Is there such a thing as a photographic memory? And if so, can it be learned?

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Alan Searleman, a professor of psychology at St. Lawrence University and co-author of the college textbook *Memory from a Broader Perspective*, explains.

In the scientific literature, the term eidetic imagery comes closest to what is popularly called photographic memory. The most common way to identify eidetikers (as people with eidetic imagery are often called) is by the Picture Elicitation Method. In it, an unfamiliar picture is placed on an easel and a person carefully scans the entire scene. After 30 seconds have elapsed, the picture is removed from view, and the person is asked to continue to look at the easel and to report anything that they can observe. People possessing eidetic imagery will confidently claim to still "see" the picture. In addition, they can scan it and examine different parts of it just as if the picture were still physically present. Consequently, one of the hallmarks of eidetic imagery is that eidetikers use the present tense when answering questions about the missing picture, and they can report in extraordinary detail what it contained.

Eidetic images differ from other forms of visual imagery in several important ways. First, an eidetic image is not simply a long afterimage, since afterimages move around when you move your eyes and are usually a different color than the original image. (For example, a flash camera can produce afterimages: the flash is bright white, but the afterimage is a black dot, and the dot moves around every time you move your eyes.) In contrast, a true eidetic image doesn't move as you move your eyes, and it is in the same color as the original picture. Second, a common visual image that we can all create from memory (such as an image of a bedroom) does not have the characteristics of most eidetic images, which almost always fade away involuntarily and part by part. Also, it is not possible to control which parts of an eidetic image fade and which remain visible. Unlike common visual images created from memory, most eidetic images last between about half a minute to several minutes only, and it is possible to voluntarily destroy an eidetic image forever by the simple act of blinking intentionally. Furthermore, once gone from view, rarely can an eidetic image ever be retrieved.

You might expect that an individual who claims to still see a picture after it has been removed would be able to have a perfect memory of the original picture. After all, a perfect memory is what is usually implied by the commonly used phrase "photographic memory." As it turns out, however, the accuracy of many eidetic images is far from perfect. In fact, besides often being sketchy on some details, it is not unusual for eidetikers to alter visual details and even to invent some that were never in the original. This suggests that eidetic images are

certainly not photographic in nature but instead are reconstructed from memory and can be influenced like other memories (both visual and nonvisual) by cognitive biases and expectations.

The vast majority of the people who have been identified as possessing eidetic imagery are children. The prevalence estimates of the ability among preadolescents range from about 2 percent to 10 percent. And it is an equal-opportunity phenomenon--there's no gender difference in who is likely to be an eidetiker. Although it is certainly controversial, some researchers also believe that eidetic imagery occurs more frequently in certain populations of the mentally retarded (specifically, in individuals whose retardation most likely stems from biological, rather than environmental, causes) and also among geriatric populations. With a few notable exceptions, however, most research has shown that virtually no adults seem to possess the ability to form eidetic images.

Why should this be so? No one really knows, although part of the answer may be related to a rather obscure fact about the development of such images. Research has shown that if a person verbalizes during the time he or she is scanning the original picture, this interferes with eidetic image formation. This utterance could be something as seemingly innocuous as covertly saying "Saint Bernard" upon seeing a large dog during the initial scanning process. So perhaps part of the reason why it is so rare to find older eidetikers is that adults are much more likely than children to try to both verbally and visually encode the picture into memory. If this is true, then it means that adults are more likely to disrupt the formation of eidetic images and are thus much less likely to be identified as having eidetic imagery, even if they really do possess the ability.

Can you acquire eidetic imagery through learning? Personally, I doubt it. To my knowledge, however, there have been no attempts to try to teach the ability to anyone. Although it is clear that eidetic imagery exists, psychologists still do not know why it occurs, what brain mechanisms may be responsible, or why it is found in such a small proportion of the population. It certainly is a fascinating phenomenon.