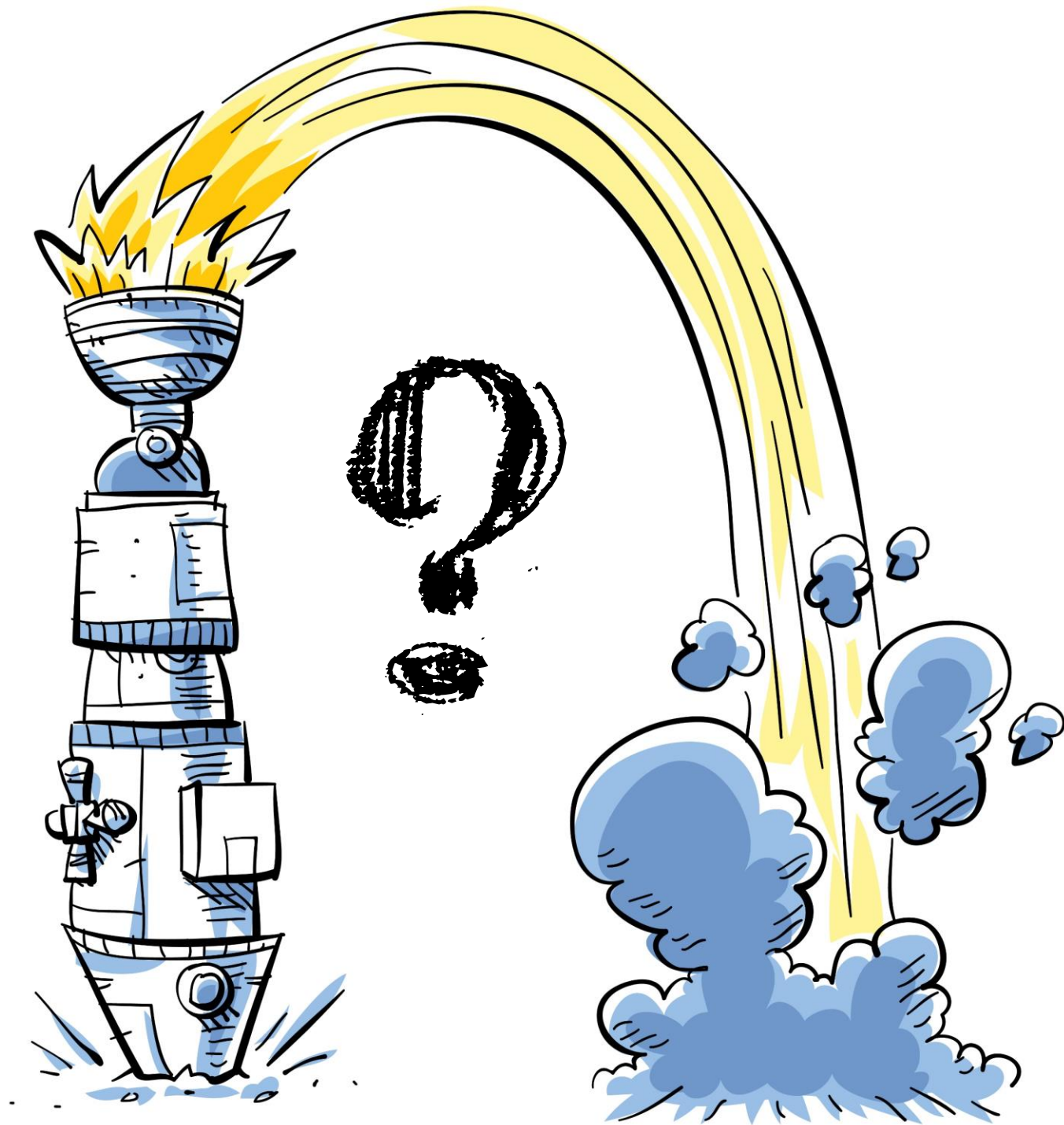


ACES
AND THE POWER
OF RESILIENCE



A simple experiment?

Werner and Smith were psychologists who had become interested in which factors in a child's early life set them off on a positive trajectory, and which ones really get in the way of them reaching their full potential.





Kauai Island

They approached all families who were going to have babies in 1955. There were 698 families that said, 'Yes, we'll support whatever you need.'"

Little did the families or the researchers know that this would turn into one of the longest studies of child development and childhood adversity that there has ever been.





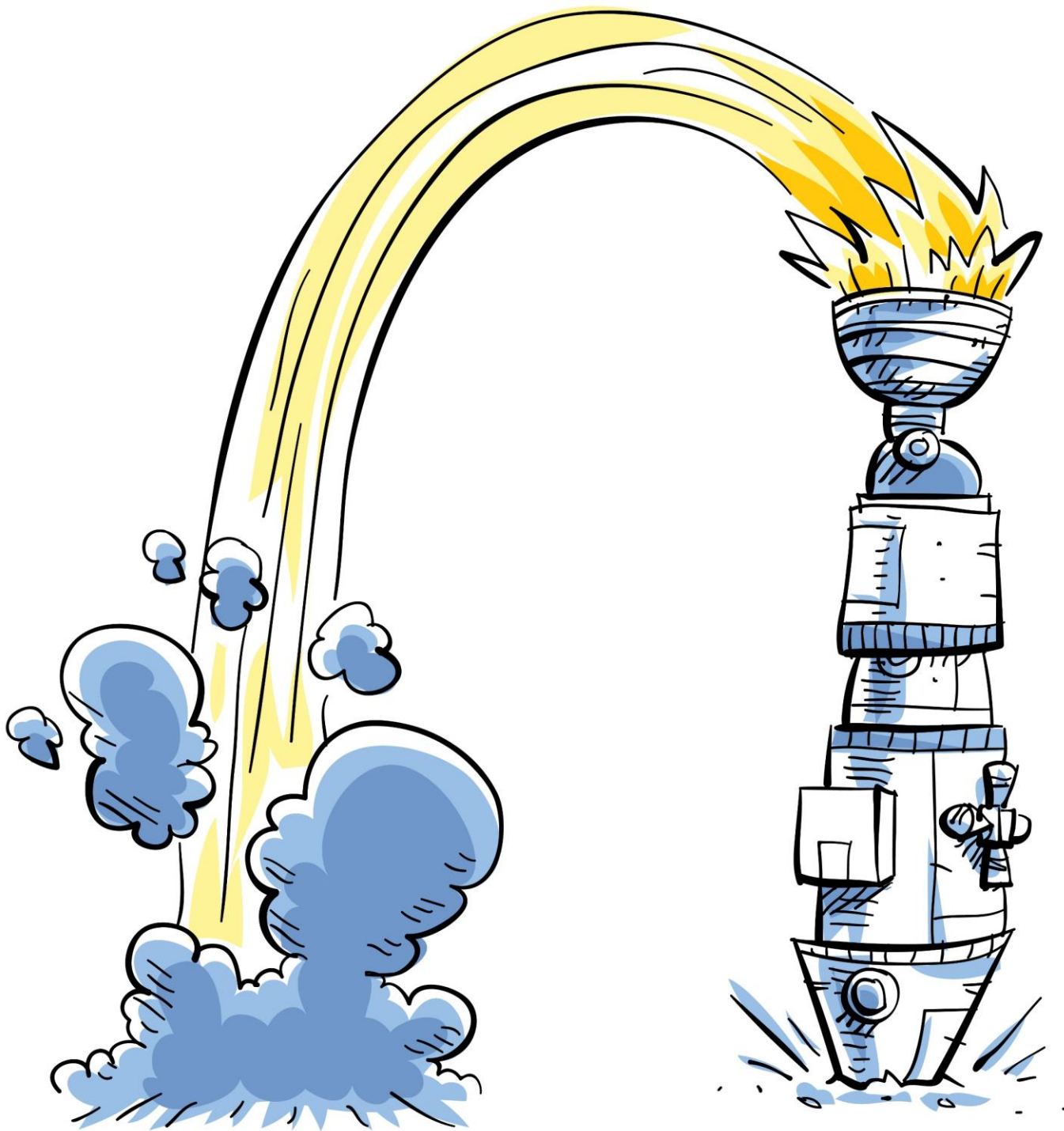
The researchers monitored the families beginning from before the babies' birth, following them and checking in at ages one, two, 10, 18, 32 and 40. They managed to track most of the cohort.

The researchers followed first the parents and then the children using a mix of semi-structured interviews, questionnaires and community records of mental health, marriage, divorce, criminal convictions, school achievement and employment.



The researchers in the Kauai study separated the nearly 700 children involved into two groups. Approximately two-thirds were thought to be at low risk of developing any difficulties, but about one-third were classed as “high-risk”: born into poverty, perinatal stress, family discord (including domestic violence), parental alcoholism or illness.





Expectations fulfilled?

The researchers expected to find that the “high-risk” children would do less well than the others as they grew up.

In line with those expectations, they found that two-thirds of this group went on to develop significant problems.



With a few surprises

Totally unexpectedly, approximately one-third of the “high-risk” children didn’t. They developed into competent, confident and caring individuals, without significant problems in adult life.

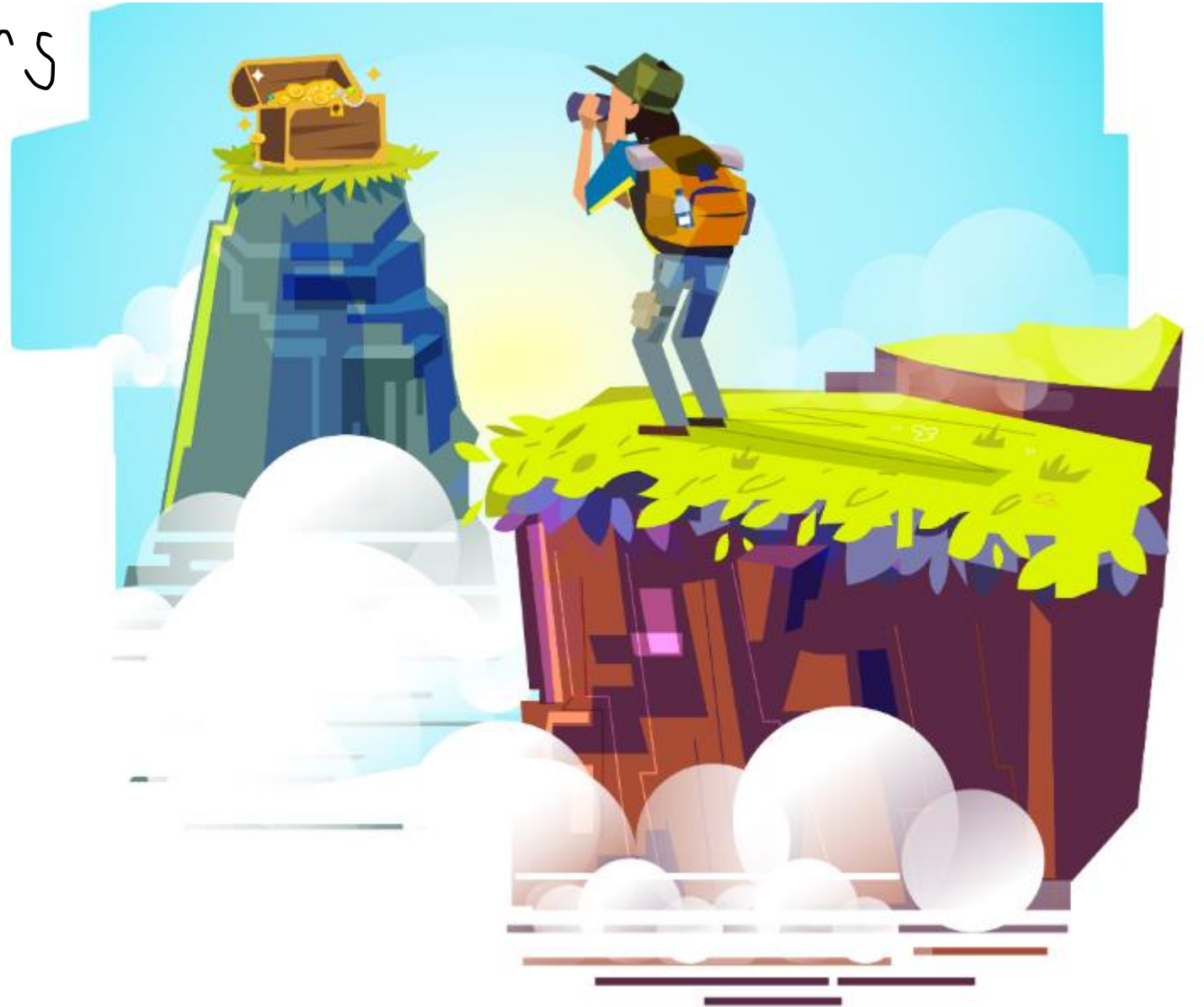
What happened?

The study of what made these children resilient has become as least as important as the study of the negative effects of a difficult childhood. Why did some of these children do so well despite their adverse circumstances?



A quest for answers

The study of how some of these Kauai children thrived despite early adversity is still ongoing 62 years later.





Groundbreaking Research

What made the study unique was that despite these risk factors ... that wasn't a guarantee ... that any child would be on a certain trajectory.

And in fact, what researchers found was there was resilience. These children were able to thrive, were able to grow, were able to develop ... able to live productive and fulfilling lives.



Three Critical Factors

Three clusters of protective factors tended to mark out the children who did well despite being “high-risk”:

- Aspects of the child’s temperament
- Having someone who was consistently caring (typically but not necessarily a family member),
- And having a sense of belonging to a wider group.





Overall, the third of “high-risk” children who showed resilience tended to have grown up in families of four children or fewer, with two years or more between them and their siblings, few prolonged separations from their primary caregiver, and a close bond with at least one caregiver.

They tended to be described positively as infants, with adjectives such as “active,” “cuddly” or “alert” and they had friends at school and emotional support outside of their families.





The picture was complex, though, with different factors seeming to be important at different ages.

Several of the factors associated with resilience throughout the children's lives involve relationships of some kind, whether within the context of a larger community—a school, a religion, the armed services—or in the context of one important person.



“Our relationships really are key. One person can make a big difference.”

--Lali McCubbin, current principal investigator.





Wider research suggests that the more risk factors children face, the more protective factors they are likely to need to compensate. But as McCubbin says, “A lot of the research supports this idea of relationships, and the need to have a sense of someone that believes in you or someone that supports you—even in a chaotic environment, just having that one person.”

It seems blindingly obvious that how we are cared for by our parents or primary caregivers is crucial, but the growing realization of just how important love and affection are to children has only come about in the last century.



Some of what we know about the effect of parenting comes from watching animals. At Stanford University in the 1930s, Harry Harlow separated baby rhesus monkeys from their mothers, and raised them in separate cages.





He allowed the baby monkeys access to two models of a larger monkey: one made only of wire, but with a bottle of milk attached, and one with no milk attached but which was covered in a soft terry towel type of material.

The young monkeys spent all their time on the soft model mother, craving the comfort, and only went to the wire one for food, before quickly returning to the toweled surrogate.

This put into question all previous ideas about food and shelter being the primary drives for an infant, and suggested that the role of comfort might be much more important than was previously thought.



Most babies and their caregivers form an attachment, and the quality of this attachment can be affected by the sort of care the baby experiences. We know now that these early attachment relationships can form the basis, to some degree, for the way we relate to others as we grow up, even in adult romantic relationships.



The Romanian Orphan Study

Anyone in Europe old enough to watch TV in 1990 is likely to have a memory of the Romanian orphans.

The haunting images of Romanian orphans staring blankly through the bars of their cots was one of the most disturbing legacies of Nicolae Ceausescu's regime.



Image via [Telegraph.co](https://www.telegraph.co.uk) Photo: Taro Yamasaki/The LIFE Images Collection/Getty Images



An estimated 500,000 children without anyone to care for them had been left in institutions, to experience immense emotional deprivation and neglect.

Their most basic physical needs were met in terms of being given food and kept warm, but their basic emotional needs for affection and comfort were not.

They learned not to even bother reaching out when adults were around.

Image via [Telegraph.co](https://www.telegraph.co.uk) Photo: Taro Yamasaki/The LIFE Images Collection/Getty Images

The discovery of the conditions in the orphanages prompted a rush of compassion and charity initiatives to adopt the children.

The UK Department of Health contacted a researcher at King's College London's Institute of Psychiatry, Psychology & Neuroscience, Michael Rutter, to ask him to measure what was going on.



Pitiful closeup of excruciatingly gaunt orphan baby Marian, 2, dying of AIDS as he cries in pain, lying in crib at the infectious disease clinic of Colentina Hospital in December 1990 (Taro Yamasaki/The LIFE Images Collection/Getty Images). Image via [Telegraph.co](https://www.telegraph.co.uk)



Image via: Lucy Gray, [YouTube](#)

For Rutter, this was a scientific opportunity as well as a practical one:
“This was a natural experiment.”

All previous studies of children in care had involved groups of children who had entered institutions at a range of ages, meaning that variation in their behavior and wellbeing might be related to things that had happened before they were in care.

The Romanian orphans, though, had all been admitted within the first two weeks of life. “It’s a horrible thing to have happened,” says Rutter, “but given that it did happen, one may as well learn as much as possible.”





Rutter's study assessed the children over time as they settled into new adoptive families. "The findings were surprises all along the line," he says.

Prevailing wisdom at the time was that serious adversity in childhood led to a range of emotional and behavioral problems.

Rutter's research found something different when the children were followed up: apart from a minority who have specific patterns of extreme social difficulties, such as autistic spectrum disorders, "There was no increase in the ordinary emotional and behavioral problems," he says "So that was one surprise."





Another surprise was that if the children were adopted out of care early enough—within six months—then they seemed to go on to develop well.

“Resilience initially was talked about as if it were a trait, and it’s become clear that’s quite the wrong way of looking at it,” he says. “It’s a process, it’s not a thing.”

It’s not a fixed trait.



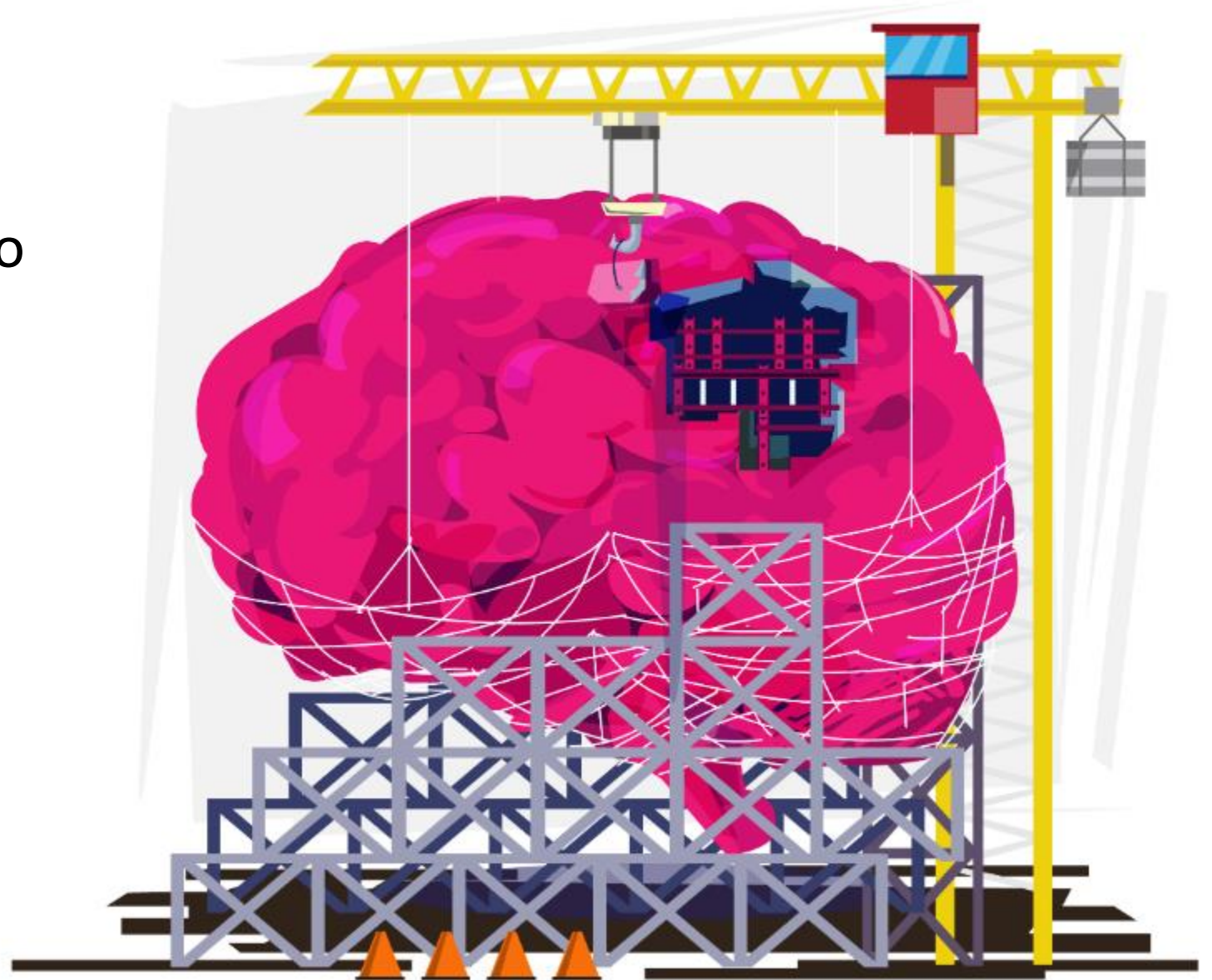


If we think of it as an adaptive process, how do our brains, our thought processes and our behaviors change to help us to cope with adverse early circumstances?

Studies of war veterans as well as maltreated children reveal that areas of the brain involved in processing threats, such as the amygdala, are more responsive both in the soldiers coming back from war and in children who have experienced early abuse. It makes sense that if you have been in danger a lot, then your brain may have adapted to be very sensitive to threat.



Researchers are studying to try to see whether differences in brain structure in maltreated children are stable over time or changeable.



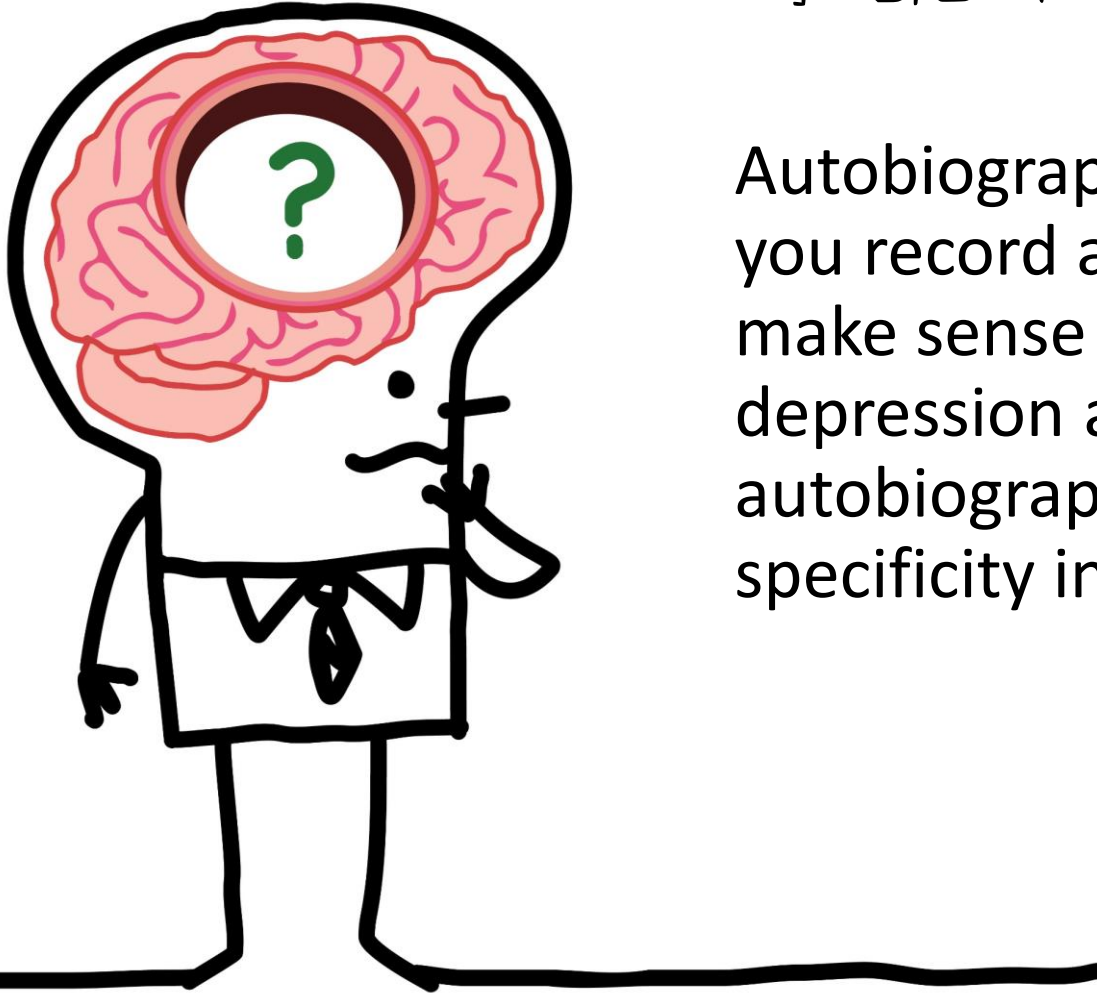


Forgetting, to adapt

The brain system involved in thinking about and processing memories of personal history might also be shaped by early traumatic experiences in a way that is adaptive in the short term but unhelpful in the longer term.

“I don’t remember”

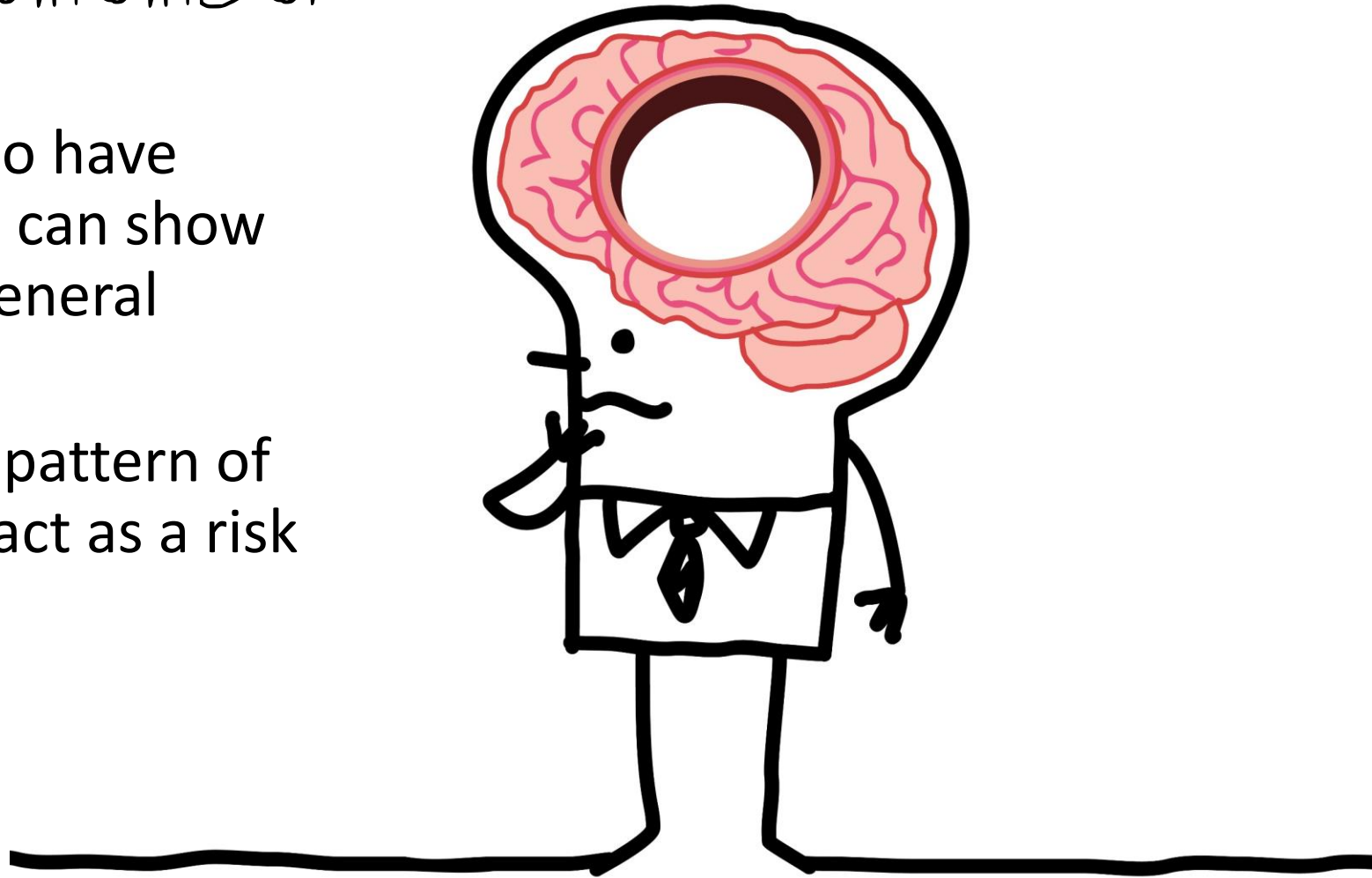
Autobiographical memory is the process whereby you record and encode your own experiences and make sense of [them]. Individuals who have depression and PTSD have... an over-general autobiographical memory pattern, where they lack specificity in their recall of past experience ...



“I really don’t remember”

We also know that kids who have experienced maltreatment can show higher levels of this over-general memory pattern.

Studies have shown that a pattern of over-general memory can act as a risk factor for future disorder.





It makes sense that if horrible things have happened to you in the past, you will want to avoid thinking about and remembering them, which might lead to a tendency to have a memory that's light on detail.

Healing hearts

The idea of resilience as an adaptive process rather than an individual trait opens up the potential for other people to be involved in that process.





In an ideal world, we wouldn't have to work out how to best to help children who have been abused or neglected; we would instead be able to remove those risks.

Admitting that we don't live in that ideal world, and trying to understand what we each can do to prevent the negative effects of childhood adversity and to boost individual resilience, is perhaps the next best thing.

