The Method-of-Loci: Enhancing recollection of positive and self-affirming memories

The Method-of-Loci (MoL) is an ancient mnemonic device that relies on familiar spatial relationships between locations. To use the technique, you start by choosing a familiar location or route that you are easily able to navigate yourself around in your mind (e.g. your journey to work/college, your home, your jogging route), and identify a number of focal points (loci) along the route (e.g. the front door, hallway, kitchen – if the route was a house). Each locus along the route is then combined with some to-be-remembered information by generating a vivid and bizarre image to link the two. The more surprising and strange the imagery, the better the material is generally remembered. To recall the target information from memory, you simply mentally navigate along the route and bring to mind the images generated in order to access the information required.

As an example, imagine that you wanted to remember a shopping list that included milk and bread, and Trafalgar Square was the familiar location. You would combine these to-be-remembered items (milk and bread) with two loci. The first might be the statue of the lion, and you could imagine the lion drinking a giant glass of milk. The second might be Nelson’s column, who you imagine to be standing haphazardly on top of a loaf of bread, swaying from side to side. When you are in the supermarket wanting to recall these items, simply retrace your steps around Trafalgar Square and the images of the lion drinking milk and Nelson standing awkwardly on a loaf of bread are used to prompt memory.

The origins of the MoL can be traced back to ancient Greek times, and remarkably, the technique is still widely used today. For example, world memory champions use the MoL to store exceptionally large amounts of information, such as complex card sequences and \( \pi \) to thousands of digits. Importantly, the MoL is an easy skill to acquire and can be used effectively by non-experts.

We recently tested whether the MoL could be used to facilitate access to positive, self-affirming autobiographical material. We found that relative to a basic rehearsal strategy, using the MoL enhanced recollection of positive and self-affirming memories at both short and longer-term intervals, in depressed and formerly depressed individuals, establishing the utility of the MoL in these clinical groups (Dalgleish et al., 2013). More recently, we have found that the MoL can be used by individuals in remission from depression to help protect against deterioration in mood. Specifically, participants trained to use the MoL were able to use the strategy to recover from induced sad mood in the laboratory. These benefits appeared to generalise to more naturalistic contexts as participants trained in the MoL reported using the strategy more frequently than those trained in rehearsal to offset naturally occurring downturns in mood in the day-to-day.

Given the well-documented memory biases experienced by depressed individuals, we have put together this short guide which outlines a step-by-step approach that you can use to teach your clients how to use the MoL. We intend for the MoL to be used as a simply strategy that can be taught within more comprehensive cognitive-behavioural treatment packages. We recommend using the MoL with the purpose of aiding access to positive and self-affirming memories for patients who have a strong negative-memory bias and have great difficulty in bringing to mind such material. The MoL as an emotion regulation strategy is best used with individuals coming out of a depressive episode for use in the day-to-day. Ideally, the MoL should be taught at least a few weeks before therapy terminates to allow for the technique to be consolidated and rehearsed while therapy is on-going, and reviewed in the final session as a relapse prevention strategy.

We recommend that you leave approximately 20-30 minutes to develop an individualised plan using the MoL with your client, incorporating the memories of most relevance to your client. For example, for someone who has a strong core belief surrounding themes of failure, identification of memories exemplifying success (e.g., being offered a job after a gruelling interview) may be useful. On the following page we have compiled a step-by-step guide of how to explain and teach the MoL.
Steps Involved In Using the MoL:

1. Provide rationale

Depression is associated with a number of memory biases, which can make it very difficult to bring to mind memories of pleasant or happy events. For example, it is much easier to access memories which fit with how we currently feel. So, when mood is low, it can be very challenging to think of happy experiences or situations in which we have performed well or done a good job. I am going to teach you how to use a handy memory strategy that can make remembering this kind of material much easier. The hope is that using the strategy will help restore some balance to the kind of memories that come to mind. Before we get to learning about the strategy though, let’s identify some key memories that you’d like to be able to bring to mind when you feeling down.

2. Choose items to be remembered

Here you need to help your client generate key autobiographical memories (between 5-10 memories) that they would like to be able to remember at times of low mood. It is important that the memories generated are either:

(i) positive memories - memories of events that elicit positive emotion both when they initially occurred, but also as the memory is retrieved. For example, identifying one’s wedding day which was happy when it occurred but is no longer positive due to a subsequent divorce would not be suitable. However, a memory of a surprise 50th birthday party that is still associated with positive emotion upon recall would be fine.

(ii) self-affirming memories - memories of events that illustrate your clients skills or strengths in some way (e.g., participating in a dancing performance last year as a part of a Christmas fundraiser or reaching the finishing line of the Cambridge half-marathon in the Spring of 2010).

What is key here is that the memories identified are for a specific event (e.g., eating the most delicious spaghetti at a lovely restaurant during my trip to Florence last year), rather than extended events or categorical summaries of events (e.g., my holiday in Italy or going on holidays). Support your client to elaborate these involving as much vivid detail as they can recall.

You can talk your client through this process using the following script:

*For the positive events, each event that you come up with should be something that you were happy about at the time that it occurred, but should also make you feel happy thinking back to it now. An example of this might be receiving a present you really wanted for your last birthday, or recently coming home to a surprise dinner that your partner had prepared for you. You would have been excited or happy at the time when these events occurred, and also have fond memories now when you think back to them.*

*The other kinds of memories that you can come up with should reflect your skills or strengths. An example of this could be finishing a marathon that you had been training hard for, giving a tough presentation in front of your colleagues and feeling that you did a really well, or even getting through something difficult in a way that you are proud of. So, as you can see, the event itself doesn’t necessarily have to be positive – it can be challenging or difficult - so long as you were able to get through it well and when you think back to the event now, it should give you a sense of pride or satisfaction.*

Once the memories have been identified, ask your participants to summarise each memory with a few words to make them easier to learn. Using the examples above, we might use ‘50th birthday’, ‘dance performance’ ‘Cambridge marathon’ and ‘spaghetti Florence’.

3. Explain the principles of the MoL

You may have heard of the strategy before – it’s called the Method of Loci...

The technique involves imagining a familiar location, around which you can easily navigate a memorable route in your mind, such as your commute to work, or walking around your house. What you want is a journey where you can close your eyes and imagine travelling along the route, and can easily bring to mind the landmarks or items that you pass along the way. Once you’ve identified your route you then locate a number of fixed points that you know you will always encounter. For example, someone going to work in central London might walk by the entrance to London Bridge (1), pass a Marks and Spenser express (2), go past the London Eye (3), before arriving at Oxford Circus tube station (3).
4. Choose the familiar route

Ask clients to identify a journey that they frequently take (it doesn’t matter if this is a walk, cycle, tube etc).

5. Identify the loci along the route

Help the client identify loci along this route (however many memories they have to remember). Ensure that the loci that are identified will always be there, and list them in the order in which they are encountered. It can be helpful to make some notes of the route and loci.

The key in generating the loci is to make sure that they are specific focal points. Choosing something such as ‘the right turn’ or ‘travelling along the road’ will be difficult to generate an image from. Instead, using loci like ‘traffic light’ and ‘flower bed’ lend themselves to being combined with vivid imagery much more easily.

Once your client has come up with the loci, they need to practice mentally navigating along this route until they can do it without the need for notes or prompts. You can talk the patient through this process using the following script.

To help you remember your commute, talk through the locations and describe the sights and sounds you would encounter along your way. As you come across each of your loci in your mind, fix this image in your head and describe its positioning in relation to the other objects on the route, as well as describing what the locus itself looks like. Once you have done this, mentally draw the route from memory. Make sure you imagine yourself actually travelling along the route and visualising the loci as you pass them.

6. Combine the loci with the material to be remembered using imagery

This is where most of the work takes place. You now need to come up with a surprising and evocative image that combines each of the loci with one of the memories identified earlier. To demonstrate how to do this, we will work through an example. First, we will combine passing the entrance to London Bridge with the spaghetti meal in Florence. To create an image linking two, you may imagine that instead of concrete structures supporting the bridge, two huge bowls of spaghetti are holding up the bridge instead. You could go even further and imagine that it is the strength of the tomato and basil flavour is actually what is holding the bridge up.

To combine a Marks and Spencer Express that has a daily changing display in the window that the client reports looking at each morning, you may suggest imagining that the display involves the items that were used to decorate the 50th birthday party venue – yellow sunflowers, blue and pink balloons and a joint present bought for you by your closest friends. These items could be visualised as on display for everyone passing by to see.

Next, as the journey continues past the London Eye, you might combine the memory of completing the Cambridge half-marathon with an image of a person running on the inside of the eye, similar to what a mouse does on a running wheel.

Finally, as the client imagines themselves arriving at Oxford Circus tube station, they might notice that as they go to swipe their Oyster, their friends from the charity are dancing the routine they did at Christmas up on top of the tube sign.

Encourage clients to generate the images themselves. The imagery they generate may be more personally relevant, and therefore, better remembered. Provide support and assistance as needed, ensuring there is ample opportunity for your client to suggest their own evocative and bizarre images. There really are no limits here – creative individuals who use imagery in everyday life may find this task easier than those who are less familiar it. From our experience in these studies, this exercise tends to be quite enjoyable, provided that appropriate levels of support are provided.
7. Practice

To consolidate the imagery and memories, ask your client to practice navigating along their memorable route, passing the loci, and using the images to cue the memories they have identified. Make sure that they do not stop at the imagery-level – it needs to be carried through to the point where they elaborate the actual memory that has been linked to the image. For example, remembering the image of dancers on the tube sign is not enough – the full memory of performing the dance routine for the fundraiser must be retrieved.

The process for practicing is as follows:

a) Recall the familiar route generated earlier and imagine navigating along it
b) Identify the first locus along the route
c) Recall the image generated to attach the memory with the locus
d) Recall the memory attached to this locus
e) Navigate along the next part of the route and carry out steps b-e for each locus

Clients need to practice doing this until they can do so confidently and with ease. Our research has shown that after the initial learning session, 10 minutes of weekly practice for the next four weeks is sufficient for clients to retain this information and access it over long-term periods.

We suggest introducing the MoL at a time during treatment when it may complement other autobiographical memory work being covered. Optimally, it should be introduced at least four weeks before therapy terminates so that after MoL skills have been acquired, they can be set as homework over the following weeks so that by the time therapy concludes the repository of memories should be securely stored in mind.

The usefulness of the MoL to bring to mind positive and self-affirming can be reviewed in the relapse prevention session as a possible method to offset mild and transient downturns in mood. Clients should be encouraged to access the memory store at times when they notice deterioration in mood as a way to regulate emotion in the everyday.

The MoL does not need to be used exclusively to aid recall of memories. It is a general mnemonic device that can be used to retain any kind of information, which should be determined according to the needs of the client. Some suggestions for potential uses to aid memory include: skills and strategies developed during the course of therapy, emotion regulation/distress tolerance strategies, reasons for living, a pleasant events catalogue, techniques that can be used to delay impulsive behaviours.