

# ***MEMORY ENHANCEMENT SEMINARS for SENIORS (MESS)***

***Presented By:***

***Skip Rizzo, Ph.D.***

***USC School of Gerontology and Integrated Media Systems Center***

***University of Southern California***

***3715 McClintock Ave. MC-0191***

***Los Angeles, CA.***

***213-740-9819***

***[arizzo@usc.edu](mailto:arizzo@usc.edu)***

The Memory Enhancement Seminars for Seniors (MESS) program was developed at the USC School of Gerontology. The MESS program consists of eight, weekly two-hour group seminars designed to assist senior citizens in learning skills for memory maintenance and enhancement. The MESS approach takes a holistic view of memory that addresses cognitive, psychological and educational factors in memory performance and aims to teach a practical outlook towards managing memory challenges. This talk will present information on the origin, structure and rationale for the MESS program and within that context will highlight the following MESS topics:

- General Introduction and memory demonstration.
- Aging Baby Boomers and Information Overload.
- The changing abilities of the brain over the lifespan.
- Memory changes that accompany aging.
- Key components in memory maintenance:
  - Education/Awareness of basic issues that affect memory—becoming your own personal scientist!
  - Psychological issues that impact memory.
  - Cognitive issues: Memory is a multi-faceted process (registration, retention, retrieval).
- External vs. Internal memory aids.
- Three main “internal” ingredients for memory (Imagery, Association, Organization).
- Remembering Names and Faces.
- The Method of Loci: A simple strategy that can be a significant asset for improving memory.
- Questions.

Examples of the methods used in the MESS program will be presented and also demonstrated with audience participants. This material should provide participants with information that they can use both professionally with clients and perhaps personally in their own battles with the memory challenges of everyday life!!

## **Review Of Key Elements from The USC MESS Program**

*(Excerpts from, “A Clinical Manual for Conducting Memory Enhancement Seminars for Seniors” (currently in press)*

### ***The “Personal Scientist” Model***

When we refer to becoming your own personal scientist, we are talking about being your own memory diagnostician, scientist, and problem solver. This means that you will learn how to “take charge” of improving your own memory skills. You will learn how to recognize where your memory breaks down, how to select a memory enhancement strategy and how you can go about applying a technique to address a memory problem. If you want to be your own personal scientist and understand and improve your memory, you need to first understand why certain memory problems occur. For example, if your car stops running, what do you do? Number one, you ask yourself do I have gas? Number two is the battery dead? Number three, do I have the wrong key? And number four, Is the engine shot? Well it’s like that with your memory...you’ve got to have a system—a checklist of questions so to speak that you can review in your head every time you have a memory “breakdown.” Rather than taking a passive stance and thinking that there is nothing that you can do to improve your memory, the “personal scientist” methodology really embraces a proactive approach to learning, which might be different from the way of thinking than what you are used to.

### ***The “3R’s” of Memory***

Most folks think that memory consists of one single entity, but memory isn’t just one thing, it consists of a variety of different components. When we talk about memory, we are talking about a complex system of many different principles at work in the brain...memory in essence, should be seen as an “activity”... rather than just a storage space. It is important to understand how the key components of memory work, because only by looking at its fundamental parts can you get a better idea of what your memory problems are. A lot of people think of memory as being composed of one global entity, but there are 3 basic steps in memory, we call them the 3 R’s of memory...just like the 3R’s that you heard about when you were going to school. Reading, writing and arithmetic...well, we have our own 3R’s for memory. The 3 R’s of memory are registration, retention, and retrieval...

**Registration** really is paying attention, getting information in the first place. This is the first step in acquiring new information and beginning to process it...but sometimes we fail to register things and why? Things like lack of interest and not paying attention cause you to not register information in the first place. Say you are at a party and you get introduced to someone and you forget their name right away. This could mean that you didn’t register the name...you probably didn’t pay attention—maybe you were nervous or something—or you weren’t that interested in the person you met. Or maybe there was so many distractions that you just couldn’t focus. A lot of times we don’t even get past the registration phase because a lot of these psychological factors interfere with taking in the information.

**Retention** is the act of taking the new information and moving it into a more permanent store... in long-term memory. You have to do something with the information you are registering in order to make it stick. If I use the example of calling information for a number and I get it and then I forget the number right after I get off the phone, there is a reason that I didn’t retain it...I didn’t do anything with it. If I am trying to remember a number, I can do a number of things...I can try to associate it with the year of my birth or with an old prefix from my childhood, or

something familiar--but I have to use something to make the number “stick”. For example, If I get a number 9981...well I might look at it and say “How could I remember this number?” well 9 times 9 is 81...so...I did something with the number here. If I don’t do anything with the number then I don’t retain it—and not retaining it is a different problem from not paying attention. It doesn’t get to stay in your memory. When I talked before about converting short-term memory to long-term memory, well there are certain tools that you have to use to do this. We’ll get into the nuts and bolts of how the tools of imagery, association and organization help you to just that.

**Retrieval** is the third step. This is the hard part. How many of you try to think of someone’s name, or where you put something. It could be on the tip of your tongue and you can’t get it out. That is a retrieval problem. That means that you paid attention—you registered it, you retained it, you did something with it, but you can’t quite get it out. There are certain tactics that help with this, but we find with retrieval problems that the harder you try to remember it, the further away it gets. The best thing to do is relax and think about something else, as your brain has its own little sub-process going on and it will pop up later instantaneously.

Many times retrieval problems exist because number one, as you get older, you have a larger amount of books in your brain, (hundreds of thousands), as opposed to when younger, you have only one hundred. To get the information that you want, you have to sift through all these different books, and a lot of these books are similar...so it’s a hard task. However, If we do something memorable with the information in the retention phase, chances are that it will be easier to retrieve later on. So, the key part in this whole process is being able to ask yourself the following questions: “Did I pay attention?” “Did I get it in in the first place?” “Did I do anything with the information?” “Was I able to pull the information out when I needed it?”

Forgetting something can be due to any one of these things. How many of you go into one room to get something and then you forget why you are in that room? Well we all know that the best way to remember something is to go back where you started. With retrieval, if you go back to that room where you first had the thought, you’re recreating the stimulus cues of the environment where you first had the thought. This re-energizes the brain and brings it right back to where you were “mentally” beforehand. Retrieval is probably the hardest part, and probably the most frustrating. One key point to remember is that you have a whole library full of information and it will be a challenge for the brain to go back over 80 years of living, and always be able to find things quickly—that is just being realistic.

### ***Brief Overview of Imagery, Association, Organization***

**Imagery.** Imagery, association and organization are the basic ingredients of memory—these are the nuts and bolts of improving your memory. When we talk about using our brain to remember things, this is the foundation to do this. When we register information—take it in—we must have a tangible way of doing this in order to convert short-term information into long-term memory. When we use tools like imagery and association, we are in a sense giving the brain “cues” to work with—we are setting up a structure so to speak for the new information we are taking in, which makes it easier for us to remember. Imagery is the art of using your imagination...it has to do with forming mental pictures—mental snapshots, and it does not have to be just visual. It can be auditory, it can be the sense of smell, touch and taste. You can use all five of your senses, and the idea here is to not just think of something in its language-based description but to form vivid mental pictures. You’re going to see imagery as being a tool of vital importance—it’s a skill. A lot of people think more in terms of language terms more than

picture terms, but with awareness and practice, imagery is a skill that can be exercised to increase your memory...it is a very powerful tool to aid memory.

**Association** is a big topic in psychology which states that in order to learn something new you need to associate it with something you already know. You naturally associate in the learning process, but if you are more consciously aware of the power of association, then you can take the reins and use it to your advantage. For instance, I used association when I took the numbers 1,9,5,4, of a phone number that I was trying to remember and I translated it into the year 1954. I associated it with something I'll never forget--the year of my birth. I used two tactics. I organized that information, I combined four separate pieces of information into one piece of information—the date--and I associated it with something that was relevant to me. To learn something new you have to associate it with something that you know already--and even better—something relevant to you.

**Organization.** We naturally organize to some degree but as we get older, we don't spontaneously use organization skills as much as we did when we were younger. Say you give a person a list of 16 words to remember and the words consist of four categories-- 4 types of herbs and spices--4 types of tools, 4 types of clothing, and 4 types of fruit. Then you read them out loud first to a younger person and then to an older person, and ask them both to repeat back as many as they can...something interesting happens. You'll find that the younger person can repeat them back spontaneously and in their proper categories, whereas the older person will recite only the last couple of items on the list (called the Recency Effect). Older people tend to naturally use less effective tactics by remembering the most recent items or the first items on the list, whereas younger folks have a tendency to better organize things in their correct category.

Imagery, Association, and Organization are really the key ways to helping you retain information better. If you can learn these memory tactics and apply them in very specific ways in different memory situations, then you can be your own personal scientist—you can be your own creative problem solver...so that you know how to tackle different memory situations.

### ***How Thoughts and Feelings Affect Memory***

Thoughts affect feelings in ways that we are not always aware of. In fact many of us become unaware of what we tell ourselves, but we feel the negative emotions as a byproduct of these statements. We first have the thought and then we have the feeling attached to it. You are going to start to become more aware of how what you think leads to an emotional state of mind which interferes in a big way with memory. When you say to yourself, "My memory stinks," or "It's hopeless for me to try now," what you are setting up in your brain is feelings of worthlessness, fear and lack of confidence to excel at learning new memory skills. Throughout this course we will be teaching you ways of first being aware of what you say to yourself, and then being able to stop destructive thought patterns. Because thoughts effect the feelings that you have you will start to learn how they have a cause and effect relationship to each other. A big part of tackling memory problems is dealing with negative self statements that produce emotions that are distracting, which serve to lower our expectations for success, and decrease our motivation to use methods that can help us to build better memory skills. The following are the 6 Cognitive Distortions that older adults typically use that serves to produce negative emotions which interfere with our memory. These have been used so often that become automatic...The situation leads to the emotion before we have a chance to become consciously aware that we are thinking in these types of distorted ways.

**1. Overgeneralization** – When we talk about “overgeneralization”, what we are really talking about how we make overgeneralized negative statements about our memory abilities based on the occurrence of one event or memory error. Statements like, “I **ALWAYS** forget important stuff” or “I **NEVER** remember things,” really sets the tone for how well your memory will function in the future. Overgeneralization is when you take one small thing, one tiny event, and you translate it into a negative statement about how your memory is for everything—it’s an all-inclusive statement that is usually incorrect. For example, if I forgot someone’s name in the class, instead of saying something positive like, “What do I need to do to improve,” or “How can I remember better for next time,”--- I might over generalize about how poor my memory abilities have become. I automatically start to think, “Gee, I’m always forgetting people’s names,” “I have a lousy memory for everything”! What I would be doing is taking one time or event where I made a memory mistake and generalizing that my overall memory ability is poor—that I make mistakes every time—and this may not be true. After a while though, all the negative statements lead to an overall belief system that sets you up to fail. I’m sure you can recall that there are definitely times when you remember stuff, you just probably don’t give yourself credit for those times. Instead, you beat yourself up over the mistake in your automatic, habitual thoughts and that’s when you get into trouble.

The big tip-offs to let you know when you are using overgeneralization type statements include the use of such words as: **never, always, every time, everything**—in your statements to yourself. When you find yourself saying that you **always** forget or that you can **never** remember **anything**, that’s a big signal that you are using overgeneralization...taking one event and applying it to everything. Basically it is taking one event and telling yourself that this is how it is for everything.

**2. Awfulizing** --This occurs whenever we automatically exaggerate the negative side of an event. Such as: “This is *horrible*...how could I forget to make that phone call!!” We may commonly do this as a way to anticipate and “insulate” ourselves from some undesirable possibility...in some sense this is paradoxical, yet it may give someone a false sense of control by anticipating the worst. An example of this would be: When you forget to mail a letter and you say to yourself: “oh...this is the worst, this is just horrible, I’m never going to get any better at remembering.” Common words that are used or signal this cognitive distortion are: Awful, horrible, terrible, the worst, devastating, etc. This occurs more subtly than we would think, often being a form of “Self-downing” that has become *automatic* from years of use. Substituting a **RATIONAL ALTERNATIVE** is the remedy...Instead of saying this is the worst thing...**STOP**... and reframe it with...“I’ll need to try a different way to help myself remember things like this—there are many other things in life that are *horrible* or *worst*!”

**3. Self-expectations** --This occurs when a person sets overly high standards for their performance and when they fail to meet those standards, they experience a sense of failure and guilt. By measuring their ability against these excessively high “imagined” criteria for success, they often set themselves up for failure and they experience a chronic feeling of never being good enough. These standards are often derived from idealizing the abilities of others—people think that other people “never” have these problems with memory. When setting up this imagined comparison with others or with some exaggerated standard, the person’s ability rarely meets this self-imposed and often irrational expectation. Common words to watch for when this type of cognitive distortion occurs are: *must, should, have to, need to, and generally “why can’t I be that good...something must be wrong with me!”* While some folks feel this is a way to

motivate better ability by setting high standards to shoot for...usually the standard is unrealistic and simply causes guilt, a sense of failure, lowered self image, and a drop in confidence and personal control. When this occurs the person continues to find “proof” that they will never measure up and develops a “why try” attitude that in the end causes further problems. Albert Ellis calls the constant internal dialog whereby the person beats themselves up with “must be as good or better” statements: **“MUSTURBATING”!** For example, when a person can’t remember where they put the letter that they intend to mail, they may have either conscious or automatic thoughts like: I must/should be better than this, my friend Mary never has this problem.” OR “I never had problems like this before” (comparing themselves to an idealized version of how they were in the past). Again, fighting this is best achieved through stopping and considering the rational alternatives (which are many). For example: “I didn’t pay attention in the first place when I put that letter in with a pile of bills...NEXT TIME...I will put it in a separate pile by the door so I can get it before I leave the house” or “I used to forget things when I was younger as well, particularly when I was in a rush.”

**4. Exaggerated Self-Statements** -- This occurs when a person develops an exaggerated view of their own importance or “uniqueness” and actually uses this view to make their difficulties “special”. When this occurs following a memory error, instead of having any positive effects, the automatic thinking that takes place produces a negative identity that could interfere with the person’s future efforts. For example, when a person forgets to stop at the store on the way home...they may comment that, “Oh well, I just have the worst memory of anyone I know”. By saying this the person is writing off their memory mistake by underscoring their own “specialness”. Not unlike people who engage in a related form of self-denigrating “one-upsmanship” with the common expression: “oh you think you got it bad...listen to how bad off I am”, common word tipoffs might include: “most”, “biggest”, and “worst”. Once again, the best method to fight this includes a healthy self-awareness of when it is occurring and then a rational disputation of this distortion by considering the plausible alternatives. Instead of saying: “I just have the worst memory of anyone I know” one needs to look around at others who indeed have memory problems (possibly due to dementia, etc) that are truly bad and make an honest comparison. In actuality, the person using this cognitive distortion may have a fine memory in areas that are discounted or ignored...remembering old phone numbers or work-related or personally relevant facts or information...that would probably indicate that they don’t have the “worst” memory.

**5. Mind-Reading** is a very simple and quite common CD. This is when a person imagines that someone has a lowered or negative expectation of what you can do...this is very common in all areas as we often try to be sensitive to others, by anticipating their thoughts. However, it is harmful when we get into the habit of thinking that others are thinking negatively of us and that they EXPECT that we are not capable of doing something. Often times, we may think: “Oh, she thinks I’m not going to remember what she is telling me” ...when in fact the person may be thinking, “gee, I hope I have it together like her, when I’m her age!” Predicting others’ thoughts and expectations, and then letting these speculations negatively affect our emotions serves to distract us and rarely leads to any benefits. One must be vigilant of this self-defeating form of Automatic Thinking.

**6. Self-Criticism** -- This cognitive distortion occurs when we make a mistake, and instead of putting it in perspective, we put ourselves down with insulting remarks. This is the most basic of all distortions in that it is simply a case of “name-calling”, except the target is ourselves. When we chronically refer to ourselves as “stupid” or “dumb” we begin to actually expect ourselves to

act that way. This serves to deflate our self esteem and our belief that we can in fact make a difference in our performance. Dispute this distortion by being the “personal scientist” that you are and seek the actual reason for why you may have made an error. Also, having a sense of humor helps! ☺

## ***Memory Tools And Tactics***

### **External Aids**

What are External Aids (props outside yourself): Notebooks, calendars, post-it notes, lists, name tags, timers, environmental restructuring (keys on hook by door or in refrigerator on top of lunch), some mnemonics (rhymes, acronyms, acrostics, sayings), drills, and routines.

External aids AIN'T CHEATIN'!! Why: forces you to process info more and thereby have better retention, reduces stress, allows you to focus on other more challenging tasks, and mention “functional” use what works approach. For example: *writing things down*- forces you to organize, focuses attention, motor cues, and visual cues, (and if you say it aloud—auditory cues). Writing notes requires specificity (“Run errands” vs. 1. Haircut 2. Phone call to doctor 3. Stop at cleaners). Another example: going to the post office, phone rings, turn your watch around, when you look at it it will cue you to go to post office.

### **The Three General Categories of External Aids**

**1. Writing Notes** – *writing things down*- forces you to organize, focuses attention, motor cues, and visual cues, (and if you say it aloud—auditory cues). Writing notes requires specificity—if you write something down, try to be specific! (“Run errands” vs. 1. Haircut 2. Phone call to doctor 3. Stop at cleaners). Also, you can't lose them...a notebook with a bright cover might help! Also, a grocery list on the kitchen table...

**2. Environmental Restructuring** – basically you can design your environment to be user-friendly. A hook for your keys by the door, a ruler in the desk drawer(you have more important things to think about than to remember where you put the ruler!) Put your wallet or purse in one spot in the house. All your bills should be in a manila envelop! ETC. You do it naturally with relish and catsup in the refrigerator...or a specific cabinet for glasses, plates, and silverware...Why not for other everyday things!!

**3. Object Cues** – Timers, Standard things out of place--going to the post office, phone rings, turn your watch around or put it on the opposite arm., when you look at it, it will cue you to go to post office. Put a paper bag on the refrigerator door to remind you to make lunch.

Misc points: Rhymes, Routines, Mnemonics, Drills, etc.— rhyming was essential before common availability of paper in order for people to remember early literature...the Odessey, etc. Rhyming uses both sides of the brain may use your brain more effectively. Mnemonic tools: Acronyms such as HOMES, SNAFU, FUBAR, Acrostics such as Every good boy deserves fudge, etc. Thirty days has September...

### **Review and Discussion of Internal Memory Aids: Imagery, Association, Organization: How they are the primary ingredients of all memory building tools.**

In this section, we start with a brief review of the basic “ingredients” of memory and discuss how these ingredients are skills that people already possess--they only need to be recognized and utilized in a systematic way. After that we will review the Method of Location, Peg Word and

Link methods. These tactics have value not simply as specific strategies for remembering lists of items, but as ways to illustrate how the imagery, association and organization components can be useful in an integrative fashion to improve memory skill. It is important to underscore that, by learning to use these strategies, you will begin to better see the power of the individual components and that this can lead to your “creatively” applying these components in ways that are specific to the needs of your own memory challenges. This is part of being a personal scientist—knowing how to use the tools that are available to address the memory challenges that exist in a variety of situations.

We talked for the last couple weeks about internal strategies for building your memory...the use of imagery—creating good mental pictures, forming associations, and organizing information. These are the primary ingredients for all memory building strategies because they help you to “shape” the information you want to remember so that it will “stick” in your mind more effectively. As we have discussed in the previous classes, the key to effective use of these ingredients involves awareness and repetition, repetition, repetition. These skills may already exist in your brain, but may not be as well-honed as they could be to be of value. You have to practice these skills in order to really make them work for you. For example, you may remember when we talked about this during one of the last classes—we discussed how remembering the five items you need to get at the grocery store could be made easier by creating images of the items linked together—something we called Associative Imagery. This is a very basic tool that can help you to remember small numbers of items, BUT it is most important to show you how creating images and associating them can make them more memorable! Say for example you need to get five items from the store. They are: Coke, Kitty Litter, Fish, Eggs, and Candy Canes. Form an image of all of these items together in one big picture. Say for example you see a Giant bottle of Coke, about the size of a 5-gallon water bottle. Lining the bottom is kitty litter, like the sand in an aquarium, and swimming in the bottle of coke is a school of fish...next you see eggs floating on the surface of the coke, and finally you see your grandson using the candy canes like fish hooks trying to catch the fish. If you create this associative image and really see it...then by the time you get to the store all you have to do is bring up this “crazy” image in your mind and you will be surprised by how well it sticks. Again--If you know how to use these key ingredients, you can continually apply them to all different sorts of situations where your memory would be challenged.

A lot of times you will be in situations where you can't write down everything that you need to remember. You may be at a party, in your car driving or walking through an office to meet someone for the first time, and you are not in a position to write down names or other pertinent bits of information. The memory ingredients of imagery, association and organization can be creatively applied in such situations as needed. Once you know how to use these ingredients, you will find that memory is simply a skill that can be improved when you practice with the right “tools”. The more you exercise these skills, the better you will get in their usage. An important aspect of using these tools is in knowing when to creatively apply them for the variety of memory challenges that you face. You can use them for making grocery lists, remembering something that you may need to do next week, or for remembering names. Of course there are times when it's best to write things down...we all can't be expected to remember everything that we are exposed to all of the time, but there are some times when you can't write everything down and that's when these tools come in handy. You can take any one of these ingredients or any combination of them and creatively apply them to all sorts of situations where your memory is put to the test.

If you complete the MESS program and remember only two general concepts make sure they are:

1. The Three R's of Memory—Registration, Retention and Retrieval
2. The Basic Ingredients of Memory—Imagery, Association and Organization.

These are the most important concepts to master because with these, you will be well equipped to understand the fundamentals of enhancing your memory in a wide range of situations. Consider these concepts to be the basic tools needed to become your own personal scientist in the area of memory enhancement.

### **Using the IAO “ingredients” to improve memory for names and faces**

This requires three main steps:

1. Register the person's name. (i.e. say it to yourself or aloud as in “Hi BILL, nice to meet you!”)
2. Notice something in their physical appearance or something noteworthy about them.
3. Form an associative image between their name and what you noticed in step two.

While often times, it is recommended that you find a distinctive feature about the person's face or body and then associate that with the person's name in some odd, ridiculous, funny, or ribald manner...it may be just as helpful to use a funny expression with the person's name and visualize that person in some act or situation that will stick out.

*For example:* I met someone named Bill...I immediately said “Ok, Wild Bill” while I visualized him riding a horse wearing a cowboy hat”.

*Another example:* I met someone named Grace, and I thought to myself: “Amazing Grace” and visualized a glow around her face as she looked to the heavens!

Finally it is important to be playful and have fun with this...you don't have to tell anyone what you used to help your memory...this takes place all in the personal domain of your mind!

Here is a little example of what we did in class:

“How can we use imagery, association and organization when we meet someone for the first time? Well, say I meet: \_\_\_\_\_Instructor addresses someone's name in the class. When she tells me her name when we first meet...I begin by saying it aloud and this helps me to register it. I then form some association between what I see in her and in her name. Perhaps I'll think about ways that she may remind me of someone from my past—perhaps an old girlfriend with the same name, or someone in the movies that she reminds me of. I then form a mental picture, a link—and I make that association. So let's take someone in class and try this exercise. Instructor chooses participant. Okay, so how could we remember \_\_\_\_\_name? What things about her appearance or name can we associate with something? Answers/Discussion.

In closing this section--Remember the three steps: 1. **Registration**--register the name—pay attention and say it out loud 2. **Retention**—retain it by using imagery and association in an organized fashion, and 3. **Retrieval**—it’s easier to retrieve now because you have made it more memorable by your actions in the first two steps. By using these structured steps, you will see that practice can improve memory skill in this area and that this method will start to come naturally to you with less effort. As well, you will see that you can have fun with this!”

### **The BIG One! Using the “Method of Location” for remembering lists of items.**

We then moved into what initially appeared to be a complex method...but as you saw it was in fact not that difficult once you practiced it a couple of times. This technique for remembering lists of items was called the **Method of Location** and you saw that by practicing this tactic, that it helped train your ability to form mental **images** and to form helpful **associations** in an **organized** manner.

Remember when we first came together for the MESS program, as a group you generated a list of ten items that you wanted me to pick up from the store and I was able to repeat them back to you (backwards and forwards) without any time to practice? At that time I also said that by the end of the MESS program that you would all be able to do the same? Hopefully that is the case and now, but here is a review in case you need to refer to this later to brush up.

Now once again to demonstrate the power of this technique, why not try it again with the following list of items that you need to pick up from the store:

1. Popcorn
2. Milk
3. Bread
4. Sugar
5. Poinsettia plant
6. Paper towels
7. Soap
8. Whiskey
9. Cat food
10. Bananas

To begin you need to take the time to specify ten locations in your house in an organized and sequential fashion—one after the other. This is done to create “anchors” that are very easy to remember since they are part of your route as you walk through your house. The images of these locations should easy pop into your memory as they are overlearned from many years of practice.

The next step is to take the items that you need to remember and form associated images of them with the locations that you have specified in your house. You need to imagine each item from the list and form an association with that image and the image of each location in my house. To illustrate, let me describe the ten locations in my house—one after the other in consecutive order from the time I pull in the driveway all the way through my house:

My locations are:

1. the carport
2. the mailbox
3. the stairs
4. the landing
5. the front door
6. the sewing table
7. the water-cooler
8. the refrigerator
9. the kitchen sink
10. the toilet

These locations are in sequential order and create a well trodden path from the beginning to the end that is very easy for me to visualize. Once you have selected these ten locations it should take little effort to remember them. In order to be useful as anchor points, your ten locations should require very little effort to imagine.

Once you have formed your associative images of the item to be remembered with the location, you simply take a “mental walk” through your locations and they will serve as cues to help recall the items that you need to remember. Perhaps walking through my associative images will help make this clear.

Let’s take the grocery item **Number 1**: “popcorn”. When I pull in the carport (my first location), I’ll imagine there is a popcorn maker there right up on the wall and popcorn is just busting out of it all over my car. This may sound like a crazy mental picture—it is and that’s OK! Using off-beat and odd image associations sometimes make the link more memorable.

**Number 2**: “milk”. I imagine that I went to the mailbox and milk came pouring out of it when I opened the little door. The milk spilled all over the floor and I imagined that I felt a cold wet sensation as the milk poured on my hand. Using as many senses as possible in the creation of images helps this process.

Next stop, location **Number 3**: my stairs going up to my place, and grocery item number 3: bread. I imagine that I step on a piece of bread lying there and it’s squishy—it feels really spongy. So when I create the image, again it’s not just visual but tactile as well...I can imagine that I feel the bread under my foot.

Okay, so the next location (**#4**) is the landing at the top of the stairs. I see piles of white sugar (item number 4) piled up all over the place. This is something that would never happen in real life but I see it right there in front of me.

The next step (**#5**), I go to my front door and there is a giant Poinsettia plant hanging on it.

The next stop, **Number 6**, is a sewing table and I visualize taking paper towels and carefully laying them on the table making like a map on the table.

The next stop (#7) is my water-cooler and I see ten bars of Ivory soap floating inside at the top of the water in the cooler.

As I'm looking at that I realize I need a drink and I go to the refrigerator (**Location #8**) and open the door and see a big bottle of whiskey staring me in the face and so I take a drink of it.

The next stop is the kitchen sink (**Location #9**) and it is filled with cat food and it doesn't smell too good and so I have not only the image of cat food, but I am also using my other senses—my sense of smell--to do this.

The last stop (**Location#10**) is the toilet and I imagine that when I open up the toilet, there is a pile of bananas in there.

So the key here is to have your own locations which are in sequence—memorize them backwards and forwards until you know them well...and then you can link the new information that you want to remember with it. Make funny, silly and crazy images that may seem ridiculous, but these are sometimes the most effective images for later remembering.

### **Review of options to the Method of Location (MOL)—The Pegword and Link System.**

Some participants find that other options to the Method of Location may be desirable. To address this, you have the option of using the Pegword system or the Link system that was covered at the end of the MESS program. Other memory programs often start with the link system and move on to the MOL. But within the MESS program, the MOL best exemplifies the use of the “Basic Ingredients” concepts and it is our view that it is the most effective method.

The Pegword system was presented as a language-based alternative to the MOL. Instead of linking new information to locations, the person must link-up the information with words that rhyme with the numbers one through ten. Some folks find this easier than plotting locations in their home. Either the MOL or the Pegword system are good examples of memory tactics that well illustrate the over-arching concepts of the 3R's and the “Ingredient's” (imagery, association, and organization) of memory. The link approach involves simply linking each pair of words together in separate associations. It lacks a quick way to specify objects that are in the middle of the list and requires that a person **MUST** remember the first item on their own in order to get started. Consequently, it is presented at the very end for sake of completion and in case some of the participants may find this to be a “quick and easy” approach to incorporate into their memory strategy armamentarium! Here is a basic review of what was covered in class on these methods:

### **Using the Pegword System**

The Pegword system is another type of memory enhancement method and it is similar to the method of location in that anchor points are involved...the only difference is that one uses locations as anchor points (MOL) and the other (Pegword) uses words as the anchor points. You can use either one if you wish. Sometimes individuals have trouble visualizing locations and so they seem to prefer to use this method because they find using words as the anchor points to be more intuitively appealing. So instead of using locations in your home as your anchor points, we're using words that rhyme with the numbers one through ten.

Here are the words that rhyme with the numbers one through ten that will become your permanent “Pegwords”:

One is **Bun**  
Two is **Shoe**  
Three is **Three**  
Four is **Door**  
Five is **Hive**  
Seven is **Heaven**  
Eight is **Gate**  
Nine is **Wine**  
Ten is **Hen**

Just like you had to remember your locations, well, here you remember each object that rhymes with the number. You can use this method, but if you are more comfortable with the method of location, I suggest that you stick to that. But if you just can’t remember the locations very well, try using the Pegword system.

But if you think you might feel more comfortable using the Pegword technique all you do is use the pegwords like bun, shoe, tree, etc. as anchor points to link up each item on the grocery list by creating an associative image. So...

The first item on our grocery list was “apples”, and so I’ll visualize the first word, “bun” with it...I’ll visualize a big bun cut in half with an apple in the middle like an apple sandwich.

Two is shoe...so when you go to put your shoe on, there is oatmeal in it. You put your foot in it and you don’t even look, but you feel it when your foot is in there!

Three from the grocery list is, “coke” and so looking at three-tree, well, I’ll visualize a big tree with coke bottles hanging from each branch.

Four is door...I’ll imagine a loaf of “bread” spiked to the door.

Five is hive...well, I’ll imagine seeing the item “bananas” sticking out of a hive.

Six is sticks...and so I’ll imagine the item “ribs” on a stick and cooking it over a fire.

Seven is heaven...and I’ll imagine floating on a cloud of “lemons” from the list, instead of a cloud of heaven.

Eight-gate...well I’ll imagine a gate with a lot of ketchup poured all over it.

Nine is wine...and so I’ll visualize a wineglass filled with the item, “chicken soup.”

Ten is hen...and I’ll visualize a hen clucking around biting at a red-hot chili pepper.

Again, instead of using the locations as anchor points (as in the MOL), you are using the words as anchor points.

## **The Link Method**

As an alternative to the Method of Location or the Pegword System, you may use a very basic approach called the Link Method that we will now review in passing. I don't believe that this method, "The Link Method", is as powerful a tool as the MOL or the Pegword, but perhaps you may find it useful in some situations. The method involves simply linking each item in a paired association with the next item...so for example if we take the list from earlier in the review we could:

Visualize an **apple** inside of an **oatmeal box**...then

Visualize an **oatmeal box** balancing on a **Coke bottle**...then

Visualize a **Coke bottle** with a **loaf of bread** stuffed in it...then

Visualize a **loaf of bread** with a **banana** stuck through the middle of it...and so on.

A variation of this theme is to link the items together into a coherent story (often termed the "Story Method"). So for example...it might start out like: "I was walking down the street under some **apple** trees and noticed an **oatmeal** box hanging from a branch. As I looked at the box, a **coke** bottle dropped out of the box and hit me on the head. After the coke bottle fell out, it was followed by a loaf of **bread** that fell to the ground. I went to pick it up and as I walked toward the bread, I slipped on a **banana**.... And so on.

All these methods have the use of imagery, association and organization in common, but use different approaches to promote those processes within a different structure. You should be familiar with each of them and then be able to choose which one is most effective at the moment. That is part of being a "personal scientist"...testing out different methods that best service your needs! Once you master a method, then you can begin the process of creatively applying the Basic Ingredients for enhanced Memory Skill building (Imagery, Association and Organization) to address the various memory challenges that you will face in the future.

For further information on this topic, contact:

Albert "Skip" Rizzo, Ph.D.

Integrated Media Systems Center and School of Gerontology

University of Southern California

3715 McClintock Ave. MC-0191

Los Angeles, CA. 90089-0191

email: arizzo@usc.edu phone: 213-740-9819 fax: 213-740-8241

### **Bio:**

Albert "Skip" Rizzo received his Ph.D. in Clinical Psychology from the State University of New York at Binghamton. He is the former Program Coordinator for the University of Southern California's Alzheimer's Disease Research Center (ADRC) and has joint faculty appointments with the University of Southern California School of Gerontology and the School of Engineering's Integrated Media Systems Center (IMSC). He is the director of the IMSC Virtual Environments Lab, which conducts research on the design, development and evaluation of Virtual Reality systems targeting the assessment and rehabilitation of cognitive and functional abilities in persons with neurological dysfunction. His work in Gerontology involves directing

the Memory Enhancement Seminars for Seniors program and designing VR and other computer-based simulation tools for cognitive assessment and rehabilitation for the elderly and persons with disabilities.

### **Educational Background:**

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|-------|---|
| Ph.D. | State University of New York-Binghamton, Binghamton NY<br>Clinical Psychology, 1991 |
| M.S.  | University of New Orleans, New Orleans, LA.<br>Experimental Psychology, 1982        |
| B.A.  | University of Hartford, Hartford CT.<br>Magna Cum Laude, Psychology, 1977           |

### **Professional Background relevant to presenting this educational activity:**

In 1996, Dr. Rizzo created the Memory Enhancement Seminars for Seniors (MESS) program at the USC School of Gerontology. This stemmed from his previous clinical experience providing cognitive rehabilitation services to persons having acquired brain injuries, strokes and other forms of neurological conditions. The MESS program consists of eight, weekly two-hour group seminars designed to assist senior citizens in learning skills for memory maintenance and enhancement. The MESS approach takes a holistic view of memory that addresses cognitive, psychological and educational factors in memory performance and aims to teach a practical outlook towards managing memory challenges. In addition to providing direct instruction of mental strategies for better remembering, the MESS program promotes a rational approach towards dealing with memory problems throughout the lifespan. Also, the program is designed to be *fun* as well as helpful! Thus far, the MESS program has been run both at USC and at many underserved Los Angeles area senior centers and residential facilities. In addition to the memory enhancement mission of the program, MESS participants also become familiar with the many senior services that are provided at the USC School of Gerontology (i.e., Caregiver resources, senior counseling, senior activist program (The Andrus Volunteers), Alzheimer's Disease Research Center, etc.).

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