

Chapter 3

Belonging – An Evolutionary and Biological Perspective

The hunger to belong is at the heart of our nature. Cut off from others, we atrophy and turn in on ourselves. The sense of belonging is the natural balance of our lives. . . . There is some innocent, childlike side to the human heart that is always deeply hurt when we are excluded.¹

In 2021, the Vatican's Pontifical Council for Culture, the Cura Foundation, and the Science and Faith (STOQ) Foundation gathered together leaders in health, science, and faith to discuss the unity of mind, body, and soul.² This has been one of the many signs of a greater awareness of the interrelationship among the body, mind, and spirit. We recognize that our spiritual and emotional well-being significantly affects our physical health. For example, intense inner turmoil can disrupt our well-being and lead to various illnesses.³ Additionally, a healthy spiritual life can significantly enhance mental and physical well-being and increase personal productivity.⁴ In light of these insights, various fields have adjusted their methods. Behavioral scientists, medical experts, and faith leaders are now working more closely together for mutual benefit.

Why is this holistic understanding of the human person essential to our reflection on community and belonging?

We risk misunderstanding social connection and belonging as optional extras rather than essential aspects of human life. As demands on our time and resources increase, social connections and meaningful relationships can be easily overlooked.

Imagine deciding to join a group of families meeting monthly for fellowship. After a few meetings, it becomes harder to find time, as spillover duties from work, household chores, and other obligations accumulate. You might think, after all, that this family gathering is just a “mere” social event. It’s not as important as career development training, a visit to the gym for health, or even some personal relaxation time. Gradually, you stop attending the group. Many of us don’t see active participation in a community as essential because we don’t realize its close link to health and wholeness. The concept of an integral body, mind, spirit, and relational interconnectedness becomes particularly essential when we strive to help people experience a sense of belonging in a community. In the next chapter, we will examine the spiritual dimension of belonging. However, before looking up to the heavens, let us first look at the earth. In the following pages, we will embark on a journey through the evolutionary path that formed our bodies over millennia. Understanding the evolutionary

¹John O’Donohue, *Eternal Echoes: Exploring Our Yearning to Belong*, 1st ed (New York: Cliff Street Books, 1999).

²“Vatican Conference 2021 – Unite to Prevent & Unite to Cure,” accessed January 2, 2025, <https://vaticanconference2021.org/>.

³Harold G. Koenig, “Religion, Spirituality, and Health: The Research and Clinical Implications,” *International Scholarly Research Notices* 2012, no. 1 (2012): 278730, <https://doi.org/10.5402/2012/278730>.

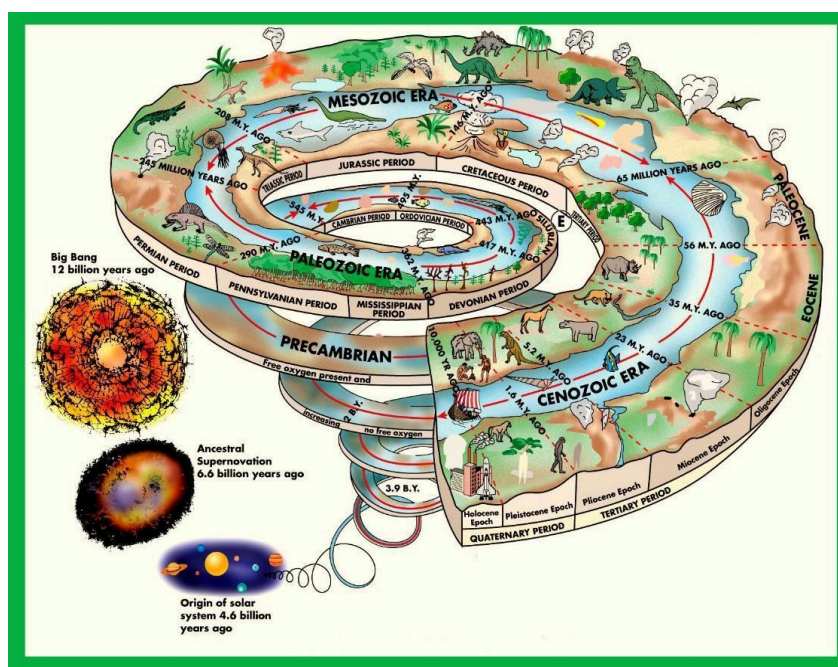
⁴Mehdi Akbari and Sayed Morteza Hossaini, “The Relationship of Spiritual Health with Quality of Life, Mental Health, and Burnout: The Mediating Role of Emotional Regulation,” *Iranian Journal of Psychiatry* 13, no. 1 (January 2018): 22–31 examine the evolutionary path that shaped.

development of the human person sheds light on the complexity of our social lives and how we are meant to live in relationship.

1. A long journey

For most of human history, we could not grasp just how far back in time we would have to look to find the beginnings of life on Earth. Was it thousands of years ago or tens of thousands of years? James Ussher, a 17th-century Anglican bishop and scholar, precisely dated the beginning of the universe to 4004 BC, and for the next century, most of the Western world accepted this as accurate.⁵ This belief was, of course, shaken up later. Most advances in knowledge begin with the observation of an incongruity. We understand reality through a mental construct that works well... until it doesn't because of some new discovery or observation. The same dynamic occurred in this matter of the origin of life. The incongruity occurred after the discovery and dating of fossils. We now know through radiometric dating and other methods that the Earth is slightly over 4.5 billion years old.

What about humans? How long have we been around? When stone arrowheads were found alongside fossils of long-extinct creatures, one early collector was perplexed by this unusual discovery. He believed the arrowheads must have formed randomly “due to an admixture of a certain exhalation of thunder and lightning with metallic matter, chiefly in dark clouds, which is coagulated by the circumfused moisture and conglutinated into a mass (like flour and water) and subsequently indurated by heat, like a brick.”⁶ In other words, he had no idea how a “man-made” artifact could have been made before human beings were around on earth. Just how old were these arrowheads exactly? That question couldn't be answered until the 20th century, thanks to the discovery of carbon dating. The answer is quite shocking. We now know that human-like creatures called hominids were carving stone arrowheads 3.5 million years ago!

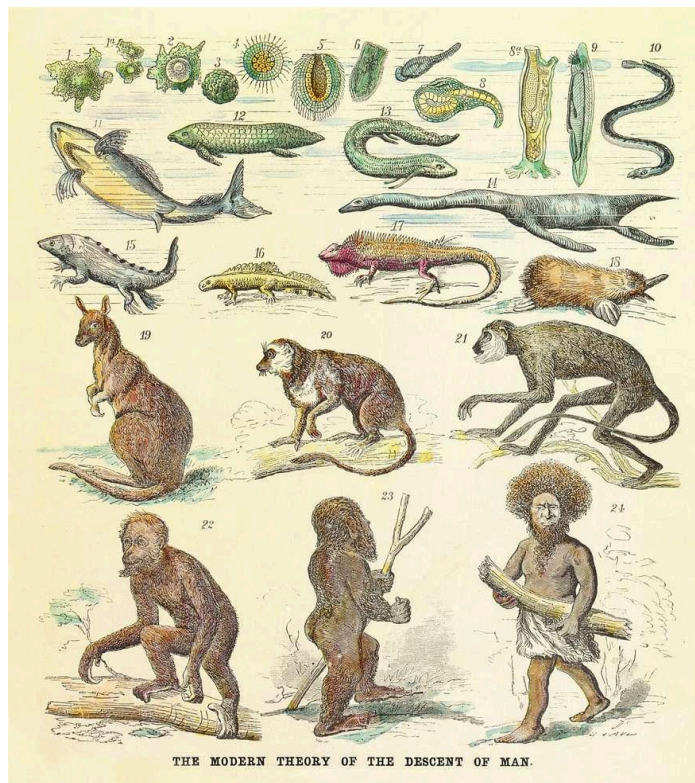


* This image is based on the original from the U.S. Geological Survey. However, the image's original author could not be identified. U.S. Geological Survey. *The Geologic Time Spiral — A Path to the Past* (General Information Product 58). Poster. Reston, VA: U.S. Department of the Interior, U.S. Geological Survey, 2008. Public domain.

⁵James Ussher, *Annals of the World* (London, England: Printed by E.Tyler, for F.Crook & G.Bedell, 1650), <http://archive.org/details/AnnalsOfTheWorld>.

⁶Colin Renfrew, *Prehistory: The Making of the Human Mind* (Modern Library, 2008).

The Bible describes God creating man from the dust of the earth. Our ancestors may have imagined this process taking a few minutes. As it turns out, the transformation from dust to human took billions of years. This seems long to us, but certainly not to God. It began with tiny organisms, invisible to the naked eye. Today, anyone can observe these organisms under a microscope, although no one knew they existed until less than 400 years ago. When life first began, single-celled organisms replicated endlessly for over a billion years before some of them began to cluster. A cluster of millions of cells, with some located deep within the cluster and others on the periphery facing the environment, requires a degree of differentiation to survive. The outer cells may become more efficient at nutrient absorption, whereas the inner cells focus on metabolizing nutrients. This primitive cooperation among living things led to the emergence of the first multicellular organisms.⁷ Over time, life evolved into increasingly complex and magnificent forms.



Organic life eventually arrived at primates and hominids, creatures that not only looked like us but even possessed some of our natural capabilities (such as toolmaking). It took another few million years before we homo sapiens, evolved, 200-300 thousand years ago: sophisticated, multicellular organisms with approximately *30 trillion human cells* working together.^{8,9} Modern humans, with their exceptional cognitive abilities (such as abstract thought, symbolism, complex instrumentation, language, and the religious sense), likely emerged closer to the first migrations of human beings out of Africa around 100,000 years ago.^{10,11} All of this was the gradual unfolding of God's plan to create us, beings that are truly part of the organic and material universe, yet who categorically and mysteriously transcend it. Despite its remarkable complexity and sophistication,

our biology is so far surpassed by our spiritual capacities that we rightly devote our time and energy

⁷ For an attempt to observe the initial formation of multicellular organisms, see William C. Ratcliff et al., "Experimental Evolution of Multicellularity," *Proceedings of the National Academy of Sciences* 109, no. 5 (January 31, 2012): 1595–1600, <https://doi.org/10.1073/pnas.1115323109>.

⁸ Ian McDougall, Francis H. Brown, and John G. Fleagle, "Sapropels and the Age of Hominins Omo I and II, Kibish, Ethiopia," *Journal of Human Evolution*, Paleoanthropology of the Kibish Formation, Southern Ethiopia, 55, no. 3 (September 1, 2008): 409–20, <https://doi.org/10.1016/j.jhevol.2008.05.012>.

⁹ Ian A. Hutton et al., "The Human Cell Count and Size Distribution," *Proceedings of the National Academy of Sciences of the United States of America* 120, no. 39 (n.d.): e2303077120, <https://doi.org/10.1073/pnas.2303077120>.

¹⁰ Teresa Rito et al., "The First Modern Human Dispersals across Africa," *PLoS ONE* 8, no. 11 (November 13, 2013): e80031, <https://doi.org/10.1371/journal.pone.0080031>.

¹¹ "Migration of Early Homo Sapiens Out of East Africa (c. 100,000 BCE)," *Climate in Global Cultures and Histories: Promoting Climate Literacy Across Disciplines*. (blog), accessed July 2, 2025, <https://www.science.smith.edu/climatelit/migration-of-early-homo-sapiens-out-of-east-africa-c-100000-bce/>.

to higher pursuits, such as love and purposeful living. That is why even when people are struggling to survive biologically, they still seek God, forgiveness, love, and meaning. The human being is truly an exceptional creature, the spiritual crown placed over the whole of the material universe.

The Lord worked all these marvels in gentle steps with an expectant love that spanned billions of years.

He formed us slowly from the earth and then imbued his spirit within us. As the renowned paleontologist-priest of the 20th century, Pierre Teilhard de Chardin, S.J., wrote, “The most telling and profound way of describing the evolution of the universe would undoubtedly be to trace the evolution of love.”¹²

The fact that we are organic and material creatures with spiritual souls places us in a unique position. Unlike any other organism on earth, we do not just live our biological lives blindly, as even the most complex animals do. We can examine ourselves. We can try to understand our need for belonging at the level of our body, mind, and spirit. This is evident even in simple ways, such as when someone says, “Sorry, I’m not thinking clearly. I need to eat something.” Being self-aware and reflective helps us lead better lives, in which we’re not merely reacting to circumstances. Or maybe you’ve noticed your sweaty palms and dry mouth before a presentation and told yourself, “Breathe and relax. You’ve got this!” Generally, you’ll perform much better this way. Learning about our brains and bodies, how they work and why, helps us live more consciously in general. Understanding how our social abilities and tendencies evolved, especially our belongingness “circuitry,” will help us live in relationship with others with a greater sense of self-awareness and intentionality.

2. The Evolutionary Basis of Belongingness

Social cognition, one could say with a stretch of meaning, can be found in every organism that “knows” there are other organisms nearby it and adapts its behavior accordingly. Even microscopic organisms do this. As mentioned earlier, the ability of cells to cooperate was essential for the development of multicellular life forms. Much further down the evolutionary path, social cognition comes to involve communication through intentional signaling. Mouse pups, for example, cry out with ultrasonic sounds when they feel lonely. This, in turn, triggers an emotional response in their mothers to come to their aid.¹³ These signals are not learned behaviors in most cases. They evolved as survival instincts to ensure the species’ survival.

Approximately 55 million years ago, primates emerged with significant adaptations for a more complex social life. Their forward-facing eyes, handy hands, and larger brains enabled highly nuanced and subtle forms of social cooperation. In primates, social cognition involves sophisticated, multidimensional signaling, combined with heightened awareness of others and their perceptions. For example, a chimpanzee that loses a fight will pretend to limp to signal being non-threatening and avoid further conflict. It’s like a dignified way of begging for mercy. Even more astonishingly, the

¹²Pierre Teilhard De Chardin, *On Love and Happiness*, (San Francisco, CA: Harper and Row Publishers, 1973), 4. Accessed through Internet Archive

<https://archive.org/details/onlovehappiness000499mbp/page/n9/mode/2up?view=theater>

¹³ Marika Premoli, Maurizio Memo, and Sara Anna Bonini, “Ultrasonic Vocalizations in Mice: Relevance for Ethologic and Neurodevelopmental Disorders Studies,” *Neural Regeneration Research* 16, no. 6 (November 27, 2020): 1158–67, <https://doi.org/10.4103/1673-5374.300340>.

defeated primate will be seen walking along just fine and then start limping just as it enters the aggressor's field of vision., This demonstrates a fascinating awareness of the other's perceptual world.^{14,15} As humans, we also adjust our expressions depending on who is watching. Imagine walking through the park, having a tough conversation with a friend. Unconsciously, you might furrow your eyebrows. Then you see a neighbor pass by, and you instantly look up and smile—not because you're suddenly happy but because you want to signal a friendly disposition or at least hide your agitation. The complex social arena is replete with such signals, our interpretations of others' signals, and our interpretations of others' interpretations of our signals! Most of this occurs without conscious thought. The evolution of our brain's social functions has given rise to this circuitry, and it remains active at all times.

Primate social circuitry developed rapidly and disproportionately in the final stages of the evolutionary path from primates to homo sapiens – it took an unexplainable leap. This is seen most evidently in the truly incredible capacity for language, which no other animal possesses. However, this leap came at a steep price. As more resources were allocated to the brain, muscle strength and bone density were sacrificed. As it turns out, our life is much more mental than that of any other animal, and the percentage of our metabolic energy that we devote to the brain is several times greater than that of our nearest primate. Because of this, no matter how intelligent and capable we are, we wouldn't enter a wrestling match with a chimpanzee. The ape is stronger, faster, and more agile, and would readily defeat its human opponent. And yet, despite how weak we are, we do not live in constant fear of apes. In fact, animals are afraid of and avoid us. This is because our capacity for large-scale social cooperation gave us a significant advantage over other animals hundreds of thousands of years ago and made us the most powerful organism on Earth by a wide margin. We build cities and houses, call animal control, and learn lifehacks from YouTube. That is, we learn not only from our own life experiences but also from the recorded, studied, and distilled experiences of countless others. Ultimately, although it makes us individually weaker, social cooperation makes us immensely powerful against foes of every kind, whether animals, infections, or natural disasters.

3. Hard-wired for community & belonging

We have been exploring the innate, genetically predisposed human tendency toward social connection. Most people are unaware of the profound need—or even the urgency—that all humans share for meaningful relationships and a sense of belonging. As a result, some individuals suppress or disregard this need in themselves, redirecting time and energy towards what appear to be more productive pursuits. We've seen parents intentionally keeping their children from spending time with friends for different reasons. Yet, given the opportunity, children instinctively seek out those friendships. As the saying goes, *you can't keep a good bird from flying*.

The evolutionary cost of heightened social cognition also makes us especially vulnerable when we are alone. This is particularly evident during infancy. Unlike other animals on Earth, human children cannot flee to hide or defend themselves from predators during their first several years of life. What an unusual weakness! We require tremendous attention and care from our parents to survive, and this need is still greater when we consider the emotional, intellectual, and moral dimensions of wholesome human formation. To put it in another way, the formation and development of a human

¹⁴ Thomas Albert Sebeok, ed., *Animal Communication: Techniques of Study and Results of Research* (Erscheinungsort nicht ermittelbar: Indiana University Press, 1968).

¹⁵ Frans de Waal, *Chimpanzee Politics: Power and Sex among Apes* (Baltimore: Johns Hopkins University Press, 1982).

being does not occur solely in the womb; it continues seamlessly in family life and community participation.

Human development depends on a rich social context because God made us as profoundly social creatures.

Often, we cooperate without even realizing it, whether we're taking "alone time" to read a book, watch a movie, or brush our teeth. Look around you. Most of the objects within arm's reach are the product of large-scale human collaboration through the exchange of materials, labor, and knowledge. Even our most private thoughts are shaped by language and ideas we've absorbed from others.

Beyond these unavoidable levels of human cooperation, we also have a spiritual need to connect with others on deeper levels of love and meaning. We need loved ones and close friends to share our joys and sorrows. We desire to connect, reveal ourselves, understand others, and be understood. No one wants to be invisible or ignored. We also seek broader social groups that provide a sense of togetherness beyond family ties. We need healthy spaces to ask life's most profound questions and to exchange ideas, enabling us to make wise decisions. Ultimately, we yearn for that love in truth found only as the life-giving Spirit draws us to the Father through Christ. Since God made us for this communion, he has ensured that our neurobiological makeup, formed through a remarkable evolutionary history, would be ideally suited for communion. We cannot be healthy human beings without it.

We have examined how belonging is a core aspect of human identity through both sociobiological and evolutionary lenses. In the next chapter, we will turn our attention to the philosophical and theological dimensions of belonging. This reflects our belief at *Amoris Christi* that an integrated approach, engaging the best of contemporary scientific insight with the truths of our faith, yields the most mature fruit for human excellence.