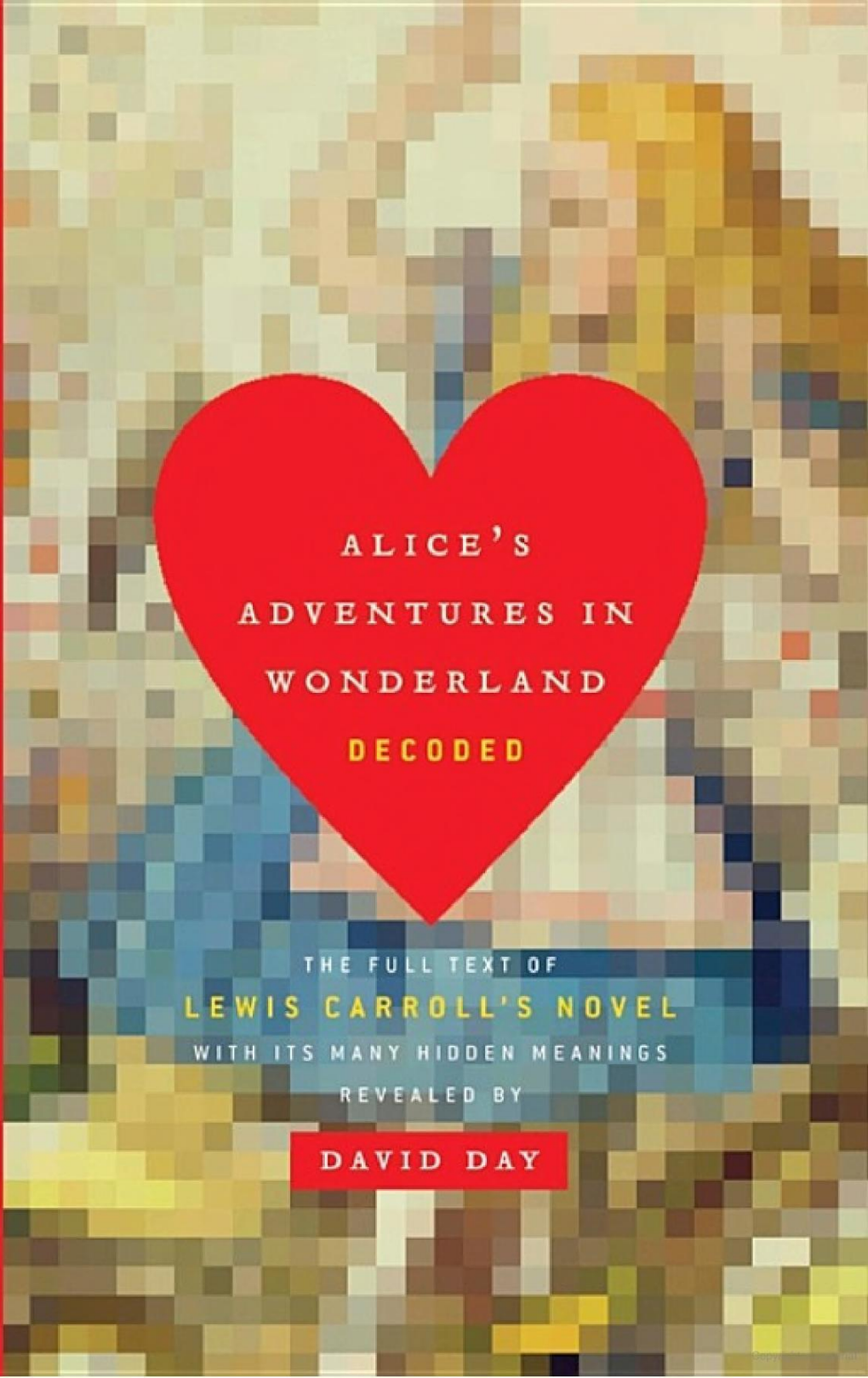

ALICE'S
ADVENTURES IN
WONDERLAND
DECODED
THE FULL TEXT OF
LEWIS CARROLL'S NOVEL
WITH ITS MANY HIDDEN MEANINGS
REVEALED BY
DAVID DAY

"… who will deny that Oxford, by her ineffable charm, keeps ever calling us nearer to the true goal of all of us, to the ideal, to perfection,—to beauty, in a word, which is only truth seen from another side?…" Matthew Arnold, *Essays in Criticism*, 1889.

Tom Gate, the main entrance to Christ Church, Oxford: The college was Dodgson's home for most of his life.

Introduction

I. WHAT'S IN A NAME? "Somehow it seems to fill my head with ideas only I don't know what they are!" Alice might very well have been describing any reader's first encounter with her adventures. Something peculiar and quite magical is happening in the word spell that is *Wonderland*.

No one had written anything quite like *Alice's Adventures in Wonderland* before, and—save for its sequel, *Through the Looking-Glass*—no one has written anything like it since. It is a child's adventure set in a fantastic imaginary world that is explored by a brave little girl armed only with her own common sense and an all-consuming curiosity. It is a book that can and should be read for pleasure by the young, but looking at the author's unique use of language, it is remarkable that children can comprehend it at all. And yet somehow they do, and we do. Furthermore, it evokes in all its readers a tantalizing sense that there is something else to be revealed just under the surface of this compelling tale.

Charles Lutwidge Dodgson was a British mathematician, logician, clergyman and photographer. A resident Oxford don for almost half a century, he was famously known as Lewis Carroll, the author of two great children's classics.

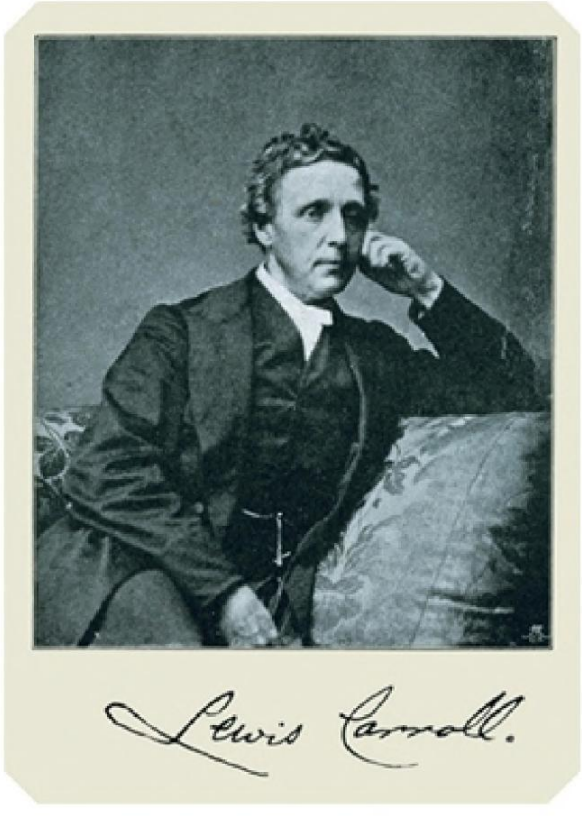
Alice's adventures have become part of popular culture worldwide, and have been translated into virtually every language. If these adventures were just flights of fancy, or simply "nonsense" as Dodgson/Carroll liked to call them, why, you might ask, are they so often quoted by physicists, philosophers, mathematicians, political scientists, historians,

psychiatrists, logicians, poets, filmmakers, novelists and computer geeks?

Wonderland has an undeniably strange atmosphere, in part because it is largely inhabited by literary tropes—that is, imaginary beings with no existence except as figures of speech or as characters from children's rhymes, fairy tales or myths. These are creatures such as the Cheshire Cat, the Mad Hatter, the March Hare, the Mock Turtle, the Gryphon and the King and Queen of Hearts. In *Wonderland*, real things like hedgehogs and flamingos are treated as objects, while objects like playing cards and numbers behave like real things.

Also, as many critics have pointed out, *Wonderland* is a complex and sophisticated construct full of literary allusions, parodies and variations of other fairy tales, rhymes and songs: Robert Southey's *Goldilocks* and "The Old Man's Comforts," Goethe's "Sorcerer's Apprentice," Aesop's "Belling the Cat" and "The Tortoise and the Hare," Isaac Watts's "How Doth the Little Bee" and "The Sluggard," James Sayles's "Star of Evening," William Mee's "Alice Gray," Mary Howitt's "The Spider and the Fly" and Charles Lamb's "The King and Queen of Hearts."

In all things, Dodgson felt the need for disguises of one form or another. Just as he always insisted on separating the life of the mathematician Charles Dodgson from that of the author Lewis Carroll, so was he careful to visually differentiate the real dark-haired Alice Liddell from his fictional blonde "dream-child moving through the land / Of wonders wild and new."



Charles Dodgson's many pseudonyms included Edgar Cuthwellis and Mad Mathesis.

Insight into the mind of Charles Lutwidge Dodgson can be gained by looking at a few of his numerous pseudonyms, such as Mad Mathesis, Balbus, Dares, Edgar Cuthwellis and Edgar U. C. Westhill. The first of these obviously refers to his vocation as a mathematician, the second is a classical allusion to the Roman Balbus the Stutterer (an affliction shared by Dodgson), the third relates to his birthplace of Daresbury and the final two are anagrams of his first two names, Charles Lutwidge.

These are simple enough, but Dodgson also invented many other fairly obscure variations of his name or initials. One typical example was Mr. De Ciel—pronounced "Mr. D. C.

L."—a scrambling of his initials, C. L. D. Elsewhere, he used the signature "Sea l'd," pronounced "sealed" or "C. L. D." And even more obscurely, on one occasion Dodgson used as a pen name the initials R. W. G.: the fourth letter in each of his names.

And then of course there is the Reverend Dodgson's celebrated pen name, Lewis Carroll. As most Carroll fans know, Dodgson began by translating his first two given names, Charles Lutwidge, into Latin, to arrive at Carolus Ludovicus. He then reversed the order of those names and translated them back into English, to arrive at "Lewis Carroll."

This much we know from Dodgson's own correspondence. Yet there is another possible level of interpretation, consistent with this author's obsession with multilingual wordplay. As the classically educated Charles Dodgson knew full well, *ludo* is Latin for "I play" and *carol* is both English and Old French for "a joyous song"—so "Lewis Carroll" could have the wonderfully appropriate meaning "I play a joyous song."

From an early age, Charles Dodgson wrote stories, plays, fairy tales, poems, riddles and games. He saw in literature a wide variety of types of entertainment that children loved; that would benefit them by keeping boredom, despair and temptation at bay; and that would—as he strove to do (in a manner unlike any other children's author) in his eventual writing of the Alice books—subliminally educate them.

In the mid-Victorian era, beyond the occasional visit to the music hall or theatre, it was up to every middle-class family to find a means to entertain themselves most evenings. Every child was required to acquire at least one party piece: the recitation of a song, poem or dramatic monologue. Dodgson organized hundreds of theatrical evenings, party games and

events for, and with, children. The eldest son and third child of a family of seven sisters and four brothers, Dodgson took on this role in the family home in Daresbury, Cheshire. He also wrote plays, poems and songs for the amusement of his siblings. And later, as a bachelor don at Christ Church, he continued to find great pleasure in the organizing of such events with the children of leading members of Oxford society. Consequently, *Wonderland* is full of games, charades, poems, jokes, songs, conundrums, riddles and puzzles.

Charles Dodgson had systems for just about everything. If an activity was without a clear set of rules or methodology, he seems to have been compelled to supply one. He created, for example, a cross-indexed and synopsized registration system for his personal correspondence. Over a thirty-five-year period, this personal register recorded 98,721 letters written, received, acknowledged and answered. Nor was this all by any means. Over his lifetime, Dodgson gathered and tabulated a multitude of other letter registers, diaries, accounting systems, journals, accounts, numerical tables and minutely detailed records.

Dodgson and his alter ego also created scores of original games. Although he never played at cards until he was in his early twenties, Dodgson, only nine days after playing his first game, decided he was fully qualified to invent new ones. He created variations of whist and cribbage, and several entirely original card games, such as Court Circular and Ways and Means. As well, he invented numerous other games not involving cards: Lanrick, Croquet Castles, Circular Billiards, Doublets, Syzygies, Mischmasch, The Game of Logic and one very like what became Scrabble.

If rules and systems were already in place, Dodgson seemed compelled to improve upon them. He reinvented the rules and scoring systems for backgammon, croquet, the postal system, railway timetables, lawn tennis, draughts, chess, charades, library cataloguing, wine storage, letter-

writing etiquette, long division, calendars, money orders, picture mounting, table plans, bet placing, scales for measuring drinks and devices for writing in the dark.

Similarly, when he found himself involved in college elections and university committees, he became obsessed with the mathematics of voting. The result was his publication of a number of complex new systems based on what we now know as proportional representation.

Dodgson's childhood tutor remembered him as an extremely advanced mathematics student who appeared to suffer physical pain if he could not resolve a problem. This same tutor wrote: "He is capable of acquirements and knowledge far beyond his years, while his reason is so clear and so jealous of error, that he will not rest satisfied without a most exact solution of whatever appears to him obscure."

Dodgson spent his entire life attempting to categorize and systematize the world around him. So when, as Lewis Carroll, he came to create his own world of *Wonderland*, there can be little doubt that its laws and structure were systematically organized and completely thought out in every minute detail.

Dodgson "when I'm lecturing": From a letter of 1868.

II. A PORTMANTEAU MIND The popular view that *Wonderland* is simply a charming fairy tale full of frivolous nonsense that was made up on a summer's day is one that Lewis Carroll was happy to foster. Just as a magician would not wish to reveal the years of hard work and machinery behind some grand illusion, the author Lewis Carroll—along with Charles Dodgson the amateur magician—did not want his fairy tale to appear as anything less than an effortless work of pure imagination.

One of the test audiences for *Alice's Adventures Under Ground*: Dodgson with the wife and children of George MacDonald, fantasy author and Christian minister.

According to the version of events often given by the author, the fairy tale was "extemporized on the spot" at the urging of three little sisters that he and another Oxford divinity student took on a boating expedition on a branch of the river Thames on July 4, 1862. That evening, at the insistence of one of the children, the eponymous Alice, Dodgson promised to write the tale down, so it might be

shared with others.

In one account of the composition of this fairy tale, the author suggests that *Wonderland* was but one of scores of fairy tales that he orally composed for these and other children. "Yet none of these many tales got written down: they lived and died, like summer midges, each in its own golden afternoon." No doubt Dodgson/Carroll told children many clever fairy tales on scores of afternoon outings, but it is absurd to claim *Wonderland* was an oral composition entirely made up and recited in a single afternoon.

In fact, aspects of the *Wonderland* story were composed long before. Anecdotal evidence suggests that Dodgson was telling a version of the down-the-rabbit-hole tale to children as early as 1854. And certainly, we know a version of the Knave of Hearts's letter-poem was published in 1855, ten years before the publication of *Wonderland.*

Even if we take the author's word for it, and accept the date of July 4, 1862, as the inspirational first day of composition, Dodgson's own diaries refute the legend of *Wonderland*'s instantaneous composition. Some five weeks after the seminal voyage, Charles Dodgson was struggling with its composition, and impatiently complained: "had to go on with my interminable fairy-tale of 'Alice's Adventures.' " Another five weeks pass before his diary confesses that he once again "Began writing the fairy-tale for Alice, which I told them July 4, going to Godstow—I hope to finish it by Xmas."

A full seven months after the boat trip, Dodgson's diary triumphantly reports: "*Alice's Adventures Under Ground*…is now finished (as to the text) though the pictures are not yet nearly done." However, the text of the story that we know as *Alice's Adventures in Wonderland* was not yet nearly done at all. It was not even half done.

Alice's Adventures Under Ground was simply the author's earliest version, just four chapters and 12,715 words in

length. This was a meagre output for seven months' labour, if we are to believe that Dodgson was simply scribbling down a written version of an orally composed story.

Even more significantly, this early version of the story did not contain many of *Wonderland*'s most complex and memorable characters and incidents. There was no Ugly Duchess, Cook or Cheshire Cat; no Mad Hatter, March Hare or Dormouse. There was no Duchess's kitchen, Mad Tea-Party, Mock Turtle's story, Lobster Quadrille or Trial of the Knave of Hearts.

All of these were written in over the following two years. The full text of *Wonderland* was 26,211 words long. Then, Dodgson commissioned and carefully oversaw the creation of forty-two original illustrations. Its first appearance in the form of a complete published book was on July 4, 1865, exactly three years after the seminal river voyage.

Alice's Adventures in Wonderland over the last century and a half has been subjected to analysis by scores of scholars from a multitude of disciplines. The difficulty is that each seemingly rational insight into *Wonderland* is contradicted by the revelations of previous or subsequent analysis.

Yet the key to the Alice books may be discovered in their curious manipulation of language and layers of meaning. Humpty Dumpty in *Through the Looking-Glass* inadvertently provides us with a useful word for describing the machinations of his creator's mind. He says of words such as *slithy*, a combination of *lithe* and *slimy*, that it is like a portmanteau, with "two meanings packed up into one word." The portmanteau was a Victorian folding suitcase that could be packed in layers. It is an excellent metaphor for this author: the man with the portmanteau mind.

The mystery of *Wonderland* is like the plot of Agatha Christie's *Murder on the Orient Express*. Inspector Hercule

Poirot's investigation is hampered by too many suspects and too many clues. The victim died as a result of a dozen deep knife wounds to the heart and lungs. All twelve passengers on the train had motive, opportunity and access both to the victim and to the murder weapon, but in the end everyone also proved to have an unshakable alibi provided by one or more of the other suspects. It seemed impossible that any one of the twelve could have committed the crime. Yet, as no one else was on the train, it seemed impossible that one of the twelve did not.

Then the inspector has a flash of inspiration: if it was impossible for any one of the twelve suspects to have committed the murder, then the only other possibility is that the murder was committed by all twelve suspects. And so it proved to be.

In *Wonderland*, a similar conspiracy and multiple systems of equal validity are at work. The man with the portmanteau mind has created a multi-layered world inhabited by characters with multiple identities.

In his preface to *Through the Looking-Glass*, Carroll explains that there are two initial levels to the story: the fairy tale and the chess game (in which each chess piece is matched up with a character in the tale). Once within his Looking-Glass world, he has his Red Queen inform us that she is aware of five more levels of existence. The Red Queen tells Alice that she lives in a "poor thin way" by living only one day at a time, and how in the Queen's country, rather, they live "five nights together" where it is "five times as warm, and five times as cold—just as I'm five times as rich as you are, *and* five times as clever!"

In his introduction to his later fairy novel, *Sylvie and Bruno Concluded*, Lewis Carroll explains: "It may interest some of my Readers to know the theory on which this story is constructed.... I have supposed a Human being to be capable of various psychical states, with varying degrees of

consciousness." He provides the reader with a listing of five levels of existence, and "supposing that Fairies really existed; and that they were sometimes visible to us, and we to them," he then presents an indexed chart identifying which level each of his characters assumes in each chapter—as well as which identity each character assumes on each of these levels.

The characters in *Alice's Adventures in Wonderland* also have multiple identities that may operate on different levels of existence. And so we have a conspiracy of the entire cast of *Wonderland* characters in this assumption of multiple identities.

All these levels stem directly from Dodgson's studies and personal interests. He graduated from Oxford with a First in mathematics, a Second in classics and a Third in philosophy and history. Added to this, there was his lifelong fascination with spiritualism and his immense interest in and enjoyment of music both sacred and profane. Each of these themes is to be discovered in this multi-layered story.

The primary level of the fairy tale provides the framework for all other levels: historic, philosophic, mythological, theosophical and mathematical interpretations are all possible. These and other disciplines all make their contributions, and many of these are discussed in this book's extensive annotations, notes and running commentaries on each chapter.

Alice's Adventures in Wonderland is—among all the many things it can be viewed as—a time capsule from a time and place that was at a historic turning point in human intellectual history: Oxford University in the Victorian age. The novel, it emerges, is a who's who of Oxford at the height of its power and influence in the world.

Consequently, the commentary of *Alice's Adventures in Wonderland Decoded* primarily concerns itself with the life and times of Charles Dodgson, Alice Liddell and the other

real mid-Victorian historical figures who are the basis for the characters and creatures that inhabit Wonderland.

III. WONDER WORDS AND RIDDLES Today, most children have some experience of Carroll's kind of storytelling through playing computer games. On entering an underground labyrinth, Alice is given the choice of golden keys, magic mushrooms, cakes and potions that allow her to change her size or shape or to gain entry into other regions. She encounters strange and wonderful creatures: sometimes hostile, sometimes friendly.

Riddles and hidden clues are to be found everywhere in this fairy tale. Like a modern gamer at her computer, Alice must make critical choices to find her way through this maze. She must endure adventures and trials before discovering the means of triumphing over the tyrannical Queen of Hearts and safely returning to her waking life.

It is only in *Wonderland*'s triggering mechanisms that this fairy-tale game varies superficially from contemporary multi-levelled computer games. Language is the key to *Wonderland*'s mysteries. The facility and flexibility of language informs all literature, of course. But nobody has ever used language in quite the way Lewis Carroll did in his Alice books. Carroll makes the English language—and the story he is telling—operate on many levels simultaneously. In *Wonderland*, icons in the form of key characters or images, puns, homophones and allusions serve as clues and signposts to indicate the various levels of Alice's adventures.

Take, for example, the meaning of the word *mean*: signify, intend, clarify, define, stingy, poor and nasty. In his satire *The Vision of the Three T's*, Carroll absurdly stretches out the meaning of *mean*: "You must know, then, that there be three Means treated of in Mathematics. For there is the Arithmetic Mean, the Geometric and the Harmonic. And note further, that a Man is that which falleth between two magnitudes....

and is in truth the Non-harmonic Mean, the Mean Absolute. But that the Mean, or Middle, is ever the safer course.…" etc.

Elsewhere, Carroll suggests that if we have the means to study time, we will soon discover a day in mean-time is quite different from a day in mean solar time, or a day in terms of a mean sun. Then, too, one might suggest it is no mean feat to find any means to live within one's means … ad infinitum.

Humpty Dumpty might have been describing Carroll's approach when he says, "When I use a word, it means just what I choose it to mean—neither more nor less." Or as Carroll himself said in a letter to a friend, writing about his stance as a logician: "I shall take the line 'any writer may mean exactly what he pleases by a phrase so long as he explains it beforehand.' "

Except in *Wonderland*, the author *doesn't* explain it beforehand. And poor Alice's problem is that most of the entities she encounters speak a formal language that is logical from the perspective of a philosopher or a mathematician, say, but nonsense in everyday ordinary speech. This is particularly true on the mathematical level.

At the tea party, for instance, Alice is bewildered by the bizarre wordplay of the Mad Hatter and the March Hare, and complains: "The Hatter's remark seemed to her to have no sort of meaning in it, and yet it was certainly English." She recognizes that they are speaking in logically structured English sentences, but is also correct in concluding that the conversation has no sort of meaning—or perhaps no more meaning than an algebraic expression has in ordinary speech.

Similarly, when the King of Hearts in the trial ponders " 'Important—unimportant—unimportant—important—' as if he were trying which word sounded the best," the regent is not being frivolous. He is quite properly conducting a trial to test each word for "soundness" (in what mathematicians call a "well-formed formula" or "wff"). The King's judgment is based on the logically "sound" structure of a sentence or

formula, not on its meaning in ordinary speech.

Formal languages and rules were developed by such specialists as mathematicians, physicists and computer scientists in order to eliminate the ambiguities inherent in natural languages like English, Latin and Greek. Carroll has reversed this process by employing formal languages and rules in the context of everyday English (and sometimes Latin, Greek and French) to create more ambiguities, thereby allowing a vast expansion of wordplay.

Carroll has stretched to its limits the power of language to communicate, and it is astonishing that the Alice fairy tales do not collapse under the weight of all these parallel meanings. Rather, the tales actually make sense—albeit comic nonsense. In fact, no real nonsense is spoken by any character: each is making sense on a different level by using everyday words with different definitions. *Alice's Adventures in Wonderland* is like a symphony comprising many separate tunes, each one fully independent and coherent in its own right, and all combining to make a masterpiece.

IV. THE REASON WHY But why? Why would anybody write a children's story in a code that is almost impenetrable even to adults? Why in God's name would anyone want to inflict complex theories of mathematics, theosophy, politics and philosophy on an unsuspecting child?

Well, if you were the Reverend Charles Dodgson, you would do it in God's name. I suppose these days we would call it subliminal advertising for Christ. The Reverend Dodgson was a devout High Anglican Churchman. The education and spiritual enlightenment of children was one of the most hotly debated political and religious issues of the nineteenth century, and an obsession of Dodgson himself.

Time and again he spoke and wrote about the church's insensitivity to children. He deplored how they were forced to endure hours of boredom in services that only alienated

them from the beauty and wonder of worship. Dodgson was a fan of the theatre, much to the displeasure and embarrassment of his fellow clergy, including his own father. But his rebuttal was that the theatre at its best was doing what the church was failing to do: engaging and enlightening the young.

What Charles Dodgson loved about the theatre was, first, its capacity to communicate spiritual and emotional realities and, second, its capacity "to convey a higher truth straight to the soul, bypassing the intellect." This is exactly what Lewis Carroll was attempting with the Alice stories.

Wonderland is a kind of memory palace constructed exactly as a cathedral is constructed: as an analog of the world and all its secrets. The magnificence of High Mass in a cathedral will fill the worshipper with wonder, but its great spiritual secrets are hidden in the sacred geometry of its architecture, the deep philosophy of its language and the mathematical complexities of its music.

For Alice, his wonder child, Lewis Carroll created an enthralling secular equivalent to High Mass in a specially constructed temple of wisdom. Alice's journey through Wonderland was based on the classical myths and ancient mystery cults that enacted a maiden's descent into the underworld. It came complete with initiation rites, baptisms, processions, catechisms, epiphanies and dialogues with saints, mystics and sages.

Christ Church Library: Dodgson first saw Alice Liddell through the window overlooking the Deanery garden.

Dodgson lived in rooms in Tom Quad, Oxford's largest and grandest quadrangle: Its Rosicrucian and Freemason influences are reflected in *Wonderland*.

With *Wonderland*, Lewis Carroll gave Alice Liddell the great gift of a classical education. It was delivered secretly and subliminally, but in the Victorian age, it was a gift no girl would have been permitted to receive in any other way.

Not that Carroll was always entirely secretive about the pedagogical subtext of his stories—especially when it came to mathematics. Fifteen years after the publication of *Wonderland*, he began publishing a series of stories (described as Knots) under the collective title *A Tangled Tale* in a magazine called *The Monthly Packet*. In the preface, Carroll was uncharacteristically revealing about the subtext: "The writer's intention was to embody in each Knot (like medicine so dexterously, but ineffectually, concealed in the jam of our early childhood) one or more mathematical questions—in Arithmetic, Algebra, or Geometry, as the case might be—for the amusement, and possible edification, of the fair readers of that Magazine."

Carroll's belief in the mystical significance and subliminal power of symbols and language was not a personal quirk; rather, it was fundamental to his religion. The High Anglican Church (like the Catholic and Orthodox faiths) believed that the souls and spirits of its followers should be guided toward the truth of religion not by logical mental forces but by the symbolic and mystical forces of sacred language, ritual and images—ideas that Carl Jung would later confirm in his own psychological studies in *Man and His Symbols*.

He noted, too, that the beauty of choral music extended its healing influence on the faithful, even though its composition was based on a complex mathematical system of harmonics that was far beyond their understanding, and that church architecture lifted the spirits not just of the elite within the priesthood who understood the philosophical significance of the sacred geometry behind it. And by many it was also

believed that when High Mass was delivered in Latin, the power behind the words reached the soul of even someone ignorant of the language.

A founding tenet of the Anglican Church was that its esoteric wisdom could only be entrusted to an enlightened priesthood. The average worshipper could not possibly be expected to understand. The best and the brightest of Churchmen took this stance, not because they believed that God's creations were devoid of logical forces and reason—many, Charles Dodgson among them, believed absolutely that the logical constructs of sacred geometry, mathematics and harmonics were God's plan built into every material thing. But they believed—with some justification—that all these theories would confuse the general population and result in a sea of bafflement and doubt.

It has been said of Dante Alighieri's *The Divine Comedy*, another famous underground adventure: "Well-nigh all the encyclopedic erudition of the Middle Ages was forged and welded, in the white heat of an indomitable will, into [its] steel-knit structure." Although Lewis Carroll's descent into his underworld makes for lighter reading than Dante's, something similar might be said of his creation of *Wonderland*. Carroll compresses into his fairy tale the entire syllabus of a classical education of his time, and the book is a time capsule of the intellectual history of the Victorian Age.

The *Wonderland* years marked the turning point at which the ancient classical education system was gradually coming to an end and the university as we know it today was born. And as unfit as it was to survive intact in the modern world, it must be said there was much to admire in the ancient tradition of a classical education and its preservation of the deep roots of Western civilization through the Latin and Greek languages. It was a pan-European, Latin-speaking culture that attempted to reclaim the wisdom and ideals of

ancients through the efforts of the medieval Scholastics, the Renaissance Neoplatonists and the Enlightenment philosophers. It was a belief in an enlightened classical system that preceded academia's modern age that resulted in the specialization and fragmentation of the arts and sciences. It was a belief that all human knowledge could be encompassed in a single aesthetically beautiful system.

Matthew Arnold, the Oxford Professor of Poetry during the *Wonderland* years, was the first to deliver his lectures in English instead of Latin and was a major force on the side of liberal reform, but he also gave full expression to the almost sacred trust embodied in the conservative classical tradition of Oxford:

> Beautiful city!—so venerable, so lovely, so unravaged by the fierce intellectual life of our century, so serene!… Steeped in sentiment as she lies, spreading her gardens to the moonlight, and whispering from her towers the last enchantments of the Middle Age, who will deny that Oxford, by her ineffable charm, keeps ever calling us nearer to the true goal of all of us, to the ideal, to perfection,—to beauty, in a word, which is only truth seen from another side?—nearer, perhaps, than all the science of Tübingen. Adorable dreamer, whose heart has been so romantic! who hast given thyself so prodigally, given thyself to sides and to heroes not mine, only never to the Philistines! home of lost causes, and forsaken beliefs, and unpopular names, and impossible loyalties!

This was certainly the Oxford that the Reverend Charles Dodgson and his literary persona Lewis Carroll stubbornly embraced. Dodgson/Carroll wished to preserve the elite tradition of Oxford at all costs. But in the rapidly changing industrial world of the vastly expanding British

Empire and the unprecedented expansion of science and all fields of human knowledge, this was clearly impossible.

Alice's Adventures in Wonderland could only have been written by a multi-disciplined mind schooled in this ancient tradition, and one who believed education was the most important driving force in the creation of a great civilization. And, wrong-headed as history has proved Carroll to be, in his *Wonderland* we have a literary monument that allows us to see what has been lost and what has been gained.

There were many fine things to admire in a classical education, and there was great beauty to be found even in its obsolescence. Like some kind of bejewelled mechanical singing nightingale in an age of the invention of the gramophone, *Alice's Adventures in Wonderland* is a demonstration of the mastery of brilliant precision and intricate beauty without any real category or obvious purpose—something aesthetic theorists might argue was the true test of a civilization's highest art forms.

Christ Church Meadow: An idyllic spot for picking flowers, drifting into a dream and falling down an infinitely deep rabbit-hole.

“Three eager faces, hungry for news of fairy-land, and who would not be said ‘nay’ to: from whose lips ‘Tell us a story, please,’ had all the stern immutablity of Fate!”

Charles Dodgson describing Alice Liddell and her sisters.

Part One: Alice's Adventures in Wonderland

Prelude Poem: All in the Golden Afternoon

Ah, cruel Three! In such an hour,
Beneath such dreamy weather,
To beg a tale of breath too weak
To stir the tiniest feather!
Yet what can one poor voice avail
Against three tongues together?

Dream child and aristocrat: Alice Liddell, photographed by Dodgson.

THREE FATAL SISTERS From the beginning, it was apparent that just beneath the fairy-tale surface of *Alice's Adventures in Wonderland*, there was a strong element of autobiography and social satire. It was obvious that many of the characters and places clearly had real-life counterparts in mid-Victorian Oxford. Some Lewis Carroll was happy to identify; others he was at pains to keep secret.

As Carroll always acknowledged, the real Alice was Alice Liddell (1852–1934), daughter of Lorina Hanna Liddell (née Reeve) and Henry George Liddell, dean of Christ Church college, Oxford. Oxford in that era was at the very core of Victorian Britain's academic, ecclesiastic and political life, and most of the characters in *Wonderland* are satirical caricatures of some of the most significant figures of Victorian society. This, Alice Liddell would have known. Indeed, as the daughter of the most influential educator of the age, she knew nearly all of these luminaries personally.

In his 1887 article " 'Alice' on the Stage," Carroll describes his "dream-Alice" as being loving and gentle and "courteous —courteous to all, high and low, grand or grotesque, King or Caterpillar, even though she were herself a King's daughter."

Alice Liddell may not have been "a King's daughter," but her family was certainly aristocracy. The Liddells were royal favourites, guests at Buckingham Palace and hosts of Queen Victoria and the Prince and Princess of Wales. Alice's father was the nephew of the baron of Ravensworth and first cousin of the earl of Strathmore and Kinghorne. And she certainly lived like a princess. Her home in Christ Church's Deanery had served as King Charles's palace during the English Civil War.

"The Dean, Chapter and Students of the Cathedral of Christ Church in Oxford of the Foundation of King Henry the Eighth," as it was formally entitled, holds a special place in

the royal history of Britain and is the only college that is also a cathedral—and under the authority of the dean. Christ Church was one of the grandest and wealthiest colleges in Britain and certainly the most influential, producing more British prime ministers than all forty-five other Oxford colleges combined. Henry Liddell had been approved as dean by Queen Victoria and the prime minister, Lord Palmerston. His qualifications were sound: not only was he the foremost classical Greek scholar of his day and co-author of the still-authoritative *A Greek-English Lexicon*, for a decade Liddell had been the highly praised headmaster of Britain's most prestigious school at Westminster. He had been Prince Albert's chaplain and was later to become mentor to his and Victoria's sons, Prince Edward (the future King Edward VII) and Prince Leopold, while each was an Oxford undergraduate.

All in the golden afternoon
Full leisurely we glide;
For both our oars, with little skill,
By little hands are plied,
While little hands make vain pretence
Our wanderings to guide.

Ah, cruel Three! In such an hour,
Beneath such dreamy weather,
To beg a tale of breath too weak
To stir the tiniest feather!
Yet what can one poor voice avail
Against three tongues together?

The only college that is also a cathedral: J.M.W. Turner's circa 1795 painting of Christ Church, with the Deanery, Alice's childhood home, in the foreground.

As dean, Liddell was the great architect of educational reform, working to overturn medieval statutes and rules that had been unchanged at Oxford for four hundred years. Medieval classics-based universities set up to educate a small upper-class elite could not keep up with the vast avalanche of new scientific and technological knowledge required for the running of Britain's empire; nor could it keep up with the demands of a modern industrial-age economy. No one did more to usher in the modern secular university system in which, in theory at least, academic achievement counted more than social standing.

The Isis at Folly Bridge: Where, as the prelude poem descibes, two young college dons in straw hats and white boating suits rowed upriver with three pretty Liddell girls.

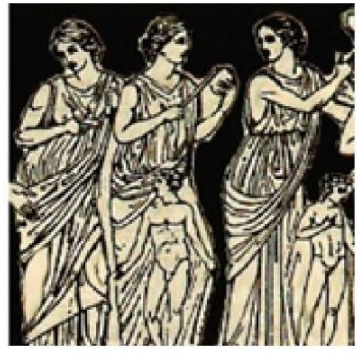
In the midst of this wave of liberal reform was Charles Lutwidge Dodgson, a junior mathematics instructor. Not yet the famous author Lewis Carroll, Dodgson's highest post at the time of Liddell's appointment was as the Christ Church sub-librarian; Alice's father was his academic superior. His ecclesiastic superior was Samuel Wilberforce, bishop of Oxford. While Dean Liddell was a liberal and a prime mover in reforming the old system of privilege and favour, Bishop Wilberforce was a ferocious opponent of reform—and therefore of the dean.

Charles Dodgson, too, was a staunch conservative who persistently conspired against virtually every one of the liberal progressive acts initiated by Dean Liddell. As Lewis Carroll—and through *Alice's Adventures in Wonderland*—he has his heroine unwittingly engaged in a satire about most of the major social and political issues of his time: Christian socialism, theosophy, spiritualism, Darwinian evolution and liberal educational reform.

Three Fates (and a brother): Alice, Lorina, Harry and Edith.

And ever, as the story drained
The wells of fancy dry,
And faintly strove that weary one
To put the subject by,
"The rest next time—" "It *is* next time!"
The happy voices cry.

Thus grew the tale of Wonderland:
Thus slowly, one by one,
Its quaint events were hammered out—
And now the tale is done,
And home we steer, a merry crew,
Beneath the setting sun.



The music of time: The Liddell sisters and "Memory's mystic band," the three Fates.

In the prelude poem, he attributes the personalities and powers of each of the Fates to a Liddell sister. He gives each of his "cruel Three" a name. "Imperious" Prima was the oldest sister, the thirteen-year-old Lorina; "gentler" Secunda was Alice, then aged ten; and Tertia was the eight-year-old Edith. The poem states that Prima orders the story "to begin," Secunda determines its contents, and the petulant Tertia "interrupts" as she pleases.

The girls thus mirror the acts of each of the Fates in classical literature. As Robert Graves states in *The Greek Myths*: "there are three conjoined Fates, robed in white.... Clotho, Lachesis, and Atropos. Of these, Atropos is the smallest in stature, but the most terrible." He also explains their roles: "the thread of life, spun on Clotho's spindle, and measured by the rod of Lachesis, is ... snipped by Atropos' shears." The Fates were portrayed sometimes as three young maidens (as Carroll suggests), other times as maiden, woman and crone. They oversee what is, what was and what will be —the birth, life and death of mortals, nations and gods.

Alice! A childish story take,
And, with a gentle hand
Lay it where Childhood's dreams are twined

In Memory's mystic band,
Like pilgrim's wither'd wreath of flowers
Pluck'd in a far-off land.

As Carroll suggests in this poem, these three sisters are also his inspirational muses (you can see this in his photography as well as in his writing) at whose command his dry "wells of fancy" are constantly replenished. And also when Alice falls down her rabbit-hole, we are told she "found herself falling down a very deep well."

In the Greek underworld, there were two wells. One was known as Lethe, or the Well of Forgetting; the second was Mnemosyne, or the Well of Memory. The goddess Mnemosyne was the mother of the Muses, and linked to the three little (Liddell) sisters as Carroll's muses and the source of his inspiration. In the poem, with his usual verbal sleight of hand, Carroll specifically and collectively identifies the sisters with the punning phrase "Memory's mystic band."

VICTORIAN CLASSICAL TRADITION Classical Greek and Roman literature had enormous significance in the cultural and intellectual life of Victorian England. And nowhere was this truer than at Oxford. In 1855, when Charles Dodgson was appointed lecturer at Christ Church, all university business and financial transactions were still conducted in Latin. Every student learned Latin and Greek and the architecture of virtually every college building was based on classical models, as were cultural institutions and civic organizations far beyond the university.

At Oxford, scores of student societies carried the names of classical figures, and it was common for students to assign the names of Greek gods and heroes to their tutors and professors—both as epithets of praise

and to mock. These names frequently appeared in anonymous satires and squibs filled with classical allusions that attacked figures of authority at the university. Dodgson himself was one of the most notorious authors of these rather scurrilous publications. So, in tandem with his satiric assignment of real-life Oxford identities to each of his *Wonderland* characters, it was natural for him to provide many of them with classical Greek identities as well.

Proserpine (Persephone), 1874, by Dante Gabriel Rossetti.

THE WHITE RABBIT Lewis Carroll's fairy tale about a young girl's descent underground is literally the oldest story in the world. Originally entitled *Alice's Adventures Under Ground*, Carroll's fairy tale is based on the story of the Mesopotamian goddess Inanna's descent into the underworld realm of the dead, the oldest recorded myth in world literature and one that is retold in the Babylonian myth of Ishtar and the Egyptian myth of Isis.

The story is best known as that of Persephone, the Greek goddess of spring whose descent into the underworld was one of the most popular mythological motifs in art and literature throughout Carroll's lifetime, indeed the entire Victorian age.

The myth of Persephone begins in an idyllic meadow with her older sister, the earth goddess Demeter, who—in the scandalous way of gods and goddesses—is also her mother. Persephone is idly daydreaming and picking flowers when she falls down an infinitely deep fissure into a subterranean world. She experiences many adventures and trials, but at last escapes and returns to her sister Demeter's arms.

The frame story of *Alice's Adventures*—in both the *Under Ground* and *Wonderland* versions—mirrors Persephone's journey. In Alice's case, she is sitting in an idyllic meadow with her (rather motherly) older sister, Lorina, and—while idly daydreaming and considering the picking of flowers—drifts into a dream wherein she falls down an infinitely deep hole into a subterranean world. Like Persephone, she experiences many adventures and trials, but finally escapes from the underground world and returns to the arms of her sister Lorina.

Mysteries of the Goddess: Alice as "Queen of the May."

But what of the White Rabbit? As everyone knows, the fairy tale properly begins with a little girl named Alice chasing a White Rabbit down a rabbit-hole into a strange and mysterious Wonderland deep beneath the earth. Why would Lewis Carroll choose a white rabbit as Alice's guide into this underground world?

DOWN THE RABBIT-HOLE.

So Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into the book her sister was reading, but it had no pictures or conversations in it, "and what is the use of a book," thought Alice "without pictures or conversation?"

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes

ran close by her.

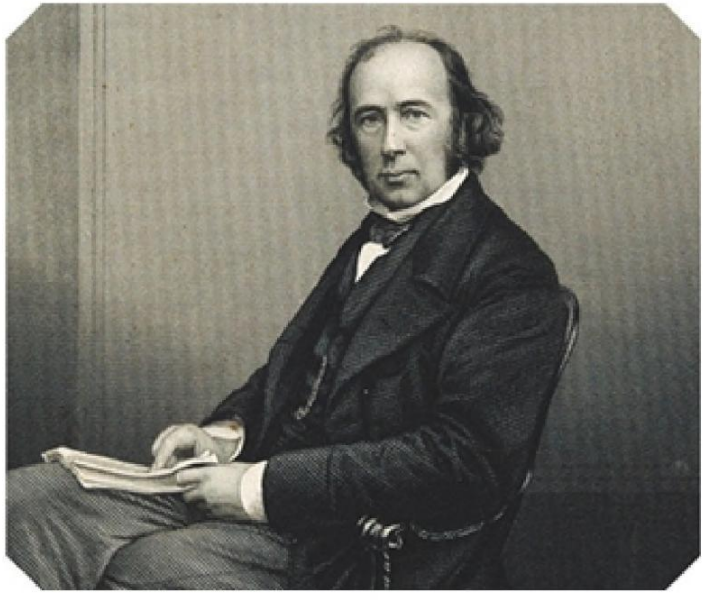
In classical times, pilgrims initiated into the Mysteries of the Goddess, dressed in white and wearing wreaths of flowers, entered her temple sanctuary at Eleusis where they re-enacted the descent and eventual celebrated return. Carroll alludes to this ancient pilgrimage in the prelude poem's final line: "Like pilgrim's wither'd wreath of flowers / Pluck'd in a far-off land." Furthermore, and not coincidentally, he photographed Alice Liddell as "Queen of the May," dressed in white and crowned with a garland of flowers like an initiate into the Mysteries.

In this context, the White Rabbit is a clear example of what is known in most of the world's mythologies as a psychopomp, or guide of souls. These are creatures, spirits or deities who escort newly deceased souls (and sometimes the souls of dreamers) to the underworld, where they are to be judged by its rulers. In a few cases, such as that of Persephone, these souls are allowed to return to the world of the living. At various times and in different cultures, psychopomps have been associated with a variety of animals.

To some degree Carroll must have been drawing on the Celtic tradition of the Phooka, a trickster animal spirit and transformer who often takes the shape of a rabbit. The Irish Phooka is a guide to the fairy realm. (In its Welsh form, it is known as a Puca, from which Shakespeare derived his fairy spirit Puck.) And we know from his diaries that upon viewing Edwin Landseer's painting *Scene from A Midsummer Night's Dream*, Carroll observed "there are some wonderful points in it … the white rabbit especially." And remarkably, next to the white rabbit is the miniature figure of Puck.

However, the most likely reason for Carroll's choice of the rabbit is linked to his inspiration for Alice's adventure: the myth of Persephone, the goddess of spring, and even more obviously, her British manifestation, the goddess Eostre. Both

drainage tunnels.



The man behind the White Rabbit: Dr. Henry W. Acland.

Either the well was very deep, or she fell very slowly, for she had plenty of time as she went down to look about her and to wonder what was going to happen next. First, she tried to look down and make out what she was coming to, but it was too dark to see anything; then she looked at the sides of the well, and noticed that they were filled with cupboards and book-shelves; here and there she saw maps and pictures hung upon pegs. She took down a jar from one of the shelves as she passed; it was labeled "ORANGE MARMALADE," but to her great disappointment it was empty: she did not like to drop the jar for fear of killing somebody, so managed to put it into one of the cupboards as she fell past it.

"Well!" thought Alice to herself, "after such a fall as this, I shall think nothing of tumbling down stairs! How brave they'll all think me at home! Why, I wouldn't say

anything about it, even if I fell off the top of the house!" (Which was very likely true.)

"There are some wonderful points in it," said Carroll: *Scene from A Midsummer Night's Dream. Titania and Bottom,* by Edwin Henry Landseer, circa 1850.

THE ROSICRUCIAN RABBIT Alice's descent down a rabbit-hole into Wonderland has an historic precedent in the publication of *Cabala, Mirror of Art and Nature: in Alchemy*. Published in 1615 by Steffan Michelspacher, it was dedicated "to the Brotherhood of the Rosy Cross; than which in this matter let no fuller statement be desired."

The Rosicrucian Brotherhood was a secret society whose stated mission was to advance and inspire the arts and sciences through the study of symbolic and spiritual alchemy. Initiates were instructed to undergo certain rites of passage that resulted in the attainment of ancient esoteric knowledge. Rosicrucianism arose in Bohemia in the early seventeenth century, and rapidly

spread throughout Europe. In Britain, it was particularly influential in Oxford.

In the *Cabala* we discover for the first time in literature and art the pursuit of a rabbit down a rabbit-hole as a major theme in a quest. One of this book's elaborate engravings reveals that 250 years before Alice ducked down a rabbit-hole, Rosicrucian initiates were being instructed to pursue a fleeing rabbit into a similar mysterious underground world—a theme repeated in later Rosicrucian documents.

Throughout the *Cabala* we find the acronym "V.I.T.R.I.O.L." This stands for the Latin "Visita interiora terrae rectificandoque invenies occultum lapidem verum medicinalem," an instruction to the Rosicrucian initiate to "visit the interior of the earth and by rectifying discover the true medicinal stone"—the philosopher's stone. And through text and storyboard illustration, the initiate is encouraged—like Alice—to "visit the interior of the earth" and to "ferret out" the rabbit. In this context it is significant that the White Rabbit of Wonderland is fearfully certain that he will be hunted down: "as sure as ferrets are ferrets!"

The Rosicrucian notion of a secret repository for universal knowledge was an inspiration not only for the Freemasons Brotherhood and the Royal Society of London for Improving Natural Knowledge but also for Oxford's Ashmolean Institute and Museum, opened in 1683. Carroll was an active member of the institute, and the Ashmolean possessed one of the world's great Rosicrucian alchemical libraries. Among the many hermetic books, the *Cabala* was one that would have been of supreme interest to the young Christ Church sub-librarian Charles Dodgson.

As the hermetic scholar Joscelyn Godwin has observed, there probably was no such thing as "a card-carrying member

of the Brotherhood," but there were a multitude over the next three centuries "who shared the ideals set forth in its manifestos." Charles Dodgson—and his alter-ego Lewis Carroll—were certainly numbered among this company.

Other symbolic images in the *Cabala* reappear in *Wonderland*. In the foreground of the engraving, we see an alchemist's initiate, blindfolded to symbolize a trance, or dream state. The figure to his left is the initiate's double, which is his dream-self. Like Alice's dream-self pursuing the White Rabbit, the initiate's dream-self double pursues a mercurial rabbit down a hole that leads into a vast and mysterious underground world beneath a mountain.

As in *Alice in Wonderland*, the Rosicrucian initiate discovers a secret underground great hall for the testing of initiates. The step-pyramid that forms the foundation of the underground hall is labelled with the seven steps of the alchemical process. However, these are in the wrong sequence.

It is up to the initiate by trial and error to "rectify" and eventually understand the alchemical process, then to put them in the proper order. Similarly, in Wonderland's underground hall, Alice must learn the proper order of actions so that she may use her golden key and enter the garden.

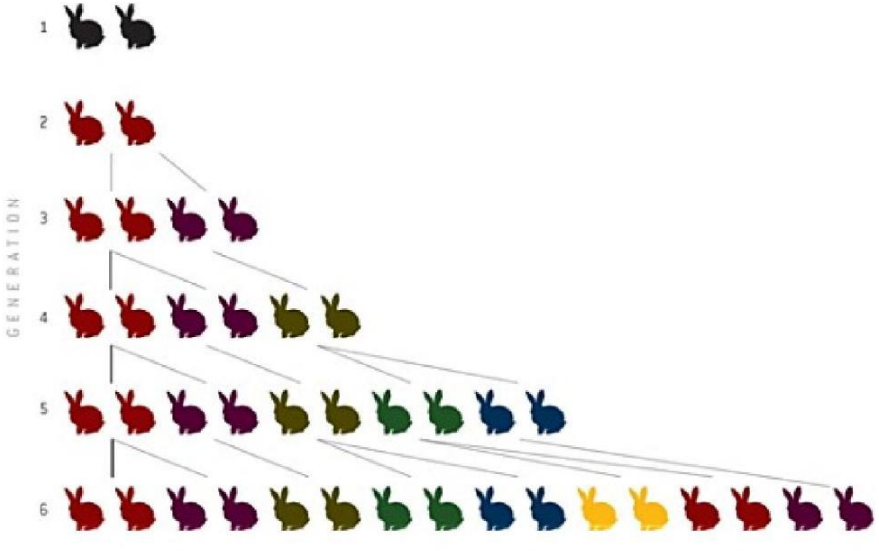
The *Cabala* alchemist's hall is under a mountain, surmounted by seven gods/planets/metals, and is reminiscent of another of the Rosicrucian legends: the quest to discover the subterranean tomb of Christian Rosencrantz ("Christian Rose-Cross"). This seven-sided tomb was placed in an underground chamber that, like Wonderland's hall, was fitted with many doors and contained many symbolic objects: magic looking glasses, telescopes, sacred books and keys.

If we look carefully at the *Cabala* engraving, we can see on the pinnacle of the Mountain of Alchemy the true goal of the initiate: a miniature rose garden with a hedge around the

FIBONACCI'S RABBIT-HOLE At the beginning of *Wonderland*, we are told that Alice is "considering in her own mind … whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her … and fortunately [she] was just in time to see it pop down a large rabbit-hole."

Note how Carroll has Alice "in her own mind" gathering "a daisy-chain." As any naturalist or mathematician will tell you, daisies are unique among common flowers in having 13, 21 or 34 petals—that is, three Fibonacci numbers in sequence.

In Fibonacci's *Liber Abaci*, or "Book of the Abacus" (published in 1202), we learn that the discovery of this sequence arose from a mathematical competition in which this problem was set: "Beginning with a single pair of rabbits, if every month each productive pair bears a new pair, which becomes productive when they are one month old, how many pairs of rabbits will there be after a year?"



Fibonacci's rabbit puzzle.

The result is a sequence of numbers, each of which is the sum of the previous two numbers, starting with 0 and 1. Thus, we have an infinite series that continues with:

1, 2, 3, 5, 8, 13, 21, 34, 55, 89…

This pattern takes on significance if we write the numbers as decimal fractions:

1/1 = 1.000, 2/1 = 2.000, 3/2 = 1.500, 5/3 = 1.666…, 8/5 = 1.600, 13/8 = 1.625…, 21/13 = 1.615…, 34/21 = 1.619…, 55/34 = 1.617…, 89/55 = 1.618… and so on.

Now, with the ratio 89/55 = 1.618 we come to one of the most important and fascinating dimensions of the Fibonacci numbers. The further down we travel with this sequence, the closer two consecutive Fibonacci numbers divided by each other will approach what was known in antiquity as the golden ratio: approximately 1:1.618 (or, slightly more fully, 1:1.6180339887… onward to infinity).

Since the time of the ancient Greeks, this ratio was believed to be the most aesthetically perfect proportion for the human body, and it has been used in the creation of art, architecture and music. In geometry it was manifest in the golden section, golden rectangle, golden triangle and star pentagram. Fibonacci numbers combined with the golden spiral dictate the shape and growth of patterns in pine cones, pineapples, sunflowers, seashells, trees and honeycombs. Known by the symbol for the Greek letter Φ (phi), it has been called “Nature’s number.”

All these aspects of mathematics related to golden

ratios, sections, series and so on were diligently taught to mathematics students throughout the nineteenth century and were seen as the aesthetical and logical foundation to all the arts and sciences. However, it was only during Lewis Carroll's Victorian childhood that the anecdotal aspect of Fibonacci's discovery through the breeding of rabbits became a well-known (and historically accurate) account that was taught to students of mathematics.

It is said that mathematics makes the invisible visible. So, let us look at Carroll's rabbit-hole through a mathematician's eyes. Let us examine a comparable infinite sequence in that popular classic text *Excursions in Number Theory* (1966) by C.S. Ogilvy and J.T. Anderson. There, the authors chose to create a graph or lattice using irrational $\sqrt{2}$ ratios as alternating consecutive fractions:

$$1/1 = 1.000,\ 3/2 = 1.500,\ 7/5 = 1.400,\ 17/12 = 1.416\ldots,$$
$$41/29 = 1.413\ldots,\ 99/70 = 1.414\ldots$$

This creates the walls of a corridor that visually demonstrate how this convergent sequence progresses infinitely toward the exact value of the $\sqrt{2}$:

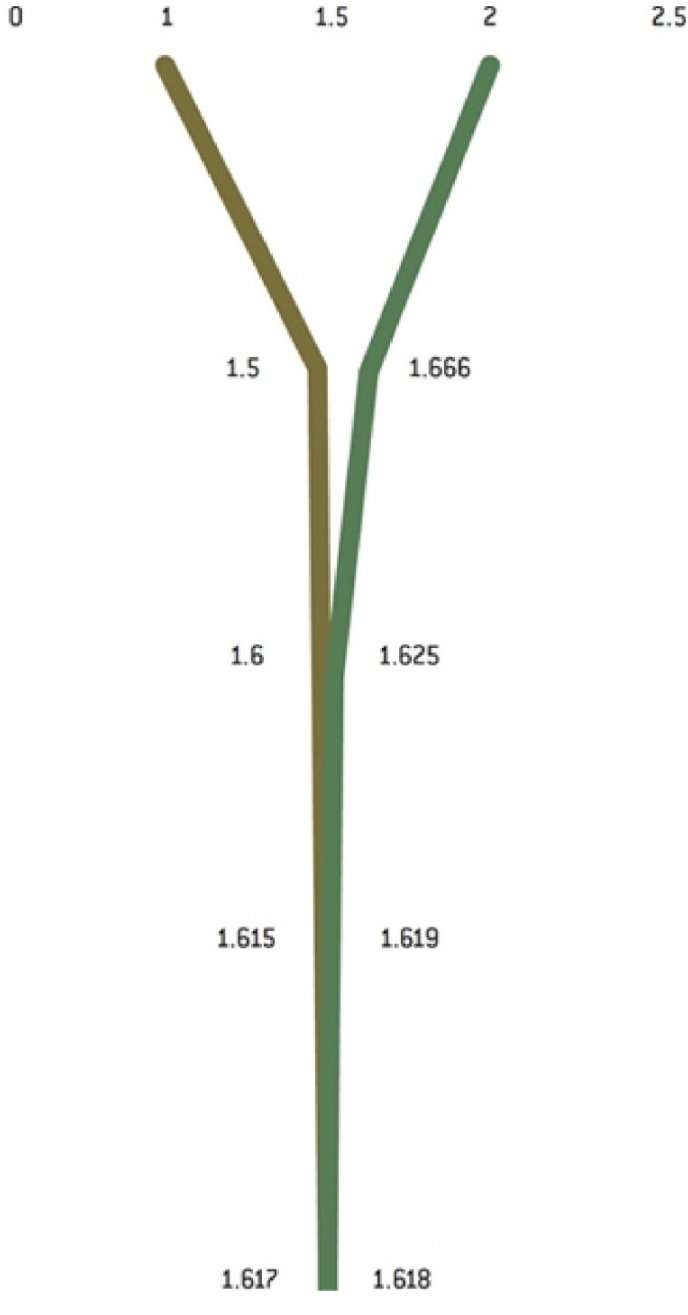
$$1{:}1.41421568\ldots \text{ and onward to infinity.}$$

If we can imagine peering down that corridor, Ogilvy and Anderson explain, "then if you were to look in that direction from the origin you would, theoretically, have a clear view … all the way to *infinity*."

If we create a similar graph or lattice using Fibonacci ratios as alternating consecutive fractions in an infinite convergent sequence, we end up with a graph that

replicates Carroll's description of Alice's descent to Wonderland through this gap in time and space: an infinite sequence of convergents oscillate to form the walls of this rabbit-hole. "Would the fall *never* come to an end?" The answer is both no and yes.

We too have constructed a tunnel with a clear view all the way to infinity. So we could answer that Alice's fall is infinite and will never end; or we may answer that it will end in what is known as an "ideal point" at infinity —which in this case is the infinite golden number, or the golden ratio known as Φ. And as this is, after all, a fairy tale, we must conclude that this "ideal point" is Wonderland: a land existing in that infinite dimension that is the human imagination—where Alice discovers the golden key: Φ.



Martin Gardner, in his *Annotated Alice*, compares Alice's long fall to "the famous 'thought experiment' in which

schoolroom, and though this was not a very good opportunity for showing off her knowledge, as there was no one to listen to her, still it was good practice to say it over) "—yes, that's about the right distance—but then I wonder what Latitude or Longitude I've got to?" (Alice had no idea what Latitude was, or Longitude either, but thought they were nice grand words to say.)

Presently she began again. "I wonder if I shall fall right *through* the earth! How funny it'll seem to come out among the people that walk with their heads downward! The Antipathies, I think—" (she was rather glad there was no one listening, this time, as it didn't sound at all the right word) "—but I shall have to ask them what the name of the country is, you know. Please, Ma'am, is this New Zealand or Australia?" (and she tried to curtsey as she spoke—fancy curtseying as you're falling through the air! Do you think you could manage it?) "And what an ignorant little girl she'll think me for asking! No, it'll never do to ask: perhaps I shall see it written up somewhere."

After her long fall, we are told that Alice lands with a "thump! thump!" but is otherwise unhurt. Immediately she leaps up and chases the White Rabbit down a passage and around a corner into a great hall lit by a row of lamps hanging from the roof. Upon entering Wonderland's hall in pursuit of the White Rabbit, Alice finds she is alone, and although there are many doors around the hall, they are all locked.

On a second inspection, Alice discovers a glass table on which she finds a tiny golden key that unlocks a little curtained door leading into "the loveliest garden you ever saw." But the door is too small for Alice to even get her head through. How will she get to the garden? Why does she wish to gain entry to the garden? And what is this great hall?

The Great Hall of Christ Church is the above-ground model for the great hall of Wonderland. Christ Church boasted one of the largest and grandest ancient halls in Britain. Built by Cardinal Wolsey in 1524, for nearly five centuries it has been the dining hall for students and faculty. Its walls are lined with portraits of its deans and famous graduates. It has been the scene of many grand dinners with notable heads of state and royalty. It has also been used as a location in numerous films, including as the Great Hall of Hogwarts in the Harry Potter series.

> Down, down, down. There was nothing else to do, so Alice soon began talking again. "Dinah'll miss me very much to-night, I should think!" (Dinah was the cat.) "I hope they'll remember her saucer of milk at tea-time. Dinah, my dear! I wish you were down here with me! There are no mice in the air, I'm afraid, but you might catch a bat, and that's very like a mouse, you know. But do cats eat bats, I wonder?" And here Alice began to get rather sleepy, and went on saying to herself, in a dreamy sort of way, "Do cats eat bats? Do cats eat bats?" and