

WHO ARE WE? WHERE DID WE COME FROM? HOW RELIGIOUS IDENTITY DIVIDES AND DAMNS US ALL

J. Anderson Thomson

Charles Darwin's theory of natural selection, now established, is the only workable explanation we have for the remarkable fact of our own existence, the vast diversity of plant and animal life, the compelling illusion of design in nature, and the architecture of the human mind. We are risen apes, not fallen angels. Our different races and ethnicities hide an essential truth: we are all Africans, all siblings, all descendants of a small group of hunter-gatherers who arose in Africa less than 200,000 years ago and conquered the world. There is one universal human nature stemming from our long history as Pleistocene hunter-gatherers. We now know why religion appeared, why particular religious ideas emerged, why they are widespread, why they are recurrent features of human minds and human societies, why they are attractive to human minds, and how and why they are related to survival and deadly violence. What makes us human can also make us religious. Religion is a by-product of cognitive mechanisms that evolved, through natural selection, for other adaptive purposes that were crucial for our survival and reproductive success. Religion's power derives from its ability to utilize these mental mechanisms designed for other tasks: our attachment to parental figures, our wish for help in distress, submission to authority, our sensitivity to hierarchies, our love of kin, and our inclination to see human-like intention as the explanation for any unknown. All individuals are vulnerable to religious beliefs and assuming a religious identity. Religious identity is an accident of geographical birth, is certainly one of the most prevalent identities, and the most at odds with the reality of who we are. It remains one of the most destructive identities we can assume. As long as we tolerate the divisive pretensions of religious beliefs and identities, especially those of the three great Abrahamic faiths, we will all remain in the line of fire.

KEY WORDS: religion; religious identity; evolutionary psychology; human evolution.

DOI:10.1057/ajp.2008.46

Biology is a land of unlimited possibilities. We may expect it to give us the most surprising information, and we cannot guess what answers it will return in a few dozen years to the questions which we have put to it. They may be of

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a kind which will blow away the whole of our artificial structure of hypotheses. (Freud: *Beyond The Pleasure Principle*, p. 60)

The individual himself regards sexuality as one of his own ends; whereas from another point of view he is an appendage to his germ-plasm, at whose disposal he puts his energies in return for a bonus of pleasure. He is the mortal vehicle of a (possibly) immortal substance—like the inheritor of an entailed property, who is only the temporary holder of an estate that survives him. (Freud: *On Narcissism*, p. 78)

The word god is for me nothing more than the expression and product of human weaknesses, the Bible a collection of honourable, but still primitive legends which are nevertheless pretty childish. No interpretation no matter how subtle can (for me) change this." (Einstein, 1954)

WHO ARE WE?

Exploring identity means exploring its source. If you ask an individual "who are you?" the answers will vary. "I'm a psychiatrist," "I'm a writer," "I'm a poet." "I'm a psychoanalyst." "I'm a wife and mother," "I'm a triathlete." "I'm a failure." "I'm an American." "I'm a Christian." "I'm a Jew." "I am a Muslim."

These are labels, describing only what one does or perhaps the choices one has made or labels imposed on one by family, culture, or country. Do they capture the essence of an individual, who he or she actually is? And so the answers we get from patients, friends, even ourselves, would suggest that we believe we are, in fact, the result of choices we have made—whoever "we" are. But is this true? Are "we" making these choices, as we seem to assume?

Few would deny that certain talents, like an affinity for exploring the human mind, or writing or other artistic talent can inhabit our DNA and be passed on to the next generation. But even such things are our beliefs, that is, a strong "faith" or identification with a religion, although seemingly more "voluntary," more the product of "choice" than nature, probably have more to do with our essential, mammalian humanness, our DNA, than is immediately apparent.

This special issue of the journal delves into identity. I posit that we cannot explore identity, and specifically religious identity, without exploring its formation in our species as a whole, over the entire course of our vast evolutionary history. We cannot explore who we are individually without exploring who we as a species were—and, in most respects, still are.

We are our minds, and the mind is what the brain does (Pinker, 1997). Like our other organs and all other living matter, the brain has been shaped by Darwinian natural selection. Biologically, the brain has, over time, been designed to aid the maximum reproduction of the genes that built it. What, then, is the brain for? Sex. It was designed to make decisions about how to enhance reproductive success, no more and no less (Gazzaniga, 1998).

Brains are complex conglomerations of neural networks, shaped over millions of years by natural selection to tell us how to survive—to tell us how to solve the adaptive problems faced by our mammalian, primate, australopithecine, and ancient *Homo* ancestors, the problems that stood in the way of replicating the genome.

Adaptive problems included finding food, friends, mates, and shelter and surviving climate, predators, and enemies. Sexuality, because it is so crucial to reproductive success, received particular attention by the sculpting of natural selection (Gazzaniga, 1998; Miller, 2000).

SO WHO WERE WE?

“I am an African ape.” That is the bedrock answer every man, woman, and child on this planet could still give, even today, if asked the question “who are you?” We may acknowledge we are ape-like, or even acknowledge our connection to the apes, but few really accept as part of their identity the fact that we are, in fact, still apes. But, in point of fact, there exists no natural category that includes chimpanzees, bonobos, and gorillas, but excludes humans. Few realize that all the African apes that have ever lived, including us, are linked by an unbroken chain of parent–child bonds only a half a million generations long (Dawkins, 2003).

We are risen apes, not fallen angels. We are, more specifically, a risen African ape, a hominid who emerged in Pleistocene savannahs less than 200,000 years ago. Our different races, ethnicities, and religions mask an essential truth: underneath our skin we are all Africans, the sons and daughters of small bands of hunter-gatherers who arose on that continent and proceeded to conquer the world (Stringer and McKie, 1996) by adapting and surviving. Those facts elude acceptance by most of humanity and the religions men have created.

Our most immediate ancestors, the primates, arose 65 million years ago when dinosaurs disappeared. The social apes appeared some 35 million years ago. Changes in the climate, which led to greater seasonal patterns, cooling and drying, particularly affected the area of Africa known as the Great Rift Valley that runs from Ethiopia to South Africa. We should think of it as the birth canal of the human species. With these climate shifts from the movement of geological plates, which closed the Isthmus of Panama,

drove the Indian subcontinent into Asia and created the Himalayas, the environment on the eastern side of the Rift Valley changed from rainforests to woodlands to savannas. Those apes that survived were those that began to move upright and could manage to forage over a greater distance. Originally, what made us “human” was our bipedalism, or upright walking.

The common ancestor of chimps and humans was probably somewhat chimp-like because little evolution was required to reach the modern day chimp, which continues to live in the rainforests west of the Rift Valley. The *Australopithecus* species, the best-known example of which is Lucy, shows up about 4 million years ago. Lest we think of *Australopithecus* as unsuccessful, we should note that they lived for millions of years. So far, *Homo sapiens* has been around less than 200,000 years.

The genus *Homo* shows up approximately 2 million years ago. Fossil evidence suggests family grouping and caretaking (Walker and Shipman, 1996). We began to change from a small-brained bipedal ape to something new. In fact, 2 million years ago there were at least four human-like species still alive in Africa. Even 100,000 years ago, there were probably three species, one each in Africa, Europe, and East Asia (Stringer and Andrews, 2005). Now we are alone, and human narcissism wants to believe we were predestined to succeed, shaped by a human-like god. Too many of our identities are based on the mistaken belief that we were somehow “chosen.” Chance changes in climates would have derailed our evolution and those cherished identities.

Several different species of early hominids, *Homo habilis* (“handy man”), *Homo erectus*, and *Homo heidelbergensis* preceded archaic *H. sapiens*. Some made it out of Africa, as far north as the Caucasus Mountains and east to China and Indonesia. We carry the legacy of Lucy and these early hominids in our bones, our brains, and our personalities and, of course, our “choices.”

Fully formed, anatomically modern *H. sapiens* possibly arose in the coastal areas of East Africa 150–200 thousand years ago. All humans alive today are descended from one woman, “mitochondrial Eve,” who lived approximately 150,000 years ago. All men descend from “Y chromosomal Adam,” who walked the African earth about 59,000 years ago (Wade, 2006). The ancestral population of modern humans, from whom we all descend, comprised less than 5000 individuals. About 50,000 years ago the three crucial events in the evolution of behaviorally modern humans occurred close together—the perfection of language, the formation of the ancestral population, and the exodus from Africa.

Even more astounding, the genetic evidence suggests there was only one successful migration out of Africa of as few as 150 modern people, who crossed the southern tip of the Red Sea at the Gate of Grief and reached India. Generation upon generation they continued to move along the coast

to Asia and Australia. Other groups moved northwest through Asia Minor and into Europe where they wiped out the Neanderthals (Wade, 2006). We are the last surviving hominid.

Even as fully formed modern *H. sapiens*, we have spent 90% plus of our time as small tribes of hunter-gatherers. Our minds and our capacities to create identities were shaped by that way of life. As recently as AD 1500, two-thirds of the world's people still lived as hunter-gatherers.

AND WHO ARE WE NOW?

We are all Darwinians now. Although many try, an educated individual can no longer have it both ways—cannot take new antibiotics to treat drug-resistant pathogens, thereby implicitly acknowledging the workings of the evolutionary process while, at the same time, refusing to see natural selection as the shaper of all life.

Christian fundamentalists, jihadists, creationists, and “intelligent design” theorists—Luddites aside, most persons claiming these identities will be found, upon examination, to use modern electronic devices. Yet they choose to ignore that the same science that dictates the flow of electrons in cell phones and computers reveals how the universe works. Modern electronics is part of the same modern science that confirmed natural selection and revealed our origins and evolutionary history from primates, monkeys, apes, and early hominids. It leaves no room for divine intervention, a 6000-year-old earth, or a 1-week-long labor to build the world (Folger, 2004). Darwin's theory, now established, is the only workable explanation we have for the remarkable fact of our own existence, the vast diversity of plant and animal life, the compelling illusion of design in nature, and the architecture of the human mind (Dawkins, 2004; Tooby and Cosmides, 2005).

All behavior is the result of underlying psychological mechanisms. All mechanisms are the product of causal processes that shaped them, and the environment in which they were formed. Natural selection is the only organic process we know that designs and maintains functional mechanisms. In essence, there is no such thing as a non-evolutionary psychology, psychoanalysis, or theory of behavior (Hagen, 2002). We know this, at some level; and yet, despite our deep awareness of the evolutionary process that lies at the root of all human behavior and all human invention, most of humanity and most modern psychoanalytic thinkers continue to deny the obvious. They deny what Sigmund Freud himself saw, however darkly, at the dawn of the psychoanalytic revolution: the role that biology continues to play in our destiny. Sigmund Freud saw the truth; he anticipated the way in which developments in biology would indeed alter our analytic conceptions. A truth we must honor and acknowledge now.

One of the relics of early humans is modern man. For 90% plus of our existence as a species, fully formed *H. sapiens*, we lived in an environment far different from the one we occupy today.

That environment, known as the EEA, or environment of evolutionary adaptation, is the one for which we are still designed, since not enough evolutionary time has passed for us to have moved beyond it (Bowlby, 1982). Other than the evidence of ourselves, we have no direct records of the EEA. Its shape can only be discerned by inference, from its echoes in our psychology, and from the few preliterate peoples who yet survive. In a sense our modern skulls contain Stone Age brains (Allman, 1994). We are adapted to the task demands of a hunter-gatherer life that to us seems long since gone, but really resides in the evolutionarily immediate past, and has dominated our species for the bulk of our history. We may be changing rapidly in the sense of cultural time, but to our own, still somewhat primitive brains, we are nearly standing still.

If we are to glean a clear understanding of human nature and identity, this EEA is one of the lenses through which we must view ourselves, our identity, and our psyches.

WHAT DESIGNED US?

Natural selection

Charles Darwin's *The Origin of Species by Means of Natural Selection*, published in 1859, remains the most comprehensive understanding of life and its diversity that we have. Darwin noticed that within species there was variation, some of that variation was heritable, and those traits that promoted survival and reproductive success were the traits that dominated.

Darwin's theory occasioned both controversy and misunderstanding. Darwin did not have the advantage of knowing about genes and the actual mode of inheritance. This ignorance led to considerable confusion and often rejection. The lack of knowledge regarding the genetic process led to notions of group selection, the idea that choices were somehow made "for the good of the species." Darwin understood the process, but not the cause; and his explanation of the process, through no fault of his own, led many to reject his theories outright, and to confuse and misunderstand his meaning.

Now, of course, we know more. Natural selection is not a blanket over a species. It works at the level of the individual. This can best be illustrated by an old joke. Two hunters are fleeing a tiger. One looks at the other and says, "We'll never be able to outrun this tiger." The other one turns

and responds, "I don't have to outrun this tiger. I just have to outrun you." Traits that promote the individual's survival and reproductive success over others of his species are those that proliferate in the subsequent generations.

In fact, to state that natural selection works at the level of the individual is not quite accurate. Instead, we now know, it operates at the level of the gene itself. This should not surprise us. The gene is the fundamental unit of life, and so it is there, at that fundamental level, that we are reshaped by natural selection, that life is reshaped by natural selection. Natural selection "chooses" those genes that successfully replicate themselves. Genes that build bodies and brains that successfully reproduce them are the ones that succeed in future generations. We are, in essence, biodegradable packages designed by our genes to get our genes to the next generation. Another way of saying it: the chicken is the egg's way of making another egg. The second Freud quote, which opens this paper, shows his remarkable intuition about what is now called the modern Darwinian synthesis.

The terms "survival of the fittest" and Darwinian fitness have created confusion. It sounds as though "fitness" means health or strength. Yet what "fitness" really refers to in this context is our ability to ensure that our genetic codes are passed on. This can help explain altruism. Why would someone sacrifice a kidney for a sibling? Fitness is the ultimate reproductive success of the individual's genes, and those genes reside in others than our direct descendants. We have brothers, sisters, nieces, nephews, cousins, etc. Genes that lead to behaviors that help bodies with copies of the same genes will prosper (Dawkins, 1976).

This is the essence of the modern Darwinian synthesis. Natural selection operates at the level of the gene, promoting those genes that build whatever structures are best at promoting the replication of the gene. We are not designed for happiness or self-actualization, but to get our genes to the next generation.

Sexual selection

Sexual selection is another form of natural selection, specifically dealing with those traits that have an immediate bearing on sex. An example that immediately leaps to mind is that of the peacock. The male peacock has an enormous brightly colored tail. Why would such a brightly colored tail have arisen since it is a considerable handicap? It makes the male a walking fast food advertisement to predators. But female peahens choose the males with the brightest tails. This leads to "runaway selection" for traits chosen by the female. Why would they want to mate with such males? It turns out

that the biggest, brightest tails indicate health, genetic quality, and especially low parasite load. The tail is a handicap display (Zahavi and Zahavi, 1997). In nature, worth requires honest signaling. The tail of the peacock says, "I am so healthy, of such good genetic quality, that I can survive in the face of this handicap."

Humans too are shaped by sexual selection. Women choose men with markers of high testosterone, a handicap that suppresses their immune systems. Men choose women with features like firm symmetrical breasts, constructed of tissue unnecessary for lactation, even though such breasts can be considered handicaps. But, they signal good genetic quality, and the ability to withstand the immunosuppressant effects of estrogen.

Sexual selection was probably involved in shaping our intelligent, but big and physiologically costly, brains. Over eons, women chose mates who were carrying traits of intelligence and wit, capacities that signaled good genes. In this sense, the human brain is the equivalent of the peacock's tail (Miller, 2000). The mechanisms that produce our identities constitute part of that cortical complex brain. Many cultural identities serve as courtship displays, so future research may show that our identities emerge from cognitive capacities directly shaped by sexual selection. How many individuals are forbidden to marry outside their faith? How many wives did Mormon founder Brigham Young have?

Principles

A newborn's mind is not a blank slate to be filled in by experience and culture. It is not like a car that develops brakes as it is driven. At the same time, a newborn's mind is not just a conglomeration of a few "drives," like sex and aggression.

Psychoanalysis made a mistake. Naming became explaining. No reservoirs of sexual or aggressive energy have been discovered in the brain (Buss, 2004). There is nothing in neuroscience that supports the concepts of a sexual drive, an aggressive drive, or a death instinct. Instead, we are born with an extraordinary array of mechanisms that are context-sensitive, domain-specific, numerous, and functional. The mind is a set of complex information-processing adaptations to solve the problems that faced our mammalian, primate, and hunter-gatherer ancestors. It can be compared to the Apollo spacecraft, a small bundle with a bewildering array of components that must continually and seamlessly solve a relentless stream of difficult problems (Pinker, 1997).

Think about vision. A three-dimensional world is crushed into two-dimensional retinal images and then reconstructed, without conscious awareness, by the brain, into an accurate visual, virtual reality. The

machinery to do that reconstruction must contain edge detectors, face recognition, color, movement, and many other devices that function unconsciously and, with any luck, seamlessly. Similar complex propensities, many unconscious, guide our negotiation of the interpersonal shoals of identity and human relationships.

All these mechanisms of the mind were shaped by natural selection to deal with the problems our ancestors confronted in their tribal foraging way of life. Those traits, which promoted survival and reproductive success, made it to subsequent generations. They were integrated into a complex whole and, just like the various organs of our body system, solve specific problems to promote the functioning of our physiology.

These mechanisms are context-sensitive. The context may be an immediate problem, a long-term question, or developmental challenge. The mechanisms of the mind are domain-specific. Facial recognition modules do not taste sugar. They are innumerable, and it is hard for us to see this since the vast majority function unconsciously and usually as a seamless whole. But each of them has a separate role and function. For example, we have mechanisms to identify those to whom we are sexually attracted. These are complex and include unconscious mechanisms to detect symmetrical features, hormone markers, and smells of the right compatibility of antibodies (Etcoff, 1999).

The causal processes designing the psychological mechanisms of the mind are in the genes, which lead to replication of themselves. There are many possible adaptations. One could copulate with food. One could flee potential mates. One could ignore predators. One could eat one's offspring. There is a vast ocean of maladaptive solutions, but then there are islands of successful solutions. Natural selection helps by designing features that get us to those islands of reproductive success amidst the ocean of nature's hostile forces.

All of us are the product of ancestors who lived long enough to have one successful heterosexual copulation that led to conception (Buss, 2003). All of us are the result of a long, unbroken chain of successful ancestors. We carry the design features that led to their reproductive success hundreds of thousands and millions of years ago. Those design features may not work well at times in the modern world, but they are our principal inheritance. As we will see, an unfortunate by-product of some of these mechanisms is our vulnerability to generate religious beliefs and identities.

The essence of this view is that there is one universal human nature stemming from our long history as Pleistocene hunter-gatherers. The purpose of life is to create more life. Reproduction of our genes is the sole goal. And, everything else is a means to that end.

IDENTITY

The mind still makes leaps that made sense in the EEA, seeking out supportive social groups to ensure individual survival. One of the social groups that has survived and thrived is religion. Other social groups exist, of course, but religious groups prove an especially fruitful source of insight into the way our identity is shaped.

The human need for something like religion has its roots in the EEA, in our origins. This need, like some of the other needs discussed above, can go awry, and in the process of examining how that occurs, we can learn much about how identity is shaped in the first place—and how our failure to understand and appreciate those processes can have deadly consequences.

Religious identity is certainly one of the most prevalent identities, the most at odds with the reality of who we are, and, perhaps paradoxically, one of the most destructive identities we can assume.

Whether those of religious persuasions wish to accept it or not, through a combination of evolutionary psychology, psychoanalysis, the new cognitive sciences, and anthropology, we now know why religion appeared, why particular religious ideas emerged, why they are widespread, why they are recurrent features of human minds and human societies, why they are attractive to human minds, and how and why they are related to survival and deadly violence (Atran, 2002; Boyer, 1994, 2001; Burkett, 1996; Dawkins, 2006; Dennett, 2005; Freud, 1927; Guthrie, 1993; Humphrey, 1996; Kriegman and Kriegman, 1998). Anthropologists estimate that there were as many as 100,000 different belief systems in human history involved in fomenting ethnic and tribal war.

All religious beliefs and identities, not just those of the predominant three monotheistic religions of the modern world, have a common denominator: each of them credit nature with some human capacity for symbolic action. Each postulates some entity with some human form as a central being. There is perhaps one violation of our intuitive assumptions, but then many that confirm our intuitive assumptions to structure the belief and ultimately bring it back to a human form (Boyer, 1994, 2001). For example, God resides “everywhere,” but has all the human sensory features. He is a man who sees your actions, hears your prayers, thinks, plans, and speaks.

All individuals are vulnerable to religious beliefs and assuming a religious identity. What makes us human can also make us religious. Religion is a by-product of cognitive mechanisms that evolved for other adaptive purposes that were crucial for our survival and reproductive success. There are no uniquely religious components to the mind (Boyer, 2001).

Let us define by-product. Reading and writing are cultural by-products, not biological adaptations. But they are by-products of the biological adaptations of vision, symbolic language, fine motor movement, and speech. To take another example, all cultures have music. Again, it is not a biological adaptation, but it is a by-product based on our biological adaptation of speech. Music is hard vowels and consonants built on the body's rhythms, such as the beating heart.

Thanks to the work that has gone on, we now know why human minds produce religious ideas and are prone to believe them (Atran, 2002; Boyer, 2001). At the individual level, religion and a religious identity are the cultural by-products of many different cognitive mechanisms that evolved to solve other problems and to promote survival and reproductive success in ancestral environments. To reiterate: the mind is what the brain does, and it comprises numerous specific mechanisms evolved by Darwinian natural selection to promote the survival and reproduction of the genes that built the mind/brain.

A partial list of these cognitive devices begins with the mechanism of decoupled cognition. This ability arises in childhood and is seen vividly in pretend play. A child might say a bottle cap is a flying saucer. The child knows that it is a cap to a bottle but can "decouple" that cognition and think of it as a flying saucer, with all the attributes imagined and related to as such.

Theater and filmgoers use decoupled cognition all the time: in those contexts, it is called "suspension of disbelief." We know that what is happening on the stage or screen is not real. Yet, when we are watching it, we choose to believe that it is, that the people on the stage really live in Shakespearean England. We suspend our disbelief in order to escape from our daily lives, to transport ourselves to another time and place.

Another sophisticated example of those cognitive abilities can be seen when you think about a conversation from last week. You can decouple cognition from the present and call up that conversation, without ever doubting that you are in the here and now. We can talk in our heads to unseen others. That capacity is obviously adaptive and is utterly crucial to memory. You can also think about a future discussion with someone without losing the sense of being in the present. Future planning depends on such cognitive ability.

The cognitive mechanisms described above also come into play in religion when one suspends disbelief—in fact, one could argue that that is a definition of faith? In any event, our ability to interact in our minds with unseen others facilitates the practice of god and ancestor worship.

The attachment system also plays a central role in religion (Kirkpatrick, 1999). When humans are distressed, we instinctively turn towards a caretaker, usually a parent or parent substitute—an attachment figure. When there is no suitable attachment figure, we can create one or find one. A god or ancestor to whom a religious person appeals is usually a caretaker figure. In this way, we use our evolved attachment system to convey a sense of reality. And, in religions, the gods are often super parents who can provide reassurance beyond any mortal parent (Humphrey, 1996).

The concept of transference is particularly useful in understanding aspects of religion. One must first ask why we humans developed the capacity for transference. What adaptive function does it serve? Early relationship strategies form stable personality characteristics. Early relationships are, in effect, the grammar for conducting later relationships. Imagine what it would be like if we had to learn anew how to relate to people with each new relationship as our lives unfolded. Basing present relationships on past relationships—real, imagined, or wished for—is an efficient way of managing our relationships. We can anticipate and plan for outcomes of present relationships based on our experience of past ones, and, we hope, avoid making the same mistakes or errors.

In this sense, our capacity for transference can be seen as a crucial ability, an evolutionary response to a felt need (Nesse and Lloyd, 1992). In psychoanalysis and analytically based therapy, we see how disturbed early relationships distort present relationships. When that transference is repeated in psychoanalytic therapy, the details of the transference itself become the arena for treatment. In the religious arena, some of the transferences are made explicit: Think of God the father, Mary the mother, etc., and one can begin to sense how those of a religious persuasion transfer all of their personal history and their personal relationships with their fathers, mothers, and significant others into religious beliefs and identities.

Humans are also born with exquisite mechanisms to recognize and relate to kin. That is crucial to not just our survival, but to the survival of copies of our genes that reside in our kin. We evolved to favor those with our genes over those without. Religious identities evoke and exploit our respective kin emotions. Catholicism offers a superb example. The nuns are sisters or even Mother Superior, the priests are Fathers, the monks are Brothers, and the Pope is the Holy Father.

In an extreme appeal to this trait, a powerful tool used to recruit suicide terrorists is an appeal to fictive kin. The suicide terrorist will help save his “brother” or “sister” coreligionists who are being oppressed, humiliated, and murdered by those who the terrorist will target (Atran, 2003).

Reciprocal altruism is essential to cognitive ability. Humans have complex cognitive software for reciprocal exchange. What one gives and what one receives are kept in strict account. Sacrificial offerings are just one place where this capacity is used by religions: for example, sacrificing a pig to bring a good harvest. Often prayer is an explicit plea for reciprocity. If the supplicant promises something, he hopes to be rewarded in return.

Humans have what are called theory of mind modules. They are taken for granted, and people experience them as a seamless part of the conscious mind. But they are hardly simple. People know without being taught that other people have minds like ours, with wishes, beliefs, desires, and passions. We can read the mental states of others with eye cues. At about the age of 5, we have the capacity to know others might hold a different belief about something than we do. We can, perhaps, most truly appreciate this capacity when we see its clinical absence, which is autism (Baron-Cohen, 1995).

In an intensely social species like ours, a theory of mind is crucial to working with other people, anticipating or reading their thoughts, their wishes, and their desires. Religious beliefs capitalize on this capacity. Gods have thoughts, wishes, desires, and memories. Gods usually have a human mind with all the possibilities. For some, religion represents theory of mind modules run amok (Pinker, 1997).

Human minds contain natural kind modules that permit us to distinguish animate from inanimate objects. This ability to cognitively see the living "essence" of things is imperfect and easily slides into assuming that there is a living essence in inanimate objects (Kirkpatrick, 1999). Animism is the sharpest example of this, but it is present in the more complex religious ideas that impute living substance to nonliving things and spaces.

Our natural kind capacities include the assumption that death, a biological event, ends biological processes. Our theory of mind capacities and our agency detection devices, however, fail to register that death necessarily ends psychological processes. Biological death appears to be intuitive, whereas psychological death is counterintuitive. There is a pervasive denial of death despite the certain knowledge of it. The result is massive conflict. When someone dies, our natural kind capacities say the person will never function biologically again. Our theory of mind capacities, however, continue to generate predictions about what the dead person thinks, believes, hears, and feels, most often when that someone was close to us. Ancestor worship and a belief in souls flow quite naturally from this conflict between these agencies of our mind when confronted with a death. And, who is closer to us than ourselves? This results in the pervasive human need to deny mortality. Religion fulfills this need by promising an afterlife for ourselves and those we love.

Human brains are also equipped with person-file systems. We are born with them and we store information about people in them. Person-file systems stay there, even when the person is dead or long absent. It permits us to “talk,” in the privacy of our own minds, with those close to us who have died. That is just one step away from formal ancestor worship.

Humans have moral feeling systems as well. One frequent argument that favors religion is that morality requires it; that without religion, in effect, we would be immoral. Not so. We might not have formal explicit moral systems, but we are all born with moral inferential systems (Alexander, 1987; Hauser, 2006). This is clear in young children who know the basic difference in right and wrong.

Gods personify, control, and appease the unpredictable. Gods also induce a fear of higher authority and insure subordination. People turn over the fruits of their labor to invisible gods, not just to the current king or tax collector. Deference to authority had survival and reproductive value in the EEA, but it creates a great vulnerability. Stanley Milgram’s famous experiments, in which he induced subjects to give what would have been lethal electric shocks to others, showed us all how we are far more submissive to authority than any of us would care to believe. A religious identity can turn this capacity to murderous ends.

RELIGIOUS IDENTITY

The laws of the universe are the same in Philadelphia and Phom Phen, in Seoul and St. Louis, in Turkey, Tibet and Texas. Yet, if you are religious, the one true God, in all likelihood, is the God of your father, your mother, your grandfather, and your grandmother (Dawkins, 1994). Religious identity is an accident of geographical birth.

Described above are some of the individual cognitive capacities that make us all susceptible to religious beliefs and religious identities. But the same evolved traits can facilitate group activities, including terrorism. How?

Central to understanding religion and religious identities’ role in human groups is what is called our naïve sociology, or our groupishness. One of humanity’s weaknesses is our inability to appreciate groups as groups of individuals.

We are an intensely groupish species, which is not surprising as a survival mechanism and is adaptive throughout our evolutionary history. Groupishness is one of the most robust findings in social psychology. If one takes a room of people, divides it arbitrarily into two groups, and gives each group tasks, members of each group quickly identify with the group, feel loyalty

towards their group, idealize it, and devalue the capacities of the other group.

We easily use group tags and explain complicated groups in a singular, reductionist way: "The Kohutians fail to do proper psychoanalysis ..." Religion historically has served as one of the crucial tags that instantly distinguish a group, dividing the world into us and them (Boyer, 2001). As Freud said, "An intimate friend and a hated enemy have always been necessary requirements of my emotional life" Freud, 1900, p. 483.

We all need enemies and allies (Volkan, 1994). That explains what we all believe to be true, the groups to which we belong are superior, and others must struggle with inferior associations. Religious leaders prey upon this groupishness to insure loyalty to the faith and one's coreligionists.

Why are religions and religious identities successful? Supernatural beliefs become religions when they start to serve important social functions, such as effectively labeling a group. One way to think of the social function of religion is as a technique for success. When nine men were trapped in a coalmine in Pennsylvania in July 2002, many among the miners' families and community started to pray and later attributed their dramatic rescue to God's will. Conveniently forgotten was that in that same month, a mine explosion in China trapped 39 miners, but those miners died. Did God also will the death of the Chinese miners? Why did God choose to save the Pennsylvania 9, and not the Chinese 39?

What are some of the social uses of religion and religious identities? Religions are useful in acquiring resources. Think of the untaxed wealth of the current religions in our world. In addition, a religious identity assists men in attracting mates. Osama bin Laden, sometime before September 11, took a fourth legal wife, a 17-year-old Yemeni girl, and there might be many women eager to bear his children in the Islamic world. It is naïve to think such polygamous behavior represents only the extreme end of the spectrum, such as Jim Jones and David Koresh. One can visit Salt Lake City, Utah, and visit the house of the Mormon founder, Brigham Young. A large dormitory extension was necessary for his 19 wives. Polygamy, although outlawed, remains widespread in Utah among fundamentalist Mormons.

Religions and religious identities are also very effective at thwarting competition. The reality is that no religion has been successful by tolerating its competitors. Religions must redirect loyalties and other identities to succeed. Various ethnic, racial, and diverse linguistic identities can fall under the umbrella of one religious identity.

We tend to think of religions as promoting family values, but one of their main functions is to override family loyalties. The idea that religion actually subverts family loyalties may come as a surprise to those who think of a

religious identity as oriented towards family values. But the family is a danger to religion. Families constitute rival coalitions. They have the unfair advantage of being bound together by kin emotions. People favor and forgive family members before they do others. Men are also quicker to seek revenge when their kin are harmed (Pinker, 1997). The hostility toward family values is nicely illustrated by the following:

I came not to send peace, but a sword. For I am come to set a man at variance against his father, and the daughter against her mother, and the daughter-in-law against her mother-in-law. And a man's foes shall be they of his own household. He that loveth father or mother more than me is not worthy of me: and he that loveth son or daughter more than me is not worthy of me. The man speaking was Jesus. (The Bible, Matthew 10, pp. 34–37)

Accordingly, a religious identity often overrides family, kin, ethnic, and national identities. None of the family members of the September 11th hijackers knew of their plans, and the hijackers' fundamentalist beliefs separated most of them from their close kin (McDermott, 2005).

Religion's power derives from its ability to utilize mental mechanisms designed for other tasks: our attachment to parental figures, our wish for help in distress, submission to authority, our sensitivity to hierarchies, our love of kin, and our inclination to see human-like intention as the explanation for any unknown.

In short, religion is a product of human minds, a by-product of cognitive capacities originally designed for other purposes. Once generated, religious ideas can act like viruses, infecting other evolved capacities of the human mind to promote the ends of religious leaders.

One need not invoke concepts like regression or dehumanization to understand this violence (Thomson, 2003). Men's minds are born with the capacity for male-bonded coalitionary violence with lethal raiding against innocents (Wrangham, 1999). All men have this evolved capacity for killing innocents and religion hijacks it. Our evolved capacity for experiencing out-group members as prey (Wrangham, 1999; Gil-White, 2001) is parasitized by religion to aid the violence. Martin Luther referred to the Jews as worms. The Iraqi Al-Qeda leader al-Zarawaqi referred to Shiites as "monkeys" (Burns, 2005).

Promises of 72 virgins in paradise and a free pass to heaven for relatives help recruit suicide bombers. We search in vain for a terrorist profile, as if the answer lies in the individual and his psychodynamics. The terrorists of our time are all disarmingly normal. There are no lone, crazy suicide bombers. All the evidence points to psychiatry and psychoanalysis having made a fundamental attribution error. The cause lies in the culture, especially religious identities (Atran, 2003).

Religious moderates wish to avoid submitting to the full implications of their faith, a choice which leads them, in turn, to tolerate the worst irrationalities and violence of their fundamentalist coreligionists (Harris, 2004, 2006). Although it is tempting for Westerners to point the finger at Islam, it behooves us to remember that the cross has accompanied the sword everywhere, including into the Arab world of the Middle Ages. Parts of the Old Testament are blueprints for murder and genocide. Deuteronomy 20:16 instructs those entering the cities promised to them by God to “leave alive nothing that breatheth” (Hartung, 1988).

WHAT DIFFERENCE DOES IT MAKE?

Children

On September 1, 2004, children assembled in a schoolyard, accompanied by parents and brothers and sisters to begin the school year. Just as the first graders were to be introduced, armed gunmen burst in yelling, “Allahu Akhbar”—God is great. The deadliest terrorist attack since September 11 left over 300 dead in Beslan, North Ossetia, mostly children. Faith-based identity and suicide terrorism showed a new, more horrible face: direct assaults on children. Now, in Iraq, on an almost daily basis, suicide bombers kill children in the name of some god.

In Pakistan the number of fundamentalist Islamist madrassa schools has grown from 3000 to 40,000 since 1978. Education consists of rote memorization of the Koran. None of these students learn from respected elders that the calcium in their bones and the iron in their blood were formed in the belly of a Super Nova, let alone are taught anything about the origins of their own species. Home schooling remains popular in the United States, particularly among Christian parents who wish to keep their children out of the public school system. At Patrick Henry College outside Washington, DC, an institution designed to enable home-schooled children to secure careers in politics, the students are taught the earth was formed in a week. Within the public school systems in the United States, angry debate persists over the teaching of evolution in the curriculum. There remains no clear education of children about what science reveals about who we are and where we came from or why human minds generate religious beliefs and identities. It matters.

Should children be protected from other people’s dangerous ideas and identities (Humphrey, 2002)? We fail to notice that when we call a child a Muslim child or a Christian child or whichever religious identity, we grant a power to religion usually reserved for ethnicity or nationality. We hardly call children Republican or Democratic, after the political beliefs of their

parents. Why should we name them after the man-made cultural beliefs and identities of their parents and grandparents? Should we not give them a chance, do our best to spare them these corrupting identities? Should we not instead call them children of Catholic parents, children of Buddhist parents (Dawkins, 2003)? Children's minds are vulnerable. Natural selection has designed their brains to soak up the culture, the accumulated wisdom and survival behaviors, of their tribe. This helps them absorb good advice while they are young—look both ways before you cross the street, don't talk to strangers. But, it leaves children vulnerable to deadly ideas: infidels must be killed, abortion is the same as murder, and Jews drink the blood of Christian babies. Yes, even that evil and infamous blood libel continues to be believed and passed on to new generations (Harris, 2004).

Do children have a basic human right to be shielded from the poisonous effects of a religious identity (Humphrey, 2002)? France shows us the way with the recent ban against religious clothing in public schools. Their example and courage stand as a beacon of light for the world's future and the protection of the next generation. Will other political leaders demonstrate similar bravery and commitment?

Face the truth

Freud led by example. He explored human nature with unblinking courage, and described what he found regardless of the discomfort his discoveries caused to human vanity. The newer sciences of human nature seek to explain much of what Freud described. Psychoanalysis can profit from these new sciences of the mind. The more accurate an understanding we have of the basics of human nature, the more effective we can be in comprehending the ills of human nature. That inevitably leads to improvements in our clinical techniques and the therapeutic impact of our treatments. Such a revision is now underway (Badcock, 2000; Nesse, 1991; Nesse and Lloyd, 1992).

Similarly, these new discoveries can enhance the work of those analysts dedicated to applying psychoanalytic understanding to deadly group processes (Volkan, 1994; Akhtar, 2005). We have all too often made the "fundamental attribution error" (Atran, 2003), offering explanations at the level of the individual's psychology when the causes lie outside the individual. Analysts explain behavior in terms of individual psychodynamics, even when significant cultural and group identities are at work. There are only a few instances of suicide terrorism arising from lone actions of unstable bombers. The research to date shows they are emotionally and economically healthier than their peers (Atran, 2003).

At the level of all humanity, the body politic, will we ever face the truth? Can our narcissism accept that humans are incidental elements to the scientific universe? Or will we continue to cling to religious identities because, when we assume those identities, we are central to the cosmos (Atran, 2002)? Will we ever acknowledge that we are risen apes, not fallen angels? There is no heaven. This life is all we have. It is far too precious to throw away for those who would exploit our vulnerabilities and violent passions with identities based on supernatural fantasies and nonexistent eternal worlds. These identities leave no choice but divisiveness, bigotry, and even murder.

We can no longer afford the luxury of tolerating religion and the identities it imposes. Religion's diplomatic free-pass, the deference we pay it, must be revoked.

If we could realize that all humans are truly brothers and sisters, that we have one fundamental identity, rather than dividing ourselves into multitudinous groups based on religious, ethnic, racial, and social identities, just think how much progress we could make. We are all each other's keeper on this fragile planet. Our different races and ethnicities hide an essential truth: we are all Africans, all siblings, all descendants of a small group of hunter-gatherers who arose in Africa less than 200,000 years ago and conquered the world. Maybe that awareness would give us pause. But as long as we tolerate the divisive pretensions of religious beliefs and identities, especially those of the three great Abrahamic faiths, we will all remain in the line of fire.

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