

Shaking our understanding of uncertainty



- Life without uncertainty would be unpalatable. Yet, uncertainty can encourage trepidation when making decisions.
- However, not all uncertainties are outside of our control.
- Associate Professor Jessica Alquist and Professor Roy F Baumeister have done a deep dive into the psychology of uncertain situations.
- They highlight two types of uncertainty that intersect in our lives.
- This insight encourages a rethink of our relationship with uncertainty.

Uncertainty certainly makes life interesting. Without it, we'd be locked in a repetitive experiential loop. Because the future, by its very nature, is yet to unfold, what it holds for us is largely unknown. For example, we know we will die, but when and how are largely a mystery. However, the future is unavoidable and must be confronted; how we do that, and the frame of mind we employ to do so are the research reserve of those examining the psychology of uncertain situations – when prediction is impossible. It is a field of study with its fair share of dark corners, including how to operate more efficiently in the face of uncertainty. A new research is helping point a light in that direction.

Rethinking our relationship with uncertainty

In a review published in *The Journal of Positive Psychology*, Dr Jessica Alquist, Associate Professor at Texas Tech University, USA has collaborated with veteran social psychologist Professor Roy F Baumeister to take a deep dive into uncertainty; it is a comprehensive examination of how uncertainty influences behaviour, decision-making, and emotional responses. It also encourages us to rethink our relationship with uncertainty.

Firstly, while it's tempting to think of uncertainty as some ethereal, untouchable construct, uncertain situations are not entirely outside

our control. There are essentially two types of uncertainty: objective or future uncertainty – tied to future events not yet determined, and subjective uncertainty – the experience of not knowing something. The outcome of a still-to-be-played football match is an example of objective uncertainty, but a finished match, the outcome of which you are unaware, is an example of purely subjective uncertainty – the outcome is factually certain, just not by yourself.

Secondly, our reaction to uncertainty differs according to its type. Because subjective uncertainty involves a situation people cannot influence, it often inhibits action, encourages the conservation of

resources, and stimulates information seeking. In contrast, objective uncertainty, conversely, prompts action and risk-taking.

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In cases of subjective uncertainty, individuals know they lack specific knowledge. This perceived deficiency in understanding can lead to a sense that actions in the face of it will be riskier. Two things result: people tend to seek out more information and conserve resources while waiting for an outcome. In a previous study, Alquist and Baumeister found that uncertainty around whether participants were expected to present a speech – considered a stressful scenario – impaired their performance on a subsequent task more so than if they *knew* they had to present a speech. Also, participants given an unclear task gave up faster on a second unrelated task than those given a straightforward first task.

In cases of objective uncertainty, people perceive that they have some measure of agency over the outcome because it is yet to be determined. This perception of potential influence, therefore, encourages taking action. Such action can be advantageous if the effort is proportional to the expected reward. Another intriguing psychological mechanism kicks into gear in the face of the unpredictability of outcomes in objectively

uncertain situations: people find it stimulating, leading to a willingness to take risks buoyed by the sense that risk might lead to a favourable outcome. It's probably one of the reasons people buy lottery tickets.

This fact highlights that, contrary to reason, uncertainty need not be feared; it can be a crucial ingredient in our enjoyment. This is why the indeterminacy of televised sports is usually more exciting if viewed live rather than recorded, even if the outcome is unknown before watching.

Intersecting uncertainties

Alquist and Baumeister have shaken our understanding of uncertainty. We may still be able to influence outcomes when they haven't yet been determined. Action in such circumstances helps cope with the uncertainty – it gives a sense of doing 'something' proactive instead of being resigned to fate, even if the action doesn't guarantee a positive outcome. So, being aware of uncertainty can be advantageous. When people are aware the outcome of a situation cannot be predicted (termed 'objective uncertainty'), they see it as a call for action to steer events towards favourable outcomes, and subjective uncertainty injects novelty and a sense of discovery into a situation.

Subjective and objective uncertainty are not unconnected – they continually intersect in our lives, and Alquist and Baumeister have designed a 2x2 matrix that represents this (Figure 1). The matrix depicts the possible scenarios at the interplay between objective uncertainty and objective certainty (where the outcome has been determined) and subjective uncertainty and subjective certainty, as well as the optimal responses. As a model for making sense of uncertainty, it provides a little more confidence for dealing with what the future has in store for us.

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Personal response

What you have learned seems at times counterintuitive; what surprised you the most?

I was most surprised that even animals will make sacrifices to avoid uncertainty. Pigeons and monkeys gave up part of their reward to learn sooner whether they would get a reward, even though that didn't increase how quickly they got the reward.

How do people balance belief in free will with the realities of objective uncertainty?

If someone believed in a purely deterministic universe, there would be no objective uncertainty. All uncertainty would be due to a lack of knowledge rather than any true unpredictability in the world.

What contributes to a belief in free will?

Other not-yet-published research from my lab led by Alec Stinnett has found that experiences of success increase belief in free will. People want to take responsibility for their success and increase their belief in free will to do so. Research has also shown that people will increase their belief in free will to justify punishing another person.

You recently embarked on an unplanned road trip through Colorado with your

husband and 5-year-old daughter; what did they teach you about dealing with uncertainty?

I am a compulsive plan-maker, so this was a stretch for me. By allowing uncertainty on the trip, we were able to have more presence and experience the joy of discovery. Stumbling across a castle on a Colorado road was a more joyful experience than if we had dutifully planned a day-trip to its location. Because we were able to tolerate the uncertainties of not knowing exactly how a restaurant was rated or what was in a particular town, we were able to be in the moment rather than constantly making plans for the future.

Some people deal with uncertainty better than others; what personality traits typically equip them to do so?

There are dispositional differences in people's ability to tolerate uncertainty (intolerance of uncertainty). Research has shown that people who are able to tolerate uncertainty have much better mental health and handle daily hassles better than people who don't. One benefit of calling attention to the positives of uncertainty could be to help people develop a more positive view of uncertainty.

Details



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Bio

Jessica Alquist is an Associate Professor at Texas Tech University who studies uncertainty, agency beliefs, and self-control. She recently embraced uncertainty by taking a no-planning road trip through Colorado with her husband and 5-year-old daughter.

Roy F Baumeister is a veteran scholar with over 700 scientific publications and 44 books.

Further reading

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Competing interest statement

The authors always strive to be competitive but have no financial interest in any specific conclusion.



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