ArchiMemory

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1. INTRODUCTION

Spatial memory is one of the key factors of life survival. Human beings have developed this asset to a high level of complexity. They started to modify their environment. They build architectural structure to host their activities. They also developed different techniques to organise their knowledge. The “**Art of Memory**” (Yates 1966) is one of the techniques that was used to structure memories. This was achieved by associating information to be remembered with emotionally striking images. Those images were then placed in a visualized location in the mind’s eye. Nowadays, the way people are using their memory is very much different. With the exponential growth of technologies, people have externalised their memories in all sort of devices in a very binary and flat format. Can we rely on this kind of artificial memory on a long term? Are we really able to retrieve the information we want?

In today’s context of technological and visual culture, spatial cognition and memory deserve a much deeper understanding. Studies in psychology have already demonstrated that human **long term memory** (Miller 1956) is essentially infinite (Eysenck 2001). Wouldn’t it make more sense to use it more actively instead? The widespread use of video games and virtual world is expanding the practice of spatial cognition by a majority of people. Motion sensors and natural interfaces are becoming the norm to interact with those worlds. Although the majority of those games are still entertainment, the potential for education is huge.

Through this interdisciplinary lens, this research aims at building the foundation of an educative system that will be used to train our internal memory. Immersed in a multi-sensory virtual environment, a user will be able to build up an infinity of places that he could then use to organised information in his own ArchiMemory.

On a more practical approach, I propose a set of experiments that will demonstrate how to use **dual-coding theory** (Paivio 1971) to encode, store and

then retrieve information in association with our long term memory.

2. REFERENCES

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Figure 1: Exp01A

Figure 4: Exp01D

Figure 2: Exp01C

Figure 5: Exp01 Recall

Figure 3: Exp01B