

My New Scientist

[Home](#) | [Opinion](#) | [Health](#) | [Opinion](#) | [Back to article](#)

Placebos at large: the power of society's symbols

06 August 2013 by [Nicholas Humphrey](#)
Magazine issue 2928. [Subscribe and save](#)
For similar stories, visit the [The Big Idea](#) Topic Guide

The world is brimming with symbols, including national flags, which trigger a phenomenon akin to medicinal placebos, argues a top psychologist

"DO NOT use this pillow as a flotation aid".
"Warning: these firefighters are flammable".
We like to deride health and safety regulations. As the [sociologist Frank Furedi](#) says, "in a world where safety has become an end in itself, society constantly promotes symbols and rituals to transmit the need for caution". These warnings, many of us think, fly in the face of our adventurous natures. So we mock the culture of the "nanny state" because we believe it holds us back from being the enterprising, rebellious souls we would otherwise be.



Do cultural symbols like national flags work like placebo medicines, emboldening us? (Image: [Martin Adler/Panos Pictures](#))

I want to tell a different story. I believe that in many areas of our lives we humans are, by nature, cowards. Left to follow our instincts we tend to be much more cautious than we need be – indeed, more cautious than is good for us. The reason lies with our evolutionary history.

It is not long, in terms of biological evolution, since our ancestors emerged from the terrible social and material conditions of the late ice-ages. [Humans who migrated from Africa to Europe](#) were under almost constant threat of famine, ill-health and predation. The genetic memory of those dreadful years has left our species still burdened with anxieties that we cannot easily throw off. So, even today, we modern humans approach life defensively. It is not "nanny culture" that is providing the restraining hand, it is "nanny nature". Health and safety regulations are in our genes.

We rely on society to embolden us. Though we may not recognise it, we are surrounded by symbols and rituals that help us to escape from our protective shells. These work by providing archaic safety signals – evidence that we live in an environment with firm rules, family support, material and spiritual reserves. Such signals get through to us on elemental levels, offering us reassurance that we live in a nurturing environment where we can dare to give our best.

But here's the great surprise: these cultural signals don't actually have to be true in order to do the trick. As human culture evolved, our ancestors were fortunate to discover that certain kinds of fake signals – pure make-believe – can do the job as well as the real thing. Sometimes they can do it even better. The fake safety signals come in a variety of guises: national anthems, pyramids, rain dances, royal families, gladiatorial shows, firework displays, crucifixes, triumphal monuments, totem poles, cave paintings, and especially [religious myths and rituals](#).

ADVERTISE

A faith healer may offer us a sugar pill that is pharmacologically inert, yet this can persuade us to initiate an immune response. A portrait of Nelson Mandela in the school hall makes no material contribution to an African American boy's life, but may lead to a significantly raised IQ test score. A national flag won't deflect an enemy bullet, yet it can boost our morale and make us determined to fight on. Belief that we are the children of God belies our biological parentage yet it can add to our feeling of self-worth with all that flows from it.

In the realm of medicine, sham treatments have long had a name: [placebos](#). I suggest we call the equivalent treatments in society "placebos at large". In fact I want to make the analogy with placebo medicine still closer. In much the same way that we have "invented" witch doctors to provide spells and potions that allow us to overcome the timidity of our bodily healing systems and cure ourselves of physical disease, so we have created witch institutions, witch ceremonies, witch arts to cure ourselves of incipient mental and social disease.

My theory of placebos rests on a new approach to understanding human self-regulation ([Current Biology, vol 22, p R695](#)). Millions of years before humans evolved, our animal ancestors evolved sophisticated top-down brain mechanisms for managing their bodily and mental well-being – internal governors, as I call them. In modern humans the job of the governor, operating outside of consciousness, is to perform a kind of economic analysis of the costs and benefits of pursuing particular courses of action. It uses cues from the environment to make a forecast of what lies ahead, and on this basis decides how best to dispose of available physiological and psychological resources; when to feel pain, when to mount an immune response, when to be a coward, when to act aggressively, when to trust and so on.

In general, if the governor picks up cues that the situation is relatively safe it will forecast a smooth passage and so sanction a fair-weather stance. By contrast, if it picks up cues that suggest storms ahead, then it will batten down the hatches. For example, the governor might detect that days are getting longer, forecast that spring is coming and food supplies will become more readily available, and so license a full-blown immune response to an infection – a response that, in times of famine, might not be a wise use of precious energy reserves. If hamsters are injected with bacteria that make them ill, for example, [they mount a stronger immune response when tricked by artificial lighting into thinking it is summer](#) rather than winter.

Many of these environmental cues operate at the level of subconscious priming, about which there is such excitement in current psychological research ([see newscientist.com/special/nudge](#)). The governor's forecast must be based on previous experience of what these cues signify, at both the personal and species level. When, as with humans, the recent evolutionary history of the species has been so dark, it is no wonder there is an in-built tendency to exaggerate costs and underestimate benefits.

Yet our species has moved on. For many people alive today, the specific dangers that humans evolved to fear are much less present. Living conditions have generally improved, interpersonal violence is on the wane, food supplies have become more reliable, disease less rampant, and so on. Of course we still do well, as the boy scouts' motto has it, to "be prepared", but the reality is that, for most of us, there has been a huge decrease in the threats to be prepared against.

In these new circumstances we should surely be much readier to let down our guard. If only our genetic tendencies could be revised so quickly! In reality, the settings of our internal governors have not had time to adapt. So we remain hostage, in mind and body, to ancient ingrained fears. Like the Japanese soldier, hiding in the forest 20 years after the second world war ended, we are stuck with obsolete superstitions and anxieties, waiting for the all-clear when there is really no longer much to fear. Paradoxically, but understandably, we still seek permission from the outside to deploy our own resources (see "[Placebo paradox](#)").

Placebos work by supplying just such permission, even if under false pretences: "Placebos at large" have proved to be a brilliant solution to the challenge of freeing up our better selves.

This article appeared in print under the headline "Placebos at large"

Placebo paradox

When we recover from illness under the influence of a placebo, it must be a case of self-cure. But if we have the capacity to get better of our own accord, why don't we just get on with it? Why wait for "permission" from a witch doctor or sugar pill?

Paradox Resolved

Self-cure has costs as well as benefits. Pain relief may put us at risk of further injury, and mounting an immune response is energetically expensive. There will be times when we are better off delaying the cure until we have evidence from the environment that it is safe to heal.

Profile

[Nicholas Humphrey](#) is a theoretical psychologist based in Cambridge, UK, who studies the evolution of intelligence and consciousness. He demonstrated the existence of blindsight in monkeys following damage to their brains, and proposed the idea of the "social function of intellect"

From issue [2928](#) of New Scientist magazine, page 28-29.

As a subscriber, you have unlimited access to our online archive.

Why not [browse past issues](#) of New Scientist magazine?

Like 0 Tweet 0



If you would like **to reuse any content** from New Scientist, either in print or online, please [contact the syndication](#) department first for permission. New Scientist does not own rights to photos, but there are a [variety of licensing options](#) available for use of articles and graphics we own the copyright to.

[Back to article](#)

Like 0 Tweet 0



ADVERTISEMENT

