

An Evolutionary Theory of Everything

Martin D. Jaffe, M.D.

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Introduction

“Nothing in biology makes any sense except in the light of evolution” (Dobzhansky, 1973).

Natural selection is the mechanism that drives evolution (Darwin, 1859), and is the basis of evolutionary biology and evolutionary psychology. Because of natural selection, all human behavior is security-seeking. To grasp why this is so, and why it is so important, requires changing two current understandings of how natural selection works. These corrections unlock fresh insights that revamp present ideas concerning matters as profound and as diverse as human behavior, emotional feelings, belief, attachment theory, moral philosophy, altruism, authority, placebos, culture, and belief in gods. Presented here is a unified theory of behavior, emotions, morality, values, and theology based upon the unifying principle of a security paradigm for the understanding of natural selection: an evolutionary theory of everything.

Security: the goal of behavior

Natural selection is based on reproductive success. Genetic traits are naturally selected when they increase in a population because of reproductive success leading to more offspring than would occur without the traits. According to life history theory natural selection can result from any mechanism that increases reproductive success. There are a number of life history characteristics that can change reproductive success. Chief among these is that of increasing the probability of living long enough to reproduce after attaining the age of sexual maturity. If our hominid ancestors lived long

enough to reproduce throughout the span of their reproductive years, with everything else being equal, their opportunity for reproductive success would on average be greater than if they had died young and had no or limited opportunity to reproduce. This scenario made it likely that the traits that contribute to prolonging the lives of our hominid ancestors and of their progeny to and beyond the age of sexual maturity would be naturally selected.

Evolutionary psychologists have uniformly supported the notion that reproductive success is increased by prolonging survival. This has been shown by their considerations of kin selection and group selection theories, wherein it is posited that an altruist risks his life and reproductive success to ensure the survival and reproductive success of his kin or of members of his group. Also, adaptations are thought to work by increasing survivability. Natural selection can result *from* increased survivability and also can result *in* increased survivability. Therefore, natural selection in hominids has generally been viewed from the perspective of a survivalist paradigm.

But a survivalist paradigm does not explain the mechanism by which genetic traits enhance survivability. In order for a genetic trait to be naturally selected, the trait must program for a mechanism, or for a structure that enables a mechanism, to increase survivability. The mechanism that is proposed here is that of security-seeking behavior, because threats to survival can be counteracted by security-seeking (safety-producing) behaviors that provide protection against the threats. Security is freedom from danger, harm, or loss of life. Examples of security-seeking behaviors that protect against loss of life are: safe driving, which decreases fatal accidents; learning to swim, which helps to prevent drowning; not smoking, which helps to avoid lung cancer; and treating hypertension, which helps to prevent heart attacks, strokes, and the resulting loss of life.

Eyes and ears, and the components from which eyes and ears are assembled, have been naturally selected because eyes and ears are structures that produce behaviors of seeing and hearing,

which are mechanisms that increase an organism's security by protecting it from threats to its survival, such as from predators. The behavior of all organs and organ systems and human behavior itself, increase our security by protecting us from threats to our survival. Although, because of natural selection, increased survivability is the ultimate goal of behavior, behavior, nevertheless, acts at the level of its proximate goal, that of increasing security, in order to achieve its ultimate goal. For this reason security is the goal of behavior. That security is the goal of behavior is crucial to the understanding of much that follows in this paper.

That security is the goal of our physical and mental behavior was confirmed in *The Primal Instinct: How Biological Security Motivates Behavior, Promotes Morality, Determines Authority, and Explains Our Search for a God* (Jaffe 2010, pp.15-22) by serially considering numerous human actions, and by showing that they all had security as their goal. We have been programmed by natural selection so that everything we do has the same goal: to increase our security. Our actions, therefore, always favor that which gives us the most security. Our desire for security is the motivator for all of our behavior, including attaching, moral, altruistic, learned, volitional, and valuing behaviors. It is the preeminent principle in psychology and is the reason theists believe in God.

The more physically and mentally competent we are in protecting against threats to our survival the more secure we are and the more secure we feel. Playing games is a technique for practicing and demonstrating competent behavior. When children play hide-and-go-seek, or adults play any physical or intellectual game, such as playing at sports or at cards, they have fun. We feel good when we have fun. We feel good and have fun when we are able to demonstrate competent behavior. Our self-esteem rises when we win a contest, solve a puzzle, satisfactorily complete a task, master a subject, or perform well: when we demonstrate competent behavior. Levels of self-esteem correspond to levels of security feelings because self-esteem monitors and reflects how secure we feel as a consequence of our

demonstrating physical or, especially, intellectual competence. That which is associated with increased feelings of security, such as having fun, demonstrating competent behavior, or increasing self-esteem, is associated with feeling good. We are motivated to seek security by our desire to experience good, pleasant feelings which emanate from our mental reward system. This will be discussed next.

The emotional feeling of security and volitional behavior

Shifting from a survivalist to a security paradigm corrects the first misunderstanding by the scientific community of natural selection. There is a second misunderstanding that needs correcting. It is that all human behavior evolved from traits that were naturally selected. However, volitional behavior, which accounts for almost all human behavior, follows and derives from belief and not from naturally selected traits, and, therefore, volitional behavior did not evolve. Belief originates from an interaction between our two belief systems: the cognitive system and the emotional feeling of security, which is part of the emotional system. To understand this requires rethinking what are confusing understandings regarding emotions and emotional feelings. Emotions are confusing because there currently is no clear understanding or consensus on how many emotions there are and which entities are called emotions. And there is poor understanding of how emotional feelings work.

Emotions are generally understood to consist of three components: emotional feelings, physiological changes, and facial, vocal, and postural expressions. The physiological changes and the expressions are reactions to security situations and are not involved in information processing. An emotional feeling, acting alone or acting as part of an emotion, is the agent of the emotional system for the processing of information that initiates the belief that determines volitional behavior.

The understanding of the relationship of emotional feelings, specifically the emotional feeling of security, to human volitional behavior begins with the idea that a two-tiered mental belief system

consisting of an emotional intelligence and a cognitive (rational) intelligence (Goleman, 1999) has evolved in humans. The emotional system occurs in all mammals (MacLean, 1990); the cognitive system is highly developed only in adult humans. The basic processing of information requires the emotional feeling component of the emotional system, but to reason requires the addition of the cognitive system. It is the cognitive system that has made us reasonable, human, and civilized, attributes which the emotional system can not provide. One cannot reason with animals that lack a developed cognitive system, with young children who do not yet have a developed cognitive system, or with religious fundamentalists, who in faith-based matters ignore their cognitive system for belief and utilize only their emotional system.

Due to natural selection emotional feelings are entirely about security. If an emotional feeling were about anything other than security, it would not have been naturally selected. This is consistent with the hypothesis that the emotional feeling of security is the only emotional feeling there is (Jaffe, 2010, p.49). Having only one emotional feeling is favored by Occam's razor, a principle of parsimony, which encourages the use of the simplest hypothesis with the fewest assumptions. And this is in accord with the absence of any identifiable emotional feeling other than that of security or a variant of security. The likelihood that there is only one emotional feeling, the emotional feeling of security, greatly simplifies the understanding of emotions and provides a mechanism to produce human volitional behavior.

Security is key to the understanding of emotions, moods, which are less intense but longer lasting than emotions, and pathological emotional states. For example, when there is an increase in security, and a corresponding increase in the feeling of security, we feel happy; with a decrease in security we feel sad; and with the threat of a decrease in security we feel anxious. People often regard happiness as their primary goal in life. Considering happiness as a goal is equivalent to considering

security as a goal because the feeling of happiness is an affective feeling that results from feeling secure. When events that result in happiness are examined it is apparent that, without exception, each event is associated with an increase in the subject's physical or intellectual security. Similarly, when situations that result in sadness or in anxiety are reviewed, it is evident that in each situation there is a loss, or a threat of a loss, of security, respectively.

Volitional behavior is intentional, purposive, voluntary, conscious, and chosen, as contrasted to being instinctual or automatic, not learned, and unmodifiable, or of being an involuntary reflex. Volitional behavior is determined by belief. We act on the basis of our beliefs. The emotional feeling of security plays an essential role in the genesis of volitional behavior because the emotional feeling of security is a determinant of belief. Belief derived from the emotional feeling of security is *felt* to be true; when derived from reasoning, it is *thought* to be true; and because evidence determines reality, belief based on evidence is *known* to be true.

The belief upon which volitional behavior is based is initiated in the emotional mental system and is then modified by the cognitive mental system. For example, decision making is determined by the emotional system (Damasio, 1994). After a decision is made by the emotional system, the cognitive system may reform or may rationalize the decision (Shermer, 2011). Reasoning and emotions interact in the prefrontal cortex where reasoning modulates emotions (Casey et al., 2008). When reasoning is minimal or does not exist to modulate emotional feelings, as occurs in animals that have not evolved higher reasoning ability or in children whose reasoning ability has not yet developed, the animals and children are, nevertheless, able to make decisions, to form beliefs, and to act on the basis of emotional feelings. Of the two belief systems, the emotional system, which evolved earlier in time, is the default system, so that, in the absence of reasoning, emotional feelings act alone. When security is threatened by an external threat, or by an internal threat such as by the stress of sickness, fatigue, sleep-

deprivation, or frustration, or when immediate action is necessary, people react emotionally. The intensity of the emotional reaction depends upon the degree of the threat to security. Violence may be initiated when a significant threat to security induces an intense emotional reaction.

The idea that human behavior evolved from naturally selected traits wrongly conflates the origin of volitional behavior with that of instinctive behavior. The error of conflating the two behaviors can be corrected by recognizing the central role that the emotional feeling of security plays in generating belief. Belief is required for volitional behaviors where people's actions are based on their beliefs, but is of no consequence to instinctive behaviors, which are automatic and derive from naturally selected traits.

The emotional feeling of security performs two functions in the process of generating volitional behavior. The first function, that of acting as the source of belief, has been discussed. The second function is that of motivating volitional behavior to seek security. This function was first considered when I recognized that both the emotional feeling of security and taking drugs, such as narcotics, were associated with pleasant feelings.

Pleasant feelings emanate from the brain's reward system (Olds and Milner, 1954) when dopamine is released into the nucleus accumbens in the brain (Ikemoto and Panksepp, 1999). Narcotics result in pleasant feelings to the point of euphoria when they hijack the brain's reward system, which is located in the brain's limbic system where emotional feelings are processed (Jaffe, 2010, p.103) and where the emotional feeling of security presumably triggers the release of dopamine into the nucleus accumbens (Jaffe, 2010, p.55). This hypothesis is supported by the findings that people experience a feeling of pleasantness during prayer and from placebos, both of which increase feelings of security, and is consistent with the demonstration that increased dopamine release into the nucleus accumbens occurs when praying (Schjodt et al., 2008) and with placebos (Scott et al., 2007).

People desire narcotics and secure feelings because they like the pleasant feelings that both are associated with. That is, we are motivated to seek security in order to access the emotional feeling of security, which elicits pleasant feelings when it sets off the brain's reward system. Thus the emotional feeling of security performs two tasks that have been mentioned: It processes information to form belief, which is the mechanism that enables us to act with intention because volitional behavior is determined by and follows belief. In this sense "feeling" is a type of "believing". And it triggers the brain's reward system, which motivates behavior to seek security. This results in affective feelings, such as "feeling happy".

Most mental processes are unconscious (Westen, 1999). We are not conscious of the emotional feeling of security, but we can consciously recognize the pleasant feeling it elicits when it triggers the brain's reward system. If we were unable to consciously recognize that feeling we would lose motivation for security. Thus, the emotional feeling of security not only initiates the belief that results in volitional behavior, but it also ensures that all volitional behavior has security as its goal. As a result our lives are not drab but are painted by the ups and downs of positive and negative emotional feelings – from happiness to anxiety and depression – which reflect the spectrum spanning high to low levels of security. The purposeful function of pleasant feelings is to motivate behavior for survival and reproduction.

In addition to the emotional system the cognitive system results in volitional behavior that has security as its goal. That is because the belief that emanates from the cognitive system is based on reason and evidence, and evidence determines reality. Reality increases security by furnishing accurate information for defending against threats to survival (Jaffe, 2010, p.16). The emotional mental system has often been described as the “hot” or “fast” system or “system 1,” which distinguishes it from the cognitive mental system's the “cool” or “slow” system or “system 2.” The two systems can also be

considered as security systems or as belief systems. The emotional belief system's belief is based on feeling secure; the cognitive belief system's belief is based on reality. As a consequence, the emotional belief system cannot distinguish between the imaginary and the real, whereas the cognitive belief system can. And because the emotional belief system is subjective and concerned with only the believer's security, while the cognitive mental system is objective and able to consider a broad picture including the security of others, the behavior that emanates from the cognitive system, by considering others' security, is likely to be more empathetic and more ethical than the self-serving behavior that emanates from the emotional belief system.

Two belief systems and their conflicting cultures

Belief is necessary if there is to be volitional behavior. Evolution's first attempt at a belief system resulted in the emotional belief system, which responds to security concerns with a feeling of security. The feeling of security that emanates from the emotional belief system can derive from either of two external sources: experience, which determines the level of security, and authority. Authorities are believed and obeyed because they provide security. Humans also evolved a second belief system to provide the belief that determines volitional behavior. This system, the cognitive system, bases its belief on reason and on the evidence that determines reality. Those who utilize the emotional feeling of security for belief will believe and obey authorities, but those who utilize their cognitive belief system, which requires evidence for belief, will not believe or obey authorities without confirmatory evidence. The belief that derives from the cognitive belief system is based on the reasoning and evidence that enables us to think for ourselves, to understand, and to make sense of the world without relying on authority. It, therefore, fosters change and innovation.

The emotional belief system evolved possibly 60+ million years ago. In comparison it was only

2 or 3 million years ago when our hominid ancestor, *Homo habilis*, exhibited a mildly enlarged cranial vault size of 680cc, compared to a chimpanzee's 600cc, and with time the vault continued to enlarge until we, *Homo sapiens*, arrived more than 100 thousand years ago with a cranial vault size of 1400cc. Thus, many millions of years after the emotional system evolved, the cognitive system evolved and was integrated with the emotional system. As a result humans possess two belief systems and the beliefs, attitudes (i.e., positions based on beliefs), behaviors and cultures that derive from the belief systems, such as the culture of religion, which derives from the emotional system, and the culture of science, which derives from the cognitive system. The two cultures compete for dominance when the emotional and the cognitive belief systems from which they emanate interact reciprocally.

A society's culture is determined by the beliefs and behaviors of those in the society. Because volitional behavior follows belief, the understanding of why those in a culture behave the way they do can be understood by recognizing the basis for their beliefs. Faith is belief without evidence for the belief. Religious culture, which is faith-based, issues from the emotional belief system, where it is handed down from authority. That is, faith-based belief derives from faith in an authority and in the authority's suggestions. Authority that determines the culture of religion is hierarchical, with power and belief flowing from the top down. Usually, religious beliefs are learned from parents, family, and friends, and are framed by clergy and religious leaders, who in turn derive their belief from holy scripture. Religious culture is authoritarian with God (Yahweh, Christ, or Allah) being the supreme authority who is totally obeyed by religious fundamentalists who believe that God provides total security. The intensity of religious belief hinges on the quantity of security the theist believes that God provides.

Children use the emotional belief system because that is the only belief system that is developed in childhood. But as children age and develop the cognitive system, learning to use evidence and

reasoning is like learning and becoming fluent in a second language. The more we are exposed to a second language and the more we use it, the more competent we will become in its use. For example, my grandchildren are far more competent in the language of computers than I and the average person in my generation are. The culture to which my grandchildren have been exposed included the use of computers, a culture to which my generation had not been exposed. When a culture values the use of a procedure the learning of that procedure by those in the culture is enhanced. And we prefer to practice that which we are good at, so that the more competent we become at using the evidence and reasoning of the cognitive belief system the more we prefer to use them for determining belief. This suggests that a change in culture is the reason my grandchildren are more competent than I am at using computers, and a change in culture may be the reason my generation is more competent than our ancestors at learning and utilizing evidence and reasoning for belief.

There are two reasons why people do not use their cognitive belief system more than they do. The first reason, as discussed in the above paragraph, is that they have not yet learned to utilize or rely on it. The second reason involves those who have mastered the use of reasoning and evidence but are preempted from utilizing the cognitive system by the emotional system in matters involving security. This scenario results in compartmentalizing, with belief involving security issues emanating from the emotional feeling of security, and non-security belief emanating from the cognitive system. There are many scientists who are religious. They apparently compartmentalize their belief by utilizing their emotional system for faith-based concerns and their cognitive system for scientific concerns.

Religion, authority, and lack of change derive from the emotional belief system and cluster together. Religion is based on authority and authority abhors change. Authorities decide definitive judgments that preclude subsequent change. God is considered to be perfect and any change would be a step down from perfection. Religious authorities such as the pope and the Bible are inerrant, with no

need to change. Religions are tradition-bound. Some religious rituals have persisted unchanged for millennia. Change away from religious dogma is heresy, which was punishable by imprisonment as in the case of Galileo or by death as in the case of Bruno. Religious fundamentalists' beliefs are based on the literal, unchanged interpretation of holy scripture. Traditional, family, Christian values, such as those against abortion and homosexuality, have remained unchanged from the holy scripture from which they derive. Islamic fundamentalists, such as the Taliban, al Qaeda, and ISIS deplore the changes associated with modernism in the West.

The current Democratic and Republican political parties are aligned primarily in relation to change. *The Republican Brain* (Mooney, 2012) reviewed psychological studies that showed that Republican conservatism is associated with a number of characteristics such as the absence of change, and the presence of authority and religiosity, whereas Democratic liberalism is associated with change, and not with authority or religiosity. This is explainable by the consideration that the beliefs and attitudes of the Democrats primarily emanate from the cognitive belief system, which embraces change, whereas the beliefs and attitudes of the Republicans primarily emanate from the emotional belief system, which values the status quo.

The emotional belief system, unlike the cognitive system, not only lacks the ability to initiate change, but it also lacks the ability to question or reason, so that religious fundamentalists' faith-based belief, which emanates from the emotional belief system, is held with certainty and lacks reason. Usually, however, belief results from an interaction between the two belief systems. Liberal theists utilize a mixture of the two belief systems in determining their religious belief. The more the belief from the cognitive system is represented in the mix, the more liberal (open to change), reasonable, and amenable to compromise is the believer.

A liberal of one religion often agrees with a liberal of another religion more than with a

fundamentalist of the same religion. Those who utilize the same belief system share the belief system in common and will tend to attach to each other and to treat each other morally (as will be explained in the next section where “attaching” is discussed.) These relationships are generally apparent and may be conspicuously displayed such as when the Israeli ultra-Orthodox and liberal secularists contend with each other and with the Palestinian fundamentalists and liberal secularists. Because of the input from their cognitive belief systems, liberal secularists are usually less emotional, less strident, more reasonable, more willing to compromise, and less demanding than the Israeli ultra-Orthodox or Palestinian fundamentalists whose beliefs overwhelmingly derive from their emotional system in matters involving their God-derived security.

Because our cognitive belief system has given us the ability to reason and to use evidence we have had a good start at understanding the world. We can think for ourselves without having to rely on authority. Those who favor relying on their cognitive mental system more than on their emotional system prefer autonomy over authority and democratic over authoritarian governance. They favor freedom and equal rights for themselves and for everyone. And most impressively, the cognitive mental system has brought about modernity and a scientific explosion.

Progress can be defined as change that increases security. According to National Vital Statistics Reports life expectancy for a white male at birth in the U.S. had risen from 47 years in 1900 to 75 years in 2000. Progress in communication, transportation, information technology, robotics, artificial intelligence, and other scientific disciplines has been awesome. Not only are scientific changes accelerating but the outcries for democracy, freedom, and for the various rights have been on the rise. “According to Freedom House, there were no electoral democracies (with universal suffrage) in 1900, 69 in 1990, and 122 in 2014 – 63% of the 195 countries in the world” (Shermer, 2014). These changes have resulted from the increasing utilization of the cognitive belief system.

There is now evidence that human violence is on the decline (Steven Pinker, 2011). This, I argue, is due to increased utilization of the cognitive belief system. Violence is less likely to be initiated by the emotional mental system, which prepares us for “fight” or “flight”, if reasoning from the cognitive system acts to modify the emotional response to a threat to security. Another mechanism by which the cognitive system may contribute to declining violence is by increasing understandings of others, thereby leading to increased tolerance for, and empathy with, others. Thus, the more that the cognitive belief system and the less the emotional system is utilized for determining belief, the less the violence.

All of this is compatible with the idea that hominids started extremely slowly, and in the process of becoming human have over the course of many millennia decreased the importance of their emotional system as they progressively learned to better utilize their cognitive system for belief in accord with the law of accelerating returns: “...the power of ideas to transform the world is itself accelerating. ...technology and evolutionary processes in general progress in an exponential fashion.” (Kurzweil, 2005).

The foregoing observations would suggest that the workings of the cognitive belief system, as represented by a scientific culture, would be more attractive and preferred over the workings of the emotional belief system, as represented by a culture of religion. But they are not. According to a 2013 Harris poll 74% of U.S. adults believe in God and according to a 2012 Gallup poll only 15% believe in evolution by natural selection. This preference of belief isn't because there is substantiating evidence for God and not for natural selection. The opposite is true. The majority of Americans are theists and the reason that the majority of Americans do not believe in evolution by natural selection is that natural selection questions God's dominance over nature. The explanation of these statistics is based on the understanding that human valuing, like all behavior, is based on security. Theists value the culture of

religion more than they value science because they believe that God provides them more security than science provides. However, theists' religious values are flawed because, as I argue later in this paper, God is a placebo and placebos do not provide security.

The question regarding which culture provides more security has fueled the present conflict over dominance between the culture of religion and the culture of science. Dominance in a competitive system is a zero sum game. The more dominant one culture is, the less dominant is the other. Humans have engaged in religious practices since the beginning of history. The emotional belief system from which religious belief springs evolved tens of millions of years before the cognitive system evolved. Science has slowly been on the rise as humans have progressively learned how to use and to rely on their cognitive belief system for new understandings. We are now, finally, beginning the transition from a well established dominance by a culture of religion to a dominance by a burgeoning scientific culture.

When the fact that God provides only feelings of security and not security itself (to be discussed) is taken into account, then it becomes evident that the culture of science and the cognitive belief system from which it derives provide more freedom, less violence, more progress, and more security than the culture of religion and the emotional belief system from which religion derives. If the cognitive belief system did not provide more security than the emotional belief system, it is doubtful that the cognitive system would have evolved. But it did evolve, placing the culture of religion on the wrong side of history.

Humanity appears to be on a trajectory where we are progressively learning to use our cognitive system at the expense of our emotional system. This bodes well for the future of humanity. But we still have a way to go. At this point in the trajectory an increased use of the cognitive system for belief is a feat that the average person has yet to master.

The theory advanced in this paper, that security is the goal of behavior, is similar to the theory of psychological egoism, which asserts that people always act in their own self-interest (Rachels, 2003). The two theories are similar because the purpose of acting in self-interest is to increase one's own security. The understanding that altruistic behavior results from emotional attaching answers much of the criticism aimed at the theory of psychological egoism. The criticism is wanting because benevolent behavior is currently considered to be motivated by either a selfless desire to benefit another (often called altruism, although the idea of altruism used in this paper is that of sacrificing one's own security to benefit another's security), or by egoism, which is the selfish desire to benefit self, but not by both altruism and egoism. Benevolent behavior, however, can be both selfless and selfish simultaneously if there is emotional attaching, because the parties to an attachment share security concerns and are emotionally bonded together as one. When one party to an attachment benefits, so does the other. This will be considered next.

Attaching: The basis of morality and of altruism

Current attachment theory deals with social attaching or bonding, particularly between a child and a mother or caregiver (Bowlby, 1958). Children attach that which provides them a feeling of security. They attach their mothers, caregivers, and security blankets. All normal human behavior is security-seeking so that behavioral patterns reflect how secure a person feels. A child's behavioral pattern may develop to be "secure" or be one of several "insecure" patterns, depending upon how secure the child has been made to feel due to the mother's or caregiver's care (Ainsworth, 1989). Attachment theory was broadened to apply "from cradle to grave" (Bowlby, 1979), and, now, attachment theory is expanded beyond the social by advancing the consideration that children and adults will attach anyone who, or anything that, provides physical or intellectual security (Jaffe 2010,

pp.28,29).

Attaching, emotionally bonding with an attachment, is a behavior and like all human behaviors, because of natural selection and the emotional feeling of security, has security as its goal. People emotionally attach in order to gain feelings of security and will emotionally attach that which provides security and the feeling of security that follows security. People's possessions – their cars, food, homes, friends, pets, and art – are acquired and are emotionally attached because they provide physical or intellectual security. People emotionally attach leaders and gods who can lead them to, and provide them with, security; they emotionally attach others with characteristics they admire and desire, in order to capture those characteristics which provide physical or intellectual security; and, most importantly, they emotionally attach others with whom they share interests in common.

When people attach others who possess interests the same as their own, they do so in order to add to and reinforce their own interests – which were initially emotionally attached in order to increase their feeling of security – with similar interests held by the attachment. People, therefore, attach on the basis of commonalities, such as class, education, ethnicity, games played, genes, gender, hobbies, home location, ideas, intelligence level, jobs, schools attended, or sports-teams. Clubs, political parties, and religions provide a common interest for attaching. Cooperation results from attaching on the basis of a commonality: a shared desire to increase security. We routinely feel more secure with whomever we share common interests than with those with whom we have nothing in common. When we attach on the basis of commonalities, the closeness of bonding depends on the extent of that which is held in common and how it impacts security. For example, we have more in common with neighbors than with strangers and, usually, more in common with family members than with neighbors. We emotionally attach because of shared security concerns that bind us together, feel closer to those with whom we are more closely attached, and treat morally, even altruistically, those with whom we feel very close.

As defined here, moral behavior is behavior that increases another's security and altruistic behavior is moral behavior that holds a significant risk to the security of the altruist. The amount of risk that a person is willing to take and the sacrifice that a person is willing to make on behalf of another is related to the closeness of the attachment bonding with the other. Generally, people are willing to assume the risk of an altruistic act to benefit only those who are closely attached.

Peter Singer in *The Expanding Circle: Ethics, Evolution, and Moral Progress* (1981/2011) expanded the circle of morality so as to resemble Sidgwick's hierarchy of the degrees of benevolence: "It is part of the common belief that we should look after 'our own' before we make efforts to help the starving overseas" (Singer, 1981/2011, p.50). This is because "our own" provide us the most security. The more centered in the circle of morality the attachment is, the more there is in common to share, the closer the attachment bonding, and the more morally or altruistically the attachment is treated. Attaching based on commonalities extends to everything living. For example, humans are intelligent animals, and we are more concerned about and treat dolphins and chimpanzees, who are more intelligent than most other animals, more morally than we treat most other animals. The more animals or other people are like us the more we treat them as we treat ourselves, which is to increase security.

Emotional attaching results in two significant consequences. The first consequence is that people share security concerns with their attachments. The amount of security obtained from attaching determines the closeness of the attachment bonding, and the closeness of the attachment bonding determines the amount of security that is shared. For example, the security concerns of a closely attached couple are almost totally shared. A person's emotional response to an attachment's security reflects the closeness of the attachment bonding. Parents are usually closely attached to their children, feel happy when their child wins an award, and grieve if the child dies. But they are not so strongly emotionally moved by the security concerns of people they don't know.

The degree of loyalty to an attachment depends upon the amount of security the attachment provides. Muslim fundamentalists may be more loyal to Islam than to their adopted country if they believe that Allah or their religion provides them more security than their adopted country provides. People in an *in-group* attach to each other on the basis of commonalities, and the degree of loyalty to each other depends on the amount of security they derive from each other. Similarly, alliances, which are commonalities that are formed in order to increase security, hold together based on the security they can provide each other.

The second consequence of attaching is that people treat their attachments morally. Cialdini et al. (1997) reinterpreted the empathy- altruism hypothesis of Batson & Shaw (1991) in terms of *oneness*. A feeling of oneness is a consequence of attaching. Moral and altruistic behaviors increase the security of attachments because attachments are emotionally felt to be part of self and, thus, are treated as self. Moral behavior requires increasing one's own security, because all behavior is undertaken to increase one's own security, and also requires, by definition of moral behavior, increasing another's security. Attaching has the unique ability to increase the security of both attached parties because those attached are considered as one and share security concerns. As a result, attaching is required for all benevolent behaviors. The benevolent behavior may be terminated or diminished if the attachment bond is severed or decreased resulting from degeneration of the security relationship between those attached.

The closer that people are attachment bonded the more they feel that the attachment is part of themselves, so that when they help an attachment it is like helping themselves. People defend close attachments as though they are defending themselves, even if it requires sacrificing their own security. Millions have died for their closely held belief in their god; Muslim suicide bombers kill themselves in defense of Allah; soldiers sacrifice themselves in defense of country or of a fellow soldier; people die

for ideas, such as for freedom; and parents make sacrifices for their children. All are instances of altruistic behavior taken on behalf of close attachments. Moral and altruistic behaviors derive from attaching, so that, contrary to theistic arguments, divine decrees are not necessary for moral behavior.

But for two exceptions, moral behavior is directed toward those already emotionally attached. One exception involves helping strangers, which occurs because helping another increases self-esteem. Self-esteem, as mentioned earlier, measures a person's feelings of security as reflected by his or her level of competent behavior. The other exception involves reciprocity. Attaching accounts for why we feel obliged to reciprocate. The basis of reciprocity is: if I treat you morally by increasing your security you will emotionally attach me to you and once attached you will treat me morally by increasing my security. The reciprocal nature of attaching and the moral treatment that is consequent to attaching is expressed by, "If you scratch my back I will scratch yours." and by the Golden Rule which prescribes, "Do unto others as you would have them do unto you," Anticipated reciprocal behavior sets the tone for considerate actions. It drives social graces, such as politeness, hospitality, kindness, and gifting (where a favor is returned with a favor). Anticipated reciprocal attaching is the tactic we use to attract and attach a potential friend or a desired mate in order to get him or her to like or to love us (liking and loving describe levels of emotional attaching). It is a principle of salesmanship and it is the scheme employed by gold diggers and by those looking for political or other favors.

This concept of reciprocity should not be confused with the theory of reciprocal altruism, a theory that proposes that the trait for altruism can be naturally selected if altruistic acts are paid back at a later date (Trivers, 1971). The current understanding of evolutionary psychologists is that altruistic behavior evolved by natural selection. This is reflected in the theory of reciprocal altruism and also by E.O. Wilson, the founder of sociobiology, the forerunner of evolutionary psychology, when he stated (1975): "The central theoretical problem of sociobiology is, how can altruism, which by definition

reduces personal fitness, possibly evolve by natural selection?” The popular kin selection (inclusive fitness) and group selection (multilevel selection) theories, in addition to the theory of reciprocal altruism, have been developed in attempts to explain how altruism could have evolved by natural selection.

There is little doubt that instinctive behaviors have been naturally selected. Examples of instinctive behavior are: complex tunnel burrowing by mice (Weber et al., 2013); nesting behavior for sea turtles (Sims, 2003); and migrating behavior for birds (Berthold, 2001). Instinctive behavior is common in animals, but rare or questionable in humans. Almost all human behavior is volitional. The most common type of human behavior is learned behavior, such as playing cards or tennis, driving a car, or using a computer, and these behaviors are volitional. Learned behaviors cannot have evolved by natural selection both because they are volitional and derive from belief and because there has been insufficient time for them to have been naturally selected. Nor can moral or altruistic behaviors have evolved by natural selection because they are volitional and derive from belief. What did evolve by natural selection are the cognitive and the emotional mental systems, including the emotional feeling of security, which initiates the belief upon which volitional behavior is based.

Selection theories have played a conspicuous role in evolutionary biology but have been contested. For example, E.O. Wilson, who earlier had supported kin selection theory championed by W.D. Hamilton (1964), revoked his support of kin selection theory and now favors group selection theory (Wilson, 2012). However, in spite of the interest they have aroused, none of the theories are credible. As explained earlier, altruistic behavior is volitional with origins in belief; not with origins in genetically derived traits. Therefore, altruistic behavior did not evolve from natural selection. It emanates from our mental belief systems. Nor, for the same reason, could any other volitional behavior have evolved by natural selection. The question of the genesis of altruism can be answered by the

understanding that altruistic behavior results from close attachment bonding, such as occurs in commonalities of kinships or groups.

Sympathy can be considered emotional identification based on emotional feelings, such as “I feel your pain,” and empathy as intellectual identification based on understanding another's predicament and agreeing with it (Jaffe, 2010, pp.28,29). Based on these definitions, animals and young children can sympathize by using their emotional belief system, but can't empathize, because it takes significant intellect derived from the cognitive belief system to have a theory of mind, which makes it possible to intellectually identify with others. When we intellectually identify with others and agree with them about their problem, we establish a commonality of interest. Commonalities are the most frequent reason for people attaching. When we empathize with another, we attach on the basis of agreeing on an issue, and when attached we treat the attachment morally. That humans can both empathize and sympathize, whereas other animals mainly sympathize, underlies the consideration that, because of their cognitive belief system, humans are more humane than animals.

Bridging the gulf between philosophy and science

Philosophers have doubted whether the gulf between philosophy and science will ever be bridged; whether science could ever explain philosophical questions. Peter Singer in *The Expanding Circle* (1981/2011) pointed out that in E.O. Wilson's 1975 book *Sociobiology: The New Synthesis* Wilson claimed that the theory of natural selection should be pursued to explain ethics “at all depths,” and that the time may have come to take ethics away from the philosophers and hand it over to scientists. Singer, however, thought that most philosophers disagreed with the prospect of science explaining philosophy: “Most of my colleagues in university departments of philosophy regard Wilson's invasion of their territory as too absurd to merit a considered response”(p. xvii). Singer

underscored his feelings regarding an unbridgeable gulf between science and philosophy with the following statements in *The Expanding Circle*: “Traditionally facts have been regarded as the domain of science, values as the domain of ethics”(p. 63). “... probably the best-known tenet of modern moral philosophy: the doctrine that there is an unbridgeable gulf between facts and values, between descriptions of what is and prescriptions of what ought to be”(p.73). “No science is ever going to discover ethical premises inherent in our biological nature, because ethical premises are not the kind of thing discovered by scientific investigation. We do not find our ethical premises in our biological nature, or under cabbages either. We choose them”(p. 77). “Neither evolutionary theory, nor biology, nor science as a whole can provide the ultimate premises of ethics”(p. 84).

Singer's unbridgeable gulf between “descriptions of what is” and “prescriptions of what ought to be” can be understood by defining the relationship between descriptive and prescriptive morality. We have been programmed by natural selection and by the emotional feeling of security for behaviors that seek security. We treat attachments, whom we emotionally consider as part of ourselves, as we treat ourselves, by acting to increase their security. This is descriptive of moral behavior. It describes “what is.” But this moral behavior benefits only attachments. It is contrary to fairness, which is treating everyone equally. Out of fairness we *ought* to treat everyone as we treat ourselves. Normative ethics is prescriptive. It prescribes that we *ought* to treat everyone, not only attachments, morally. Prescriptive morality is the ideal; descriptive morality is the real. The difference between descriptive and prescriptive morality is who is treated morally.

Ethical premises, such as morality and altruism, derive from moral and altruistic behaviors. We feel that we *ought* to behave morally because it is the *fair* thing to do. But it is also the *right* thing to do as determined by our values. Just as ethical premises, such as morality and altruism, derive from moral and altruistic behaviors, values derive from valuing behavior. All rational behaviors because of natural

selection and the emotional feeling of security have security as their goal, so that valuing behavior, which decides what is right, desirable, good, or important, decides on the basis of security. We value behaviors in relation to the security they provide. The more security a behavior provides, the more right, desirable, good, or important the behavior is felt to be. Thus, normative ethics is founded on principles derived from science – from natural selection and from the emotional feeling of security.

Just as Wilson suggested: the gulf between science and philosophy can be bridged. It is bridged by considering ethical premises as behaviors that are security-seeking. That eminent philosophers, such as Peter Singer, have not bridged the gulf between philosophy and science is presumably a consequence of the fact that philosophers and psychologists usually consider natural selection in terms of survival. But a paradigm based on security-seeking behavior can bridge the gulf between philosophy and science.

The placebo effect and divine deception

Placebos can be considered as an accident of evolution. They occur because humans evolved two belief systems: an emotional system whereby the emotional feeling of security determines how secure we feel, and a cognitive system whereby reasoning with evidence determines how secure we are. Usually, feeling secure corresponds to being secure, so that when we are secure we feel secure. With placebos, however, we feel more secure than we actually are. This false sense of security is consequent to an authority attributing imaginary powers to either an otherwise inactive entity or to an imaginary entity.

The fact that the powers attributed to the placebo by an authority are imaginary makes the placebo an agent capable of increasing a subject's feelings of security but not of increasing security itself. For example, if a soldier who was yearning for hostilities to end were told by an officer in

authority that peace had been declared, the soldier would feel happy, a feeling of increased security. If the soldier didn't know that the information was false, he would feel safer but he would not be more safe: a placebo effect. Placebo deception occurs when we believe that something that increases our security is true, when it isn't. Placebos increase feelings of security without increasing security itself. Imaginary (false) information that doesn't increase feelings of security does not result in a placebo effect.

Considering that security is the goal of behavior, it follows that whoever controls a person's security controls that person's behavior. Authorities control security so they also control behavior (Jaffe, 2010, pp. 62,63) – not only physical behavior, but also mental behavior. Controlling a subject's mental behavior gives an authority the power of suggestion. When a physician, a medical authority, assures a sick patient that an inert pill has the power to heal, the patient will begin to feel better (more secure) even before swallowing the pill. The patient who has faith in the physician and in the ability of the placebo to heal her, will feel more secure with the placebo, but this is a false sense of security because the placebo's powers are imaginary. She will feel better, but her prognosis will not improve because the healing powers are not real. If the healing powers were real, the pill would not be inert and it would not be a placebo.

Although medical placebos are the prototype of placebos, they are not the only type of placebo. Anything that induces a false sense of security will produce a placebo effect. All faith-based entities, such as gods, heaven, and prayer, have been ascribed imaginary powers by religious authorities and are placebos because they induce a false sense of security in the faithful. The majority of placebos, the type of placebo that billions of people have embraced, are religious placebos. “Placebo effects occur when religious or medical authorities, in order to further their own agendas, create gods and/or other placebos by ascribing to them imaginary powers” (Jaffe, 2012).

The faithful have faith in their authorities and believe that the powers attributed to placebos by the authorities are real, which leads them to the belief that placebos can and will increase their security. Scientific thinking, however, requires evidence for belief, and without evidence the scientific thinker will not accept that placebos increase security. This stems from the consideration that anything can be imagined, but it takes evidence to determine that which is real. Faith is belief without evidence, so that medical or religious entities that are faith-based lack reality, but can be imagined. For example, expectations, hopes and wishes are faith-based and are imaginary. They become real only after they are actualized, at which time evidence presents to make them real. Patients feel better and more secure when prescribed a medical placebo for a health problem when they have faith in the medical authority, the physician who prescribed the placebo, and in the efficacy of the prescription. Similarly, the faithful feel more secure when prescribed a religious placebo by a religious authority in whom they have faith. That is, religious belief is faith-based and derives from authority. Albert Einstein warned, “A foolish faith in authority is the worst enemy of truth” (Isaacson, 2007).

Scientists cannot argue meaningfully with theists about evolution or creationism because their belief systems differ over the importance of reason and evidence when dealing with concerns involving faith. The need for evidence, which determines reality, is woven into the very fabric of scientific thinking. Faith, belief without reason or evidence, conflicts with the cognitive mental system that uses reasoning with evidence to determine belief. Theists, when dealing with faith-based entities, utilize a belief system based on emotional feelings, which does not require evidence for belief. The emotional belief system, which bases its belief on the feeling of security, cannot recognize that faith-based entities such as gods and heaven are imaginary or, as in the case of prayer, have been ascribed powers that are imaginary. Nor can the faithful detect that faith-based entities are placebos. To recognize the imaginary or placebo characteristics of faith-based entities requires evidence, which is ignored by the faithful

because of the emotional belief system they employ when considering faith-based matters.

Although theists employ an emotional belief system when considering religious concerns, their daily business is understood and transacted by the use of their cognitive belief system. Theists deal with faith-based entities by using an emotional belief system because faith-based entities, such as God, are considered by the faithful to be the main source of their security, and emotions are automatic reactions to security concerns. In addition, a cognitive belief system is not used by the faithful in dealing with faith-based entities because if a cognitive system were employed it would become clear that due to lack of evidence faith-based entities are imaginary and are placebos.

On the other hand, medicine has eliminated its faith-based, imaginary, placebo aspects by insisting on randomized, double-blinded, placebo-controlled studies in order to demonstrate evidence of efficacy of drugs and procedures. Evidence-based medicine is now the gold standard for medical care (Timmermans and Berg, 2003). This has saved many lives and has improved medical care significantly. But religion is faith-based. Although the faithful seek security, they are able to obtain only feelings of security. Thus, they are deceived by the placebo effect, a deception they cannot recognize because the emotional belief system that the faithful employ in faith-related matters does not use evidence for determining belief.

Religious belief has earned the reputation of fomenting wars, conflicts, and persecutions. The atrocities that have been and are being committed by the Taliban, al Qaeda, and ISIS in the name of Allah are revolting. But immoral behavior in the past has not been limited to Muslims. There has been Israeli violence against Palestinian villages such as portrayed in S. Yizhar's *Khirbet Khizeh: A Novel*; and Christian Crusades, Inquisitions, and the persecutions of Jews for almost two millennia have been committed in spite of the fact that a major tenet of Christian religion is to “love thy neighbor.”

Preaching love prescribes how people ought to behave morally. But, as discussed in the

previous section, how people ought to behave differs from how people actually do behave: their actual behavior is to love and to treat attachments morally. Preaching's ability to bring love and peace is usually more limited than attaching's ability because it is more likely that people will do what their nature leads them to do than what they are asked or told to do. If neighbors are of the same sect and the same religion, with other things being equal, because of commonalities leading to attaching, the neighbors will treat each other morally. If instead of religious commonality, there is competition for religious supremacy, conflict is likely to ensue. Competition for religious supremacy is in my view the primary underlying reason for the chaos in the Middle East today and for religious persecutions and wars in the past. That is because religions are authoritarian, and the nature of authoritarian leaders is to seek supremacy including supremacy for their religious ideology. On the other hand, democracies rarely war against each other (Russett and Oneal, 2000). This presumably is at least in part due to the consideration that democracies value freedoms, which results in tolerating differing ideologies – providing the foreign ideology does not threaten the democracy. These considerations illustrate the superiority for security of the cognitive belief system, from which freedom and democracy emanate, over the emotional belief system, from which religion and authority derive.

As successive generations progressively increase their use of reasoning and evidence, the inability to recognize that God is a placebo will eventually correct itself. We may even now be witnessing a trend that is beginning to question the existence of God, which not so long ago was unheard of. A Pew Research Center Poll taken in 2012 showed that only 9% of those over 65 were unaffiliated with a religion, whereas, 32% of those 18-29 years of age were unaffiliated. In addition, a 2014 poll by the Pew Research Center showed that 72% of Americans said that religion was losing its influence on American life, the highest number since the poll was started in 2002. These are studies of Americans. Studies of Europeans show that they are abandoning religion faster than Americans.

Agnostics often assert that it is not knowable whether or not there is a God. It is knowable, however, that God is a placebo. When there is objective evidence that a medical entity, such as a pill or a procedure, does not increase security, but that it does increase the feeling of security, then the medical entity is recognizable as a placebo. The same criteria apply to faith-based entities such as God. The objective evidence that God does not increase security but does increase the feeling of security makes God a placebo. Thus it is knowable that God is a placebo with imaginary powers. This is *the* decisive argument that disproves the existence of God.

Attending religious services and believing in God are not the same thing. A belief in God is only one of the several reasons why people attend religious services, whereas, the desire for security is the most compelling motivation for a belief in God. A monotheistic God, more than any other entity, provides theists a feeling of security. Because the desire for security is extreme, the passion for a God who is thought to provide security is intense. It is so powerful that the faithful are willing to kill and to die for their God, with whom they are totally attached because they believe that God provides them total security. Crusaders killed for the glory of God; jihadists on behalf of Allah. Many millions have been killed and persecuted because religious fundamentalists have been tricked by a placebo effect into the false belief that their (nonexistent) God provides them security. This monumental tragedy and absurdity is a result of the certainty with which fundamentalists hold their faith. Certainty results from an emotional belief system, which precludes questioning to uncover evidence that would shake certainty.

The more certain that theists are that God provides total security the more fundamentalist they are. Fundamentalists may be willing to take extreme measures to protect their source of security and so they are easily radicalized as extremists. But theists, who are able to question and to inject some reason into their emotional beliefs, are less certain that God provides total security, and are those who are

liberal-thinking secularists. The harm principle articulated by philosopher John Stuart Mill states that people can believe and act as they desire as long as it does no harm to others. The practice of religion has a number of desirable features and should not be restricted if no harm is done. But when religious fundamentalists hold their faith-based beliefs with such certainty that they are willing to kill and die for those beliefs, the potential for violence and for harm is great.

It currently is not generally understood or accepted that faith-based entities have imaginary powers and are placebos; that all placebos are imaginary and/or have imaginary powers; that religious placebos are analogous to medical placebos; or that the medical community has eliminated placebo deception by the use of evidence. If fundamentalist extremists can ever be led to appreciate any of this, it might challenge the certainty with which they hold their fundamentalist faith enough to temper their extremism. For as philosopher Will Durant stated (Harris, 2004): “Intolerance is the natural concomitant of strong faith; tolerance grows only when faith loses certainty.” If humanity wishes to rid itself of religious persecutions and religion-induced terrorism it must moderate or eliminate the certainty with which fundamentalists hold their flawed religious beliefs. This can be accomplished if fundamentalists learn to employ their cognitive belief system rather than their emotional belief system when considering faith-based entities, just as the medical community had learned to do when it eliminated its placebos.

The faulty foundation of religion will eventually crumble when theists come to realize that they have been deceived by a placebo effect. Divine deception, stemming from the fact that God is a placebo, is the greatest deceit ever. But it is not an intentional hoax. It is based on the consideration that humans evolved two belief systems: an emotional system based on feelings of security and a cognitive system based on security itself. Truth will out when humanity learns to rely on its cognitive belief system rather than on its emotional belief system. That God is a placebo is a new understanding, and

new understandings are often poorly accepted. It took the Church 350 years to accept that Galileo was right in that the earth does move around the sun. How long will it take humanity to learn to utilize its cognitive belief system in order to understand and accept that God is a placebo that exists only in the imagination?

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Many believe that the goal in life is to be happy; others to seek pleasure. But new understandings regarding the emotional feeling of security make it likely that the goal in life is the same as the goal of behavior: to increase security so as to increase survivability; and that the purpose of happiness and of pleasure is to motivate behavior to seek security. I believe that increasing survivability is nature's answer to the meaning of life, which is to survive so as to safeguard the tenuous thread of existence, without which our lineage would be terminated. It is estimated that 99.9% of species that have ever existed have become extinct (Raup, 1991), and that is in spite of security safeguards that have resulted from evolution. We have been thoroughly programmed by natural selection for security that enhances survival, thereby increasing the probability that life is perpetuated. Our role is simply to reproduce, to seek security, and to ponder the evolutionary theory of everything.

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