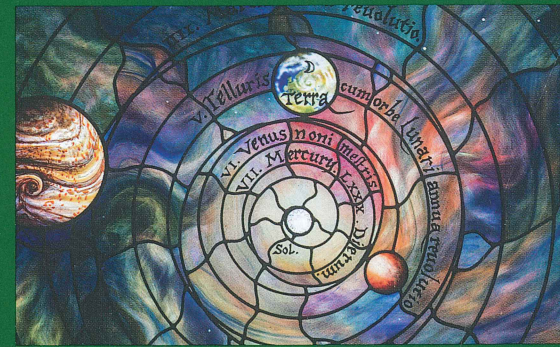




ROOTS OF KNOWLEDGE

UTAH VALLEY UNIVERSITY



Roots of Knowledge: A Story of Art, History, and Human Drama

From conception to completion, *Roots of Knowledge* in the Bingham Gallery at Utah Valley University represents years of devotion and attention to the finest detail, handcrafted into 80 stained glass windowpanes, spanning 10 feet in height and 150 feet in length.

The scene opens with the intertwining roots of the Tree of Life and the Tree of Knowledge, winding their way through the panes. In the final scene, the Tree of Hope for Humanity solidly stands, strengthened by the complete panorama, representing experiences, discoveries, and efforts spanning centuries, continents, and cultures. Branches stretch across the upper panels to represent the hope that is inextricably tied to knowledge.

Utah glass artists Tom Holdman and Cameron Oscarson from Holdman Studios approached Utah Valley University President Matthew S. Holland with an early concept of the project. President Holland enthusiastically embraced it on one condition: Make it bigger.

The Holdman Studios team consisted of dozens of skilled artists working as designers, painters, and technicians, doing everything from research to assembly. President Holland even enlisted the expertise of several members of UVU's faculty for consultation. UVU's fundraising greatly helped ensure the success of the stunning display, including a permanent exhibition home in the unique undulating wall at the front of the Fulton Library.

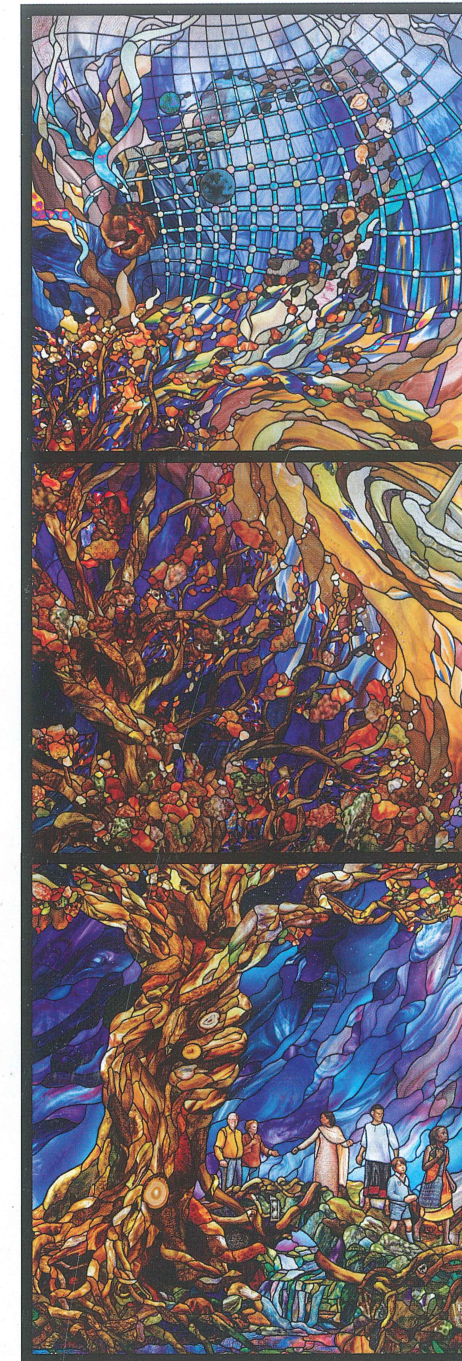
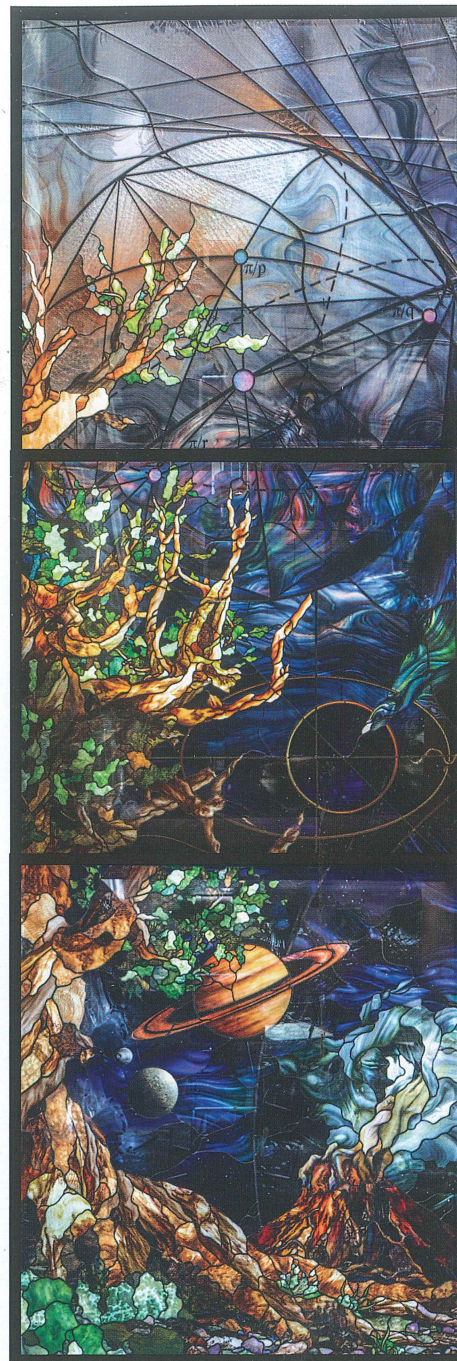
As you experience *Roots of Knowledge*, we hope you will find—and expand—your own quest for learning.

A Column: Ex Uno Plures (Out of One, Many)

Roots of Knowledge begins with the genesis of life on Earth. As told through stained glass, the chronicle of humankind's journey commences with the Tree of Knowledge to symbolize these origins. Modeled after the Methuselah Tree, a 5,000-year-old bristlecone pine found in California's White Mountains, and named after the aged biblical prophet, the tree's roots extend into the following windows to represent the growth and sharing of knowledge.

Z Column: Hope for Humanity

Roots of Knowledge comes full circle. The lateral roots and medial branches that had extended from the Tree of Knowledge and the Tree of Life at the beginning of the series, and traversed through every column of stained glass, connect to the Tree of Hope for Humanity. Reminiscent of a hand gripping a torch, the Tree of Hope for Humanity symbolizes the transfer of knowledge and wisdom to subsequent generations who will carry with them the light to illuminate the world.



Origins

Life begins on Earth, the little blue orb the human family calls home, located in the vast gulf of space pictured in the middle of this column. The roots from the Tree of Knowledge at the beginning of series of windows course through the terra firma of this column and nourish the first signs of animal life on the planet.

The Kindling of a Flame

The story of the human family commences. These windows are filled with images connected to the dawn of man, both religious or scientific. The lower panes of windows in Roots of Knowledge typically display scenes from history and the top panes chronicle the evolution of the written word. The earliest steps in this evolutionary chain of writing are shown through the pictograms and petroglyphs featured in this column's top window.

Seeds of Civilization

For men and women to settle in locales and build civilizations, they first needed crops to grow to feed a growing populace. The base window displays the agriculture that replaced hunting and gathering, allowing the great societies to literally rise up in the windows above. Thanks to a harvest of sustaining food, people could also focus on the other areas that define a civilization and that are pictured in these windows: erecting monuments, fortifying settlements, exploring seas, and recording language.

Nobly Dare

The progress of Roots of Knowledge witnesses the rise of great nations and vast empires. From mere settlements, humankind expanded their territory, accumulating wealth, establishing tradition, developing law, and pursuing ideas for their flourishing societies. Mighty monarchs and powerful potentates oversaw the construction of the projects that would not only ensure a culture's survival, but also leave a legacy for posterity.



To Move a Mountain

The sophistication of the ancients, both in monumental engineering and written wisdom, is represented in these windows. Topping the column is a collage of wit from the teachings of Confucius, *Aesop's Fables*, and Solomon's *Proverbs*. In the lower window is a wonder of the ancient world: the Hanging Gardens of Babylon, a majestic marriage of architecture and horticulture.

He Who Teaches, Learns

In the past, the inhabitants of civilizations developed ways to practice their creeds, transfer their knowledge, and immortalize their faith. This could be done by erecting towering edifices laden with precious metals, sculpting magnificent statues in the image of a religious figure, or gathering around campfires to listen to shamans. Many of the featured images in these windows were paramount to various civilizations, providing them identity and purpose to move forward.

The Examined Life

Civilization enters into one of its most pivotal periods in this column, with the conveying of ancient wisdom of Greek philosophy, Chinese Taoism, and Indian medicine. Dominating the column is a recreation of *The School of Athens*, a fresco painted by the Renaissance artist Raphael to honor the Ancient Greeks (e.g. Plato, Aristotle, and Archimedes) who inspired the thinkers of his own time.

Instructed by Reason

The glories of classical antiquity are showcased in this column — from Socrates, who charged us to “know thyself,” to the orator Cicero’s addressing the Roman Senate, and to the Lighthouse of Alexandria’s lighting the way for ships approaching the Hellenistic city of learning. Although this was an age often defined by military conquest, the teacher’s pen could prove mightier than a soldier’s sword, as attested by the Roman poet Horace in his *Odes*: Exegi monumentum aere perennius (I have made a monument more lasting than bronze).



By Their Fruits

Roots of Knowledge reaches in this column what is sometimes called the Meridian of Time, due to the arrival of Jesus of Nazareth and the founding of Christianity. During this period the Roman Empire reached its furthest extent, connecting people through commerce and government, but the empire's vastness would also be a force behind its undoing. The background destructive scenes, such as the burning of the Library of Alexandria and the Fall of Rome, indicate that the future looks ominous for the pursuit of knowledge.

Ink Will Endure

Following the end of the Classical Age came the Dark Ages, an appellation given by the Renaissance scholar Petrarch. To capture this period, the setting is nighttime, but that is not to say that there are no luminaries at work — such as Bede the Venerable and Bruriah the Scribe. While this period is often labeled as a dark age in European history, it was a high time for the Byzantine Empire, as evidenced by Hagia Sophia. For others, this period was marked by the life of the prophet Muhammad and the subsequent Islamic Golden Age.

The Light Shineth in Darkness

The rising sun on the horizon in the central window signals a new dawn in humanity's fortunes, as civilization rises from the Dark Ages and advances to the High Middle Ages and the Renaissance. Thanks to tireless scribes, embroiderers, and monks, knowledge was kept alive during this period in the form of illuminated manuscripts and handmade tapestries, as depicted in the top window, while in the bottom panel Bi Sheng invents a boon to knowledge: moveable type.

Towering Ambitions

The Middle Ages was a time to try men's souls. Wars, epidemics, and disasters were characteristic of the medieval era, but in spite of such obstacles, civilization survived. Laboring tirelessly with the knowledge at hand, individuals such as Roger Bacon, Marco Polo, Dante Alighieri, Ibn al-Nafis, and Nicholas of Salerno gave of themselves to their fellow man, while such works as *The Tale of Genji*, *Diamond Sutra*, *The Canterbury Tales*, *One Thousand and One Nights*, and, of course, the *Magna Carta* improved humankind's station.



Rebirth and Ingenuity

During the 15th century, much of European civilization turned a corner, enjoying a movement known as the Renaissance, meaning "rebirth." Ancient knowledge and wisdom lost after the fall of Rome were rediscovered. Artistic geniuses — such as Filippo Brunelleschi, Leonardo da Vinci, and Albrecht Dürer — crafted masterpieces for the humanities. The seeds of the Reformation were planted by such figures as Johannes Gutenberg, Martin Luther, and Huldrych Zwingli. And in 1492 a New World was discovered in the West by explorers.

All the World's a Stage

Covering the span of the 16th century, this column reflects the dynamic days of the Age of Exploration. Capping the column is a fitting world map, regarded as the first modern atlas, while the windows beneath display a tropical harbor visited by vessels laden with goods and treasure from around the globe. The 1500s brought civilizations together in cultural clashes that shaped the fate of humanity forever.

Upon the Shoulders of Giants

The 17th century was an era of both bloody conflict and monumental revelation. Amid these turbulent events stepped forward such brave souls as Galileo, Isaac Newton, Gottfried Leibniz, William Bradford, Pocahontas, Miguel de Cervantes, René Descartes, and Thomas Hobbes, who imparted their wisdom to society, whether the world was prepared to hear it or not. Even in such trying times, philosopher Francis Bacon wrote reassuringly, "The monuments of wit survive the monuments of power" (*Essex's Devices*).

A Right to Dream

The Enlightenment of the 18th century defines this column, with the windows occupied by the great philosophers and statesmen who dared to challenge conventional thought and speak truth to established power. Receiving special attention is the American Revolution, a pivotal event in history that saw the birth of a new nation inspired by both the classical wisdom of the ancient world and the enlightenment philosophies of the contemporary era.



A Heart Untainted

The dawn of the modern era arrives in this column, as freedom movements shape nations and the last corners of the map are explored. The top window contains documents that defined the revolutions and formed the governments of Europe and the Americas at the turn of the 19th century. The lower windows portray the travelers and naturalists who adventured into the wilderness, studying nature's flora and fauna and learning from indigenous peoples.

Beauty is Truth, Truth Beauty

The English poet John Keats famously wrote in his 1819 poem *Ode on a Grecian Urn* that "Beauty is truth, truth beauty." Keats's poem reflects a spirited journey society was on during his lifetime. Following the Age of Reason and the pursuit of enlightened knowledge in the 18th century, intellectuals and artists began to emphasize the sentimental wisdom to be found in nature, history, and the individual in the early decades of the 19th century, through the movements of Romanticism and Transcendentalism.

Unbounded Nations

The Victorian art critic and philanthropist John Ruskin gave a charge to his contemporaries: "Therefore, when we build, let us think that we build forever. Let it not be for present delight, nor for present use alone. Let it be such work as our descendants will thank us for ... 'See! This our fathers did for us'" (*The Seven Lamps of Architecture*, 1849). When Ruskin wrote those words, the world was poised for change and progress unlike any other previous period of history. This progress is reflected in both the political documents and stately edifices featured in these windows.

On Wings of Passion

The Industrial Revolution of the late 1800s and very early 1900s, also called the Technological Revolution, oversaw a cavalcade of inventive breakthroughs and technological achievements. Ideas carried out by brilliant men and women gave light to darkness via electricity, provided the means to cover vast swaths of land in record time, erected buildings and monuments rising higher and higher into the heavens, and allowed humans to sever the harnesses of gravity and take flight with birds, thanks to the miracle of aviation.



W Nothin' But Blue Skies

The Mondrian painting at the top of this column, with historical figures encased inside, reflects the shifts being made in the arts and sciences during the early 20th century. Below, a street scene filled with automobiles and crowds surrounded by high-rises, train stations, and movie palaces testify to the mood of these dynamic decades.

A leading playwright of this kinetic era, George Bernard Shaw, wrote: "Imagination is the beginning of creation.

You imagine what you desire, you will what you imagine, and at last you create what you will" (*Back to Methuselah*).

W Worth the Fighting For

Through such events as the Great Depression, World War II, the Holocaust, the initial stages of the Atomic Age and the Cold War, and a series of other disasters — both manmade and natural — society was tested during the 1930s and '40s to its limits. In spite of these unprecedented trials, civilization was victorious and proved that the forces of freedom and truth are more powerful and enduring than the forces of tyranny and hatred.

X Breaking Barriers

The post-World War II years saw many dramatic changes — political, social, economic, artistic, and technological. Many of these changes are displayed in the top window, where a suburban home built for the nuclear family in the 1950s is strewn with objects that chronicle the passage of time through the subsequent 1960s and '70s. This theme is further demonstrated in the lower windows, as humankind continues to push the boundaries of the possible, whether by connecting the world through global communications or by venturing to the moon.

Y Places You'll Go

The windows in this column take the viewer into the modern era and a little bit beyond with projections of what is to come. The theme of education and the pursuit of knowledge continues to the end of *Roots of Knowledge*, as displayed by a cutting-edge classroom, luxurious buildings rising into the ether, high-speed transit systems below the seas, and a limitless galaxy beyond our Earth waiting to be explored.

