Let me begin by saying that I'm an atheist. I do not believe in God in any of the traditional ways that people believe in God. I'm a scientist.

it's very, very unlikely that science will ever prove that God exists. At the same time, science, especially neuroscience will not be able to prove that God does not exist. If the experience of God, as I will argue here, is caused by a certain pattern of brain activation, the possibility will still remained there is a real God, one outside of ourselves, whose presence creates the same pattern.

The idea that God might be "the very coinage of our brains " is very engaging. Nevertheless, it's unlikely that any test could be devised that would prove decisively that the brain activation now known to be associated with the experience of God comes from within through organic means, or comes from without through the divine action of a being that has no physical existence, and whose will is sufficient to make changes in the world.

There's a lot more to God than whether or not he exists. In fact, from my perspective, that doesn't matter of all. I'm an atheist, but I pray. I enjoy my prayers. I find a depth and subtlety that no other experience creates for me.

Although I was raised Roman Catholic, I later became interested in Eastern philosophy, especially Buddhism. But I also had a long-standing interest in religion of the American Indians. When I met a medicine man who offered to teach me how he prayed, I said yes. What he told me was to begin my prayers with ritual words "On the back of Brother Eagle I send a voice". The next step was to offer thanks. It didn't matter what I was being grateful for, only that I began my prayers by looking for gratitude. The next step was to offer prayers for other people especially people who were in fear, poverty, illness, or anything else that prevented him from enjoying their lives. In the last step, I pray for myself and my own needs. I was taught to do this soon after getting out of bed in the morning.

I have no idea who I'm praying to. In the Native American spiritual traditions, that's OK. One of the many names of God you find among American Indians is "Wakan Tanka". Wakan can mean spirit or sacred. It can also mean "mysterious ". Tanka can mean great or highest. One of the ways of translating this is as "great mystery ".

I don't know who I'm praying to, and it doesn't matter. I'm praying to a mystery. With close to one trillion possible connections between neurons in my brain. God is mysterious whether he exists in it or not. But that's a
personal experience, and not a piece of scientific reasoning. Science is not a
religion. It doesn't require that its adherents practice it in their daily lives, or to
set an example for others to follow. Religion involves perfecting ones being,
while science strives only to perfect its explanations for things.

For a few minutes each day, I pretend I believe in God.

It works for me.

When I say it works for me, I don't mean that I think my prayers are true for
me, or that the being I pray to actually exists. That's not the point. If anything,
it allows me a few minutes in which I stop supporting negative thoughts and
feelings. It feels good. It also makes me feel that I have done something about
whatever I've prayed about.

I believe that science will recognize the evidence that weighs in favor of
religion, even if it can't conclude that the basis for those religions are true.
Believing in God is only one religious behavior. There are others.

One of them is prayer. It offers real benefits to many people, even though it's
quite difficult to put into words exactly what it does. There have even been a
few scientific studies done noting the medical benefits of prayer. In one of
them, a congregation prayed for a group of cancer patients, while a second
group did not receive prayers. The group received the prayers responded to
their treatments more readily than those who did not. While this finding is very
controversial, and needs to be replicated more carefully, it opens the door for
asking questions about the benefits of prayer in scientific terms.

Another one is group bonding. Religion is provided many contexts in which
people can gather together as a group, and share something higher than their
individual selves. In our early evolutionary history, we relied heavily on the
group we lived with. Living constantly with the same people, always being
exposed to their idiosyncrasies, and the thought of leaving the group almost
impossible to conceive, we probably did well by maintaining ways of relieving
interpersonal stress. Gathering together as a group may well have
accomplished this, as petty irritations, rivalries, and disagreements had to be
set aside in order to participate in the ceremony. It also put each person's
basic needs and responsibilities directly in front of their group. Rites of
passage allowed young people to step into the full set of adult responsibilities
quite seamlessly. I could go on, but I think I've made the point.

Traditionally, religion is provided a context for counseling. People in stress or
crisis could usually look to their shaman, priest, pastor, minister, vicar, local
monk, for some individualized advice. Religions usually have a fairly
wholesome moral code, so when an individual did seek out some advice or
psychological healing, they're usually given advice that encourages adaptive
behavior, or discourages maladaptive behavior.

Someone once asked Candace Pert, the discover of opiate receptors in
human brain, whether or not she believed in God. She replied "Of course I
believe in God. I'm a member of a species that believes in God." Even though believing in God may be very adaptive behavior, it's not enough to explain how our species has it as a trait.

The oldest evidence on this subject - that God has something to do with the brain - actually goes back quite far. There's an association between religious experience, including the experience of God, and epilepsy. Specifically, temporal lobe epilepsy. Temporal lobe epilepsy is a variety of epilepsy that is confined to the temporal lobes of the brain. The temporal lobes of the brain have lower thresholds and are more sensitive than other areas of the cortex. This means there is a degree, an intensity, above which seizural activity will spread outside the temporal lobes. less than that, and the seizure will stay in the temporal lobes of the brain. The temporal lobes are very intimately connected to the limbic system, and sometimes this variety of epilepsy is called limbic epilepsy.

Temporal lobe epileptics are credited with a wide range of religious and mystic experience. These include hearing angelic choirs, visions of heaven and hell, being filled with a feeling of otherworldly bliss, out of body experiences, having the sense that one knows everything, the sensation of being uplifted, (or lifted up), visions of angels, and even seeing God.

Wilder Penfield published a case in which an epileptic patient saw Jesus descending from heaven, and framed as though he were in a picture. Others are simply filled with a bliss so intense that they can only attribute it to God. Others sense his presence, while others hear his voice. Although visions of God are not common epileptic experiences, they do occur once in awhile. What is common, is a fascination, or even obsession with God in the personalities of those who have temporal lobe epilepsy.

One researcher questioned his temporal lobe epileptic patients about their religious feelings and many said they believe they were being controlled from outside by god or by creatures from outer space. One patient ritually recorded in a ledger everyday that he was free of seizures. "I thank God no seizures". To his astonishment, multiple religious conversions were common among these patients. A man who developed temporal lobe epilepsy in his 30s abruptly became interested in religion; volunteering daily for religious organizations and determining to become a minister. His sermons dealt with moral issues in highly circumstantial and meticulous detail. This hyper religiosity can appear in people deny religious faith. One patient with this trait was an atheist because he felt the clergy 'were not sufficiently devout'. Another stated "God would strike to meet their dead if I were to set foot in church. A third interrupted a church service by going to the pulpit to debate in theological point.

Vincent Van Gough, who is thought to have had temporal lobe epilepsy, once wrote "I often feel the need of - shall I say the word? - of religion. Then I go out at night to paint the stars."
I had temporal lobe epilepsy as a child. It appeared around the age of 7 and subsided around the age of 10. This is the time in childhood when it most commonly appears. Temporal lobe epilepsy almost always subsides with the onset of puberty, but the personality traits it brings out usually stay with a person for the rest of their lives.

I remember having out of body experiences about this time. In the one I remember most clearly, I was eating ice cream, and listening to a record. All of a sudden, I was no longer in my body. I was hovering below the ceiling looking down on myself and my brothers, who were also eating ice cream. There was an adult in the room, and being out of my body, I thought I was going to get in trouble. I thought I'd be caught and punished for it. I had some idea that kids weren't allowed to leave their bodies. I remember being completely terrified. Utterly and absolutely filled with fear. This fear, called ictal fear, is common in temporal lobe seizures. In the literature of temporal lobe epilepsy, the words I've read most often to describe it have been "the sense of impending doom." It's not that out of body experiences are frightening, but rather that out of body experience seems to be based in the right hemisphere of the brain. One structure, the amygdala on the right side, is specialized for fear. What happened was that the seizure had spread out beyond the structure where it began, and included another so that two very different experiences, being out of body and being afraid, could happen at the same time, and even seen connected. I thought that out of body experiences were somehow frightening, but there is no way that could ever have inspired as much fear as I felt.

Although the out of body experiences were not the most frightful phenomena I encountered, they were one of the easiest to describe. Another one, that happened more often, is known as macropsia. In macropsia, you have the illusion that things are larger and farther away than they actually are. For example, if you're sitting in front of your computer, and the monitor is two feet from you, and 1 1/2 feet tall, macropsia could allow you to see its as 20 feet tall and 15 feet away. Another illusion, called micropsia, gives you the impression that everything is smaller and closer than it actually is. People have said they felt that they and all the world around them would fit into a Matchbox.

Temporal lobe seizures are much more likely at night, when the brain's melatonin levels are elevated. That's when it happened for me. I would lie awake in my bed at night having a very powerful experience. Everything around me was absolutely enormous. Not only were they gargantuan exaggerations of themselves, but they also seemed to be incredibly dense. I once talked to a fellow would have the same experience during an episode of fever delirium, but I haven't heard of it in any other contexts. At the same time as I felt that everything, including my own body, was incredibly dense, I also had the sense that I was incredibly strong just to be able to move my own arm. This amazing sense of power later reminded me of the verse in the Rig Veda: "Now I shall place the earth perhaps here; perhaps there. Have I not drunk Soma?".
In order to escape the frightening, huge, but commonplace objects around me, I would shut my eyes. But that only made things worse. What I saw with my eyes shut was an infinite space in front of me. It was utterly black, and yet conveyed the impression of a velvety texture, punctuated by spiky bits. Even more compelling than its total blackness, was the enormous, even infinite, size of it. Directly in front of me, an unimaginable distance away, was a tiny point of extremely brilliant white light.

That light was the single most frightening thing I'd ever seen. It had an emphatic quality, as though it were utterly determined to do its thing. Its job, of course, was to kill me. I felt like it was my death, not just waiting for me, but adamant about accomplishing its mission. Later, that would allow me to understand what epileptologists meant when they spoke of "the fear of impending doom".

I had other odd experiences.

I remember having the feeling that my body was composed of vibrating grains. I remember tingling sensations that would run through my body. I had deja vu very often. One of these experiences was very disturbing. I remember looking at someone and suddenly finding that they seemed terribly alien. This experience, called Jamais Vu, is a sort of opposite to deja vu. In deja vu, things seem extra familiar. In Jamais Vu, things, even very familiar things, like your own hand, become completely unfamiliar, even alien.

This would often happen together with a phenomenon that I experienced later on in life after doing meditation. It's called Enhanced visual acuity. While its happening, colors seem a bit more vivid, the sharp edges of objects would appear more crisply defined, and my sense of living in three dimensions would become quite intense. It would be impossible for me to look at an object without really noticing its depth.

One night, I woke up to find that all of the shadows in the room had rearranged themselves so that they formed an enormous cow right next to my bed. I was terrified. As the experience unfolded, the cow acquired more detail, until I could see the markings on it's hide, its eyes, and even see its hair. I don't know how long I lay there, but eventually the experience came to an end. The cow returned to the shadows from whence it was made, and I fell asleep.

I want to emphasize that even though temporal lobe epilepsy can elicit experiences that are called religious or mystic, mysticism is not epilepsy. Only a very small portion of temporal lobe epileptic experiences include these kinds of phenomena. In fact, the most common temporal lobe epileptic event is automatic lip-smacking.

What I believe is happening is that the human capacity for religious and mystic experience is part of our organic, natural repertoire of subjective experiences. As such, they have neural representation. Parts of the brain (or better still, sets of pathways widely dispersed throughout the brain) that have
no other function. They exist solely to provide human beings with this special class of experience. Further, if they exist at all, and are to be found in every human brain, no matter how high or low their thresholds for each person, they must be the result of evolution.

Dr. Michael A. Persinger, director of the Laurentian University neurosciences program, to which I belong as an associate member, has elicited the experience of God in many times in laboratory settings. Again, to keep things in perspective, it must be emphasized that only a very small percentage of the people who have received his procedures have had this experience - about one percent. Nevertheless, in spite of the small percentage, the number is large enough, about 20, to allow some conclusions about which parts of the brain are most involved in the experience of a divine visitation.

The single most implicated structure in the brain is the amygdala, on the left side. The amygdala is a very social, and a very emotional structure. It recognizes the emotional content of other People's facial expressions. It's sensitive to tones of voice. On the left side, it supports experiences of joy, bliss, elation, and happiness. The literature of neurology as far more reports to offer about the functions of the amygdala on the right. There, it supports the experience of fear, anxiety, and apprehensiveness. Unfortunately our need to recognize threats is more pressing in our need to recognize potential benefits, so I believe nature has equipped us with the right amygdala that is more sensitive than the left overall. Interestingly, and perhaps validating the idea that the experience of God relies upon the brain part that response to faces, one author, a minister who interviewed children about their religious alliance, found that when asked to draw a picture of God, the children overwhelmingly drew only God's face.

Dr. Persinger's research relies on stimulating the brain with faint magnetic signals whose shapes matche those identified through EEG monitoring as "signatures", indicating the activity of specific structures. Applying these signals to the brain activates the structures the signals were derived from. A magnetic copy of a signal derived from the amygdala will activate it, and only it. In this way, specific brain structures can be targeted for activation, yielding a wide range of responses depending on the individual, and which part of the head the magnetic coils are applied to.

The most effective way of using these signals is to apply one signal to the right side of the brain, followed by a signal derived from the amygdala to both sides. This neural stimulation session is a two-phase one. The first part can be uncomfortable, as the amygdala is activated on the right side, along with several other structures. As the amygdala on the right becomes more active the one on the left quiets down. When the the second phase in this technique begins, the quiet amygdala, the one on the left, suddenly becomes quite active. The result, for a few individuals, can be a direct experience of God.

For some people, this meant actually seeing God, sometimes as Jesus. For others, it has meant sensing a presence that inspires a mood so pleasurable and intense that the presence can only be called God. There probably have
been others who had this experience in Dr. Persinger's lab, but were hesitant to tell a scientist that they were in the presence of the creator of the universe. Spiritual experiences can be very intense, and very personal. Some people never speak of them at all, even though they may have them all the time.

What we can infer from Dr. Persinger's work is that the experience of God, taken as a neural event, not only includes the amygdala on the left, but is probably dominated by it. When the pathways of epileptic seizures include the left amygdala, then those seizures can include visions of God, sensing God's presence, and even hearing his voice. Hearing the voice of God, either as a religious experience, an epileptic phenomena, or as a schizophrenic symptom, isn't uncommon at all. Why? Because the amygdala on the left supports the experience of God, and the temporal lobes of the brain include crucial language centers. In fact, there are no important language centers on the right side of the brain at all.

One related, but unpublished laboratory observation is that Dr. Persinger has elicited experiences of "the light" by stimulating the left side of the brain with the signal derived from the amygdala. If you stop to think about it, this isn't too surprising. There are many words used to describe God that has connotations of light. God is radiant. God is resplendent. God is glorious. God, when depicted as a man in the person of Jesus, is surrounded by light, shown as a halo.

I once asked PMH Atwater, the author of several books on near death experiences, and a veteran interviewer of people who've had them, which phenomena were most likely to happen in near death experiences that included a miraculous healing, which have been mentioned in the literature on NDE's. With very little hesitation, she replied "Bliss, and the light ". Both of these have been elicited in Dr. Persinger's laboratory through stimulation of the left side of the brain using the amygdala's signal. Research on the brain's involvement in the experience of God may not just be an exercise in the meeting of science and spirituality, or the creation of a new field before philosophy, but they actually one day allow physicians to create cures utilizing a neural mechanism whose action, until now, has been taken as miraculous.

There's another portion of the brain, this time on the right, (also in the limbic system), called the hippocampus. It functions to create and consolidate memories. It contributes heavily to spatial perception. It's implicated in deja vu. The hippocampus is a very "knowing", cognitive structure. It allows us to place things in context in all sorts of ways.

Just as the primary features of God, including light, Love, and ultimately being very much like us (having been made in "his " image) can be explained through the activation of the amygdala on the left side, many of the secondary features of God, his classical attributes, can be explained through activation of the hippocampus on the right side. Traditionally, these have been omnipotence, omniscience, omni-presence, and eternal existence. God exists, we're told, in all places and it all times. God knows everything, and "he" is all-powerful.
The locus of my childhood epileptic seizures was almost certainly in the hippocampus on the right side. Its guesswork, but it does imply that the sense of incredible power I felt at being able to move my own arm might easily have relied on some recondite hippocampal function. Should such an experience happen at the same time as a vision of God, it would be hard to avoid the impression that God was omnipotent.

Omniscience, the ability to know everything, is one experience that I have not read about in the literature of epilepsy, but the primary phenomena involved in it, having one's capacity for knowledge heightened, also seems to implicate the hippocampus on the right side. This arises out of the hippocampus's very cognitive functions, as well as its structure. Unlike other structures in the limbic system, the hippocampus is not composed of blob-like nuclei. Instead, it's made of many layers, each one structured very much like the ones next to it. The hippocampus is involved in the experience of retrieving memories, and if it's activity was high enough, many of the inhibitory synapses might fail to inhibit layers not being used. It's easy enough to imagine that the experience might be one of knowing everything, all at once. This is a bit speculative, but still allows us to see how God's "all knowing" attribute might arise from hippocampal activity, just as his presence might arise from amygdaloid activity. There are many published near death experiences that include accounts of people feeling that they knew all the secrets of the universe. Some of them included being in libraries where all the information in the universe was available. Perhaps the organization of information in these libraries reflects the organization of the hippocampus.

Another of God's attributes, being omnipresent, also implicates the hippocampus on the right side. The right hippocampus, (especially in conjunction with an area on the surface of the brain above the occipital lobes, and behind the parietal lobes) is involved in spatial perception, and the ongoing maintenance of one's body image. Again, if you imagine activity in the structures intense enough, you can see how the experience of being everywhere at once might arise. Another experience that could arise from the same set of structures in a high state of activation (as well as being perturbed, or a bit detoured) is the experience of being "one with the universe".

Deja vu, an experience that implicates the hippocampus, involves a significant illusion in one's sense of time. The present and the past seem to be happening at once. What seems to be happening is that the mechanism for retrieving memories is active at the same time as one is concerned with the present. The important connections here seem to be between the hippocampus and nearby areas of the cortex, the brain's surface. When connectivity between these two break down, the past and the present can seem to occur at the same time. The sense of being everywhere all at once, such a very different experience, may only be slightly different from the experience of deja vu, when seen in terms of brain activity.
My point in going over these attributes of God is to explain how not only can God be explained in terms of brain function, but to show how the traditional attributes of God may also be explained the same way. At the same time, it seems that the attributes of God, as understood through traditional Judeo-Christian theology, are upheld by contemporary neuroscience. If it's true that prayer is a worthwhile spiritual technique, even though there may not be any God to pray to, it may also be true that contemplation and reflection on the divine attributes may offer support to those who use God, no matter how strongly or lightly they hold onto their beliefs. The ancient theologians knew what they were doing. They chose these attributes of God because they believed they were real and true, but had they chosen divine attributes that did not echo human experience, their theologies would have been forgotten. In spite of being based on ideas that are not true from the scientific perspective, they still have value for those with God-based spiritualities.

Next, we need to look at how the capacity for experiencing God arose in our evolutionary history. When we first emerged as a species, which many anthropologists now believe occurred around 100,000 years ago, two parts of the outer layer of our brains changed. The frontal lobes, and the temporal lobes. Both of them became dramatically larger.

In general, the frontal lobes are concerned with anything that has to do with the future, such as anticipation, planning, expectation, and creating strategies. In spite of their having many other functions the temporal lobes are crucial in creating and retrieving memories. When the temporal lobes and the frontal lobes expanded as we became the species we are today, an interesting ability appeared. It became possible for us to look at a dead body, remember it, and extrapolate into the future to conclude that the same thing would happen to us.

No matter how other species may understand the reality of their own deaths, it's certain that human beings experience it differently.

Among other differences, we can use the power language gives our minds to think the problem over. We have to use language. The only way to think about death from the perspective of personal experiences is to be dead. Until very recently, only a handful of people who began to go through the death process returned from it to tell their stories. Never having been there, we could not know that we would go there. At least, not from experience. Nevertheless the power that words gave us allowed us to grapple with our situation through words. Those words are "I will die".

The fact that we can tell ourselves that we will die, together with our experience of the deaths of other people is enough for us to come to grips with it. Even though no one who is alive really knows what it's like being dead, our ability to think about it in words allows us to act and feel as though we do. Nearly every religion in the world teaches, in one form or other, that there is no such thing as death. It's a transition between worlds. It's like going to sleep. It's a return to the place we existed before we were born. It's going to
heaven. It's being reincarnated. Its breaking through a veil. It's joining the ancestors. It's an undiscovered country, from whose shores no traveler returns. It's going to be with Jesus. It's anything, anything at all, except death.

The antidote for the thought that one will die is religious belief.

But personal mortality offers another threat, one that no religious beliefs, no matter how beautiful, will ever be able to alleviate. And that is being afraid of death itself, in the moment when one's life is actually threatened, or when we're thinking about ways to stay safe. Ways to avoid the threat of actual death.

The expanded frontal and temporal lobes we acquired when we emerged as a species allowed us to anticipate all sorts of threats, and think of ways to avoid them. We applied our intelligence to staying alive. This meant we had to think about death a great deal, and that's very stressful. Our fear of death motivated us to look for ways to stay alive, and that had tremendous payoffs for our evolution. At the same time, it introduced a new threat to our mental health: death anxiety.

The experience of fear and anxiety are primarily supported by activation of the amygdala on the right side of the brain. Both amygdalae participate in almost any amygdaloid function, but fear seems to be the domain of the one on the right. The one on the left is specialized for the opposite range of emotions. Elation, joy, bliss, happiness, up to and including mania associate with activation of the left amygdala.

The two amygdala are connected to one another via a structure called the anterior commissure. The anterior commissure functions only to facilitate communication between the two sides of the brain, and it leads from one amygdala directly into the other. According to the theory of interhemispheric intrusions, developed by Dr. Michael Persinger, what happens is that in moments of extreme stress and anxiety, up to and including the fear of imminent death, the right amygdala is activated. When the activation becomes too intense, that activity can spill over to the amygdala on the left, via the anterior commissure. By monitoring the effects of magnetic stimulation on only one brain part at a time, Dr. Persinger has established that activating one brain part can reduce activation in other brain parts to which it is directly connected. This means that in moments of extreme fear, the intense activation of the right amygdala happens along with a de-activation of the one on the left. If the right amygdala is active enough that the activity spills over to the one on the left, the one on the right will tend to shut down, at least for a little while.

The sudden and dramatic activation of the amygdala on the left is the source, not only of relief from death anxiety, but also the experience of God.

Let's put this into context. There are a whole spectrum of phenomenon, called "visitor experiences", that are actually very much like the experience of God, when looked at from the perspective of brain activity. What they all have in
common is a breakdown, a failure to communicate, or a disturbance between the two hemispheres.

We all have two selves. One on each side of the brain. Ordinarily, the one on the left is dominant and we identify ourselves largely through our thoughts about ourselves; thoughts that happening in words. Simple strings of words can dramatically raise or lower our self-esteem. Compliments insults tend to stay with us for a long time. If we lose an argument, we sit around thinking about what we should have said. To a large extent, our self-esteem is nothing more than what we think other people think of us. And we are more influenced by what they say to us than anything else. Sticks and stones may break your bones, but words can really hurt you.

But language, the matter how important it may be to us in our lives, or how crucial it’s role in our evolution, can never fully describe the human sense of self completely.

Our other self, the one that resides in the right hemisphere, and understands all sorts of things that cannot be said in words, is subordinate to the self that exists on the left side, but is never suppressed by it. Both of them function at once - all the time.

Once a while, communication between two senses of self breaks down. They might fall out of phase with each other, for example. When this happens, the right hemispheric sense of self can emerge into the awareness of our more normal sense of self, and be experienced as a being outside of ourselves. Its simplest and most common manifestation, it emerges as the sense of a presence. You feel that someone is standing behind you, but when you turn to look, there’s no one there. This mechanism explains why we sometimes get to a sense of a presence, as well as why sometimes we might see or feel the presence of a ghost, an angel, a spirit, or, as can also happen, a demon.

Whether the presence feels good or bad depends upon which of the two amygndala is most active. Whether we only feel the presence, or in unfolds into an actual vision, depends upon which of the visual centers are involved in the experience. Whether it’s accompanied by a divine fragrance or hellish stench depends upon whether or not the olfactory bulb is recruited into the event. Whether or not the being speaks to us depends on the involvement of linguistic centers. Whether or not the divine attributes seem manifest in the presence depends on the involvement of the hippocampus on the right, as we discussed earlier.

It seems as though the most direct path to God is through fear, or some other extremely unpleasant emotions. The night before his enlightenment, the Buddha was beset by the daughters of the King of evil, and was attacked by his armies. Jesus, on retreat in the desert, met Satan face-to-face. One more recent Hindu Saint, Ramakrishna, had his awakening after a period of being convinced he was about to die. I heard from a woman who told a story about an enlightenment experience, after months of wrestling with cancer. These, and many other stories like them find spiritual awakenings coming after
spiritual travail. The dawn of understanding or God consciousness after the dark night of the soul. The activation of the left amygdala following activity by the one on the right.

The experience of God seems to be made out of the same stuff as angels, ghosts, invisible friends, and visions of those we know who have died. Part of ourselves is projected outside ourselves where we can perceive it directly.

I wonder if perhaps something similar might be happening when children play with objects so that a pencil becomes "Mr. Pencil", or some cloth and padding becomes a beloved teddy bear, with its own name and a promise of being preserved for years.

I also suspect something similar might be happening in romantic love, as some part of ourselves, arising out of the right side of the brain where few words are processed, and projected onto our beloved. When we stop to think how intensely social our early cultures must have been, with tribes living together their whole lives, and the need to avoid conflict and strain between people so absolute, then perhaps this mechanism where we fall out of phase with ourselves, and find the gaps smoothed over outside of ourselves, may have offered its first important advantage in helping us to love one another. Romantic love certainly seems to involve projecting a part of ourselves onto another. At least, we see our lovers as we want to see them instead of seeing them as they are all too often.

God does not offer the same disappointments that romantic partners do. But God does not require that we find an actual person, and the experience of God is much less common than the experience of romantic love. Nevertheless, to me it looks possible that traditional religion may be right in one of its classical statements. God, whether created in our brains or not, is love after all.

If that is true, then we should preserve the God of our experience even as the God in the brain becomes more and more apparent. Saint Augustine once said that if someone wanted to enrich their spiritual life but did not believe in God, they should pretend that there was a God. Then, he said, real faith became more possible. I think it would be a good thing to live in the world where people believed in God, but knew they were only pretending, received all the benefits and comforts that prayer and spiritual community can offer but, like children playing pretend, don't mind when other people play differently.