



is a temporary problem that will return to normal tomorrow.” Unlike the mouse, when the human is put into the maze the next day, he or she returns to the old location of the cheese. Not finding it there, the human becomes irritable, difficult, and depressed. What’s even more interesting is that the human has a very good chance of continuing this behaviour time and time again, returning to the old location, rather than exploring new possibilities. At times like these, mice seem to be smarter than humans are, because, when conditions change, it’s the next meal that’s important, not yesterday’s meal.

Are mice actually smarter than we are? In this case, they seem to be. Because their brains are small and focused on the present, mice are not concerned with past experience. That is the advantage of a small, focused, mouse brain. Without question, humans are far more intelligent, adaptable, and technologically able to create their own environments. But we pay a price for this advantage: we have long memories, and we expect new experiences to be like old experiences. Unlike mice, we fall prey to the *investment principle*. As a result, we are often disappointed when new experiences don’t live up to our expectations, and we are surprised or mortified when the new experiences are different from our expectations.

Why do our brains operate this way? Human brains are the most complex brains on the planet. Our brains also use enormous amounts of energy, so anything that minimizes energy usage is a good evolutionary tactic. Consequently, the human brain has evolved to develop patterns of thinking that minimize the amount of energy the brain has to use. What does this

mean in everyday life? It means that we believe in our patterns of past experiences to establish our present and future behaviours. These patterns become our *working beliefs*, in which we invest time and energy, because they are the beliefs upon which we act.

There are four types of working beliefs:

- **Beliefs about oneself:** How capable we believe we are affects whether or not we act. For example, if we believe that we are capable of getting the cheese quickly and easily, we go in search of the cheese, without hesitation.
- **Beliefs about others:** What we believe about others, what they do, and why they do things, affects how competitive or collaborative we become. For example, if we suspect someone else is in the maze and is after *our* cheese, we act more competitively.
- **Beliefs about society at large:** What society considers to be the norms of behaviour determines how we act out our beliefs. For example, if we think someone is outside the maze watching us, we act differently, depending on what we think the person expects from us.
- **Beliefs about context:** What we believe is always set within a context. For example, in this story, the context has two main aspects: the maze and the location of the cheese. If we learn about where the cheese is in the maze, we tend to look for the cheese in the same place, even if it has been moved to another location.

So what happens to our working beliefs when the cheese is moved? The investment principle kicks in, and we are caught in our working beliefs that the cheese should be in the same place as before. The cheese has no business being anywhere else. So, we complain that the cheese is gone, and rationalize why it should be there. The key is in understanding the power of the investment principle in keeping us tied to our past experiences, and thus preventing us from discovering new possibilities. Once we understand how the investment principle works, we can understand our working beliefs, and make choices about whether or not we should continue to act on these working beliefs.

“As long as we remain mysteries to ourselves, as long as we suffer, as long as we have not descended into a utopian torpor, we will continue to ponder and probe our minds with the instruments of science. How can we not? Inner space may be science’s final — and eternal — frontier.”

— John Horgan, **The Undiscovered Mind: How the Human Brain Defies Replication, Medication, and Explanation** (1999)

**Note:** Peter Hawkins, a researcher in organizational learning, told the story of the cheese and the maze at the 1999 Learning Company Conference in Warwick, England.

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