

Two Belief Systems and Their Conflicting Beliefs

What we believe determines how we behave. Beliefs tell us what to do. Although volitional behaviors are determined by beliefs, instinctive behaviors are not. They derive directly from naturally selected traits. But humans have few if any instinctive behaviors. They are not necessary because almost all of our behavior is of the more flexible, volitional type, which is voluntary and chosen. The beliefs that determine behavior derive from the interaction of two belief sources that process information: the emotional feeling of security, which is part of the emotional mental (belief) system; and the cognitive mental (belief) system. The emotional system is located in the limbic system of the brain; the cognitive system, which developed many millions of years after the emotional system evolved is located in the prefrontal cortex. The emotional system is subjective and deals with how secure the subject feels. The cognitive system is objective and its understandings, which result from evidence-based reasoning, determine reality and truth.

The emotional belief system produces beliefs that are based on emotional feelings: specifically, on the emotional feeling of security. An emotional feeling is an elementary type of belief. “*I feel*” translates to “*I believe*.” Because of natural selection all biological activity, including cellular, mental, and physiological functions, and organs and systems, increase the security of the organism. Increasing security is the only known way of increasing survivability, which determines what is naturally selected. (see: “Natural Selection Selects Only Behaviors That Increase Security” at www.mdjaffe.com.) And because natural selection selects solely for behavioral traits that increase security, there is only one basic emotional feeling: the emotional feeling of security, whose function is to motivate behavior to seek security. This was first

explained in some detail in my 2010 book. *The Primal Instinct: How Biological Security Motivates Behavior, Promotes Morality, Determines Authority, and Explains Our Search for a God*; and then the explanation was further developed in the 2015 essay “An Evolutionary Theory of Everything,” which, like this essay, can be accessed through the website www.mdjaffe.com.

Comparing Behaviors from the Two Belief Systems

An interesting and productive new approach to the understanding of human behavior is that of classifying behaviors into two categories: behaviors that derive mainly from beliefs that originate in the emotional belief system and behaviors that derive primarily from beliefs that originate in the cognitive belief system. Both categories are stratified: Belief systems determine beliefs, beliefs determine behaviors, and beliefs and behaviors determine cultures.

Compared to the primitive emotional belief system, the cognitive system is advanced. It has resulted in behaviors that have made us human and civilized. It has brought modernity and the scientific explosion. Without the cognitive system we would act on the basis of only the emotional belief system and would behave like the infants, children, and animals, who chiefly utilize only the emotional system for belief and behavior.

Infantile and childish behaviors derive primarily from the emotional belief system because the cognitive belief system is not yet developed in infants and children. Characteristics of infantile or childish behavior can be described as immature, demanding, unreasonable, self-centered, and occasionally violent. These characteristics contrast with the behaviors that emanate from the cognitive belief system: mature, civilized, humane, understanding, intelligent,

and nonviolent. Animalistic behavior, which may be violent, also derives primarily from the emotional belief system, which is the only developed belief system that mammals have.

Uncivilized humans living in primitive cultures rely mainly on their emotional belief system because they haven't yet learned to proficiently utilize their cognitive belief system for the beliefs that determine their behavior. Over many millennia hominids have incrementally learned to competently use both evidence-based reasoning and the fruit of evidence-based reasoning, so that evidence-based reasoning is the driving force behind the cultural evolution that has propelled Homo sapiens from being uncivilized toward being civilized, but is still a work in progress. This idea was presented in my essay "An Evolutionary Theory of Everything", although at the time I did not recognize it as the grand example of cultural evolution that it is. The Flynn effect, which is an increase in intelligence test scores over time, is compatible with the concept of cultural evolution resulting from humans progressively learning to use their cognitive belief system.

Animals and humans do not have to learn how to use their emotional belief system, which is about security. It is innate. The emotional feeling of security motivates behavior to seek security by activating the brain's reward system. A good feeling of happiness or joy automatically occurs when security is increased; an unpleasantly sad or depressed feeling results when there is a loss of security; and an uneasy feeling of anxiety stems from a threat to security. Threats to security are dealt with by violent fight or flight behavior, which originates primarily in the amygdala, a structure in the limbic system where emotions originate. Violence occurs when the emotional belief system is activated by a threat to security. But there is no

known mechanism that automatically motivates the use of evidence-based reasoning that originates in the cognitive belief system. Evidence-based reasoning has to be learned.

Although volitional behavior results from an interplay between the two belief systems, one or the other system often dominates. According to neuroscientist Andrew Newberg, neuroimaging studies show, “There is a push-pull between our frontal lobe and limbic system that can get out of whack sometimes. If we get overly emotional our frontal lobes shut down, and if we become over-logical, our emotional areas shut down.” Competition between the two belief systems results in opposition between religion and science in a zero sum game, with religion being the prime example of a culture resulting from the emotional belief system and science the prime example of a culture resulting from the cognitive belief system.

The desirable behaviors that the cognitive belief system makes possible contrast with the emotional belief system’s inadequacies. The cognitive system, from which science emanates, provides intellectual behavior. It permits us to think for ourselves, to understand, question, change, compromise, invent, and create. It is forward looking and allows us to anticipate and to plan. On the other hand, the emotional system, from which religion emanates, lacks those features. It is unable to question or doubt, even its own beliefs. It does not have the ability to introduce changes, but cherishes unchanged rituals, traditions, attitudes, prejudices, and beliefs, which orient it to the past. In addition, it results in self-centered behavior, lacks the ability to compromise by intellectual means, and prefers physical actions, which may be violent.

Beliefs that emanate from the emotional belief system derive from information that originates from authority or experience. Because the emotional belief system cannot question, theists consider authority to be the “final word” so that whatever is handed down from

authority is not subject to change. Abrahamic religions' faith-based beliefs are based on the authority of scripture: The Bible and the Koran. Attitudes and beliefs, such as those opposing abortion, homosexuality, and gay marriage, derive from the authority of Holy Scripture, and not from reason or evidence. As humans have progressively mastered the cognitive belief system, learned to think for themselves, to question, and to act autonomously, their reliance on authority has diminished. Humans have come to demand equal rights, civil rights, human rights, freedom, and democracy in preference to authority and authoritarian governance.

Corruption occurs when the emotional belief system seeks personal security without regard for others or the truth. The cognitive system, however, uses evidence-based reasoning to make decisions based not on personal security, but on truth. The cognitive system is objective and is able to understand others. Understanding others facilitates identifying with and empathizing with those who might otherwise be feared. Empathic behavior is compassionate. It makes humans humane.

In Chris Mooney's 2012 book *The Republican Brain: The Science of Why They Deny Science—and Reality*, differences between Republican and Democratic attitudes and beliefs are noted. These differences make sense when viewed in terms of the belief system from which the beliefs emanate. Beliefs of Democrats derive primarily from the cognitive system's evidence-based reasoning, which directs them toward being open to change and liberal; whereas, Republican beliefs derive more from the emotional belief system's desire to preserve security, which directs them toward conservatism and maintaining the status quo. Security is a high priority for Republicans, who favor strong national defense and, more than Democrats, support religion, which is based on the belief that god provides security. The religious right holds god-

oriented ideas such as creationism, and is against ideas that threaten the primacy of god, such as evolution by natural selection. Both the religious and the Republicans tend to downplay science, including the scientific global warming hypothesis, which derives from the cognitive belief system's evidence-based reasoning. Another reason leading to rejection of the global warming hypothesis by Republicans is that to protect against global warming would be costly and would threaten their financial security. The more a political party is right leaning, the more its beliefs derive from the emotional belief system, and the more it is left leaning, the more its beliefs derive from the cognitive belief system. But there are a number of variables that drive political beliefs. Some result in crossovers, such as when people are financially secure and favor conserving their fiscal security, but are also socially liberal and favor social change.

Political party preference appears to be determined either by the desire for truth and for change, which derives from the cognitive belief system, or by the need to feel secure, which derives from the emotional belief system. The level of security required to feel secure is determined not only by how secure the person really is, but also by previous experience and genetic factors that result in a secure or insecure personality. In this way genetics influences the emotional belief system and in turn affects attitudes. The current literature, such as comparing identical to fraternal twins, suggests that political attitudes result from a combination of environmental and genetic factors, with genetic factors accounting for forty to sixty per cent of the political attitude preference.

Scientific Evidence vs Religious Faith

People originally held polytheistic views, with each god having control over and providing security in a specific domain. Switching from polytheism to monotheistic belief

resulted in a monotheistic god not only providing security, but providing *total* security. Today, theists believe that god provides them total security, which is why they worship their god so fervently. And people turn to god for security when their security is threatened, so that religion thrives when adversity strikes.

The more that personal security is threatened the more likely the emotional belief system will be activated. On the other hand, the more intellectually competent we become the more likely we will pursue the truth by utilizing evidence-based reasoning from the cognitive belief system. In Drew Westen's book *The Political Brain: The Role of Emotion in Deciding the Fate of the Nation* the case is made that people make political choices primarily on the basis of emotions. But wouldn't that depend upon who is polled? If only top scientists were polled might not their political decisions be chosen on the basis of evidence-based reasoning rather than on the basis of the emotional feeling of security? The search for security or for truth, like their respective belief systems, vie for primacy as goals of belief. That balance is slowly switching away from security as living and health conditions improve and toward truth as humans progressively learn to increase their cognitive competence. At the present point in the trajectory of cultural evolution, and as *The Political Brain* points out, the average person in the U. S. is more concerned about the emotional belief system's personal security than about the cognitive belief system's truth. But because of cultural evolution, that will inevitably shift in favor of the cognitive system; and the sooner the better for humanity.

The cognitive belief system uses evidence-based reasoning to arrive at truth. Reasoning, however, can be rationalized, which entails inventing a plausible explanation that may not be true. The one way to determine truth is by the use of evidence. Faith is belief without evidence

for the belief. Our behavior is either primarily oriented to seek the truth that is evidence-based and derives from the cognitive belief system, as science does, or to seek the feeling of security that is faith-based and derives from the emotional belief system, as religion does. Religions are faiths whose beliefs lack evidence and, therefore, are imaginary. An emotional *feeling* from the emotional belief system, is subjective, lacks evidence, and is a type of faith-based belief that need not correspond to reality; whereas, *knowing* from the cognitive belief system, is objective, and is a type of evidence-based belief that does correspond to reality.

Theists utilize faith rather than evidence for religious belief because faith obscures the fact that there is no evidence for god. In an attempt to compensate for lack of evidence, religion has touted faith, and has made faith acceptable, even preferable, as a source of religious belief. The use of faith has successfully tricked theists into believing that god exists. But the faith-based belief that god exists is a ruse. It contradicts the scientific understanding that evidence is necessary in order to show that god, or anything, exists.

Because evidence determines reality it distinguishes the real from the imaginary. Gods are imaginary because there is no evidence that they exist. But that gods are imaginary is not the reason that gods are placebos. They are placebos because imaginary powers have been attributed to them by the primary religious authority: Holy Scripture. Similarly, medical placebos result from imaginary powers assigned to them by medical authorities: physicians.

Placebos produce a false sense of security. The powers that have been ascribed to placebos increase the subjects' feeling of security because the subjects are made to feel that the powers will be used for their benefit, but because the ascribed powers are imaginary, security itself cannot be increased. Placebo deception occurs when the subject is made to feel

more secure by the placebo's implied benefits, but is not more secure. The difference between simple deception and placebo deception is that although both result from imaginary information, the placebos' information increases the feeling of security, whereas, in simple deception the feeling of security does not change. (A more detailed explanation of how placebos work can be found in the essays "An Emotional Theory of Everything" and "Placebos Work by Reversing the Anxiety Component of Disease" at www.mdjaffe.com.)

Although early hominid culture was determined almost entirely by the emotional belief system, as humans progressively learned to use their cognitive belief system, its use became increasingly prominent at the expense of the emotional system. Western civilization is currently experiencing a clash between the culture of religion and the culture of science. It is at a crossroads, about to transition from a culture that has for millennia been dominated by religious, faith-based beliefs, which are generated by the emotional belief system, to a culture of science, whose evidence-based beliefs are generated by the cognitive belief system. As the cognitive system's dominance brightens, the emotional system's dominance fades and so does religion. In the Middle East, however, where the Muslim religion holds a firm grip on culture, religion has restrained the transition from a dominant religious culture to a culture based on science and, thereby, has held back the civilizing process.

The new understanding of how placebos work makes it apparent that god is a placebo, an anachronism, whose time is running out. This understanding, however, does more than discredit a belief in god. It explains why theists have been tricked into believing in a nonexistent god. But the trick can be unmasked and placebo deception overturned simply by using evidence in the process of believing.

As noted earlier, the use of faith results in theists believing that their monotheistic god exists and provides total security, even though there is no evidence that god exists or provides any security. Religious fundamentalists cannot even recognize that they are deceived about god and security because having faith commits them to using their emotional belief system for belief, which precludes their questioning their own beliefs. Because the emotional belief system does not have the ability to question, its beliefs are held with certainty. As a result those who hold beliefs that emanate primarily from the emotional belief system tend to be uncompromising and intolerant of others, even of those who hold only slightly different beliefs. This leads to narrow-mindedness, to racism, and to sectarianism. The fact that religions stem from the emotional belief system accounts for the competitive behavior that often occurs between religions and between branches of a religion, such as between Catholics and Protestants, both Christian, and between Shia and Sunni, both Muslim.

Religious leaders have succeeded in glorifying faith by emphasizing that faith makes believers feel good, secure, and hopeful. But those feelings are produced by placebos, which are faith-based and lack evidence. Placebos lack evidence for belief and placebos can be eliminated by the use of evidence. Authority, which is believed on the basis of faith and not on the basis of evidence, produces placebos by attributing to them imaginary powers. Beliefs that lack evidence because they derive from faith, from authority, or from faith in authority, emanate from the emotional belief system and result in placebo deception.

Albert Einstein cautioned, "A foolish faith in authority is the worst enemy of truth." Placebos and gods are faith-based. Without faith there would be no placebos and no imaginary gods. In an attempt to legitimize religion, faith has been marketed by theists as benign and

benevolent, but this is misleading because faith-based entities are frauds. They are placebos that deceive. It is hypocritical for religion, which claims to be the wellspring of morality, to promote fraudulent belief as the basis of behavior. Faith, which results in placebo deception, has seduced billions of people into believing in an imaginary god that doesn't really exist. Faith is based on myth. Even concepts of holiness and sacredness are mythical because they apply to gods for whom there is no evidence and who exist only in the imagination.

Supernatural entities, such as miracles, ghosts, angels, heaven, the soul, and gods, are faith-based. They can be imagined but cannot be found in nature because there is no evidence to validate that they exist. When religious faith ignores the need for evidence and instead bases belief on authority, as Einstein cautioned, "truth suffers". By disregarding evidence or its lack, and, instead, basing belief on authority, the Inquisition silenced Galileo, and religious fundamentalists currently deny the soundness of the theory of evolution by natural selection and falsely claim that god exists.

Placebo deception makes a god concept an embarrassment for theists. The definition of a lie is a false statement made with intent to deceive. The recognition that god is a placebo and that placebo deception results in false beliefs suggests that those who believe in god are living a lie; a lie which theists intentionally enforce by their insisting on using faith rather than evidence for religious belief. This lie destroys religion's morality. But theists, who claim morality comes from god, will no doubt argue otherwise. To argue otherwise, however, would be arguing against what is now a basic tenet of the medical profession: that placebos deceive and that placebo deception can be eliminated by evidence.

Evidence Eliminates Gods and Switches Belief to a Cognitive Belief System

We mistakenly believe that all of our beliefs are based on the truth, and, indeed, truth is the proximate goal of the cognitive belief system. (Security is its ultimate goal because truth increases security.) All beliefs that emanate from the emotional belief system, however, are based on the desire to feel secure; not on truth. Moreover, because a monotheistic god is falsely believed by theists to have the ability to provide total security, an ability not approached by any other entity, religion is by far the most important entity that derives from the emotional belief system. As a result, and as noted earlier, religion's influence on culture is enormous, including its ability to slow cultural evolution such as has occurred with Muslims in the Middle East.

The goal of the emotional belief system is to seek the feeling of security, but in the pursuit of security violent behavior can erupt because violence results from an emotional reaction to a threat to security. Although emotional behavior that derives from the emotional belief system's beliefs is often violent, reasoned behavior that stems from the cognitive belief system's beliefs is nonviolent, empathetic, and compassionate. The fact that democracies derive from the nonviolent cognitive belief system's beliefs may account for the finding that democracies rarely war against each other; however, lack of violence and lack of war is not true of religions, which derive from the violent emotional belief system.

Samuel Huntington, in his 1996 book *The Clash of Civilizations and the Remaking of World Order*, made these three points: 1. Cultural and religious identities will in the future be the primary source of conflict between civilizations. 2. Religion is the most important factor that differentiates civilizations. 3. Conflicts are prominent between Muslims and non-Muslims.

Muslim fundamentalists will go to extremes to protect Allah, who they believe to be the main source of their security. But gods, such as Allah, are placebos and do not provide security. They provide only the feeling of security. If Muslim fundamentalists could be made to understand that a threat to Allah is not a threat to security because Allah neither provides security nor exists, this would eliminate their violent behavior. But it takes evidence to do so.

The medical profession was plagued by placebos, which were faith-based, anecdotal treatments that lacked evidence for efficacy. It was by switching to evidence-based treatments that ineffective placebos were eliminated from medicine's therapeutic armamentarium. Evidence-based medicine is now the gold standard for medical care.

Gods, for whom there is no evidence and who are faith-based placebos, can be eliminated by using evidence for determining belief. The use of evidence eliminates violence by religious fundamentalists in two ways: as just described, by eliminating belief in a nonexistent god in whose defense fundamentalists act violently, and by switching from faith-based belief, which emanates from the violent emotional belief system, to evidence-based belief, which originates from the nonviolent cognitive belief system.

In *The Better Angels of Our Nature*, Steven Pinker points out that the world is becoming less violent. In the essay "An Evolutionary Theory of Everything" I proposed that the decreasing violence results from humans progressively learning to use their cognitive belief system at the expense of their emotional belief system. Cool reasoning from the cognitive belief system opposes violence, whereas, hot emotions from the emotional belief system predispose to violence. As humans have become more civilized due to cultural evolution, their behavior has

become less violent and more humane because they use their violent emotional belief system less and their nonviolent cognitive belief system more.

When there is a significant threat to security, violent emotions automatically take over. This innate propensity can be overcome by willfully overriding the emotional system by using the cognitive system to think through the best way to deal with the threat. To “calm down” is not merely a platitude. It is an injunction to switch belief from the emotional belief system to the cognitive belief system. Christ, in his Sermon on the Mount; Gandhi, with ahimsa (nonviolence); and Martin Luther King’s and Nelson Mandela’s passive resistance, recommended what amounts to using the cognitive, nonviolent reaction to injustice, rather than an emotional belief system’s violent reaction. Ahimsa is based on satyagraha (holding firm to truth). The intent of satyagraha is to convert, not coerce. Conversion away from the use of violence from the emotional belief system and toward the use of evidence-based reasoning from the cognitive belief system provides a nonviolent response to threats to security.

Religious fundamentalists may be arrogant because they hold their religious beliefs, which derive from their emotional belief system, with certainty, but they are not stupid. They, like the medical profession, have been deceived by placebo deception. Placebo deception has wreaked havoc, with disastrous results for Muslim fundamentalists. They kill, both themselves and others, on behalf of a nonexistent god. Jihadists are not heroes. “Jihad cool” is not cool. Jihadists are victims of placebo deception. If would-be jihadists were made to understand that their behavior is senseless and contrary to their own best interests, they might curtail that behavior or at least question the certainty with which they hold it. But to even question their

beliefs, fundamentalists must switch from using an emotional belief system, which is faith-based and ignores evidence, to an evidence-based cognitive belief system.

The reason fundamentalists believe the faulty notion that Allah provides security, whereas, Allah provides only the feeling of security, is because they have been taught by religious leaders to use faith for determining their religious beliefs, not realizing that faith-based beliefs result in imaginary entities and in placebo deception. If fundamentalists are to be truthful and reasonable, their beliefs must avoid the imaginary and avoid placebo deception by being evidence-based. The telling difference between the the two belief systems and between religious and scientific cultures is that the emotional belief system and the culture of religion ignore evidence for believing, whereas, the cognitive belief system and the culture of science require evidence for belief.

The more thoroughly convinced that Muslim fundamentalists are that their extreme actions in defense of Allah are justified, the more willingly will they act radically. Radicalization occurs when friends, family, imams, or social media assure fundamentalists that their extreme actions are justified. Conversely, counter-arguments against justification may produce enough uncertainty to dissuade radicalized fundamentalists from violent behavior.

Promoting the Use of Evidence for Belief

The most significant adverse consequences that derive from the emotional belief system are violent behavior and the fact that the emotional system's beliefs stem from faith in authority and not from evidence, thereby, resulting in false beliefs and in placebo deception. Theists believe in god because they have been tricked by placebo deception into falsely believing that god provides them total security. Placebo deception has, throughout history,

caused millions to be persecuted and killed by religious fundamentalists, who act on behalf of an imaginary god, whom they passionately but mistakenly believe is the primary source of their security. Violent behavior, false beliefs, and placebo deception can be prevented or eliminated by insisting that evidence be used in determining belief.

Evidence distinguishes between the real and the imaginary. It determines reality and reality is what truth is. Because there is no objective evidence that god exists, god is believed to be imaginary. But only those who use evidence and their cognitive belief system for belief understand that god is imaginary. Similarly, there is no evidence that god provides security, even though there is evidence that god provides a feeling of security. On that basis god is a placebo, but only to those who utilize evidence for determining belief.

The fact that scientific belief is based on evidence but religious belief lacks evidence, results in cognitive dissonance. To eliminate this discord theists argue that evidence for religious belief is not needed because religious belief is based on faith – on faith in authority. But the use of faith is a ploy, which is utilized to eliminate the need for the evidence that theists would like to eliminate, because if objective, scientific evidence instead of faith were used for religious belief, theists would have to acknowledge that god does not exist. Scientists compartmentalize their beliefs, with the cognitive system's scientific belief being evidence-based, and the emotional system's religious belief being faith-based. Although this may eliminate cognitive dissonance, it does not negate the fact that faith results in entities that are imaginary, or have imaginary powers, or both. Placebo deception is an example of wishful thinking. It derives from insidious faith-based belief and can be eliminated by evidence. The lack of evidence makes it clear that god is imaginary, has powers that are imaginary, and is a placebo.

Although theists' faith-based beliefs ignore evidence, evidence is too important to be ignored. Evidence is needed to understand the way the world really works, to successfully engage in science, technology, and daily activities, to be truthful and moral, and to eliminate medical and religious placebos, which would eliminate religious wars and religious violence. As just noted, evidence eliminates placebos, and because god is a religious placebo, evidence eliminates a belief in god, which deserves to be eliminated, because it is a fraudulent belief, resulting from placebo deception.

To induce theists to use evidence for belief requires changing their religious attitude away from being faith-based by showing why the use of evidence, which would eliminate religion and religious violence, makes more sense and is much more honest and beneficial than their continuing to tout faith. Courses in critical and in scientific thinking, which incorporate teaching the use of evidence for belief already exist. But something simpler and more targeted toward evidence would be cheaper and more effective for accomplishing a similar objective.

The actual learning to use evidence requires minimal effort. It is a no-brainer. The medical community eliminated medical placebos simply by explaining that using evidence was in the best interest of patients. What needs stressing is that evidence should be used in determining all beliefs: religious and nonreligious. That is the only message necessary to eliminate religious placebos and religious violence.

Just as religion has successfully glorified the concept of faith, which ignores evidence, an extensive marketing program to extol the benefits of using evidence has a decent likelihood of success for eliminating religious placebos and religious violence. There are limitless possibilities on how best to get the message out, including to whom the message should be addressed,

whether it should be addressed locally, regionally, or globally, and the possible role of academic classes or of social media in presenting the message. It is likely that liberal theists would be much more accepting than fundamentalists of the message. Even so, a large-scale program that markets the use of evidence for belief might, just might, sufficiently shake the certainty with which Islamists feel that radical acts in defense of Allah are justified, that they forgo the use of terror.

Because of the new understanding that god is a placebo, the role of religion in our culture will have to be rethought and revised downward, which is compatible with the process of cultural evolution. Marketing the use of evidence for belief could accelerate the transition from a culture of religion, and its violent emotional belief system, to a culture of science and its nonviolent cognitive belief system and, thereby, act toward eliminating religious placebos and religious violence. Average human cognitive ability is becoming sufficiently developed that we are finally approaching a point where, by using evidence, we can and should do away with placebo deception. A program to use evidence to eliminate religious placebos and religious violence would be a gamble well worth taking. It presents a rare and unique opportunity for significantly changing the world for the better. It could produce “one giant leap for mankind” in the ongoing cultural evolutionary march toward becoming civilized.