

The Sky Is Not a Ceiling

An Astronomer's Faith



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Chapter 1

Wonder Bread and the Game Show God

AMONG MY MEMORIES from elementary school is a field trip where I was mesmerized by the production line in the Wonder Bread bakery. The loaves of bread rode on tracks through an incredible series of machines that sliced them, bagged them, and dropped them into plastic cases to be stacked into trucks and driven, fresh, to grocery stores all over the Mile-High City. Perhaps my fascination was one of the early signs of the geekery that would blossom in me a decade later. But at that time it was simply fascination and delight with things that are neat, well-ordered, and efficient. I still like such things, delighting in the view of urban highways from airplanes, though I know now to distrust such neatness and efficiency in human affairs.

The Wonder Bread bakery's impact still resonates with me for two reasons. The first is that I've been teaching physics for more than two decades and would love for my students to see and respond to such beautiful efficiency. The second is that Wonder Bread is a telling icon of my childhood years. It was billed to "build strong bodies 12 ways" due to flour enriched with vitamins and minerals. The current website claims this was part of a "quiet miracle" in nutrition that almost eliminated diseases such as beriberi and pellagra linked to vitamin deficiencies. Yet I found Wonder Bread to be little more substantial than cotton candy. Maybe I just don't have the taste for white bread. I never did comprehend people who tear the crusts off their bread since the crust has the most substance. Nevertheless, the

icon of Wonder Bread that is wedded to my memories of the late 1960s and early 1970s is one of uniformity and hollow promises.

I was born in Denver, Colorado, in 1958 and grew up in Aurora, a suburb to its east. It was a white bread world with very few people of color or local ethnicity. It was the white, suburban America of Beaver Cleaver, and yet there was a dark side that the Cleavers never acknowledged. That dark side was the hollowness of the promise of nutrition that melts away like cotton candy, the promise of “liberty and justice for all” that sent the children of the poor to suffer and die in southeast Asia while the children of privilege and connections joined protests against the draft with their deferments carefully tucked away, and the promise of *Saturn V* rockets launching men on journeys to the moon even as the dread of rockets bringing nuclear annihilation lurked in all our hearts.

Cold and Hot Wars

Both the Cold War and the hot war in Vietnam (that, we were often reminded, was not a war since Congress had not declared it) were constant presences in my life. We were told in school that the “bombs could drop at any moment,” and we all speculated about how life would change “when the Russians invaded.” It didn’t produce an active fear in us, but more a cold, dark dread that we were living on borrowed time and the world we knew was doomed to destruction. I still carry that dread, though I now attribute it to my awareness of how precariously our society and lifestyle are perched on unsustainable energy, economic, and agricultural processes.

For me, the active fear was of the fate of my brothers in Vietnam. The evening news usually led with casualty counts, and soldiers were always at Mass at our army parish. My oldest brother enlisted in the navy when I was nine, in 1967. My second brother followed two years later. My youngest brother (still five years my senior) was considering defection to Canada the night the birthday lottery reprieved him with

a draw of 362.² Though my older brothers enlisted for six-year stints with the submarine corps to avoid Vietnam, I didn't quite trust that they wouldn't end up like the wounded soldiers at Mass or under one of the countless white crosses at Fort Logan National Cemetery, which we drove by on our way to the mountains for picnics.

I was haunted through those years by a dream I had early in my oldest brother's enlistment. My dream began with a box from the Navy arriving at our house. When we opened it, it was filled with chips resembling the broken shards of a fresh coconut with the white coconut meat lining the inside. But it wasn't a coconut, it was my brother's skull and the meat was what was left of his brains. I awoke from that dream with a fear I would carry until the last troops left the roof of the embassy in Saigon. It reawakens every time I watch another generation going off to yet another war, leaving little sisters to worry and cry themselves to sleep.

Religion in Aurora

Religion was mostly a sideline event in the lives of us neighborhood kids. It was regular, our trooping off to our respective churches every Sunday, but not particularly meaningful. As a Catholic kid, I also trooped off on Saturday mornings for catechism class while my Protestant pals were happily playing. With only an hour in Mass the next morning, I played alone while all my friends attended Sunday school. I knew only one Jew, with whom I wasn't very close, and didn't know what day of the weekend was her sacrifice to religion. I did know that she traded in Christmas for Chanukkah, and I wasn't sure if it was a gain or a loss, given the rumors of eight days of presents! I didn't know any Muslims, Hindus, or Buddhists, though the Hare Krishna cult members did appear in the airport concourses chanting and begging in my preteen years. The different hours when we had to sacrifice our play for religion were the only differences among the

2. To prioritize men for the draft, the dates of the year were drawn by lottery and men drafted in order of their birth dates.

faiths that we understood. When we compared notes, we discovered that each of our religions claimed to be the “one true faith.” As for us, children who could sing the jingles of just about every product advertised on TV, we took these claims as seriously as we took claims of being better than “brand X.”

In our TV-informed universe, religion seemed much like a cosmic *Let's Make a Deal*, where contestants traded some odd object or costume they had brought from home for what was behind various numbered doors. Some of the doors hid wonderful prizes such as cars and vacation packages. Others held gag prizes such as a cow wearing sunglasses and a feather boa. Throughout the show, Monty Hall offered money for odd items and for a bid for taking whatever was behind a door or curtain. It seemed to me that in the cosmic *Let's Make a Deal*, each religion claimed that God was behind their door with the great dinner party of heaven (that sounded quite dull to our childish minds) and behind all the other doors lurked fire, brimstone, and eternal damnation. God's enemy, the Devil, wandered about offering riches and promises to coax people away from the “One True Door” to one of the doomed doors. Needless to say, we didn't take the claims of truth of our religions very seriously.

Looking back, I envision the *Let's Make a Deal* set with each religion gathered in front of its own door waiting for God to be revealed. The Protestants gather in front of door number three, seated around folding tables and passing covered dishes of string beans in cream of mushroom soup. The Catholics are in front of door number two with nuns and a few old people kneeling in neat rows reciting the rosary with the speed of a horse-race announcer. The priests gather in the front in strict hierarchical order and a few of the Knights (of Columbus) hang out at the back bar drinking beer. At door number one are the Jews; men in black hats and long coats standing at the door rocking in their prayers and wedging little notes into gaps between the panels. In the back, a Klezmer band plays, and a few men and women in uniforms wander about with their Uzis. At a second door number two (confusing the Catholics) rows of Muslim men kneel shoulder to

shoulder on their prayer mats, bowing their heads to the floor while old women in head scarves and burkas watch from the back. Along the boundary with door number one, the young Jewish and Muslim men stand face to face arguing about the exact placement of the line. The Buddhists and Hindus don't bother with the doors and are off in the park chanting and circumambulating the hall. The Unitarian Universalists, also certain that God doesn't lurk behind any of the doors, are in the parking lot hoping to get out before the rush when everyone else discovered that truth. The women of the Catholics, Jews, and Muslims are mostly in the basement preparing meals and running after the kids so they don't disturb the men upstairs and recognizing that the reality of their lives is fairly independent of their religion.

This was as seriously as I took religion, and it expresses the nonsense I saw in it. I was told that only Catholics got into heaven and my Protestant friends were told Catholics couldn't get into heaven. But all of us were taught that non-Christians certainly couldn't get into heaven and that the purpose of life was to get into heaven. That puzzled me a great deal since I imagined that non-Christian people were probably a lot like us and were probably not Christian because of where they grew up, just as I was Christian because of my family. Would the God who they always said loved us really condemn people for believing their family's religion? Very much like *Let's Make a Deal*, it seemed like a cosmic guessing game, and even as a child I found that a rather absurd expression of a loving God.

Actually, I wasn't sure about how loving God really was. The God I understood from church was a Great White Father in the sky who kept careful track of how many impure thoughts I had, how many bad words I said, and wouldn't like me at all if it hadn't been for Jesus, though I didn't have a clue what I could have done to offend God so deeply. I just didn't buy the idea of original sin. My parents got over it fairly quickly when I ate something they told me not to. They also managed to forgive me without beating my older brother, so why was God so hung up on an apple and why did God require Jesus to die

to forgive us? In this context, the claims of God's great love rang as hollowly as my Wonder Bread icon. There's no forgiveness from God without punishment? What kind of love is that? Also, stories from the Holocaust and stories of innocent people being tortured and killed on the evening news left me puzzled as to why we were supposed to see Jesus as so special. Didn't people die all the time trying to protect the ones they loved? And they weren't God, and they didn't really know what might happen to them after death, whereas Jesus seems to have been quite certain of going to heaven. The story just didn't hold together for me and yet left me feeling vaguely guilty that I existed at all and confused as to why.

At home we didn't discuss religion, though I recall my mother helping me memorize my prayers and passing on her mother's advice to "listen to what they say, and do what you think is right." As a child I did not see my parents pray outside church, and they never referenced the Bible, homilies, or anything from church. We simply went to Mass and participated in the required sacraments. I saw much of what we did as acquiring merit badges for getting into heaven. We Catholic kids had to learn to recite all our prayers, obey all the rules, and dutifully report every infraction to the priest in confession. I recall leaving confession once, after having said my ten Our Fathers and ten Hail Marys, and thinking that my soul was all clean and as soon as I thought, spoke, or acted, I'd start dirtying it up again.

From my observations of the adults — the priests, nuns, and leaders of the parish who we were certain were going to heaven — I deduced that being kind wasn't necessarily required. Some of them seemed quite comfortable treating us kids with discourtesy and sometimes outright meanness. If they were all going to be in heaven, I wasn't so sure I wanted to go.

When my parents first moved to Aurora and were involved with their geographically determined parish, they had a terrible experience with a priest, which drove them to join the parish at Fitzsimons army hospital. I have learned little of what happened since it occurred before my birth, but it resulted in all my Catholic experience

taking place at Fitz and all my sacramental records being held by the Department of the Army. There was a chapel that served all active faiths on the post where we most often went to Mass. Due to sharing the space, however, the 8:00 a.m. Sunday morning Mass was at Bushnell auditorium on the eighth floor of the hospital, where President Dwight Eisenhower had recovered from a heart attack in 1955 and the presidential candidate John Kerry had been born in 1943. When we went to Mass there, I was struck by the magnificent view of the snow-capped peaks of the Rocky Mountains from the windows and the presence of soldiers wounded in Vietnam.

In religion classes, I tended to keep quiet and do what I was told, waiting for it to mean something. I had questions that I felt I could never ask, though I'm not sure why I felt that way. The silliest of them was the meaning of Christ. Was it Jesus' last name? For years I wondered about this, not figuring it out until some time in high school. I also wondered why Mary and Joseph, after losing the twelve-year-old Jesus in Jerusalem, were confused by his telling them that he had to be about his Father's business. . . . Didn't they remember Mary's angel, Joseph's dream, the shepherds and the Wise Men? They supposedly knew he was the son of God at his conception. Did they forget that by the time he was twelve? When Jesus and John the Baptist met at the Jordan river, why didn't they know each other; weren't they cousins. Hadn't Mary visited John's mom, Elizabeth, when they were both pregnant? Was that the only visit? My cousins visited us in Colorado from Massachusetts, Alabama, and Washington state more than once while I was a kid and they were a lot further away than Mary was from Elizabeth. These things still confuse me when people claim that everything in the Gospels is literally true. It just doesn't fit, and it puzzles me that others don't seem to see that.

There were also the more troubling disconnects between what Jesus said we should do and what we actually did. Jesus said to call no one on earth father because there was only one Father, so why did we call all the priests Father? Jesus said to love our enemies, and yet the soldiers at Mass, the whole and the wounded, testified that we

were still busy hating and killing our enemies. Jesus said if someone demands your cloak, give him your coat as well, and yet complaints about “welfare queens” abounded.

Then there was the church’s devaluation of women. We girls felt it sharply as the call for boys to be altar servers went out every year. I don’t know if I would have been a server, but being excluded from even trying because of how I was on the outside, without the least interest in what I was like on the inside angered me. They did always say that our outer appearance was not as important as the condition of our soul. So why did gender matter so much? The church just didn’t seem to *see* women. They said women weren’t at the last supper so they weren’t “ordained” by Jesus, yet they had been everywhere else with Jesus, and I couldn’t imagine the men cooking and serving themselves. Also, if Mary Magdalene was the first person Jesus appeared to after he rose, why wasn’t she an apostle while Paul, who’d never met Jesus in life, was?

These and many more questions were the sort of thing that confused us kids and made religion seem like a bit of a fairy story with aspects as incomprehensible as spinning flax into gold and wolves dressed as grandmothers. Yet we were supposed to *believe* everything in religion. We did discuss these questions among ourselves and some were more bothered than others, but none of us were certain that the grown-ups really knew what they were talking about. After all, by the time we were twelve, Santa Claus, the Easter Bunny, and the Tooth Fairy had all been revealed as unreal, and in many ways Jesus didn’t seem terribly different.

Perhaps if I had lived in a more ethnic neighborhood where everyone was Catholic or if I had gone to Catholic school, I would have found religion more real. My only contact with the local Catholic school was getting beaten up in the playground of Peoria public school by a bunch of kids from St. Therese. Among my university colleagues, the women who went to Catholic school and have mostly left the church claim that not attending Catholic school may have been the salvation of my faith.

It has always struck me that the Catholic schools educated a lot of kids right out of the church by developing their minds and then expecting them to be checked at the church door. This is illustrated by an incident from Karen Armstrong's experience of the novitiate at a convent where she was assigned an essay to "assess the quality of the evidence for the resurrection." She read all the required books and thought deeply about the arguments put forth and found she just didn't believe them. It wasn't logical; one couldn't "prove" the resurrection from the incidents in the Gospels. But she knew she had to write for the exam, so she "reproduced the mental gymnastics"³ of proving that there was sufficient evidence in the Gospels for anyone who read them to believe that Jesus was divine and had risen from the dead. She felt a loss of integrity in writing it, but the nun to whom she turned it in acclaimed it as excellent. In response, Karen asked "It just isn't true, what I've written, is it?" To which the nun responded "No, Sister. No, it isn't true, but please don't tell the other novices."⁴ There are those in the church like "the other novices" who believe the "mental sleights of hand"⁵ from the apologetics, but I also know many very intelligent and well-educated people in the church who see the untruths and mental gymnastics and have simply chosen to live with them as the inevitable creations of an institution and not the essence of the faith. It is now what I have chosen to do, but it is a constant challenge to not let them drive me away from the practice of any religion as they finally did Karen Armstrong.

I did give the church a serious try when I was seventeen and decided on my own to seek Confirmation. My parents expressed no concern about whether or not I chose to be confirmed. By that time, my five siblings had been confirmed, ranging in age from twenty-two to thirty, and had left the church. I assume my parents didn't think Confirmation made much of a difference. Hence of my own free will,

3. Karen Armstrong, *Through the Narrow Gate* (New York: St. Martin's Press, 1981), 154.

4. *Ibid.*, 155.

5. *Ibid.*

wondering if I hadn't missed something people were trying to tell me in religious classes, I attended the classes and made the retreat necessary to be confirmed. Our retreat was at Camp St. Malo in a picturesque valley just west of Denver. I delighted in the mountains and silence. And I spent long periods in the chapel seeking whatever it was that was supposed to move me there. Nothing did, though the scent of the pines in the rain and the sun glinting off the pond filled me with comforting sense that there was a "who-ness" to the universe with whom I had a relationship of love. I didn't think of this as the God they told me about in church and left the retreat thinking that I didn't know how to pray or was somehow inadequate as a Catholic. I did get confirmed and, much to my surprise, my parents actually had a bit of a party for me with cake and ice cream. Later that year, though, as I left my parents' home for college, I left Catholicism there in a drawer with my confirmation certificate.