

TIME MACHINES, PENSIEVES, *and* PORTKEYS— MEMORY TECHNOLOGY *to* BRIDGE GENERATIONS

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THE SCIENCE—AND SCIENCE FICTION—OF MEMORY

How does memory work, exactly? Why do we remember some things and not others? Why do some memories change or become distorted over time? How can simply reading someone else’s story have such an impact on us that it *feels* like a memory? Most importantly, how can we record and transfer our own memories in such a way that it will have that kind of impact on others?

It’s tempting to think of our brain as massive filing cabinet full of individual memories, or perhaps a super-computer with a finite amount of RAM and ROM. Of course, the human brain is far more complex. Our memories are made by a group of systems that play different roles in a vast interconnected neuro-chemical network: creating, storing, and recalling our the things we see, hear, and feel.

Today’s magic is tomorrow’s technology. Technology that seemed fantastical only a few short decades ago—flying to outer space, personal video telephones, self-driving cars, prosthetic limbs driven by brain waves, artificial intelligence—are now part of our everyday lives. While science fiction devices like time machines, pensieves, and portkeys currently exist only in the magical realms created by J.K. Rowling, H.G. Wells, and Jules Verne, we have the next best thing in our pockets right at this moment. Our smart devices allow us to (virtually) travel through time and space.

So how can we use this technology, and an understanding of how memory works, to “teleport” understanding and empathy between people?

HARRY POTTER and the PENSIEVE

J.K. Rowling’s fictional “pensieve” is a brilliant metaphor of how stepping into another’s memories can completely change one’s perspective. The first time Harry sticks his head in the stone bowl, he is swept into the mind and memories of his nemesis, Professor Snape. What Harry sees is very different from what he expects, and he never again quite sees things the same. In the process of sharing our own personal and family history, we can also use the pensieve as a metaphor. Our goal is to transfer our memory experience to another—in the present or in the future—in such a way that it retains its emotional power.

THREE ASPECTS OF MEMORY and WHY THEY MATTER

1. Encoding

- Encoding is the process of converting data, memory, or information from one form into another for efficient transmission.
- In Harry Potter’s world, wizards used a magic wand to pull memories out of the

brain, turned into a silvery strand of light that could be captured in a bottle for later retrieval and viewing.

- For us “muggles,” it’s not so easy. We don’t have magic wand. We have to do the encoding ourselves – talking, writing, recording, taking pictures – of our memories in order to transmit them to others.

2. Storage

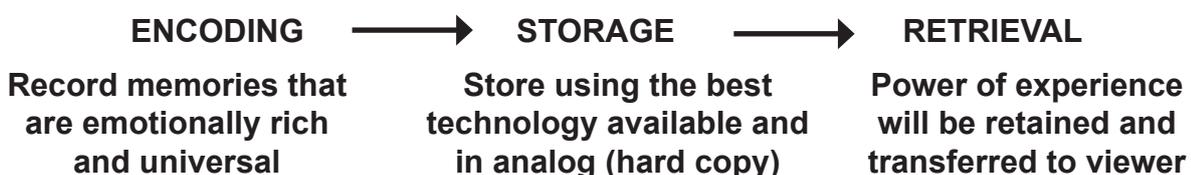
- In order for our recorded memories to survive and have lasting impact, we must put the encoded memory in a “container” that preserves the memory without corruption or degradation, that will not fade, disappear, or be made obsolete.
- Redundancy is key to the survival of our memory material. We must think past the latest tech gadget and look at multiple ways (digital and analog) of storage to ensure redundancy. (The Dead Sea Scrolls survived centuries; some digital data from the 1990s has already disappeared forever.) Use the best technology available at the time, and don’t forget a hard (analog) copy.
- We also have to “label” the memory, to make it available/findable in a way that will have meaning for future generations. Who, what, when, where, and most importantly, why?

3. Retrieval

- Psychologically, we, as viewers of another’s memories, want to be able to feel what they felt. The meaning will transfer to the viewer *if it’s been encoded with meaning in the first place*. (We still enjoy and relate to Shakespeare’s stories because he wrote about universal human themes that are independent of time or space: love, jealousy, pride, hate, forgiveness.)
- Technologically, the responsibility rests partly on the keepers of the memories (after the encoder is gone)—family, community, libraries, society—to transfer and upgrade memory material to changing technologies.

CURATING OUR MEMORIES

- Like the wizards in Harry Potter, we have to choose which memories to encode and store. This is crucial – we must choose our strongest memories that will have the most impact on our audience.
- What’s the criteria by which we decide what memories to share with the future? What makes us remember some things and forget others? **Strong emotions** and **universal experience** will have the best chance of transferring to another in a meaningful way.
- Not everything worth saving. Find the WHY. What is the point of the story? You will cheapen what is most important if you include everything. (If Dumbledore had left a huge box of unlabeled bottles for Harry to sort through, would Harry have had a clue where to start or what he was meant to see?)



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