

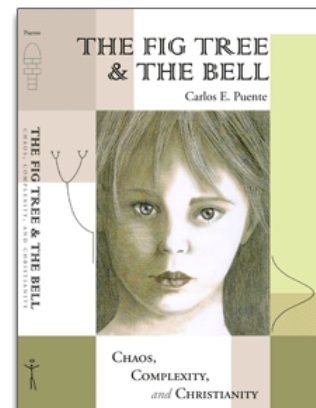
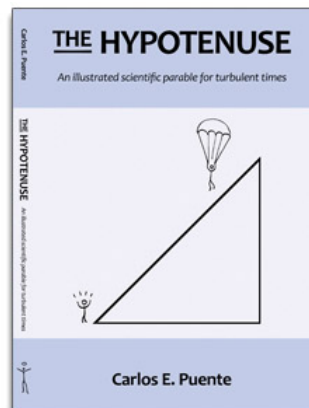
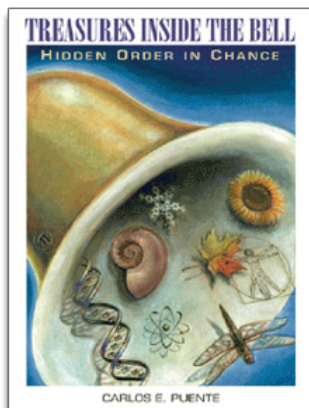
# From Modern Science to God's Mercy

Carlos E. Puente

The last few decades have witnessed the development of a set of ideas aimed at understanding and predicting nature's ever-present complexity. These advancements have uncovered relevant universal laws regarding the intricacies of natural disorder and have reminded us that complexity has often simple roots. This series of lectures exhibits a comprehensive linkage between such universal concepts and the moral choices we all face and deduces from them, in consonance with the Holy Bible, the Christian invitation to reconciliation and love for all mankind. By emphasizing the relevance of a saintly life via the continued practice of repentance and by reaffirming sound Catholic teachings, including key eschatological reminders, these presentations provide valuable faith lessons about God's merciful redemption through **Jesus Christ**, and through Him only. As such, these lectures represent urgent lessons to share during the Jubilee Year of Mercy, and beyond.

## About the Instructor:

Dr. Puente studied Civil Engineering and Mathematics at Universidad de los Andes in Bogotá, Colombia and obtained two masters degrees and his doctorate at the Massachusetts Institute of Technology. Since 1986, he has been a professor of Hydrology at the University of California, Davis. He is the author of more than sixty publications, including the books *Treasures inside the Bell*, *The Hypotenuse* and *The Fig Tree & The Bell*, which serve as the basis for these lectures. He is a Fellow of the International Society for Complexity, Information and Design.



## Lectures:

1. *Jesus: the only merciful way to the Father*
2. *A merciful lesson from a chaotic fig tree*
3. *The merciful transformation of God's love*

The site [http://puente.lawr.ucdavis.edu/chaos\\_complexity\\_christianity.htm](http://puente.lawr.ucdavis.edu/chaos_complexity_christianity.htm) contains related materials, as used to teach the seminar class *Chaos, Complexity and Christianity*.

# **From Modern Science to God's Mercy**

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## ***1. Jesus: the only merciful way to the Father***

The quest for equilibrium is one of the most instinctive actions we perform in our lives. However, this is particularly difficult in this day and age when the “turbulent forces” of modernity induce a fast pace of life that hinders our ability to be fully attentive to one another and to ourselves. During the past few decades a host of ideas have been established in order to study natural complexity, and in particular the one produced by turbulence. This presentation explains how such modern notions help us visualize the essential options we all face regarding equilibrium and shows how such ideas point us to one, and only one, serene state in which real peace may be achieved. Citing a variety of Biblical passages, it is argued that such a desired condition ought to be approached via the dynamic practice of humility, repentance and love, as personified by Our Lord Jesus Christ, who, by being symbolized by a straight ramp, mercifully invites us to slide through Him to the Origin of all, His beloved Father. The poem The Hypotenuse sketches some of our options.

## ***2. A merciful lesson from a chaotic fig tree***

The pursuit of order is one of the most pressing chores we humans attempt during our lives. This quest; however, is especially challenging when the evil of “chaotic forces” propels us into restless states, whose intrinsic disorder hinders our ability to appreciate God’s mercy. During the past decades a collection of ideas have been developed in order to study natural complexity, comprising the identification of processes that progressively degrade “order” into the specific disorder of “chaos” and that define a host of chaotic trees, as epitomized by the iconic Feigenbaum tree, or fig tree in German. This presentation explains how such notions help us visualize the essential moral options we all face and shows how the ideas point us to the straight roots of such trees as the only common ground for true order and peace. It is explained that the modern concepts provide a rich symbolism consistent with Holy Scripture that, in particular, allows us to further appreciate why Jesus may have, seemingly out of character, cursed and withered a fruitless fig tree and why He may have asked us to learn a rather merciful lesson from a fig tree, and other trees, as a mysterious and yet urgent precursor to His second coming. The implications of the notions regarding our need to be always watchful, including our prescribed conversion by coming down our own “fig trees,” are emphasized. Relevant aspects of this lecture are included in the poem Le Plus Improbable.

## ***3. The merciful transformation of God's love***

The belief that God is made of three distinct persons: the Father, the Son and the Holy Spirit, is a fundamental doctrine unique to Christianity. This lecture introduces a mathematical construction having three united components that, in a special limiting case, helps us visualize key attributes of the Blessed Trinity: the Father in heaven via a loving and light-conducting bell curve concentrated at infinity, the Son in a uniform and serene histogram that satisfies the defining adage “fill the valleys and cut the mountains,” and the Holy Spirit in a space-filling transformation, built by mid-point additions of unity, which joins the Father and the Son and proceeds from both of them. It is explained how the scientific construct, contrary to notions regarding power-laws in natural and man-made complexity, invite us to find order, peace and love, but only in the artful and merciful limiting transformation, having a superior spiritual dimension, which is capable of transmuting death into life. It is also shown how the ideas are related to a variety of Biblical citations and other fundamental Catholic concepts, which include the Eucharistic Doxology and the curious story of St. Augustine and the child at the beach. The poem The Antidote explains some key aspects of the merciful transformation.

## The Hypotenuse



Two options before us  
two pathways ahead,  
the one is the longest  
the other straight.

We journey directly  
or go by the legs,  
we follow intently  
or end up in pain.

By walking the flatness  
or hiking the spikes,  
we travel in lightness  
or take serious frights.

The incentive is unity  
and the call proportion,  
the key is forgiveness  
and the goal true notion.

In wandering wickedness  
there is never a fruit,  
but in ample humbleness  
one encounters the *root*.

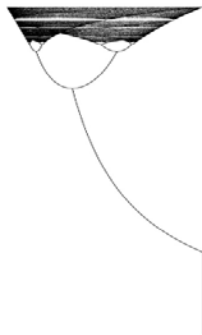


## Le Plus Improbable

In the highest ugly heat  
*sûrement misérable,*  
almost never a repeat  
*oh détour incroyable,*  
sad travel with no rest  
*dynamique indésirable,*  
ever close to the best  
*étrange état exécration.*

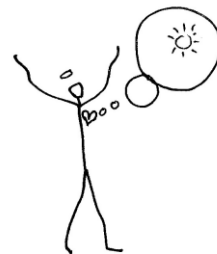
In the most hellish beat  
*également déplorable,*  
a silly and vain defeat  
*périodicité interminable,*  
also a spectacle disjoint  
*obstination reprochable,*  
an epsilon from the point  
*oh hasard inévitable.*

In the real driving seat  
*chaudement guérissable,*  
surely a fantastic feat  
*oh purgation ineffable,*  
a way to erected root  
*oh victoire admirable,*  
faithful relief and fruit  
*oh miracle vénérable.*



In the symbolic tree  
*égoïsme détectable,*  
thorns, dust in a spree  
*oh fractal pitoyable,*  
but in humble zero set  
*oh origine inégalable,*  
line cancels all debt  
*oh paradis inaltérable.*

In the unbent choice  
*oh l'amour véritable,*  
always a clear voice  
*oh poème formidable,*  
an appointed up lift  
*miséricorde vérifiable,*  
deterministic a gift  
*oh le plus improbable.*



## The Antidote

From x into y  
as unnatural flow,  
mapping immensity  
leaving dust below.

From x into y  
inspiring all awe,  
o plus of liberty  
forever aglow.

From x into y  
only a tiny piece,  
wired to totality  
o normal release.

From x into y  
o infinite fleece,  
by packing vitality  
no thorns but peace.

From x into y  
singular the dough,  
symphony of unity  
breeding single row.

From x into y  
by breaking a spell,  
merciful simplicity  
o refuge from hell.

From x into y  
from holy plateau,  
perennial immunity  
o spirit on the go.

From x into y  
triune is the cell,  
omnipotent divinity  
o sacred God's bell.

