

Why You Feel the Urge to Jump

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14–18 minutes

Have you ever stood in a high place and felt the urge to jump? Judith Dancoff did one beautiful, clear day on Deception Pass Bridge, a narrow two-lane causeway that ribbons between two islands north of Seattle. If she followed her compulsion to leap, death at the bottom of the steep ocean gorge 180 feet below would be almost certain.

A novelist known for literary flights of fancy, she did not feel suicidal—and never had. Though normally fearful of heights, she strangely was not afraid then, though Deception Pass Bridge is ranked among the scariest in the world. Its slender concrete span cantilevers over jagged cliff-tops and reportedly wobbles in high winds, with only a minimalist 1935 railing separating you from distant roiling waters.



Temptation: Deception Pass Bridge rises 180 feet above the ocean. Amit Chattopadhyay / Wikipedia

None of that registered with Dancoff, who was also unaware of the bridge's history of attracting jumping. Instead, she saw herself as if in a dream, climbing onto the pedestrian railing then diving off. She was so unnerved that she sat down cross-legged on the pavement to stop herself. "It was terrifying

because of the possibility of doing it,” she later recalled. “I felt a bit foolish. I thought, ‘where did that come from?’ ”

The seemingly irrational, but common urge to leap—half of respondents felt it in one survey—can be so disturbing that ruminators from Jean-Paul Sartre (in *Being and Nothingness*) to anonymous contributors in lengthy Reddit sub-threads have agonized about it. While the French philosopher saw a moment of Existentialist truth about the human freedom to choose to live or die, ramp_tram called it “F***king stupid” when he had to plaster himself to the far wall of a 14th-floor hotel atrium away from the balcony railing because “I was deathly afraid of somehow jumping off by accident.”

The French explain it as *L’Appel du Vide*, or call of the void. Are they just French, or can the void really beckon you to kill yourself? New science on balance, fear, and cognition shows that the voice of the abyss is both real and powerful. Heights, it turns out, are not exactly what they seem.

Traditional theories attribute extreme phobic reactions—whether fixated on heights, snakes, or the sight of blood—to emotional problems, negative thinking, anxious temperament, and past traumas. “With fears and phobias, psychologists like to say that you are afraid of this because you don’t have coping mechanisms or you are afraid because of anxiety,” says Carlos Coelho, known for his groundbreaking psychology research into acrophobia, or the fear of heights. “But where is this anxiety coming from?”

When it comes to heights, there is more going on than the projection of past anxieties, as once thought. The nature of extreme heights mixes together sense perceptions, body kinesthetics, and our mental states. “We take perception as the grounded truth: Seeing is believing,” said Jeanine Stefanucci, a professor of cognition and neural science at the University of Utah who studies how emotions, age, and physical condition change how we relate to space, especially vertical space.

Her research belies the truism that seeing is believing. Subjects in her lab see poop on a table (actually a messy blob of chocolate) as closer than it really is, and the width of a plank they’ve been told to walk over as smaller than it is. Other researchers have found that subjects have underestimated the time to encounter a snake or spider, but not a butterfly or rabbit.¹

Fear may also explain why humans do not see up-down the same as sideways. To understand how that works, let’s stand on a high balcony, near the railing. Look at a disk placed on the ground below, then back up until the railing is as far away from you as the spot is below you. You’ve just matched a vertical and horizontal distance.

Acrophobia can produce a bizarrely counterintuitive effect: the impulse to yield to the source of panic and willingly jump.

But you’re probably wrong. Study participants have been observed to overestimate verticals by anywhere from one-third bigger to double their actual size.² Yet people usually have no problem correctly estimating horizontals. The vertical over-estimation bias makes high places scarier than they are for some people: Stefanucci and others have found that people most afraid of heights overestimated verticals the most, heightening their fear and creating a feedback loop.³

“A lot of people who hear about our work want to know why it would be good for someone to overestimate heights. I argue that it’s adaptive,” says Stefanucci. “Taking a step back is a good thing.”



Inspiration: Jean-Paul Sartre’s famous urge-to-leap passage may have been inspired by a mountain pass in the Pyrenees. V C / Flickr

Steep drop-offs in high places can also create symptoms related to motion sickness because of conflicts between our visual system and our vestibular system, Coelho hypothesizes. Think of it like a contractor’s level in your head that responds to gravity and motion, made up of liquid in three canals inside our ears. When we experience motion sickness on a boat, for example, the vestibular system knows we’re moving, but we see ourselves as stationary because we rock with the boat. The conflict creates nausea. (It can help to close your eyes.)

Something similar can happen on a high precipice. Perhaps a mountain pass in the Pyrenees, like where Sartre used to vacation, possibly inspiring his famed urge-to-leap passage in *Being and Nothingness*, according to Sartre biographer Gary Cox. The view seems to stretch forever, the distant expanses flattening into infinity. With so little earth up close beneath your feet, there are few visual cues to accompany forward motion, and your visual and vestibular systems clash.

(Those who are most likely to feel the urge to leap also tend to worry more about other life issues.

People who rely more on sight to navigate struggle harder to maintain their balance while moving, making them even more afraid at heights, where the loss of depth of field confounds our visual abilities.

Others may suffer from poor postural control, which requires muscular-skeletal strength and agility. Coelho measures postural control in his laboratory with the Romberg test, echoed in the drunk driving check requiring you to walk a straight line. To try the tougher lab version, stand barefoot heel to toe, left foot directly in front of the right, cross your hands over your chest, and close your eyes. Now hold that pose for two minutes. Sounds easy, right? Many people only make it a few seconds. The average time in Coelho's lab was about 40 seconds. The few aces who made it to two minutes were the least afraid of heights.⁴

The difficulties presented by these effects—faulty visual perspective, poor body control, weak vestibular signaling, and overestimation—contribute to making acrophobia, or fear of heights, one of the most common phobias in the world, affecting 1 in 20 people. But unlike snake, spider, or blood phobias, acrophobia can produce a bizarrely counterintuitive effect: the impulse to yield to the source of panic and willingly jump.

As complex as our fear of heights is, the urge to jump is even more difficult to explain. Jennifer Hames, a clinical psychology professor at the University of Notre Dame specializing in suicidal behavior, has dubbed the sudden impulse to jump the “High Place Phenomenon.” In a landmark 2012 paper, she and her colleagues found that half of 431 subjects who'd never considered suicide had thought about leaping from high elevations.⁵ (Among people with past suicidal thoughts, 75 percent had felt the urge.) She theorizes that the urge may come from a misinterpretation of a signal sent to the conscious brain by the body's safety systems. Our fear circuitry, which includes the amygdala and other fast-acting subconscious brain regions, may send an alarm to the prefrontal cortex for interpretation. Your conscious processing, which operates at a slower speed than the fear circuitry, recognizes the alarm signal, but may not know why it was sent.

While your conscious brain would not need to scratch too hard to figure out why your hand recoils from a hot stove, you might be confused why your body automatically pulls back from the edge of a precipice. Because the void is different. You wonder, as Hames explained it: “Why did I back away? I can't possibly fall. There's a railing there, so therefore—I wanted to jump.”

Consistent with this theory is the fact that those people most likely to feel the urge to leap (and who'd never considered suicide) also experience more anxiety, including worrying more about their own body reactions. These sensations can include sweating, heart palpitations, dizziness, and shaky knees, all of which are common responses to high places. How you interpret those sensations can mark the difference between triggering panic, if you think “I'm going to die,” or excitement, if you love the rush of a high. “There is a subjective dimension to all of this,” Coelho said, especially when it comes to vestibular signals. “The way you interpret the vestibular system is much more up to you” than the interpretation of sight, because it operates outside of conscious awareness. Those who are most likely to feel the urge to leap also tend to worry more about other life issues, including the fear of going crazy.

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This kind of anxiety, though, did not correlate with an urge to leap for subjects in Hames' study who had

thought of suicide. Whether their urge to leap reflected an actual death wish or a misinterpreted safety signal was unclear. “That is a good question for further research,” Hames said.

An alternative theory for the impulse to jump is offered by Adam Anderson, a Cornell University cognitive neuroscientist who uses brain imaging to map behavior and emotion. He suggests that the High Place Phenomenon stems from the human tendency to gamble in the face of great risk. “People are less risk averse when the situation is bad,” said Anderson. “They roll the dice to avoid the bad thing.”

In the case of high places, the roll of the dice is to jump. “Being somewhat anxious of heights myself, I feel the pull of the ground, as if it is a safe place,” Anderson said. It doesn’t make sense, of course, since jumping would cause death, but our intrinsic biases (including temporal discounting and negative reinforcement) place a greater value on avoiding present loss than a future gain. “Fear of heights and fear of death may not be as connected in our brains as much as we think,” Anderson explained. “We solved the fear of heights problem: jumping. Then we are confronted with the fear of death problem. It’s like the CIA and FBI not communicating about risk assessments.”



Looming: In experiments, subject underestimate the time it will take them to reach a frightening animal, but not a friendly one.
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Our indirect and delayed processing of the possibility of death was also observed by an “Existential

Neuroscience” brain imaging study conducted by German psychologists at Osnabrück University and the Max Planck Institute for Biological Cybernetics.⁶ In fMRI scans of 17 male university students, they found that contemplating dying triggered areas of the brain associated with the anticipation of anxiety, rather than actually experiencing anxiety. In other words, our brain holds the idea of death at an emotional distance.

What these theories share in common is their observation that the will to live—and the specter of death—swirl and mix at the edge of an abyss. In some sense, it’s as if the abyss itself exerts a pull on us. Feeling dizzy at the brink of the precipice, as Sartre saw it, is “the vertigo of possibility” when humans contemplate dangerous experiments in freedom. “During vertigo the drop obsesses us,” as Cox explains in his book, *The Existentialist’s Guide to Death, the Universe and Nothingness*: “The void seems to beckon us down, but really it is our own freedom that beckons us down, the very fact that we can always choose to go down the quick way.”

It is difficult, or maybe impossible, to know which, if any, of these theories are relevant to those who choose to actually jump. Two years before Dancoff stood there, a 25-year-old man yelled “Yahoo,” then dived from Deception Pass Bridge. Telling his buddies he’d jumped from taller, he hit the water apparently lifeless, was sucked under by a whirlpool, and never seen again. He joined a reported 400 plus others who have died leaping from the bridge since it was built in 1935. Why did he do it? Stupidity, alcohol, a secret death wish, or an existentialist choice?

Thinking back to her own experience on Deception Pass, Dancoff doesn’t believe that the void beckoned her down. Instead, she says, it beckoned up. “It was the opposite of vertigo. It was the urge to fly,” she tells me, adding that the ecstatic, out-of-body experience reminded her of joyous childhood dreams that she could fly. She adds her own High Place theory into the mix: Her impulse to leap, she says, tapped into age-old myth reflecting humanity’s collective consciousness. It’s all there in the ancient Greek tale of Icarus, whose DIY wax-and-feathers wings melt when he flies too close to the sun, and send him crashing to his death.

We have been warned. Not everyone listens, as seen in the surge in extreme airborne sports such as BASE jumping, which involves leaping from high places with a parachute or in a wing suit fitted with a late-opening chute. The death rate is steep, around 50 to 100 deaths per 100,000 jumps, dwarfing the United States suicide rate of 13 deaths per 100,000 people, especially since many people jump more than once.

It reminds us that we should not necessarily feel anxious about feeling anxious in high places, Coelho says. “No fear is more dangerous. Lack of fear kills a lot of people. They don’t go to the doctor, they die.”

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