The 18th-century polymath Jeremy Bentham once wrote, “Pain and pleasure govern us in all we do, in all we say, in all we think.” Modern neuroscience strongly supports Bentham’s intuition. The brain’s limbic system, which is important for emotion and motivation, projects to the rest of the brain, influencing every aspect of our being, from our ability to learn, to the people we befriend, to the decisions we make.

It is not surprising, then, that when we attempt to motivate people, we try to elicit an anticipation of pleasure by promising rewards (for example, a bonus, a promotion, positive feedback, public recognition), or we try to warn of the pain of punishment (a demotion, negative
feedback, public humiliation). But what’s not always clear is: Which should we be using — the promise of carrots or the threat of sticks? And when?

A study conducted at a New York state hospital provides some answers. The goal of the study was to increase the frequency by which medical staff washed their hands, as sanitization in medical settings is extremely important for preventing the spread of disease. The medical staff is repeatedly made aware of this, and warning signs about the consequences of unsanitized hands are often placed alongside sanitization gel dispensers. Yet cameras installed to monitor every sink and hand sanitizer dispenser in the hospital’s intensive care unit revealed that only 10% of medical staff sanitized their hands before and after entering a patient’s room. This was despite the fact that the employees knew they were being recorded.

Then an intervention was introduced: An electronic board was placed in the hallway of the unit that gave employees instant feedback. Every time they washed their hands the board displayed a positive message (such as “Good job!”) and the current shift’s hand-hygiene score would go up. Compliance rates rose sharply and reached almost 90% within four weeks, a result that was replicated in another division in the hospital.

Why did this intervention work so well? The answer provides a general lesson that goes beyond hand washing.

The brilliance of the electronic board was that, instead of using the threat of spreading disease, the common approach in this situation, the researchers chose a positive strategy. Every time a staff member washed their hands, they received immediate positive feedback. Positive feedback triggers a reward signal in the brain, reinforcing the action that caused it, and making it more likely to be repeated in the future.

But why would inconsequential positive feedback be a stronger motivator than the possibility of spreading disease? This may seem odd, but it fits well with what we know about the human brain.

Neuroscience suggests that when it comes to motivating action (for example, getting people to work longer hours or producing star reports), rewards may be more effective than punishments. And the inverse is true when trying to deter people from acting (for example, discouraging people to transgress moral norms).
from sharing privileged information or using the organization’s resources for private purposes) — in this case, punishments are more effective. The reason relates to the characteristics of the world we live in.

To reap rewards in life, whether it is a piece of cherry pie, a loved one, or a promotion, we usually need to act, to approach. So our brain has evolved to accommodate an environment in which often the best way to gain rewards is to take action. When we expect something good, our brain initiates a “go” signal. This signal is triggered by dopaminergic neurons deep in the mid-brain that move up through the brain to the motor cortex, which controls action.

In contrast, to avoid bad things — poison, deep waters, untrustworthy people — we usually simply need to stay put, to not reach out. So our brain has evolved to accommodate an environment in which often (though not always) the best way to not get hurt is to avoid action altogether. When we anticipate something bad, our brain triggers a “no go” signal. These signals also originate in the mid-brain and move up to the cortex, but unlike “go” signals, they inhibit action, sometimes causing us to freeze altogether. (Even in situations where real danger is imminent, the freeze response often precedes the fight-or-flight response that may follow it, like a deer in the headlights.)

This asymmetry partially explains why electronic positive feedback was more successful at motivating the medical staff to wash their hands than the threat of illness to themselves and others. There are a number of other reasons too, such as social incentives, that I uncovered when researching and writing my book.

Other work demonstrates how we are biologically wired such that anticipating rewards elicits action. In an experiment led by neuroscientist Marc Guitart-Masip, which I and others collaborated on, we found that volunteers were quicker to press a button (that is, to act) when we offered them a dollar (anticipating a reward) than they were to press a button to avoid losing a dollar (anticipating punishment). However, they did a better job when they were asked not to press buttons (to not act) to avoid losing a dollar than they did when we offered them a dollar in return. In the latter case they sometimes instinctively pressed the button.

While we should be cautious translating such basic research to real-world situations, it would seem that creating positive anticipation in others (perhaps with a weekly acknowledgment of the most productive employee on the company website) may be more effective at motivating action
than threatening poor performance with a demotion or pay cut. Fear and anxiety can cause us to withdraw and give up rather than take action and improve. In line with this notion, studies have shown that giving people small monetary rewards for exercising or eating healthily was more effective at changing behavior than warning of obesity and disease.

There is another reason why warnings often have limited impact. Our research has shown that the brain encodes positive information (such as learning that the likelihood of obesity is lower than previously thought) better than negative information (such as learning it is higher). In fact, people often assume negative information is unrelated to them, but view positive information as very much relevant, which generates an optimistic outlook.

When we notice others making suboptimal decisions, we automatically fast forward in our heads and visualize their failure, leading us to warn them about the devastation we envision. But what the research here suggests is that we need to consciously overcome our habit of trying to scare people into action, and instead highlight the rewards that come with reaching our goals.

Tali Sharot is an associate professor of Cognitive Neuroscience at University College London, director of the Affective Brain Lab, and the author most recently of *The Influential Mind: What the Brain Reveals About Our Power to Change Others*.

**This article is about MOTIVATING PEOPLE**

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Clement Gavi  6 months ago

Great post indeed. Reward arouse energy, thus even in the case where punishment is required it must have pedagogical dimension where the person can still see he or she is getting something positive. Punishment is pedagogical when it is lucid and positive, lucid as it contains keys for its understanding, the reasons why for it and positive as it is conceived as such it does not push back energy but help integrated what has determined it in becoming added value.