FIGURATIVE CODES SYSTEM** is a complicated task. You can create your own figurative codes system. However, it is much easier to use our reference book as a basis and substitute any words you do not understand with ones more suitable for you.

## FIGURATIVE CODES FOR ALPHABET LETTERS

Figurative codes for alphabet letters can be created to your liking. The principal with them is not to intercross them with other figurative codes. Thus, the figurative codes that you use to encode letters of the English alphabet must not be used to encode two- and three- digit numbers into images.

The principle used to choose the appropriate words is very simple. You simply choose a word that begins with the necessary letter.

A – Arch

B – Bear

V – Vampire

G – Gum

Uses for the figurative codes for letters of the English alphabet:

- Memorization of complicated combinations of letters in automobile license plate numbers.
- Memorization of information in the alphabetical order.
- Memorizing of letters encountered in codes and passwords.

## PHONETIC FIGURATIVE CODES

Phonetic figurative codes are used for quick and very precise memorization of pronunciation of new foreign words.

Phonetic figurative codes can intersect with other figurative codes since the memorization using them is temporary. When word pronunciation is fixed in the long-term memory, figurative codes that provide a hint to pronunciation become useless. In order to memorize pronunciation of a new foreign word, a combination of three different methods is used, one of which is the phonetic figurative codes method.

Examples of the choice of words:

Japanese

い (I) Ink

え (E) Elbow

お (O) Ocean

か (KA) KAYak

き (KI) Kiosk

す (SU) Sugar

ね (NA) Napkin

む (MU) Mustard

## OTHER FIGURATIVE CODES

Figurative code is a GMS<sup>®</sup> language. Without knowledge of this system, the art of memorization quickly turns into suffering. Every time you try without it, you will agonize over having to choose an image to memorize an element of information. The previously memorized figurative codes make this process quick and pleasant.

There do exist other information elements, aside from the ones already described above, which are not included in the “figurative codes reference book.” Anyone can (and must) choose figurative codes for such elements independently.

ANY FREQUENTLY ENCOUNTERED INFORMATION MESSAGE ELEMENT is subject to encoding into visual images. You cannot tell beforehand what figurative codes will be of use to you particularly.

If you are a lawyer, you will have to create figurative codes for the most common judicial concepts.

If you are a chemist, you will probably need to find figurative codes for chemical substances.

If you are a mathematician, you will need figurative codes for common mathematical concepts and actions.

If you study geography, encode continents, countries, states, and towns into images.

For faster memorization of names and last names, you will need to find appropriate figurative codes for male and female names.

Only figurative codes necessary to a person, regardless of his or her job, are subject to compulsory memorization. These are the figurative codes for two-

and three-digit numbers, months' names, weekdays, and the alphabet letters. When you study a foreign language, you need to memorize phonetic figurative codes for that language.

Other specific figurative codes can be found gradually, according to their popularity in the memorized information.

If you start creating a list of some specialized figurative codes, you can share the results of your work with other users of the GMS<sup>®</sup> techniques by publishing them on the pages of [www.Pmemory.com](http://www.Pmemory.com) website under the “**Forum**” section. Thus, the website will accumulate and offer a large number of additional information that you will be able to use in the future.

I, as the author, the manager, and the main expert of the site, retain the rights to edit, send to archive, and delete the materials from the “Forum” section. The most successful, technological discoveries and materials on GMS<sup>®</sup> will be published on the pages of the website. If you have contributed, this will be done with you cited as the author, with your consent, and upon your desire to share it.

## WORD REPRESENTATION WITH AN IMAGE

When you perceive words, they automatically cause visual images to appear in your imagination, according to previously created associations. For example, you understand the words “dog,” “crow,” or “match,” because the corresponding pictures appear as a reflex when they are perceived.

Images that appear are usually very weak, so weak that many people do not even comprehend that word understanding occurs as a result of visual images. People think that they understand words without visual images.

You can easily check if a connection between an image and a word has not been created beforehand: you will not understand the meaning of the word. Compare: hito, akai, utau, and mise with a man, red, sing, a shop. These words represent the same visual images. The image appearing in your imagination is the WORD SENSE. Image-sense is a common basis for all languages. People speak different languages, but they see the same visual images in their imagination.

A simple representation of images does not offer enough for us to memorize well. Images that appear randomly in the imagination should be intentionally amplified and transformed so they'll become handy to memorize. An image should not be too simple nor too complicated (complex plot pictures). Images must be large, three-dimensional, in color, and detailed.

A good example of how visual images should be memorized is shown using three-dimensional software graphics (3D Studio MAX).



## SYMBOLIZATION TECHNIQUE

The symbolization technique is used to transform abstract words into visual images. An abstract word is a word that does not have any visual sense.

Symbols are all around us. The letters of the English alphabet symbolize (represent) sounds of speech. Road signs symbolize particular rules. Computer icons represent particular functions and commands.

There are symbols which are fixed in the mass conscience, that is, in the conscience of the majority of people. Such symbols are promoted by mass media and are clear to anyone: “Dove” is a symbol of peace; “Turtle” – a symbol of slowness; “Skull” - a symbol of death; “Crown” - a symbol of power; “palm-tree,” “sea,” and “yacht” are all symbols of recreation, resort, or holidays.

Meanwhile, during memorization, any abstract words must be transformed into visual images, and not only those which have fixed images. In such cases, every person must find his own set of images according to the content of his or her memory.

For some of us “jealousy” is a wet handkerchief, for others – a broken chair. Some imagine wealth as a bag full of money; others as a large number of friends; someone else – as a huge library.

Below are some examples of image selection for abstract words:

Cold – ice;  
Warm – cup of hot-water;  
Illness – thermometer;  
Eternity – Egyptian pyramids;  
Infinity – mathematical sign of infinity;  
Separation – train;  
Time – watches;  
Autumn – maple leaf;  
Wintertime – snowflakes;  
Summer – roller skates.

When choosing an appropriate symbol for an abstract word, you must choose an image that is handy for you to memorize. Most often, the image that was the first to appear in your brain should be taken as the image to choose. If you find it difficult to choose an image to suit a word, you do not yet understand the word - and its meaning to you is not clear.

By using the symbolization technique, you can automatically systemize things in your brain, and precisely understand the meaning of the words you use. Apart from this, you will see that people often use the same words to mean different things.

If a person says: “I love you,” one must figure out what exactly it is that he loves: your body, your soul, your house, your connections, your money, all of you?

### LINKING TO THE FAMILIAR INFORMATION TECHNIQUE

People who are not familiar with **GMS**<sup>®</sup> often use concepts such as “a phone number easy to memorize” or “a number hard to remember.” Many phone telecommunication companies sell phone numbers that are easy to memorize.

Let us look into the reasons of this phenomenon that makes people think that phone numbers are either “easy” or “hard” to memorize.

Here is an example with two phone numbers: 492-39-45 and 746-83-57.

Obviously, the first one belongs to the kind of numbers that are easily memorized. Why? Because the elements that make up the phone number are familiar: 492, 39, and 45. What does “familiar” mean in this case? This means



that VISUAL IMAGES appear when such elements are perceived. When you see number 492, you will remember that Columbus discovered America in 1492, and a ship image will appear in your imagination. When you perceive the number 39, you will remember the beginning of WWII and a swastika image might appear in imagination. 45 will remind you of the end of WWII and an image of the parade can appear in your imagination.

When you perceive the second phone number, images do not readily appear in your imagination; because of this, it is hard to memorize the number. The brain is only capable of memorizing connections if there is some corresponding image; no image and the connections cannot be established.

If elements of the memorized information message are automatically transformed into visual images, these images are the ones to be used for memorization. No special transformation of the images is needed.

Here are some examples of information that causes visual images to appear and is, thus, easy to memorize.

SONY – an image of some device made by this company appears.

Washington State – an image of one-dollar banknote (with the image of George Washington on it).

Colorado State – an image of Colorado beetle appears.

Number 110 – an image of an electrical plug appears.

Mars planet – an image of “Mars” candy bar.

Venus – an image of Venus statue.

Familiar information is information that contains elements which cause visual images to appear in the imagination when perceived.

The above-mentioned method IS NOT USED FOR NUMBER MEMORIZATION. This technique is used primarily to transform names and last names into images.

The method should be used only when a perceived element *spontaneously* causes an image to appear in your imagination. In other cases, you should move on to using other encoding techniques.

## ENCODING BY CONSONANCE TECHNIQUE

Many foreign words, names, and terms, are similar to the ones existing in our own language, so we easily imagine them as visual representations.

This word transformation technique is easy to illustrate with the following examples:

Factor – tractor;

Kami (Japanese for hair) – camel;

Kubi (Japanese for neck) – cube.

By remembering each image and pronouncing them inwardly, you will easily remember the sound of a new word, term, concept, or last name.

## CREATING A WORD FROM SYLLABLES TECHNIQUE

This technique, just as figurative codes for two-digit numbers, is a “vital” technique of GMS<sup>®</sup> because it is used very frequently to transform names, concepts, or foreign words into visual images.

Any syllable can be developed into a word with a meaning. You can add elements to a word on its right, left, or from both sides.

CAM – CAMel, CAL – CALculator, KNI – KNIfE.

SOR – SORT, AKI – fAKIr, NIC – NICotine.

NIG – kNIGHT, ISK – whISKer, MAG – MAGic.

Suppose, we need to transform the word MACHBASRUL into a visual image. First, we need to break it down into elements: MACH + BAS + RUL.

Then, each syllable must be complete in order to become an image-word: MACHine, BASket, RULer,

A base must be chosen for these elements – a big image, to which other association images (elements) will be connected.

Let the “machine” (automobile) be the base. Two parts must be singled out in this case: gear shift and a glove compartment. Create the following associations: “gear shift – basket” and “glove compartment – ruler.”

Imagine the integral association. This is a machine with a basket on the gear shift and a ruler inside the glove compartment.

Now, MACHBASRUL has become easy to read via this association. The word is read through visual images.

Sure, if you memorize only a couple of words each day, such a technique may seem excessive to you; but, if you memorize tens of new terms a day, this method together with other techniques allows memorization to be quick and efficient. Most importantly, it ensures long-term storage of the memorized data.

Here is how the name WISCONSIN should be memorized:

Break the name into three elements: WIS + CON + SIN.

Complete each syllable so that it becomes an image-word: WISent + CONdom + SINKer.

Choose the association basis: WISENT.

Single out two sub images in the WISENT image: horn and a mouth.

Create connections: “Horn + condom” and “mouth + sinker.”

As a result, “WISCONSIN” will be encoded into the following image: Wisent with a condom on one of his horns and with a sinker in its mouth. The state name is easy to read with this association.

Please note that, in this technique, the method of creating an associative connection is also used. That is, simultaneously with the transforming of images, we are also memorizing them (create connections).

## METHOD OF CLUE ASSOCIATIONS

The method of clue associations (MCA) includes a combination of five techniques:

Symbolization technique (love – heart);

Encoding by consonance (Factor – Tractor);

Connection to familiar information technique (Mars planet – “Mars” chocolate candy bar);

Developing a word from a syllable (NIC - NICotine);

Association creation method (all created images are united into an integral association).

All of these methods are used spontaneously without prior preparation. The use of any method depends on the word memorized and upon the content of your memory. One word can be transformed into visual images using different methods. This process is called the “Method of Clue Associations” because new and unfamiliar words are coded into an association (a combination of visual images), that offers a clue to the pronunciation of the new word.

Why do you need this? Our speech analyzer cannot memorize many words quickly, only five words a day on average. Also, there is no guarantee for long-term preservation. The visual analyzer can memorize up to tens and hundreds of words quickly and in proper sequence.

Initially, a list of new terms is read with the assistance of visual images which appear in the imagination. After a couple of days, new names are completely fixed in the brain and are easily reproduced without the pictures.

Using the “Method of Clue Associations,” you can consecutively memorize all the states of the USA and every town in every state. All the terms used in pharmacology study books are easily memorized within a few days; consequently, the study book itself is memorized as well.

The “Method of Clue Associations” is one of the most complicated and hardest ones to master in GMS®. Many students seem to spend too much time on transforming separate names into combinations of visual images.

That is why I recommend using some kind of reference book, for instance, a medicinal substance reference book, to train the brain to memorize names of cures in the order in which they appear in the book. The skill can be developed to become automatic and will not cause hindrance further on.

Here are several examples of transforming names into images using this method:

### **Alabama State**

Break the word into two parts: **ALA** and **BAM**. Transform each part into a word: **ALA** – **ALArm** (consonance) – alarm-clock (symbolization), **BAM** – **BAMboo**. Create association: alarm-clock (base) has minute-hands made from bamboo (element).

### **Alaska State**

Alaska – **salmon** (symbolization).

### **Arizona State**

Break the word into two parts: **ARI** and **ZON**. Transform each part into a word: **ARI** – **ARiA**, **ZON** – **ZONE**. Aria – a piece of music. Zone - surrounded by barbed wire. Create association: A piece of music paper wrapped in barbed wire.

### **Arkansas State**

Break the word into two parts: **ARK** and **ANSA**. Transform each part into a word: **ARK** – **ARK**, **ANSA** – **NASA**. Create association: In an ark’s main entrance is a NASA shuttle.

**California State**

California – **surf board** (symbolization).

**ENCODING IMAGES INTO SOUNDS**

In order to consecutively memorize sounds of a new alphabet, you need to encode the sounds into images. The chosen images must comply with two requirements. First, they need to be handy to memorize. Second, one part of each image must be pronounced as a corresponding alphabet sound. As an example, Japanese hiragana alphabet is used.

あ (A) Artist

い (I) Ink

え (E) Elbow

お (O) Ocean

か (KA) KAyak

き (KI) KIosk

す (SU) SUgar

ね (NA) NApkin

む (MU) MUstard

By memorizing the sequence of these images, you will be able to reproduce the sound sequence.

## ENCODING SIGNS INTO IMAGES

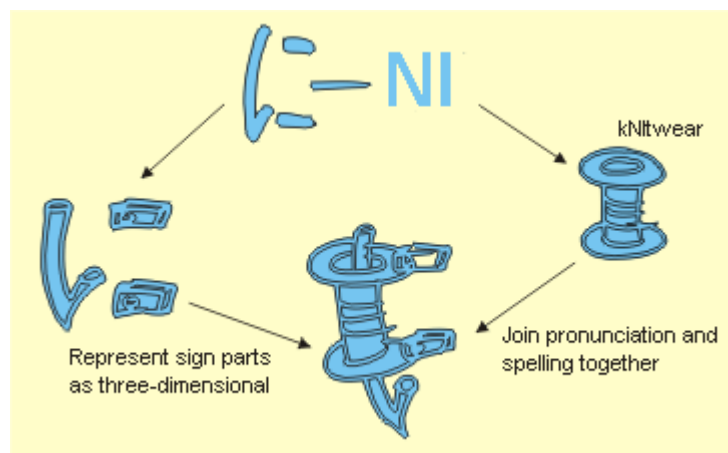
Signs are very easy to transform into images. Every part of a sign must be imagined as a three-dimensional image. If a sign is complex, it must be broken down into elements with each element represented as a three-dimensional image.

Memorization of any alphabet is actually memorization of “sound + sign” combinations.

When you transform both the pronunciation and the writing of a sign into an image, this connection is easy to remember. This is done directly in the imagination: an image representing a sound is connected to an image representing the writing. The associations you get are memorized using whatever method of image sequence memorization that works best for you.

The Japanese “Hiragana” alphabet, consisting of 46 images, can be memorized this way in only an hour, and in exact order!

Though, you will need some 3-4 days to fix the signs, this fixation is realized without any study books or cheat sheets; the signs are remembered using nothing but your memory.



## THE DISTINCTIVE FEATURE TECHNIQUE

This method is used to memorize monotype objects, that is, objects that are very similar in general contours and differ only in details - people, for example.

Every one of us had a nickname at school. One was “Joker,” another – “Donut,” others – “Ice Queen” or “Professor.” All these “Jokers,” “Donuts,” “Ice Queens,” and “Professors” are considered to have distinctive features. Children do not usually like last and first names since they are hard to

memorize. Nicknames are not the same; they are individual, so one can instantly understand who is it that we are talking about.

A nickname reflects the most important thing in a personality, appearance, or reminds us of a last name in a shorter form. It is very important that a nickname is usually a word that is easy to represent as a familiar visual image and, thus, easy to memorize.

## DISTINCTIVE FEATURE FUNCTIONS

A distinctive feature allows remembering a particular person.

Any precise information about a person is linked to distinctive features: first and last name, address, phone number, automobile license plate number, etc.

Distinctive features are easily memorized in certain order, which makes it possible to consecutively remember information about a group of people.

## SINGLING OUT A DISTINCTIVE FEATURE ON A PHOTOGRAPH

A distinctive feature perceived simultaneously with a photo, is a natural association and, consequently, is memorized automatically. As soon as you see a distinctive feature, a general image of the person appears in your imagination.

A distinctive feature on a photo can be anything: clothing elements, haircut, appearance defects, a similarity to someone else. Even an element of a background can be a distinctive feature.

Singling out a distinctive feature on a photograph can be useful for memorizing information about outstanding scientists, writers, musicians, or politicians.

Analogical methods can be used to memorize a sequence of any group of pictures, including a sequence of illustrations in a study book.

Here is an example of singling out a distinctive feature on a photograph: say, you see a photo of a girl with a strange earring in her ear. In this case, the “earring” image can be chosen as a distinctive feature. When you examine the photo and pay attention to the distinctive feature you have found, your brain will automatically fix the connection between the distinctive feature and her face. Memorization is AUTOMATIC. You do not need to think about it since the images are already CONNECTED.



A brief example of singling out a distinctive feature on an illustration is when you study a book about aquarium fish and need to memorize both the common and scientific names and the appearance of the fish. You need to choose a distinctive feature on an illustration. Say, a fish is photographed with an unusual shell in the background. In this case, this shell might be chosen as a distinctive feature; you can later connect the name(s) of the fish to this image.

### SINGLING OUT A DISTINCTIVE FEATURE OF A PERSON YOU KNOW WELL

Even if you know a person very well, you will probably need to memorize some additional information about them: They may have a habit of changing their cell phone number every month.

In this case, a distinctive feature is found on the basis of their job, hobbies, good or bad habits, idiosyncrasies, manner of walking, speaking, dressing, or their character traits. If your acquaintance is a police officer, you might associate him with his badge. If he collects stamps, his distinctive feature might be “a magnifying glass.”

You must not remember an image of a person when memorizing information about him. All people are the same for your brain. Each person must be marked with an individual visual image during memorization.

### SINGLING OUT A DISTINCTIVE FEATURE OF AN UNKNOWN PERSON STANDING IN FRONT OF YOU (“MEETING” SITUATION)

During the first meeting, a person usually relies on his memory; after a few minutes, he realizes that he has forgotten the name of the person he has just met. This situation is too common.

If you know that you will be meeting someone new, try to look at this person and select a distinctive feature beforehand. By the time he opens his mouth to introduce himself, an image should be ready in your brain. You will then connect your associations to the image you get from the name.

Have you ever wondered why it is only a name that is always forgotten? It seems that the information you have just received is automatically deleted. The truth is that a single word is not memorized, because it is a one-element information message; thus, the brain has nothing to connect it to. When you have prepared a distinctive feature in advance, you have what you need to create a connection - a name plus a distinctive feature. Do not forget about the main paradox of memory: *the brain can only memorize connections.*

It is not easy to single out a distinctive feature of an unknown person. You must train yourself to do so. Try to single out such features for ten random people in a subway or on a bus. Just like any other encoding process, this operation will take quite a long time to perform. You need to learn to find distinctive features and be able to find them fast.

### **SINGLING OUT A DISTINCTIVE FEATURE OF A PERSON WHOSE IMAGE IS UNFAMILIAR TO YOU**

In this case, you only need to memorize a person's last name and then single out the distinctive feature. If the last name is Wolf, then, obviously, the person can be represented with the image of a "Wolf." If a person's last name is McCloud, he can be marked with an image of a "loudspeaker." If his last name is Jordan, he can be represented with an image of a "basketball" (Michael Jordan).

### **SINGLING OUT A DISTINCTIVE FEATURE OF AN INTERIOR**

It is often enough to simply note an element of the interior where a person lives or works. Thus, in a dentist's office, it can be a special armchair. In a hospital, it is a window at the reception desk. Associations connect the data you need to the objects you have singled out.

A distinctive feature in a room can be singled out when you need to memorize a phone number of an organization if the names of staff or a doctor are of no interest to you.

### **SINGLING OUT A DISTINCTIVE FEATURE IN A CAR**

It is often necessary to memorize a car's license plate number, for example, if you have witnessed a car accident, a hit-and-run, and want to provide information. All cars are similar; if you try to memorize the car's license plate number separately, without connecting it to anything, you will not be able to do so dependably (the brain forgets the information, because no connection has been created).

Singling out a distinctive feature will allow you not only to connect a number to it, but also to remember the car make - and even the driver's appearance.

Look inside the car and spot some gadget in it; drivers like to decorate their cars on the outside as well as on the inside.

## ATTENTION: FALSE AND STANDARD DISTINCTIVE FEATURES

When you try to find a distinctive feature, try not to choose the ones that are hard to memorize. Try to note if a person is cross-eyed. If he has a golden tooth, big ears, a scar, sweaty hands, piercings, bad fingernails. A tattoo can be temporary and is not a secure distinctive feature.

Do not pay attention to clothes, haircut, and other external, changeable features; these are only masks - and some people wear these masks with only one goal: to avoid your attention or simply to get lost in a crowd.

An example of a false distinctive feature is a reversible coat (one that can be worn on both sides and has two different colors), or a bright cap that can be taken off.

An example of a standard distinctive feature is a short haircut, though if everyone was bald, it would be impossible to find the one you need.

Human behavior itself is an unreliable, distinctive feature. Many swindlers are talented actors; as Shakespeare once said, “All the world’s a stage... and all the men and women merely players.”

## THE INFORMATION COMPRESSION METHOD

This method is used to encode short text extracts into visual images: anecdotes, encyclopedia data, or separate text paragraphs.

The results of experiments with memorizing textual information (F. Bartlett, “The Mind at Work and Play”) prove that textual information is sort of erased after a period of time (as if compressed). In essence, a person can initially reproduce a text more or less precisely and completely; then, after a few weeks, his memory retains only a couple of sentences from each page of textual data.

GMS<sup>®</sup> does not require precise memorization of textual information. It should be, at this point, obvious that a person reproduces textual data by the pictures he remembers. When you read a book, reproductive imagination automatically translates words into visual images and creates CONNECTIONS between them. Thanks to this process, you memorize something like separate frames from a “viewed movie” which the text causes to appear in your imagination. The process of recollecting a story is similar to retelling a story by pictures.

You already know that connections created between visual images only once are quickly deconstructed. That is why, even an hour after reading a text, only a part of the created connections remains in your imagination. Consequently,

your brain will generate only a portion of the visual images – and, since there are fewer pictures left, the story you tell decreases in size as well.

Since textual information is “compressed” anyway (deconstructed over time), GMS® teaches to concentrate your effort not on precise literal memorization of a text, but on forming a skill for excellent memorization of the pictures which reflect the principal thoughts of the text and, then, forming a skill for generating speech statements based on those remembered pictures.

Encoding a text into images and memorizing this sequence are not the hardest parts. It is much more difficult to learn to build your speech on the basis of visual images. In order to form this skill, special exercises are provided in the **“Textual Information”** course. Very often, a student is unable to answer a question not because he does not know the information, but because of his inability to translate thoughts/images into a verbal statement.

The main problem, when studying foreign languages is the same: absence of speech automation.

The information compression method is very simple. Let’s say, you need to memorize the following text extract:

Leanne Cox, a student of the California University, set a new world record. She crossed the Magellan strait, 3.3 kilometers wide, in 1 hour 2 minutes, in spite of the cold water.

The first operation you must perform is distinguishing the association base. You need to learn how to quickly “catch” the main idea of a text fragment. Imagine that you are an editor-in-chief of a magazine and your task is to read large amounts of short texts and give them each a TITLE (headings). This article deserves the title of “Record Set on Water.”

However, we cannot memorize word combinations automatically. Imagine that there are hundreds of such names. How will you memorize their sequence? A person can only create connections between visual images.

That is the reason why the next mental operation is to mark the association base with VISUAL-SUPPORT. Visual-support is an image-word that is easy to memorize using different associative methods.

In this case, the visual-support “medal” is suitable to represent the “record set on water” association base.

Thus, a textual extract is “compressed” into a compact and informative image; then, such images can be memorized in very large amounts and in the necessary order.

The “Information compression method” scheme is as follows:

Textual extract – sense-support (name) – visual-support (image)

Consequently, if a text contains 20 paragraphs, each paragraph must be marked with a visual image; then one must memorize the sequence of these images. Later, when recalling the sequence of images, you will retell the text without breaking the sequence.

Texts can contain large numbers of precise data, a text from a history book, for example. Textual information may also contain no precise data (anecdotes or science-fiction texts for children).

Text information memorization will be examined more closely in the “**Textual Information**” course. For now, we will just tell you that GMS<sup>®</sup> makes it possible to qualitatively memorize *any* textual data – from anecdotes and reports to complicated educational texts (which is what it was originally invented for). Mnemonics is the main component of rhetoric, an art of oral presentations.

You are now acquainted with the basic methods of transforming information message elements into visual images. The described methods can be used to encode almost any data into images. The next memorization stage in GMS<sup>®</sup> is **FIXATION OF CONNECTION BETWEEN VISUAL IMAGES IN THE BRAIN**, visual images that represent the elements of memorized information.

## PART 5: MEMORIZATION

### THREE METHODS OF IMAGE CONNECTION

Now, we move forward to the detailed examination of the second stage of memorization – memorization itself. During the first stage (the encoding stage), elements of the memorized information message are transformed into visual images: the information is prepared for memorization. The memorization process itself involves connecting elements of the information message.

We will look into three methods of image connection:

- Connecting two images;
- Association creation;
- Connecting the associations.

You must understand that images are always connected the same way in the imagination. Whatever technique you use, it is all about connecting two images in your imagination. The two images must be imagined in large size, so that they take up all the imagination space.

Image connection process and association concept are often mixed up. I remind you that, in the present system, an association is a group of connected images that encode a certain information message. Connecting two images is not creating an association. It is only a means of creating associations.

Associations – different information messages – need to be memorized consecutively. This is done in two ways: either an association is fixed on auxiliary support images (stimulating images) or it is connected directly to another association. In this case, large images of associations (association bases) are connected using the “Russian Doll” method. When we have a group of associations that are connected directly, we speak about an “Information Block” – a group of monotype data (chronological tables, a list of phone numbers, or sequence of paragraphs in a text).

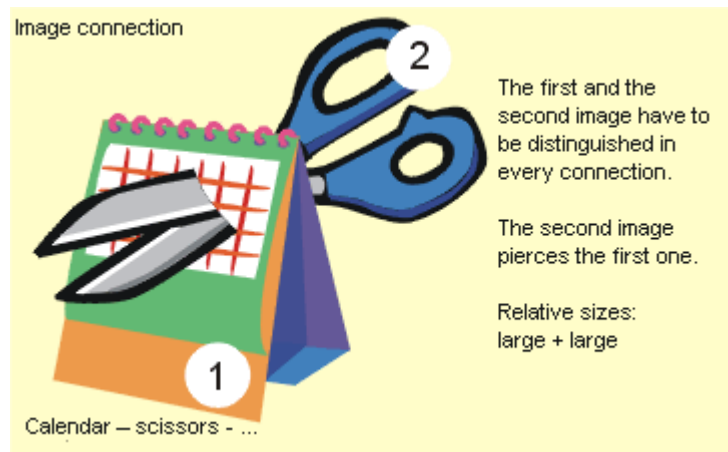
In order to delve into these methods in detail, you need to remember what “relative size” is. I remind you that a size can be small, medium, or large.

The image connection methods are quite simple, though their rules must always be observed during memorization. It is better to learn to memorize correctly from the very beginning. Mistakes (incorrectly formed skills) are always harder to correct.

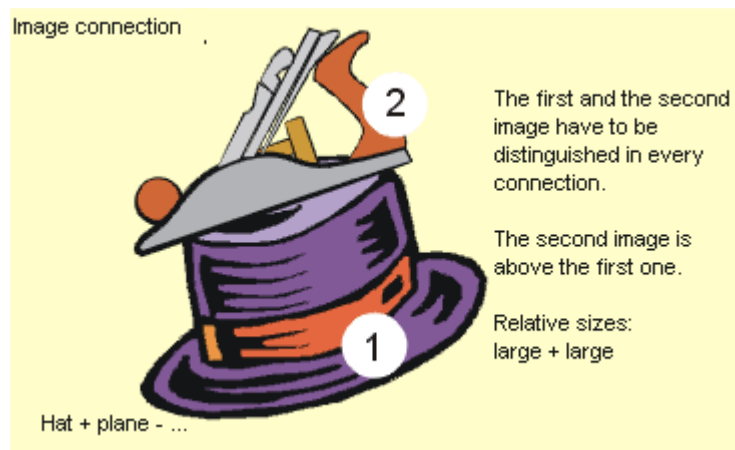
## CONNECTING TWO IMAGES

Images are always connected in *pairs*. Any connected image must be seen in *large size, in detail, in color, and in three dimensions*, if possible. Even when connecting two images, one must observe *a strict sequence* of connections in order to be able to say which image of a given pair is the first and which is the second.

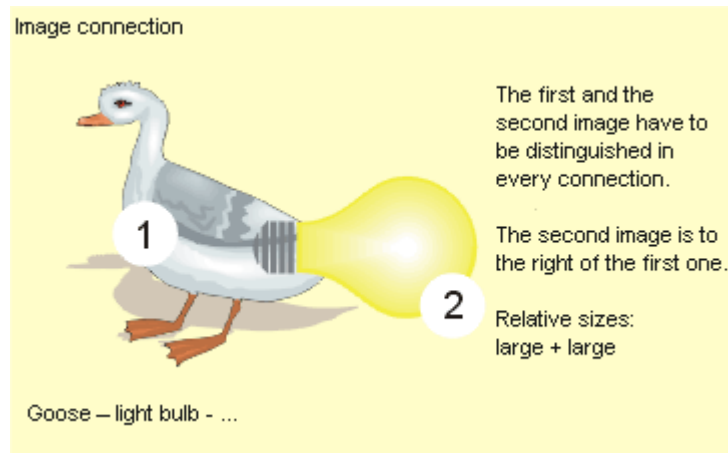
Let us agree that the second image of any pair will *pierce* (penetrate into) the first image of the pair.



Or the second image will be placed *on top* of the first one.



The second image of the pair must also be situated *to the right* of the first image.



The position of the second image of the pair relative to the first one depends on the images connected. Connect them the way that it is most comfortable for you. Rotate them in your imagination; examine them from different sides; make them fit together, to get the connection that you need and that is easy to use.

As mentioned, the type of created connection is of no importance to you. If you feel that familiar connections are easier to memorize – create familiar connections. If you think unfamiliar, weird connections are easier to memorize, create connections you have never seen before.

The principal is that *connected images must touch each other, that they can be encircled with one continuous line*. Your brain is interested in general contour.

Whatever the relative size of the connected images is, you must forget about everything when you create them, and concentrate your attention on **ONLY TWO** images you connect and imagine them in **LARGE** size.

The images can differ in size in real life but, when you connect them in your imagination, they must be of *the same size*. If in real life an ant is small, its image must be enlarged. A plane is big; consequently, its image should be minimized. When you connect these two images in your imagination, they must be of the same size. Such image connection method is called the “Chain” method in GMS®.

## CREATING AN ASSOCIATION

Association is a group of images that encode particular information. There is always a **BASE** in any association – the principal element of the information message. Other images are called association **ELEMENTS**. Any figurative code is always an association element; figurative codes are never used as an



association base. Associations may contain from 2 to 6 images. Association elements are always situated in the same order on an association base – left to right and top to bottom. Associations are formed by consecutively connecting several images. The standard length of time for connecting two images is 6 seconds.

If an association contains 4 elements, you will need 18 seconds in order to connect them.

An ASSOCIATION BASE is always a LARGE IMAGE in any association; ASSOCIATION ELEMENTS are always MIDDLE-SIZED. When you create connections, images are always big.

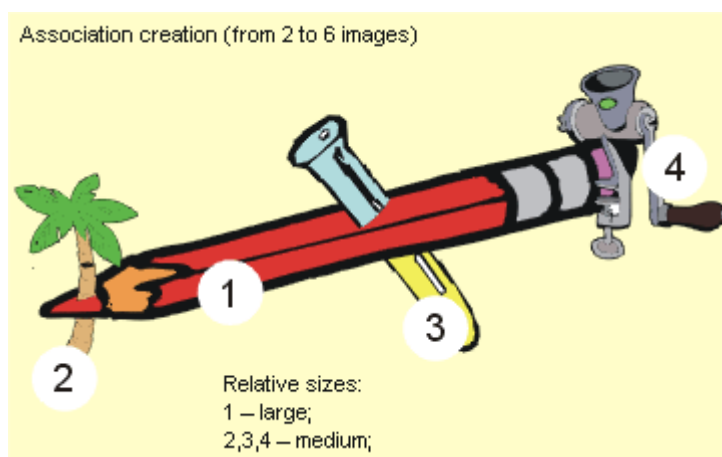
For example, memorize the following information:

Numerical signature is 56059079.

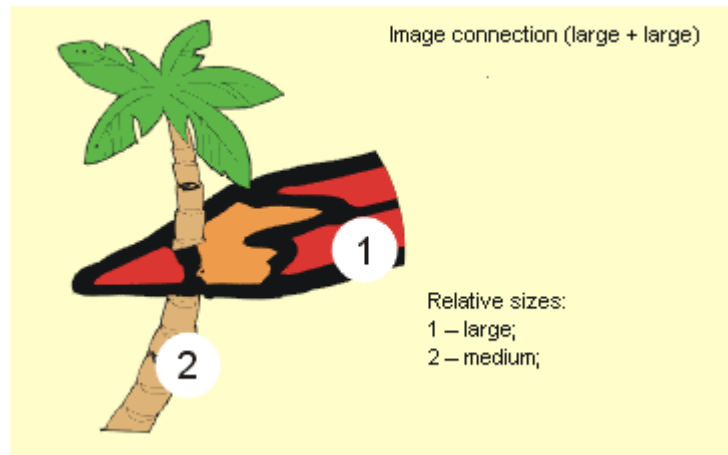
This information message contains four parts. Let us single them out: numerical signature, 560, 59, and 079. We will take the image representing numerical signature for an association base (for example, a “Pencil”). Then, we will transform the two-digit and three-digit numbers into images according to figurative codes: palm, tube, meat grinder.

Pencil – palm – tube – meat grinder.

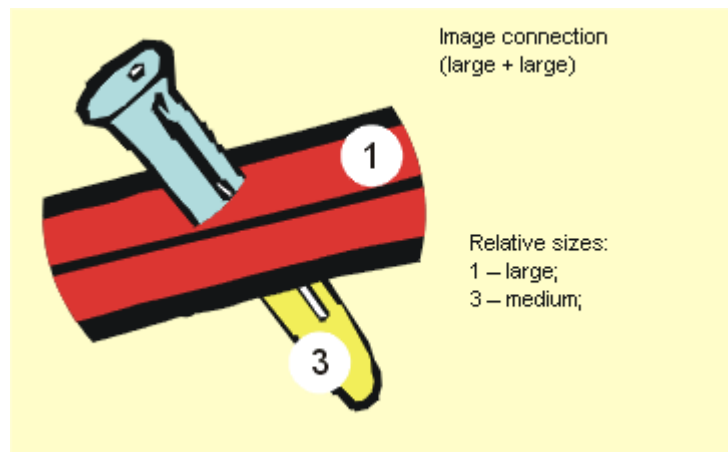
The elements are translated into the brain language, so we can start DIRECTING MEMORIZATION, directing the connection of the information elements in the imagination. An association is created by combining three image pairs in imagination: lead – palm, pencil – tube, eraser – meat grinder.



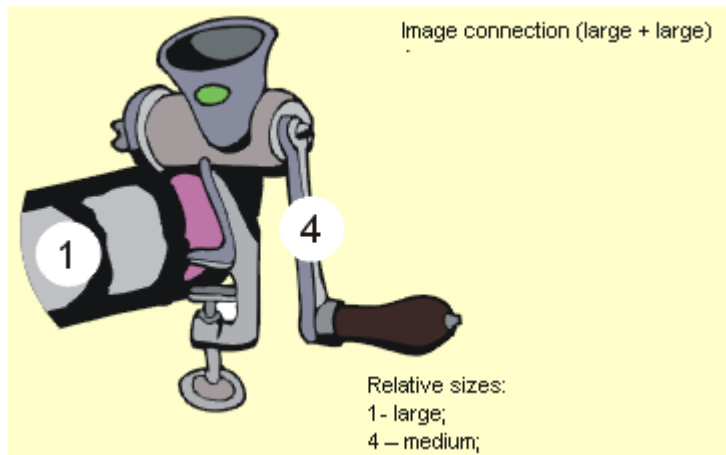
Time to connect the first pair of images (6 seconds).



Time to connect the second pair of images (6 seconds).



Time to connect the third pair of images (6 seconds).



You will need 6 more seconds to connect the ASSOCIATIONS with a support image or another association.

Such a method of association creation permits the fixation of information with frequently repeated elements (similar images). The same elements can appear numerous times on different bases. That is why even memorization of a random sequence of two-digit numbers, containing nothing but combinations of four elements: 00, 01, 10, 11 (figurative codes: casks, nose, enema, onion), is possible.

01.10.10.01.11.00.11.10.11.01.01.10.01.01.00.10.11.10.10.11.11.10.11.00.01.

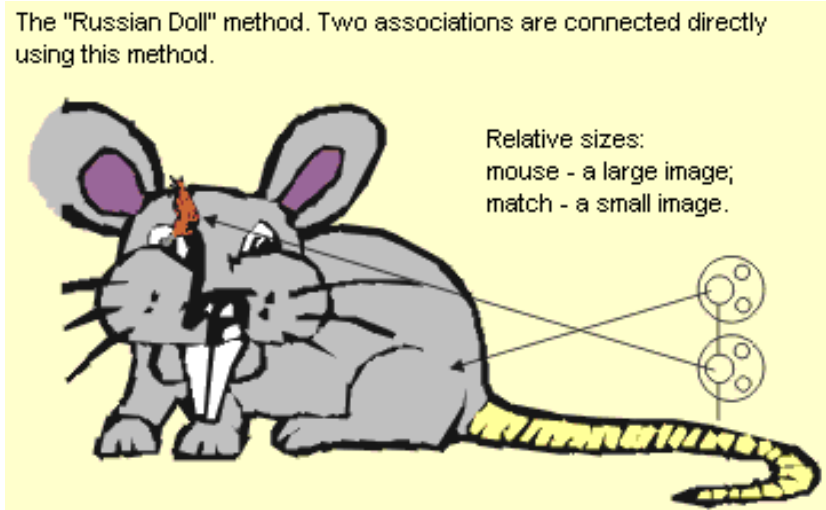
In order to memorize this sequence of zeros and ones (transformed into visual images of two-digit numbers), you will need 5 support images (5 association bases) and 2 minutes 30 seconds (25 images multiplied by 6 seconds = 150 seconds). This is the standard for our students.

## ASSOCIATION CONNECTION

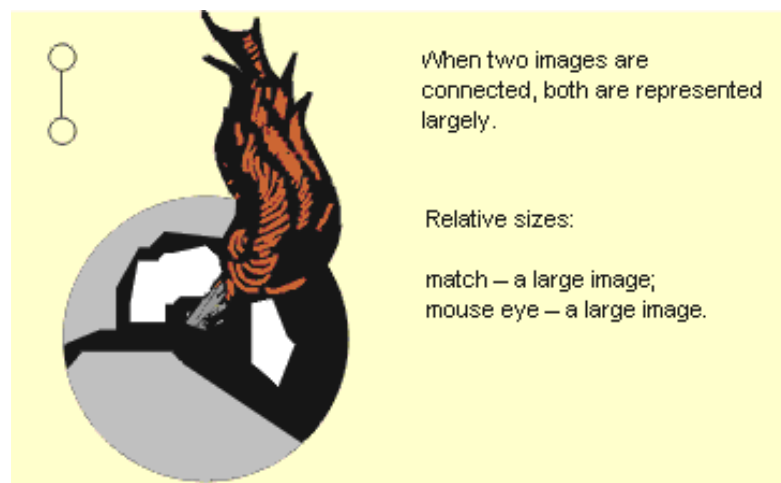
A sequence of associations is memorized in two ways. First, an association base is connected to an auxiliary support image. Second, you can also connect several association bases directly among themselves.

We will now look into the second method: connecting associations directly. Associations are connected together when one needs to memorize precise data which is organized by subjects, e.g. if you memorize a list of phone numbers. Monotype information is connected into one block that is then fixed upon one support image.

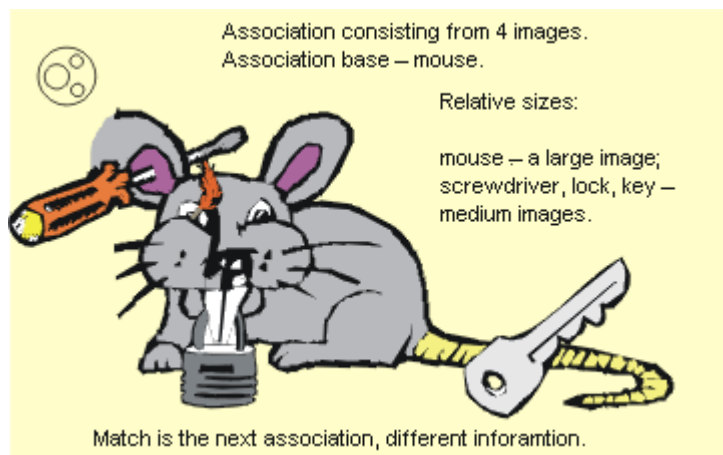
When connecting two association bases, you should use the “Russian Doll” method, which means that in any given pair the first image is larger and the second is smaller (reference: relative sizes of objects).



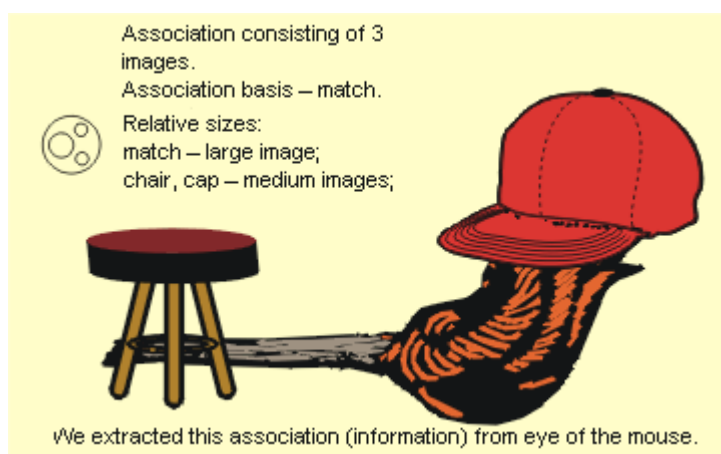
But when you create a connection, both connected images are represented largely.



When you reproduce an association base (large image), you can read information from it (medium images). Then, we look for the next association basis (small image), and enlarge it in our imagination.



As a result of small image enlargement, the elements of the next association (information message) are available for reading.



Assembling the memorized data into one information block is a more complicated technique for memorizing a sequence of associations than memorizing them using support images. However, information blocks allow you to economize support images by putting them together the monotype data. It is rational and efficient to use this method when memorizing table data.

## PART 6: SEQUENCE MEMORIZATION

### THE CICERO METHOD

The Cicero method is based on natural associations, that is, connections which have been created in the brain naturally, during one's regular perception of interrelated visual images.

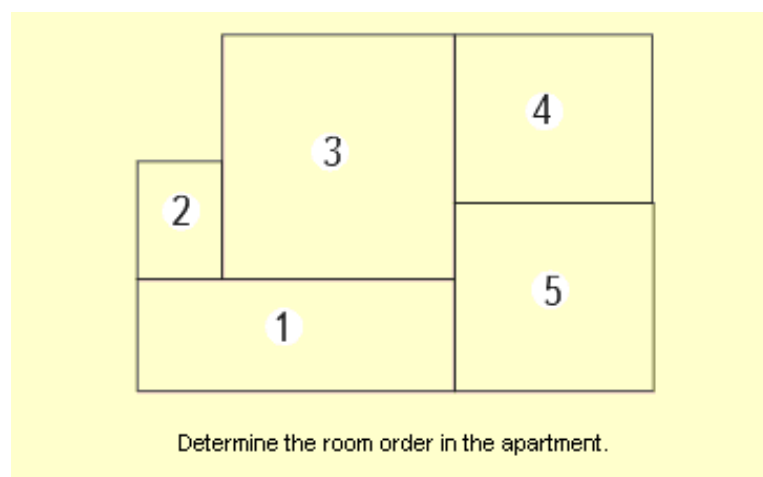
All people regularly observe the same visual images. These are objects in a room, an office, on the streets that we walk.

Since the connections between objects that are regularly perceived already exist in your brain, such connections do not need to be memorized: you already remember them.

In order to form support images using the Cicero method, you only need to fix a *sequence* of familiar images in your memory. This is achieved by multiple repetitions of such data.

### SINGLING OUT SUPPORT IMAGES USING THE CICERO METHOD

Define the sequence of rooms in your house or apartment, office or your friends' houses. For example, always memorize rooms in the following order: corridor, bathroom, kitchen, small room, and dining room.



Concentrate your attention on one particular room. Say, your corridor. Walk around the corridor in your imagination (always in the same direction - clockwise) and remember 10 different objects.



Do the same with other rooms of your apartment. Single out 10 images in the bathroom, in the kitchen, the small room and the dining room.

As a result, you will have 50 images. First, you remember 10 images in the corridor, then – 10 images in the kitchen, and so on.

Fix the 50 images and their order in your memory using multiple REMEMBERING.

This is important!

The selected images MUST NOT REPEAT THEMSELVES. Only object names can be repeated.

Single out images by remembering them. You need to extract the connections that are already present in the brain.

Choose the images that would later allow you to single out 5 more images from them.

### Use:

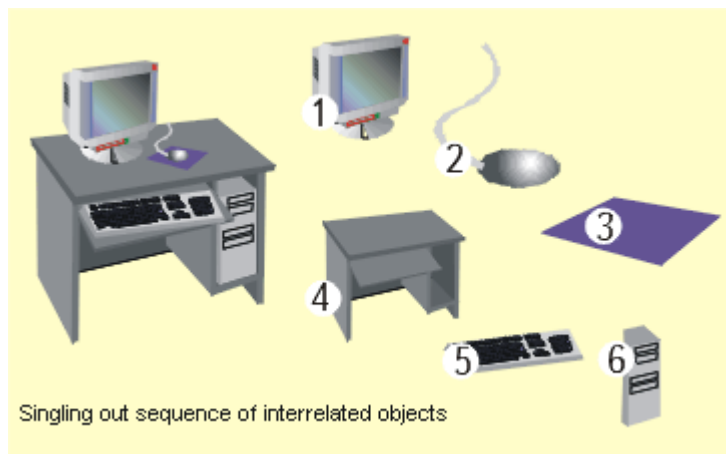
The Cicero method is used to form a system of support (stimulating) images. The support image system is formed via a combination of different sequence memorization techniques. The images selected with the Cicero method are usually FIRST-LEVEL images in the support image system. If we draw parallels with a computer, they are a parent directory or a root catalogue, through which you come to other support images.

## THE FREE ASSOCIATION METHOD

A person almost never perceives objects separately from each other. Most objects have constant interrelations that are automatically, reflexively fixed by the brain.

For instance, a teaspoon is normally connected with a cup. A cup is related with a saucer. A piece of cake is usually lying on a saucer. The image of a “cake” can cause an image of the box it was sold in to appear in imagination. This image will remind you of a shop-window that you saw it in, and so on.

The free association reception method is very easy. You only need to remember a sequence of images that have natural interrelations. This image sequence can be used as support (stimulating) images for information memorization.



**This is important!** When you single out images using this method, you should not try to switch to the images of the Cicero method. In other words, the images of this method should be omitted when you choose the images for the Cicero method.

No support images should be repeated. Even if you have a hundred thousand images in your support image system, they must all be different, unique, no matter the method used to form them.

### Use:

The free associations method is used to enhance other memorization techniques. It is particularly useful when you need to quickly form additional support images.



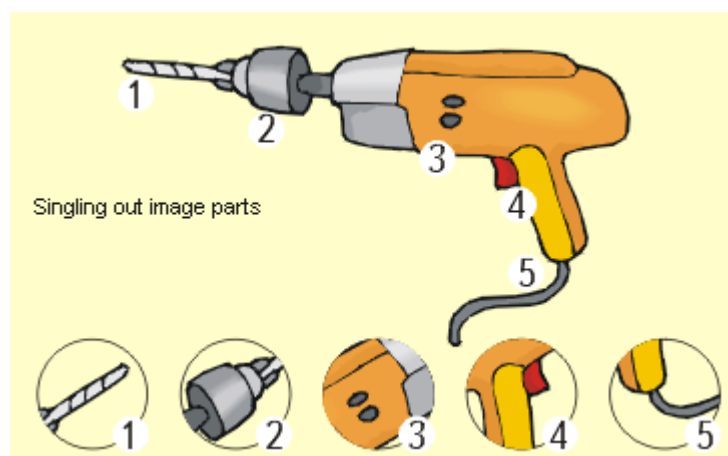
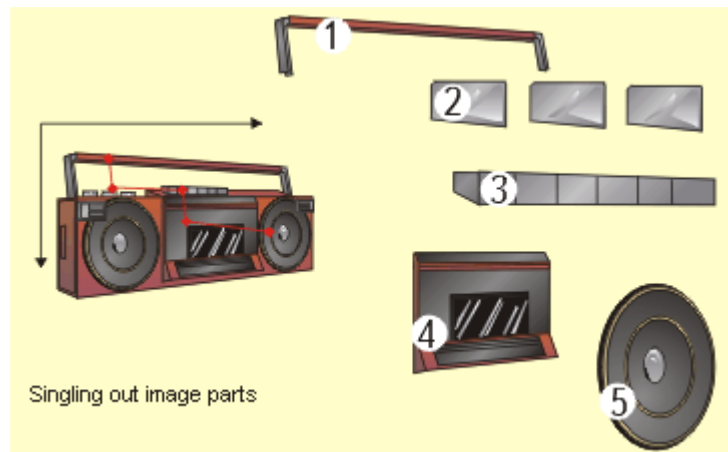
## SINGLING OUT PARTS OF AN IMAGE

Practically all objects consist of parts. These parts are inevitably connected to the object itself. Further, these connections, if perceived regularly, are automatically fixed by the brain. Consequently, the method of singling out image parts is based on natural associations, that is, connections created naturally when one perceives an object.

You should always single out (choose) images from an object in the same order: *left to right and top to bottom* (like we usually read or write).

Any selected sub image must be represented *separately* and *largely* in imagination.

The chosen images are support (stimulating) images; as with any support images, they must never be repeated.



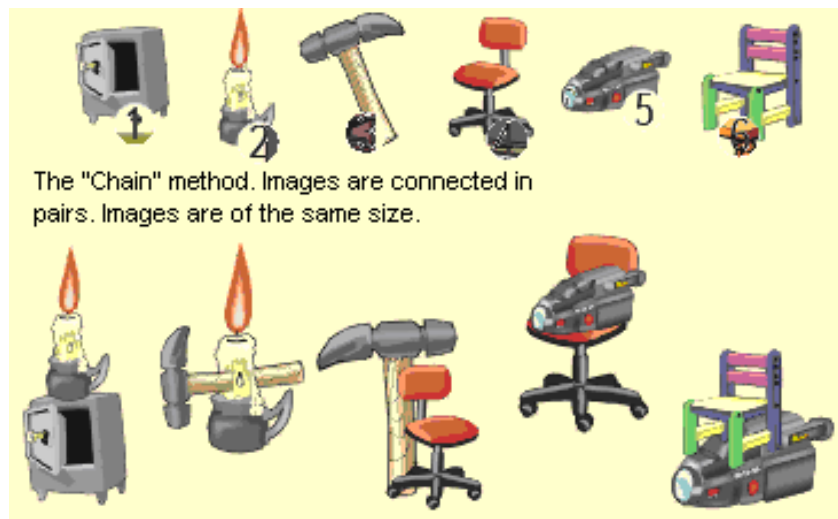
**Use:**

Images selected using this method are normally final images in the support image system. Associations encoding specific memorized data are directly connected to them.

**THE “CHAIN” METHOD**

Images are connected in pairs using this method. Relative sizes of all objects are the same: large.

The first and the second image of any image pair must be strictly distinguished. The second image *penetrates the first one*. The second image *is above the first one*. The second image *is to the right of the first one*.

**Use:**

This method is used to form short sequences of support (stimulating) images. The sequence of images can be fixed easily through multiple repetitions. The sequence is then used to form a system of support images, if combined with other sequence memorization techniques.

Long image sequences are not used in the GMS<sup>®</sup>, because any long sequence will be deconstructed over time (the “Connection erasure effect”). Only the first and the very last element of a long sequence remain in memory (even if you are able to reproduce the whole sequence faultlessly and completely right after you have memorized it).

Memorization of a long image sequence with the "Chain" method can be used during training exercises, when long-term preservation of connections is unimportant to you. In such cases, the number of connected images is practically unlimited; one can connect tens and hundreds of images among themselves.

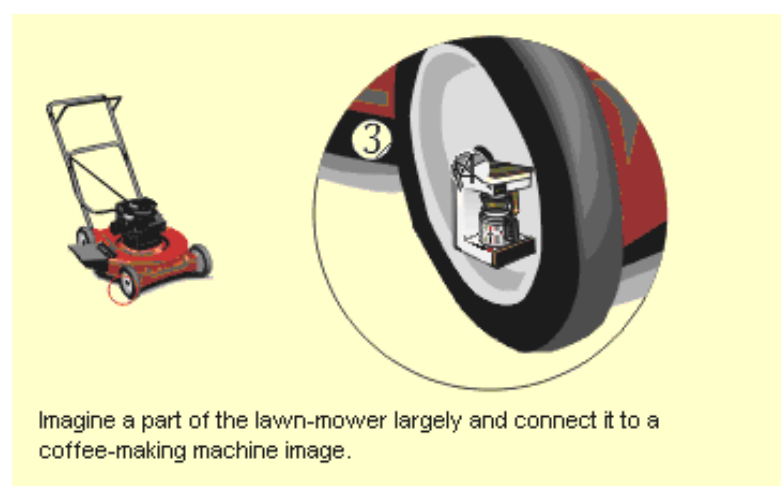
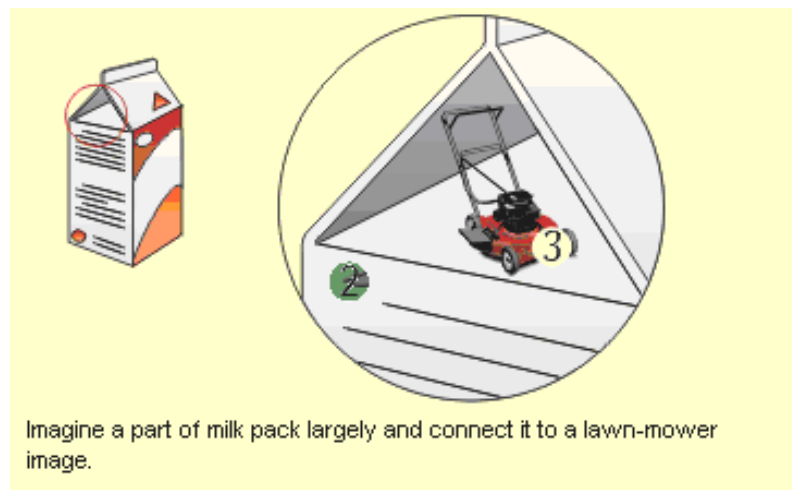
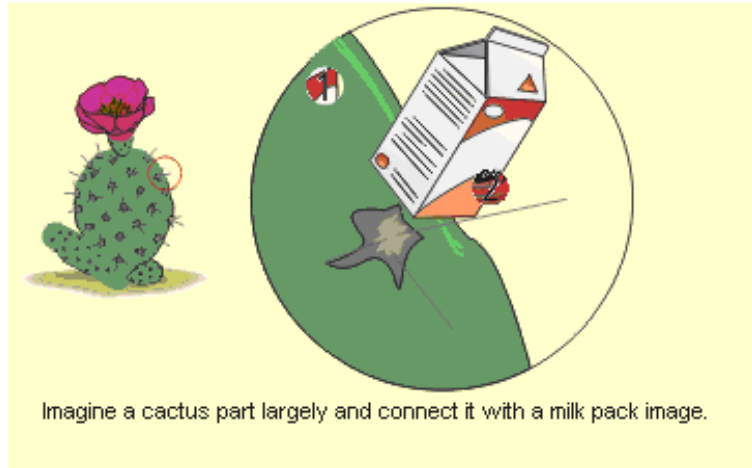
### THE "RUSSIAN DOLL" METHOD

When you memorize an image sequence using the "Russian Doll" method, the images are inserted *into* each other, like in the famous Russian doll toy set, where a small doll is nestled in a medium-sized doll, both of which as then nestled into a larger doll.

Relative sizes of the connected images in every pair: big + small.

In reality, a small image (imagined largely) and a part of big image (large in imagination) are connected.





An explanation of this method is as follows:

Each memorized element remains free; other images (medium-sized) can be written on it later on:

- Memorization of an image sequence using the “Russian Doll” method stabilizes images in the imagination when they are remembered. The next picture will not appear in your imagination - unless you intentionally increase in size a part of the first image.

**Use:**

This method is used to memorize a sequence of several associations, in case the associations are connected directly, avoiding stimulating images.

Monotype data is thus gathered to form one information block (a list of phone numbers, chronological tables, etc.) which is then fixed onto a stimulating support image.

## MEMORIZING BY ORDINAL NUMBERS

Memorizing by ordinal numbers is hardly ever used to memorize everyday information or real educational information as this contradicts the basic principles of the GMS<sup>®</sup> explained above. When it is necessary to numerate the memorized data (for example, constitution articles), the method of numerating images with figurative codes is used.

I remind you of the rules of handling figurative codes: 1) Nothing is recorded on figurative codes. 2) They must not be connected with each other.

That is why you can use the memorization method described below:

For training;

For different types of demonstrations and tricks;

For temporary memorization.

Suppose, you need to memorize the following ordinal numbers:

43 - Magic

65 - Wealth

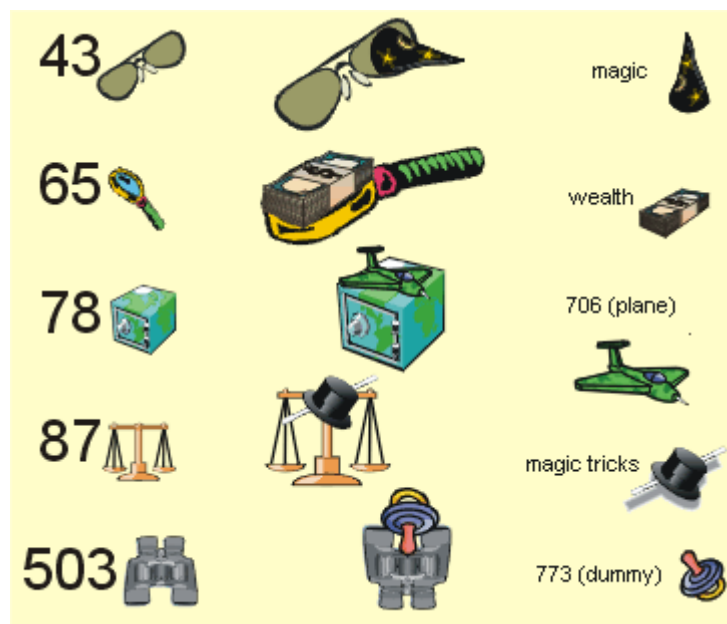
78 - 706 (plane)  
 87 – Magic tricks  
 503 - 773 (baby's dummy)

The images representing ordinal numbers (43, 65, 78, 87, 503) are represented as large (association bases, contrary to the basic rules of memorization). The images representing the memorized words or numbers are represented as medium-size in your imagination.

In order to memorize them, you need to create connections between a part of a large image and a medium image.

When you remember an ordinal number (every person is able to remember a sequence of numbers without mistakes), you remember an image that represents it and “take” the previously memorized image from it.

How do you distinguish images-words and images-numbers? Very simply: images representing numbers have to be memorized well beforehand, after which they are easily recognized.



This method is not suitable for long-term memorization of necessary information. Images representing numbers cannot be used as association bases; to do so would constitute a harsh mistake.

This is one of the memorization techniques used in sport mnemonics, when large amounts of seemingly senseless information (numbers, cards, words, etc.) must be memorized quickly.

## MEMORIZING IN ALPHABETICAL ORDER

In the simplest case, memorization in alphabetical order is identical to memorization by ordinal numbers. However, there are only a few letters in an alphabet, so one can only memorize 26 information units using them.

The practical scheme for memorization in alphabetical order is represented in the picture below. In order to form a system of support images, the combinations of several techniques are used:

Figurative codes of the letters of English alphabet;

A short sequence of random images (memorized using the “Chain” method);

The method of singling out image parts (5 images usually singled out).

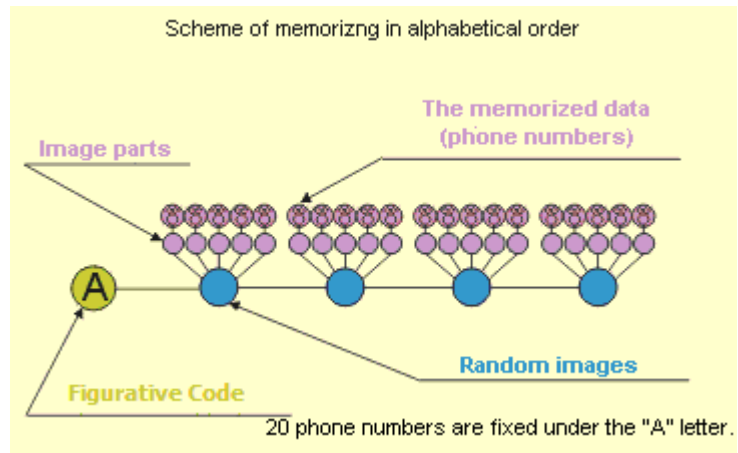
The memorized information itself (phone numbers, for example) is formed into an association in advance; then, an association base of every association (every phone number) is fixed with a connection to parts of a random image.

Such an alphabetical phone directory can be enhanced easily by increasing the number of information cells. In order to do so, new random images are added to the present sequence of random images.

There will only be a few images for rarely encountered letters, many such images for “popular” letters.

Phone numbers memorized using this method can be remembered consecutively, by alphabet letters without having to run through the entire list, or by any element of a phone number (last name, first name, or one of the numbers).

Of course, all created connections are meticulously fixed by their repeated activation (retelling by heart).



## THE RETURNING METHOD

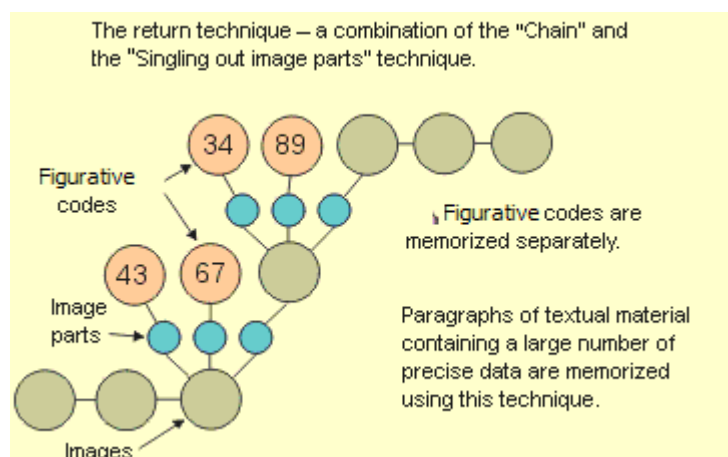
To ensure more secure, long-term storage of connections in the brain, figurative codes must not be connected with each other.

The returning method is a combination of the “Chain” and the “Singling out image parts” methods and makes it possible to memorize figurative codes separately.

The returning method is used for the long-term memorization of difficult textual extracts which contain many often-repeated figurative codes (two- and three-digit numbers, first names, last names, and so on).

The images which represent precise data are memorized using the “Chain” technique: as soon as a figurative code is encountered, it is connected not with the previous image, but with its part.

When figurative codes are isolated images, connection is continued using the “Chain” method.





The use of this method will be examined in more detail during the analysis of the factographical information memorization technique.

## FIXED SEQUENCE

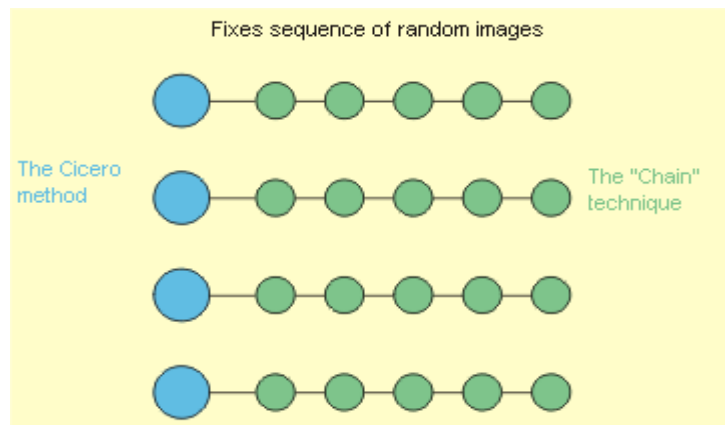
Any randomly chosen images that are easily memorized can be used as support images.

If you connect a short sequence of 5 images created with the “Chain” method to any of the 10 images chosen using the “Cicero” method, you will get 50 support images instead of 5 images.

A system of support images is formed in advance and is easily fixed in the brain using multiple repetitions.

The best way to fix support images is to use them for memorization. You can memorize numbers on the formed support images. You need not fix such information afterwards.

- **Any support image can be used multiple times, literally like a floppy disk. When you memorize new data onto support images, you automatically erase the previously recorded information.**



## INVISIBLE IMAGE PARTS

People, particularly males, often dismantle things; that is why we often know what is inside a radio, a TV, an automobile, a washing machine, and other objects.

Objects found inside other objects can be used as support images.

This support image forming technique is extremely reliable, because external connections do not influence internal connections.

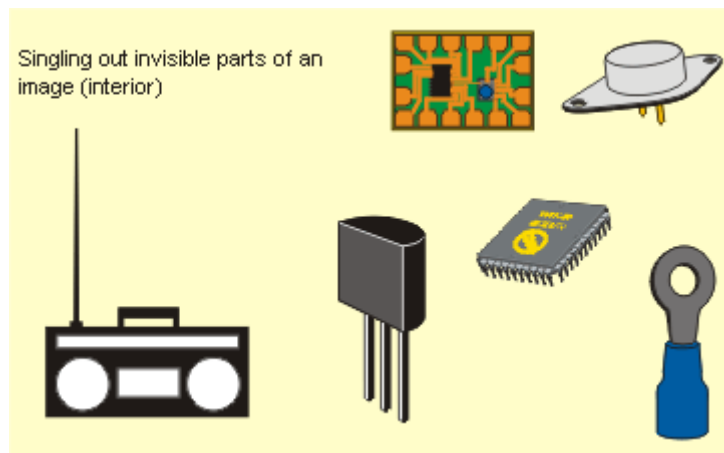
External objects can be connected using the “Chain” method; associations containing some precise information are connected to the inner parts.

This support image forming technique can also be used for long-term memorization of miscellaneous information.

The Invisible Image Parts method is good because it also gives you the ability to rebuild support image systems in your brain. Thus, inside the “radio” image, you can fix 5 phone numbers; then, by moving this image inside your support image system, you automatically move all the information contained within it.

A random image is used as a container. Information is stored inside and is easily moved, together with the image.

In addition to that, external image parts can also fix information (the method of singling out image parts).



## NUMERATION WITH FIGURATIVE CODES

You are already familiar with the “figurative code” concept. That is a visual image that represents frequent information elements: two- and three-digit numbers, months’ names, weekdays, etc.

Any randomly taken visual image can be marked with a figurative code by creating a connection.

You can mark a random image with figurative codes of weekdays. It is easy to memorize various timetables by weekdays using this approach.

When you mark random images with figurative codes of months' names, you will form support images allowing you to memorize celebrations and birthdays.

By numerating images with number figurative codes, you get a system of numerated images.

How does the remembering of such support images happen? Anamnesis is based upon the fact that any person can easily remember an array of numbers or a sequence of months' names. Thus, when you remember numbers, you will remember their figurative codes; in turn, they will cause the random images you previously connected with them to appear in your brain.

The technique of singling out image parts is convenient to use in combination with the numeration method. In this case, you get 5 support images on one random numerated image.

Images can be numerated with several figurative codes, e.g. several figurative codes of three-digit numbers, thus making it possible to form an endless support image system in memory. Remember: Any support image system formed in the brain must be carefully fixed by multiple mental repetitions.

### **Examples:**

Imagine a large image of an "automobile" and place a "monitor" image on top of it (figurative code for Monday). Now you can fix your study timetable for Monday on the different parts of the automobile.

Attach the figurative code of "35" (beer) to the top of a "scanner" image. Now you got the support image for number 35.

Place three coccyx (tailbone) on a "tin can" image – you get a support image for 999 999 999.

## **PART 7: CONNECTION FIXATION IN THE BRAIN**

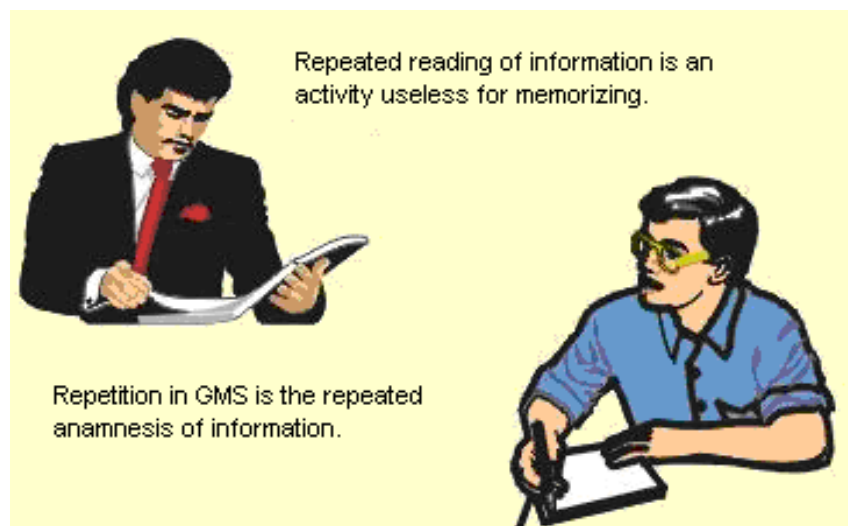
### **THE ACTIVE REPETITION METHOD**

Connections between visual images, created naturally when reading a text or intentionally by connecting images in imagination, are very quickly and spontaneously erased.

To store them in the brain, the data must be repeated. The process of connecting multiple activations includes a mechanism for maintaining such connections so they can exist in the brain for a relatively long period of time. If the connections are regularly activated (at least one time in 6 weeks), they can be stored forever.

In GMS<sup>®</sup>, repetition is a process that differs from the usual definition of the word. People usually define “repetition” as a multiple *perception* of information. For example, reading a text or a list of phone numbers numerous times. The multiple perception process is absolutely useless with regard to sign information (that makes no visual images appear in the brain). No matter how many times you examine an array of random numbers containing only zeros and ones, this data will not be memorized.

In GMS<sup>®</sup> by saying “repetition,” we mean a process of multiple *remembering* (recollection) of information. Data can only be repeated by first remembering it.



If a person is not specially trained to memorize precise data, he or she is unable to remember this sort of data and, consequently, be able to fix it in his or her brain.

You should note that GMS<sup>®</sup> repetition is not performed for memorization, but for the actual fixing of information in your brain.

#### AN APPROXIMATE REPETITION SCHEME:

After memorizing information using GMS<sup>®</sup> techniques, one must perform TEST REMEMBERING. If you memorized 30 phone numbers, they should be written down on a sheet of paper or recorded on a Dictaphone tape.

Afterwards, the recorded information must be compared with the source information. This testing must always be performed to ensure that you are not making mistakes during the encoding stage and creating false connections.

If you have discovered an error or omitted part of information during test remembering, you should re- memorize the missing data until you have it correct and completely.

After the test remembering and error correction, you are certain that the information can be reproduced in full volume and without mistakes. It is only after this stage that you can begin fixing the information in the brain by repeating it multiple times.

Please note that, after the memorization stage, you cannot tell whether you remember the information or not because as is no information yet fixed in your brain. It is created by the brain in small amounts by the *connections* fixed by the memory process. That is why test remembering is absolutely necessary in every case. It is the only way to ensure that you have remembered all of the information correctly.

How often and after what period(s) of time should the memorized data be activated? There is no single answer to this question, as it depends on the complexity and the volume of the memorized data, as well as the memorization skill of a particular person. This is also influenced by your functional condition: obviously, if a person is ill, the memorization and the anamnesis processes are harder to perform.

We can only recommend an approximate temporary repetition scheme that goes as follows;

The first remembering should be done after 40-60 minutes following the memorization. It is during that timeframe that the connections created once are destroyed in electric memory.

The second remembering should be done after about three hours after the first.

The third is should be performed about 6 hours after that; the fourth should take place the next morning.

This number of repetitions is essential. Generally, the number of repetitions increases in proportion with the level of data complexity and the volume of information. The more often you remember the data, the better it is fixed in your brain.

Regardless, any new data must be remembered intensively within the first three to four days after the primary memorization.

After such connection fixation, data it can be stored for approximately six weeks in your brain even if you do not return to the information at all. After six weeks, the data will gradually start to erase.

This means that, for the lifetime storage, information should be remembered at least once every six weeks.

If you memorize necessary information that is regularly used in a studying process or at work, the information usage will automatically retain it in your memory.

If you memorized potentially necessary, but seldom used information, such data needs to be regularly remembered in order to ensure its long-term storage in the brain.

All the above-mentioned phenomena concern electric memory.

The memorized data can be repeated via different methods. More on this below.

## VIEWING SUPPORT IMAGES AND ASSOCIATION BASES IN THE IMAGINATION

This repetition method is applied to the already fixed information and is used when you quickly need to repeat large volumes of data. Potentially important information that is not used within a six-week period should be repeated this way.

Support images are a sequence of auxiliary images that help fix an association sequence. Precise data is encoded in associations. An association base, a large image to which parts, medium images (association elements) are connected, is always distinguished in any association.

When you repeat information using this method, you should intentionally suppress internal pronunciation/inner speech with regard to the visual images. It is obligatory to *see* the support images and the association bases connected with them.

Suppressing inner pronunciation allows for a noteworthy increase in information viewing speed. 10 phone numbers can actually be seen in 5-10 seconds in your imagination. If you start saying them to yourself, the viewing speed will equal your speech speed.

Normally, reflex connections between images and words are so stable that a person finds it hard to distinguish activity of different analytical systems. However, different analytical systems can function separately from each other, even parallel to each other. Thus, a professional typist can chat to her friend on a phone while typing a text. She does not understand the meaning of what she is typing but, still, makes no mistakes. In this case, movement skill is completely automatic.

Visual and speech analyzers can also work independently. In order to suppress inner speech while we are remembering images, our speech analyzer has to be occupied. For instance, during image viewing, you can read a poem you know well or count out loud or to yourself. Your speech analyzer will not be able to name images and read a poem simultaneously. By doing this exercise, you will gradually learn to view images in complete silence.

If you have read works of Castaneda, you probably remember that Mexican magicians called such skill the “great silence.” By the “great silence,” they meant a person’s ability to think directly in images, when slow, clumsy, and often-erroneous speech thinking-pronunciation is completely blocked out.

When you study speed-reading, suppression of the inner speech is one of the most important methodical techniques. During speed reading, a book is perceived the same way as a movie. Eyes run through the pages, but only scenes and images flash in our imagination.

## REPETITION WITH COMPLETE DECODING

Repetition with complete decoding is used during the memorized data fixation in the brain 3 to 4 days following the memorization.

Miscellaneous information is fixed as associations in the brain. Every association is fixed on an auxiliary support image. Repetition with complete decoding is similar to the following:

Suppose you have an image of a “can with medicines” representing a drug store fixed on a “door” support image. Images of “carpet,” “spider,” and “tea” are fixed with connections on different can parts. This is the telephone number of the drug store: 389-53-04. When activating this combination of visual images in your imagination, you also have to turn on your speech analyzer in order to translate several association images into an oral statement. In other words, when you remember this picture, you need to say: “A drug store – phone number: three hundred eighty nine, fifty three, zero four.”

Note that you should not give images common names. You have to *see* images in your imagination, but say NUMBERS out loud.

Particularly, terms and names that are memorized repeatedly require repetition with complete decoding. In these cases, if you remember wisent, condom, and sinker - you need not name these images, but remember the name of the state – Wisconsin.

Anamnesis is similar to reading a book in GMS®: the only difference is that you do not see a text; instead, you see pictures which represent certain information elements in your imagination. Information is literally “read” from the imagination, as if it were a book with illustrations and you know what each illustration stands for.

### INNER SPEECH AND INNER DRAWING TECHNIQUES

Repetition using mental speech and mental drawing is used for the types of information that need to be fixed in the memory before becoming a reflex. These include various figurative codes, foreign words, and characters of a new alphabet.

What is the difference between imagining a visual image and mentally drawing it? When you imagine a visual image, it should be represented as: large, detailed, three-dimensional, and in color. Mental (inner) drawing involves an eye movement (motion memory). Imagine that you write something with chalk on a blackboard or with paint on a wall – this is roughly what mental drawing is.

You need to mentally draw unfamiliar signs, new foreign words the way they are written.

Reflex connections are created slowly and between different analytical systems.

To fix information on a reflex level is to create a reflex connection between different analytical systems, mainly between the visual, speech, and movement analyzers.

### FIXING FIGURATIVE CODES

Remember the “beer” image that represents number 35. Keep it in your imagination for some time. Slowly draw “35” on the image itself or in its background. Repeat the operation several times every day for 3 to 4 days.

As a result of simultaneously imagining the visual image and the corresponding eye movement, the brain will fix this connection. Later, when you remember the image of beer, it will automatically switch on your eye



movement and draw “35” in your imagination. Meanwhile, it will seem to you that you automatically remembered the number.

## FIXING FOREIGN WORDS

Remember an image that represents a Russian word. Say, an image of a house. Read image hints that represent sounds of the English language: “domino” - |dom| sound. Thanks to high inertness of the speech analyzer, you will be able to keep the pronunciation of |dom| in your conscience for a long time.

Then make several actions at once: imagine a house; mentally pronounce its name |dom|; and draw the way it is written: DOM. You will find this combination of processes to be fairly common in foreign language workbooks promising to teach you Spanish, French, English, etc. quite quickly; they involve reading, seeing, and writing. The more systems involved in making connection, the quicker the reflex recall will be developed.

As a result of repeated, one-time activation of nerve cells of three different analytical systems, a stable reflex connection will be created among them. Visual image – visual analyzer. Word pronunciation – speech analyzer. Word spelling and writing – movement analyzer.

## FIXING NEW SIGNS

Remember to use an image that gives you a hint at the word pronunciation. Read an image from it that implies its spelling. Then, draw the sign in your imagination as you pronounce it out loud or to yourself.

If you need to store an image implying the pronunciation of the sign in your memory, you should draw and pronounce the sign in the background of this image.

Reflex connections take a long time to create. When you memorize foreign words, do not cheat yourself. If you memorized a word in the evening and got an “A” in the morning, this does not necessarily equate to true knowledge. If foreign words are not fixed on the reflex level, they will be completely forgotten. Then, you will only have a diploma left after a language course... thanks for the memories.

## HOW TO CHECK THE REFLEX LEVEL OF MEMORIZATION

The principle is very simple. If a reflex connection is created, it has to work very quickly and automatically. Remember the way your hand is pulled away from a hot iron – this is a reflex, though unconditional, one genetically “built in” to your brain.

In order to check the quality of foreign word memorization, write the words down on cards. This is necessary in order to quickly obtain a random sequence of elements. Now, place the cards on a table one by one and translate the words from Japanese into English or vice versa. Pay attention to your speed of translation. If you translate a random word in one second, the word is fixed in memory and will not be forgotten. If you need time to think about a word, it is not yet fixed and will be forgotten soon.

This is also the way you can ascertain which signs and figurative codes which may be poorly fixed in your brain.

So, the quality of foreign word memorization is tested by recognition speed. Simple use of these words is an illusion of memorization. Remember this when studying a foreign language.

You can easily examine what comprises a reflex memorization. Letters of your native tongue alphabet are fixed at the reflex level in your brain. Now read the letters in this sentence: ecnetnes sith ni sletter eht daer won. New signs, figurative codes, and foreign words should be read just as easily. A reflex reacts without delay – and, if there is a delay, it is not yet a reflex.

Note that developing the information repetition skill in order to fix it in your memory is just as important as forming the skill of information memorization using visual images.

You must train yourself to repeat information – just as meticulously as you train yourself to memorize it.

## FORMING A SUPPORT IMAGE SYSTEM

Different systems of support images can be created through combination of the described image sequence memorization techniques.

A system of support images must be created in advance; it should be fixed by repeated remembering of its images several days in a row, until an automatic “paging through” of the images is achieved in your imagination. Support images are fixed well if you use them. Training exercises can be recorded multiple times on a newly formed support image system - for example, a sequence of two- and three-digit numbers. Every time you memorize new numbers, the previous ones will automatically be erased from the support images. By performing training exercises, you should not have to fix the memorized data in your memory. You memorize the support images, recall them, and never go back to them. In this case, support images will automatically be cleared after about an hour.

Let us examine several of the most common combinations used to form a system of support images.

**The simplest variant.** Create a support image system in your memory that only contains the objects selected using the “Cicero” method. If you form a sequence of 100 images, you can already begin training exercises. These images can be used multiple times to memorize words, numbers, letter combinations, and in other training exercises.

**A combination of the Cicero method and the method of singling out image parts.** If you select images more meticulously according to the instructions provided in the book, you will be able to single out 5 sub-images (image parts) from every image created using the Cicero method.

**An example:** Suppose one of your images is a refrigerator. Consecutively deconstruct this image in your imagination and imagine every part separately: bread compartment, fridge door, freezer, shelves, and fruit compartment.

If you do the same with each one of the 100 images you arrived at with the Cicero method, your head will contain a support image system that contains 500 elements. Consequently, your memory volume capacities will increase drastically because the volume of memorized information is only limited by the speed of creating connection and the presence of a sufficient number of support images in the memory.

### THE CICERO METHOD + WELL FIXED SEQUENCE + SINGLING OUT IMAGE PARTS

You singled out 5 sub-images in every of the 100 images created with the Cicero method, so you have 500 support images. Now, link a short sequence of random images (containing only 5 images connected using the “Chain” method) to every of the 500 images and, in each of these new images, single out 5 more components.

Let us now calculate the number of support images we have. It seems that we now have 12 sets of 500 support images. Sure, it would be extremely difficult to create this amount of support images at once, so create them gradually. The main hurdle is that none of the support images should be repeated.

For a GMS® user, support images are the same as hard drive volume for a computer. Support images are information carriers in a GMS® user’s head.

You can divide your support images system into different sections. One image section will only be used for short-term memorization like training exercises or

to demonstrate memory tricks. Other support images can be reserved for everyday information memorization (phone numbers, addresses, and so on). Yet another portion of images will be used to memorize educational information.

If you fix the necessary information on support images, such support images will not be available for repeated use. Otherwise, the data stored on them would be deleted. Conversely, a strict sequence of support images will make it possible to view the information fixed on them which, in its turn, will ensure the information storage in your brain.

I advise you to create a system of support images and do so before you do anything else. A person without support images is like a computer without a hard drive that has nothing but operational memory.

Principally, a system of support images is a system of brain inner stimulation that renders your memory independent from external stimulating influences. You will always need instantaneous access to the information you require, regardless of external stimuli.

Look at the people around you; watch them. Many do not have a system of brain inner stimulation. Their memory and thinking is easily diverted by any external influence. It is enough to offer a conversation topic, another one, and then the third one for such a person to forget the things he initially wanted to say.

After you understand human memory mechanisms, you will be able to master the mechanisms of neurolinguistic psychology.

**• Remember one important rule: every memorization technique is only as efficient as your mastery of it.**

You may think that you know how to create support images system. Yet, it is one thing is to know how and another thing to have a support images system containing hundreds or even thousands of images in your memory. Mnemonics users of the Middle Ages could “format” their memory and create up to 300,000 support images in it. As you see, theoretically, the secret of phenomenal memory is simple, but only theoretically.

If you have studied the material in this book closely enough, you can become a student of our school. The Remote Training Study Course consists of five different, but interconnected courses and exercises which provide for gradual increase of volume and complexity of memorized materials. Below, you will find the brief description of each study course.

## SCHOOL OF PHENOMENAL MEMORY<sup>®</sup> STUDY COURSE

### **Intensive Training** (introduction course, 12 lessons)

Detailed study of separate techniques of memorizing. Students can expect a gradual increase in the volume of information that can be memorized at a given time; up to 100 elements. They will also gain powerful stability of attention. The exercises of this study course are designed to help you develop the initial skills of memorization, without which the study of other courses is impossible.

### **First Database** (basic course, 12 lessons)

Learning the techniques of memorizing for 25 basic kinds of information (telephone numbers, historical dates, constant values, time-tables, names, formulas, etc.), with the possibility of selective retrieval and relocation of information in the memory. You will work with one hundred examples of unmemorable information. You will be able to recollect upon request consistently and selectively with absolute accuracy. It is impossible to memorize any more effectively. Final exam at the end of this course.

### **Foreign Languages** (special course, 11 lessons)

Training in the memorization of foreign and phrases. Course material is based on the Russian language. (Any language can be used by analogy.) The complex application of GMS<sup>®</sup> is considered words during independent work with lessons of the tutorial (memorizing and affixing new words, grammar, phrases, word-for-word text memorization, structure models, audio courses, dialogue preparation, and the like into long-term memory).

### **Textual information** (special course, 16 lessons)

From jokes and short stories up to entire books and tutorials containing complex terminology. Complex texts are used as exercises. How can you memorize a paragraph of a text book in the shortest amount of time possible? How can you memorize the content of a whole book? How can you remember a content of your speech or a lecture forever? The answer is simple: with the help of GMS<sup>®</sup>. (The texts are not remembered word-for-word but are reproduced using your own words while preserving the sequence of paragraphs and the exact information.).

### **Codes and passwords** (special course, 8 lessons)

The course teaches you how to reliably keep numerical data in your memory. From websites and email addresses, to credit card numbers, pin-numbers, bank accounts numbers, and various login information... all of this information can be stored in the memory. We'll show you how!

For more details, see:

[http://www.pmemory.com/memory\\_training\\_online.html](http://www.pmemory.com/memory_training_online.html)

The book is available on the **“School of Phenomenal Memory<sup>®</sup>”** webpage, since March 29, 2006 in its original version.

The English translation was edited by Andre Kozlovsky and Keaston Alberts.

Welcome to the  
**School of Phenomenal Memory<sup>®</sup> !**

Ver. 5.00 no pic