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USING PRINCIPLES FROM W.D. GANN
& MODERN PHYSICS TO FORECAST
FINANCIAL MARKETS

TRADING

FABIO ORESTE

Quantum Trading

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Quantum Trading

*Using Principles from
W.D. Gann and Modern Physics
to Forecast Financial Markets*

FABIO ORESTE



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Preface

I have written this book for traders, both professionals and beginners, who would like to start a new adventure, a journey into the vast and unexplored land of Quantum Trading. It's a journey that could change your life forever.

This book could also be considered an exploration of phenomenology and quantum philosophy. Why philosophy and not science? Because the quantum viewpoint affects not only particle science but also contemporary psychology and the way we conceive of the relationship between observed objects and the observer. We will also examine how we think of and experience reality.

Great thinkers such as Max Planck, Carlos Castaneda's Don Juan, like Erwin Schrödinger, W. D. Gann, and Albert Einstein have more in common than you might suspect. This book aims to express rocket science concepts in layman's terms and apply them to your daily lives and trading; it's going to be a lot of fun. You will better understand how reality works and achieve amazing results in many areas of your life. Above all, you can make huge amounts of money using these concepts to trade the markets.

We will be applying these ideas to create a Quantum Trading system that provides a high percentage of winning trading signals. In the first few chapters, I describe my proprietary approach to financial trading based on Einstein's theory of relativity and quantum physics, and how to start a very profitable business with little capital, compared to other businesses.

You will be able to set up your own personal "trading firm" without formally incorporating a company. If you follow the rules in this book and always use stop-loss orders, then you will find yourself trading more successfully. Stop-loss orders prevent large, unexpected losses for each trade and allow for the possibility of only relatively small losses, according to your personal risk tolerance.

If you are an absolute beginner and don't know how to calculate the best stop-loss with respect to your trading capital, don't worry. It is explained in detail within later chapters.

This book is also written for professional traders who may have many years of experience, but are looking for something new in the enormous arsenal of technical analysis theories and tools. I have been successfully

using the Quantum Trading approach to manage my client's accounts for years, and I believe that other professional traders can use this theory to improve their performance, too.

The techniques presented here are based on a new approach to financial trading that I have developed during the past 15 years, and they are quite different from the classical technical analysis trading tools, even if they share some common ground.

You can apply Quantum Trading techniques to different time frames, such as weekly, daily, 60-minute charts, or 5-minute charts.

This book is not about methods of technical analysis that you are used to seeing. I am not going to speak about moving averages, oscillators, or the hundreds of indicators you already know about. Perhaps you are searching for something different, a more precise instrument that can indicate when the next top or bottom price could form.

Rather, this book is about quantum prices, time levels, and how the theory of relativity and quantum mechanics concepts can practically affect your favorite stock, commodity, or currency price. It is also about trading models that provide precise indications on trend turning points and how to predict the most likely prices and times for the major and intermediate reversal points.

We start our journey by borrowing some ideas from the theory of relativity and its implications in modeling space. We continue by examining electron behavior in the quantum world. Finally, we compare this notion with some of W. D. Gann's 100-year-old concepts about the market that are still relevant today.

We continue our journey by exploring fascinating lands, learning how quantum laws, according to scientist such as A. Goswami, can also affect our daily life. We review how this quantum approach can help us in obtaining a more meaningful life, freedom, and financial independence, and dramatically improve our life and the ability to get what is really important to us.

At the end of this process, you are going to discover many interesting and safe ways to make money in the financial markets using unconventional yet powerful trading techniques such as Quantum Price Lines (QPLs) and Time Algorithms (TAs).

If you continually improve yourself and reach for a higher and higher level of knowledge and awareness, you will exponentially increase your personal power and improve your energy level. You will experience a quantum leap in the quality of your life. Then wealth will come to you like a moth to a flame.

If you are ambitious and feel you have many goals still to reach in your life, then reading *Quantum Trading* can help you to improve your trading and change your life forever.

Fabio Oreste

CHAPTER 1

The Birth of Quantum Trading

*How Einstein's Theories
and Quantum Particles Affect
Your Daily Trading*

It was April 14, 2000, and the market was about to close. I had just placed a selling order on all of the put options I had bought a few days before and cashed in my profit. I stared in disbelief one last time at the prices on my screen. I couldn't believe my eyes! I was excited because the S&P 500 was plummeting, losing more than 180 points from the historical top in a few days, and the put I had bought had earned 128 percent. I had waited a long time, recalculating almost every day the most likely price level for a reversal and waiting for the moment when the S&P 500 price would meet with the maximum curvature point of the P-Space, the new trading tool I had been developing during the past years. From another point of view, this would have been the point at which the quantum entanglement would be relevant.

Quantum entanglement is a property of the quantum mechanical state of a system that contains two or more objects. Specifically, the objects that make up the system are connected in a way that cannot adequately describe the quantum state of a constituent of the system without full mention of its counterparts, even if the individual objects are spatially separated.

I had been waiting for this quantum correlation between P-space and the S&P 500 price for a long time. In those days I had not yet developed the software that now allows me to visualize in a few seconds the points most likely for a reversal on the chart. To calculate everything by hand, I needed a lot of time.

The week before I had warned my clients to close all of their long positions on stocks and take profits. Most of them were astonished and asked

me, “Why do I have to sell when the stock exchange continues to rise and I’m making money?”

“Stock prices are likely to drop significantly soon,” I explained, “and before we see such price levels again, many years will pass.” At that time they surely thought I was crazy, but in hindsight I was proved correct. If you study my Quantum Trading techniques you will discover why.

I wanted to go out and get some fresh air, despite the fact that it was raining, when the phone rang.

“Hey, Fabio, have you seen the S&P 500? It seems you were right. It reached the levels you forecasted. Try not to disappear tonight because we need to celebrate! I saw how much the puts you bought for my managed account are worth now, and we made a fortune. All of us will come over to your house around eight-thirty tonight. We’ll bring the champagne and dessert, and you’ll cook the risotto. We need to talk. You have to explain to me how your theory works again. By the way, does your theory also work for currencies?”

“Yes, it also applies to currencies, and to everything else traded on the stock exchange. Your plan sounds great. See you at eight-thirty,” I responded to Dave, a friend of many years and also one of my best clients. I left my house and walked briskly through the pouring rain. I needed to decompress after such an intense trading day. The raindrops beat down sharply on my head, helping me to reflect.

Take a look at Figure 1.1. On April 10, 2000, I bought put options on the S&P 500 expecting a big drop for stocks and the entire index because



FIGURE 1.1 S&P 500 Future: Major Top Forecasted in 2000 Using QPLs

two major Quantum Price Lines (QPLs) were simultaneously touched by the index price at point A on the same day.

This is a very rare event and when it happens the market is ready for a big movement within a few days. Instead of the put option we could have sold short a future contract on an S&P 500 to take advantage of the significant drop following the contact of the price and the two QPLs. The two QPLs indicate the point of maximum curvature of the S&P500 P-space which, when reached by the price at point A, indicates a strong reversal pattern. How did we calculate them? We discover the answer in the next few chapters.

Walking down the street, I was happy because I had finally proved to myself that my trading theories, based on Einstein's space-time discoveries and on the behavior of an electron leaping from one energy level to another, were working well and were profitable. After years of study and observation I had finally developed two complementary trading models that worked very well together. Physicists were still split on the supremacy of quantum mechanics over Einstein's theory of relativity, and many contradictions were still in place in the standard model of quantum physics because the Higgs boson has not yet been found. Even though Einstein didn't believe in quantum physics, my trading model uses both Einstein's theory and quantum mechanical approaches, successfully harmonizing both ideas for trading purposes.

The models that I had elaborated for trading were only partly drawn from physics. I had developed these trading models in an autonomous way beginning with the assumption that the entire universe is connected by a gigantic entanglement—or interconnection—governing not only the subatomic particles behavior, but also other complex and immaterial relationships, such as financial transactions.

I was also inspired by W. D. Gann's statement about the close relationship between atoms, electrons, and stock price behavior. Gann was one of the most legendary traders in the history of Wall Street. My way to calculate QPLs is partially based on Gann's confidential work, although the concept of P-space, based on the equivalence between Einstein's light deflection and price deflection phenomena, is completely new and unknown by previous traders and authors, including W. D. Gann. Furthermore, I rigorously propose a quantum scale for QPL calculation, based on Leibniz's original chart of 64 codes on which binary code is based, refusing to use a linear approach, and this is another new concept in trading. Two to the power of n is the number of ways that the bits in a binary integer of length n can be arranged. We use them to calculate our QPL's price orbital, the same way they are used to measure computer memory, processor power, and computer disk drives.

The trading of stocks, bonds, currencies, and commodities takes place in our everyday reality, a relatively reliable world that apparently doesn't seem affected by the paradoxical laws postulated by Albert Einstein's relativity theory and Niels Bohr, Max Planck, and Erwin Schrödinger's quantum mechanics. What happens in our daily life can be elegantly explained by classical physics, which is full of reassuring certainties about linear models ruling space, time, and other things, such as locality, on which we base our representation of three-dimensional reality. For example, it is very easy for classical physics to measure the mass, strength, and velocity of an object, such as a bullet, and precisely predict its trajectory through space. Unfortunately, these certainties cannot explain nonlinear models like the ones ruling stocks, commodities, Forex (FX), and financial markets in general.

According to what I had discovered, the prices of stocks, or anything else traded on the different exchanges, were not only influenced by news about profits, GDP, the Fed's minutes, mergers and acquisitions (M&A), write-downs, interest rates, inflation, consumer confidence, or other fundamental data, but also by nonlinear entanglements based on the theory of relativity and quantum physics. Using trading models based on these theories, we can understand the financial securities price behavior. My trading models are based on the entanglement formed between different categories that operate in a multidimensional, mathematical space that is curved because of the presence of objects with a specific mass, which I call P-Space.

It seems that the same day unexpected news affecting the financial market is released, provoking a top or a bottom, my Quantum Trading models show that the price has reached the maximum curvature point of specific space-time in which the price of a financial security moves, that is, the P-Space.

I used two different sets of concepts to develop my Quantum Trading view: one from Einstein's Theory of Relativity and the other from Quantum Mechanics. Apparently these two visions of the universe are incompatible, but my trading based on these concepts worked very well and I was making money.

On the other hand, by studying Nobel Prize-winner David Bohm's theories, one could find some clues to harmonize these two irreconcilable views of the universe.

I had left behind even dear old technical analysis, with its arsenal of oscillators and indicators, which was unable to forecast the final top of a big movement, or the major bottom in the markets, despite many attempts.

It's not as if technical analysis was not interesting for me. In fact I had studied it passionately for years. Yet I was looking for a "Theory of Everything" to explain the financial market's movements using consistent

and elegant models. For instance, technical analysis wasn't able to explain why a double bottom sometimes is a very strong support and the price bounces, but other times it is easily broken and price collapses.

Instead, the models I had developed, inspired by physics, were able to forecast if a major or intermediate top or bottom would be likely to occur at a certain time using the quantum level of the orbitals of price—very similar to an atomic orbital—and calculating the points of maximum curvature.

Correctly forecasting the time and price of the turning point of a stock index is a dream for every trader because it means you could make a fortune if you know where the bottom or the top is located.

The best part of this approach is that Quantum Trading models can calculate these turning points weeks or even months in advance with high probabilities of success. You just need to wait until the price reaches the QPL you have already drawn on the chart far in advance. When the QPL price level is reached, you are likely to see a significant reversal, as shown in Figure 1.2.

You could have sold short HP stock on the QPL resistance at point A and closed the long position on the QPL support. HP stock wasn't able to break the QPL resistance level.

This means that if you had sold HP short on the QPL resistance you would have made money because the price dropped. If the price would have broken the QPL resistance then it would have continued to rise until the next available QPL. By putting a stop-loss order one dollar higher than the QPL resistant price you would have exited the short position and you



FIGURE 1.2 Hewlett Packard Stock: 2010 Top

could open a long position at the stop-loss level, buying double the amount of stock you previously sold short. This is called “stop and reverse” and all experienced traders are very familiar with it.

If you wonder if I have really found the Holy Grail of trading, I have to clarify a very important point. In quantum physics, we speak in terms of probabilities that the electron can be found at a certain position using the probability wave function. In the same way, in my Quantum Trading models I speak of the high probability that a significant reversal can occur, or a minor probability that pushes the price toward a higher orbital level, exactly like an electron’s quantum leap.

In physics an atomic orbital is a mathematical function that describes the wavelike behavior of either one electron or a pair of electrons in an atom. Quantum physicists use this function to calculate the probability of spotting any electron of an atom in any specific place around the atom’s nucleus. These functions can form a three-dimensional graph of the likely location of an electron. Specifically, atomic orbitals are the possible quantum states of a single electron in the collection of electrons around a single atom.

In the same way, we use QPLs as if they were atomic orbitals to understand the behavior of financial securities prices.

If they tell you that you can use all of these physics concepts to forecast the next top or bottom of your favorite stocks, you would probably think it is just a fairy tale, but when using the Quantum Trading models for a significant period of time, the results will probably help change your mind.

I am not asking you to believe me up front, but rather to follow me chapter by chapter and then experience the results for yourself.

A LESSON IN ELEMENTARY PHYSICS

Around 2,500 years ago in India, Buddha said, “Do not believe unless your experience can prove it,” a beautiful example of structural skepticism that should be applied to everyday life.

If your knowledge of physics is rudimentary, relax. I will use simple terminology in the pages that follow. I will attempt to communicate all of the concepts that usually require complex equations in a simple way without using “rocket science” notation.

I have included some very simple mathematical equations in order to meet formal criteria requirements. At most, I will sprinkle some simple formulas here and there, but nothing complicated.

All the charts here could be visualized in a three-dimensional way, but this surpasses the limits offered by a book.

Many years ago, I did not speak to anyone about my discoveries other than a few friends with whom I had shared travels, studies, and adventures. Certainly colleagues in my field would have thought I was crazy or doubted my masters degree in Business and Finance, which I earned from Luiss University in Rome.

Moreover, at that time I was missing some elements that would have made my model more elegant, ridding it of some contradictions that I was not yet able to solve, and that I came across only a few years later, thanks to string theory.

Nevertheless, my short S&P 500 trade mentioned earlier in this chapter and based on this theory was placed very close to the historical top of 2000 and was a powerful reversal point for the index before a big plunge.

The high profits I earned from my S&P 500 trade in only a few days had just materialized into my account. This, more than anything, boosted my confidence in my Quantum Trading models.

Absorbed by these thoughts, I arrived at the store; I had to shop for ingredients before my friends came to dinner in a few hours as well as pick up Monika, my girlfriend, who had just finished a photo shoot in the Caribbean. Everyone expected risotto for dinner and I was more than happy to cook for them.

After my friends arrived I occupied myself with preparing the risotto, but I did not use the *risotto al Barbaresco* recipe I intended to use. Dave had been sent truffles from Italy and brought them to my house so that I could put them on the top of the risotto instead of using Barbaresco wine to cook and aromatize the rice. My friend considered me a very demanding gourmet and the risotto I cooked that time was very satisfying because the ingredients were really terrific. The truffles David brought were picked only the day before and were very fragrant and tasty.

Dave is a really great guy! Smart and interesting, he was at the time a very successful real estate entrepreneur and a good friend who traveled to Europe and Asia with me. In Europe we liked to search for the finest dishes and best wines. We would visit many different vineyards and restaurants in our quest to find the best. In Asia we traveled together through the most stimulating places in Tibet, India, Nepal, and China to study ancient Eastern philosophies and the science of the mind.

Einstein, Bohr, and Planck were all interested in studying Taoism and the Abhidharma and Veda philosophy and cosmology. These ancient philosophies contain many interesting concepts that relate to the subatomic world, and the wisdom contained in these systems seems to be the precursor of modern science and physics.

David Bohm, a Nobel Prize-winning scientist, spent many years formulating a higher order of physics and was close to discovering a solution that would make the theory of relativity and quantum mechanics compatible.

For many years he studied Vedanta, one of the most important philosophical schools of ancient India.

Dave offered to go with my butler to the cellar and personally choose the vintage of Barbaresco to accompany the meal. When he returned I was battered with questions.

“Now, explain to me, Fabio, what Einstein’s studies of space-time and quantum physics really have to do with the stock exchange?” asked Dave, happy that two more bottles of wine were on the table. “I knew you were crazy, but fortunately I made the same trade you placed with my managed account with my personal account and it’s made me a small fortune. I’m starting to think that you got your hands on something really big considering how much we gained from the last trade made with your precise forecasts from three weeks ago.” Dave liked to occasionally trade Forex and S&P 500 futures on his own, using some basic technical analysis tools in addition to the account I managed for him.

“Well, it’s a long story and I don’t want to bore the others. . . . We’ll talk another time,” I responded, knowing Dave would not give up so easily.

“No, no. We absolutely have to know how Quantum Trading works,” Dave insisted.

“Now we’re curious and you have to explain everything,” added Elena, my best friend. She was usually very interested in my travels and studies. “So let’s eat the Sacher cake I baked today, open a bottle of champagne, and make a toast to your trading system,” concluded Elena, smiling happily.

We quickly agreed to Elena’s suggestion. The Sacher cake was exquisite, especially since it is difficult to find true Sacher cakes outside of Austria. Fortunately Elena’s grandma was from Vienna and was an amazing cook.

“Okay, okay! We’ll start at the beginning and move step by step,” I conceded to my friends. In reality, I was happy to talk about my trading models. We toasted, and while I was appreciating the apricot marmalade layer of the Sacher cake, I thought that celebrating with old friends that evening at home had made it all worth it.

“What I have discovered is that the price of a stock or a security can be seen either as a light particle, called a photon by scientists, or as an electron. First, Newton’s classic physics, Riemann’s curvature tensor, and Einstein’s theories of relativity leading us to the concept of the curvature of space help us to understand some aspects of a security’s price behavior. Second, quantum physics allow us to better understand the characteristics of stocks, commodities, and currencies price behaviors.

“If we want to understand how Quantum Trading works, we need to refresh our memories of some of the basic concepts developed by the founders of classic and quantum physics.

“Everything actually begins in England with Isaac Newton, the father of classical physics and one of the most influential people in human history. He was an absolute genius who worked on his theories for years, adding to the scientific knowledge of his time by exploring the laws that govern both our everyday reality as well as our solar system. He had explored all of the sciences and considered mathematics insufficient to explain his findings. As a result he and Gottfried Leibniz developed a new type of mathematics: differential calculus.

“Newton was not known for many years by his contemporaries because he preferred to devote himself to research at the expense of his social life. It was only in 1687 after publishing his masterpiece, *Philosophiae Naturalis Principia Mathematica* (Mathematical Principles of Natural Philosophy), that he gained success and fame all over Europe. For the next two centuries this book would be considered the most important scientific treatise ever written.

“Following the publication of his treatise, he became a real celebrity. Two years later he was elected to Parliament, and in 1703 he became president of the Royal Society. In 1705 Queen Anna knighted him as Sir Isaac Newton, the first scientist to receive that honor.”

“Ah, okay, now I remember,” said a tipsy Barbara, Dave’s long-time girlfriend. “Newton was the one who shot the apple that fell on his son’s head with a bow and arrow.”

“No, Barbara, you’ve mixed up William Tell, the Swiss hero, with Newton, the scientist,” explained Dave.

“Well, actually, she’s not far off because Newton was inspired to formulate his theory of gravity by observing the fall of an apple from a tree,” I added, laughing.

“But didn’t he also study alchemy? It seems that following his death they found numerous writings and research on this topic. Is it true?” asked Elena.

“Yes, that’s true. Imagine that even though he is universally considered the real father of modern science, he wrote more pages on alchemy, occult sciences, and theology than physics or mathematical subjects. But that’s another story that will take us too far off topic, so let’s get back to classical physics.”

“His first big discovery was the theory of Universal Gravitation and the movement of planets. According to Newton, all celestial bodies are attracted to each other. The source of gravity instantly passes from one point to another of the universe and keeps the planets in our solar system fixed in their orbits while preventing us from floating away. His idea of the universe is as a perfect mathematical place, very similar to a giant cosmic clock, where every mechanism unwinds in a precise and predictable way. It’s a mechanical universe based on the principle of cause and effect where

it is possible to represent and measure exactly the movement of objects. It's a universe ruled by an absolute deterministic order in which paradox, contradiction, and indetermination are unknown."

"What do you mean by absolute order?" asked Monika.

"Newton, to instill order on chaos, proposed a concept of absolute space and time. For this reason everything was simple: It was possible to unequivocally identify motion and time because absolute space always remained the same: immobile and without a need to relate or refer itself to any other external object fixed of moving. Absolute time works in the same way as absolute space."

"Well, why is it not always so?" interrupted Monika. "If I take a flight from New York to San Francisco and it takes five hours from take-off to landing, aren't these five hours the same for everyone? The clock ticks and time passes in the same way for those traveling in the air as it does for those on the ground."

"This is one of the crucial points in the theory of relativity. For Einstein, time is not absolute and does not tick in the same way for everyone. After Newton it took three centuries before Albert Einstein proved that space is not a three-dimensional entity separate from time. Space and time form a continuum. The closer an object's movement is to the speed of light, the more time slows down for them. Do you recall the paradox of the Einstein twins?"

"I think I know the story," Elena quickly responded. "The first twin remains on Earth while the second travels in a spaceship that moves at the speed of light. After many terrestrial years, the second twin returns to Earth and finds his brother crooked and aged with gray hair, while he is still young. It's a paradox because the twins should be the same age, given that they were born minutes apart."

"Yes, it's just like that. The first twin remained on the earth and for him time passed 'normally,' while for the second one in the spaceship, time passed very slowly and almost stopped compared to time on Earth, because he was traveling at the speed of light," added Dave.

"In fact in 1911 Einstein asserted that 'if a living organism, after an arbitrarily long flight at a speed approximately equal to the speed of light, could return to his place of origin, he would only be slightly altered while his corresponding remaining organisms would have already given birth to new generations.'

"The point is that even if the twins were born more or less at the same time and were the same age, for the one on the spaceship time passed slower in comparison to the one on Earth. Einstein concludes that it is important to evaluate the passage of time of an object on the basis of its speed with respect to that of another observer. In this way, the

concept of absolute time was destroyed and the “relative space-time” concept remained.

“I used the idea of ‘relative space-time’ as the base from which I developed my P-Space theory. I use it to calculate the most probable time and price for a reversal in the financial markets,” I explained.

“Among the various consequences of this revolutionary hypothesis is that the passing of time varied according to the state of motion—or state of rest—of the observer, depending on the velocity with which the latter moved.

“It’s exactly to explain that point that Einstein suggested the famous “Twins Paradox” we have just spoken about, even if it’s not a true paradox, since it is completely explained in the context of the two postulates of the theory of special relativity. There are two twins, initially in the same place and with two identical clocks that are synchronized. One of the two twins remains on Earth, while the other leaves for an interstellar journey on board a spaceship, whose elevated velocity reaches 80 percent that of light. On his return to Earth, his clock indicates that 30 years (of “real” time) have passed since his departure, while the clock of his twin, left on Earth, indicates 50 years have passed since the departure of the spaceship.

“Since the astronaut twin does not perform a uniform motion, but has to accelerate or decelerate to carry out the departure and return, the situation is no longer symmetrical: the astronaut will have, in effect, lived less than the twin brother left on Earth.

“But why do you need to know all this stuff if you want to make money trading the financial market with your system?” asked Barbara.

“If you begin to see things in this way and try to apply these concepts to stock, commodity, and FX trading, you can revolutionize your way of interpreting financial phenomena and start seeing them in a different light.”

“So all of this plays a role in your trading system and the money you both earned, with which my dear Dave will buy me that wonderful Bulgari diamond ring that I saw last week?” exclaimed Barbara.

Dave coughed and his face immediately turned red. He knew that taking Barbara to the Bulgari shop would cost him a fortune. In that moment it seemed he regretted telling Barbara how much he had earned that week with the help of my algorithms.

“Barbara is right,” I said, enjoying her dazzling smile.

Dave quickly snapped back, saying that given how I was agreeing with her, I could be the one to accompany her to the Bulgari shop and use my credit card instead of his.

“No, Dave,” I said. “I was referring to the fact that Barbara was right in saying that, until now, I have only spoken about relative time and I’ve not yet arrived at the crucial point.

“The point is that according to Einstein, even space is not uniform, the opposite of what Newton assumed.”

“In fact, in the general theory of relativity, Einstein specifies that mass is a form of energy and that the force of gravity, due to the presence of mass in space, has the capacity to curve space. The implications of this concept are numerous, but it is really this property of the curvature of space that led me to the idea of creating a virtual mathematical space in which the price of a share moves similarly to a particle of light, a photon. When the price moves and eventually reaches a point of curvature, it deviates from its trend and inverts, creating a top and a bottom.”

“Explain yourself better,” said Dave, “I studied technical analysis a little bit, but I’m unable to see any resemblance. What is the relationship between the curvature of your mathematical, virtual space in which the price of stock moves and marks a major reversal of the trend?”

“Bernhard Riemann’s approach to topography is very enlightening and can help us understand the entire process. Applying Riemann’s idea of the curvature tensor to the space where the price of a stock moves helps us reach a deeper understanding of my trading theory. Try to picture the price of a stock as a ball in constant motion on a rugged terrain full of *cavities* and *bumps*. At times the ball ascends a bump, which corresponds to an uptrend. When the ball reaches the peak of the bump it corresponds to the highest price of the stock, or the top in its chart. Once it arrives at the peak it begins to descend, sliding down toward the valley, which corresponds to a downtrend. Then you may see it roll on the flat plain, and this corresponds to a lateral trend. When it descends to the lowest point of the cavity, this corresponds to a bottom in its chart. Still in motion, the ball returns and ascends. It’s a matter of topography.

“The ball is the price of a stock that rises and falls. Do you understand now?”

“Yes, now it’s a bit clearer. But didn’t you say that in your model the price was like a particle of light?”

“Einstein probably made a similar reasoning to figure out the phenomenon of the deflection of light in the presence of masses that curve space. In fact, he used Riemann’s geometry and curvature tensor, the basis of modern topography, to finally express his theory through a definitive formal model.

Despite the fact that he had already discovered the core of his theory on light, space, and time a few years previously, Einstein could not progress with his theories for years until Marcel Grossmann suggested to him to consider the revolutionary Riemann studies and his curvature tensor. Einstein didn’t know Riemann’s geometry until that moment. Grossmann suggested that Einstein would need a space-time

model possessing not only the flat, Euclidean properties of special relativity, but a space-time possessing non-Euclidian properties, like Riemann's geometry.

One of space-time's main features is that, while it appears curved on a grand scale, it appears flat on smaller scales. That is exactly what happens if someone stands on a football field and looks around: the Earth will appear flat. The first consequence is that for the description of events confined to local regions of space-time, special relativity remains valid. But things appear differently for large regions over which the curvature of space-time becomes significant and visible. In the same way the football field looks flat to a football player, but America looks curved if observed by an astronaut. So, it's easy to understand that the larger the radius of a sphere, the smaller its curvature. In the same way, the larger the radius of a sphere, the greater the area surrounding any point that appears to be flat, if observed locally.

"Einstein, in his book *Relativity*, came to a very important conclusion: The distribution of matter in the universe determines the amount to which space-time is curved: The greater the density of matter in a region, the higher the curvature of space-time. Thus space-time is distorted more around the Sun than the Earth because the Sun has the larger mass. This means that gravity no longer exists as such; it is transformed into the curvature of space-time."

"Can you please clarify what you said about the deflection of light, given that it's so crucial to your theory?" asked Elena.

"Of course," I replied. "Let's imagine Newtonian space for a moment. It's uniform and, for the sake of explanation, we will represent it with two dimensions (see Figure 1.3), even though it always exists in three dimensions. We can compare this space with a tablecloth that forms a flat plain. Let's hold the tablecloth in the air and take a steel ball that represents the sun and place it in the middle of this space (see Figure 1.4).

"According to Einstein, due to heavy mass, space is distorted just like our stretched-out tablecloth is distorted when it is indented by the steel ball. The end result is that space, in our case the tablecloth, now curves" (refer back to Figure 1.4).

"This leads us to two considerations. Regarding gravity, the first effect of the curvature of space is that it supplies us with the line of minimum resistance on which the planets move around the sun. Regarding the movement of light, which is crucial for understanding our trading model, particles of light, originating from a distant source and passing close to the sun, deviate from their rectilinear path. This happens because the gravity of the mass of the sun curves the space in which the particles of light travel. In this way the particles of light are deflected—and the price of a stock follows a similar pattern" (see Figure 1.5).

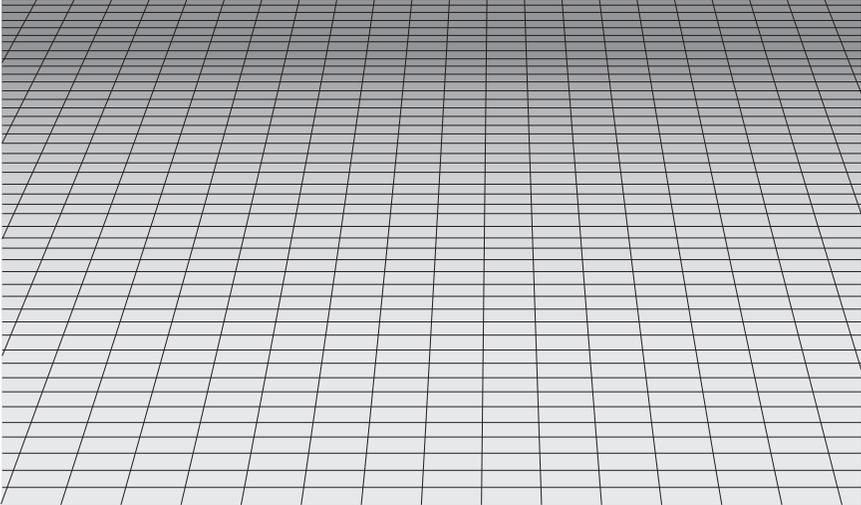


FIGURE 1.3 A Schematic Representation of Flat Space

“You mean to say that the price of a share behaves like a particle of light and it’s enough simply to apply the formulas of relativity to forecast future stock and currency prices?” asked Dave.

“No, wait a minute! My model only uses some concepts inspired by Einstein’s work on relativity. A few concepts were taken from quantum physics regarding the behavior of particles, and the rest stemmed from

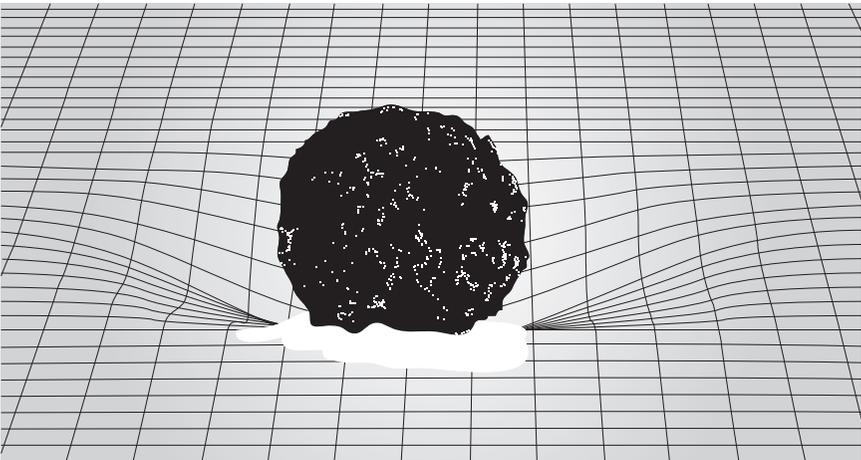


FIGURE 1.4 The Sun Curves the Space around It

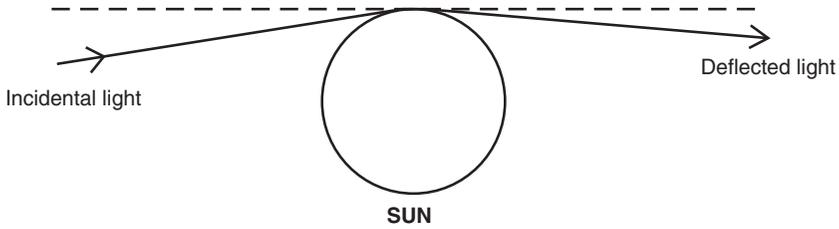


FIGURE 1.5 A Similar Pattern Unfolds with the Price of a Stock

other diverse disciplines. Even though the concepts I use are inspired by relativity and quantum physics, the equations I use are not necessarily related to them, but rather use a simplified mathematical operation. I'm not pretending to have discovered what Einstein never said about the stocks. That would be absurd!

“My model was inspired by the behavior of a particle of light, whose trajectory deviates because of the presence of a celestial object with a mass that curves the space around it. The model only serves to describe a behavior and provide algorithms that, if applied to the P-Space, a virtual space-time, enable us to calculate the most likely points for a reversal on the chart of a financial security. The price, after touching certain levels, reverses itself because it's as if it intersected a curvature that has deformed the space” (see Figure 1.6).

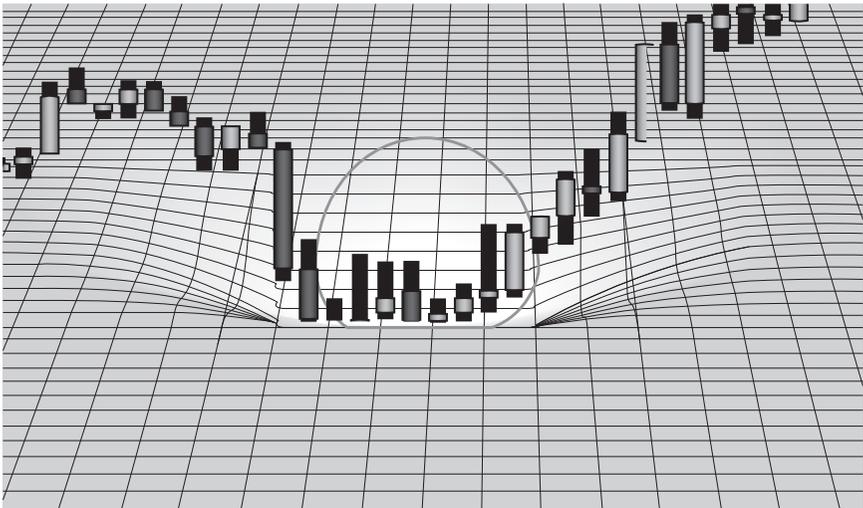


FIGURE 1.6 A Curvature That Has Deformed the Space

“Anyway, the Einsteinian concept of light deflection plays a crucial role in my trading system. It inspired me to create the structure of P-Space where price moves, ahead of time. It also inspired me to calculate the point of curvature of P-Space using mathematical operators stemming from physics. When the price reaches the point of curvature, the trend can reverse.

The concept I borrowed from topography relates to the example of the ball, representing price, which rises and falls according to its journey through the uneven terrain. This example is only useful as a description and does not allow me to make forecasts unless I measure it first. It allows me only to observe a bull or bear trend as it happens just by looking at the P-Space chart.”

“Do you mean to say that the price level at which the inversion will most likely take place is constant and that sooner or later it will invert its course?” asked Dave.

“No, just the opposite. The price level at which the curvature begins is not constant and varies with the passing of time. It can be calculated using my curvature equation of the P-Space. The curvature deflects the price and causes in the P-Space a reversal. We perceive this reversal in our common stock charts as a top or a bottom” (refer back to Figure 1.6).

P-SPACE: A QUANTUM TRADING TOOL

“You keep mentioning this P-Space. What do you mean when you say P-Space?” asked an ever-more intrigued Dave.

“It’s a multidimensional, virtual space composed of securities prices, time, and objects in movement, which curve the space due to their mass and gravitational effect. You can apply similar laws to P-Space, as those indicated by the theory of relativity and the laws ruling electron movement, though not the exact same equations.”

P - SPACE

P-Space is a matrix that can be linked to the chart of any security. On this two-dimensional chart, we can project lines that represent the points of curvature for every time frame (minutes, hours, days, or weeks). Under certain circumstances curvature points can transform into important levels of support or resistance, which are invisible using a traditional, technical analysis approach.

The support and resistance levels are spotted using Quantum Price Lines (QPLs; see Figures 1.1 and 1.2).

“So if you say that this P-Space is virtual, that means it doesn’t actually exist and you invented it!” observed Barbara, perplexed.

“Well, sure it doesn’t exist in the same way that your earrings and rings exist, Barbara, but it exists just like mathematical matrices and virtual reality exists.

“P-Space is an interactive, virtual structure ruled by entanglement, or nonlocality. It is composed of different pieces of the reality that surrounds us, such as objects in the solar system that move according to the mathematical laws discovered by Kepler and perfected by Newton, time, and the prices of a stock or currency whose movements are similar to that of a particle of light.

“Having reconstructed our universe as a virtual reality, we can start to see how a price will behave if it intersects a large gravitational mass. We will see the effects of its deflection from its earlier path by applying principles discovered by Einstein. Finally, we can verify the results by observing the actual movements of the stock price and how they relate to the generated QPLs (see Figures 1.1 and 1.2).

“With accurate observation you can see that the effects of deflection in P-Space are amplified with respect to our solar system. But P-Space is a virtual space, a mathematical laboratory created ad hoc to measure the interactions of space-time with stock prices using simple equations that are exceedingly accurate. The function of the P-Space is to help us forecast the major and intermediate reversals of the financial markets.”

“And so how does quantum mechanics fit into this?” asked Dave.

“Well, we’re not there yet. But so as not to leave you hanging, you can consider the price as an electron that jumps from one quantum orbit to another. This exercise allows us to calculate the probability of a stock price jumping from one QPL to the next one. We can do that by applying the conceptual arsenal of quantum physics, such as Bohr’s atom model, Planck’s constant (denoted h), and Schrödinger’s wave.

“The Planck’s constant (h) idea led me to understand that a stock’s price, like an electron, moves from one energy price-level to another, thanks to the fact that it either gains or loses a discrete ‘quanta’ of energy. In P-Space the different energy levels can be measureable through QPLS that provide powerful support and resistance price-levels.”

“Does ‘string theory’ play any role in your models?” asked Dave.

“Actually, the QPLs we can draw on the chart of a financial security can be seen as the result of strings loaded with information that illustrate the behavior of the price according to classical physics, the theory of relativity, and quantum mechanics, at the same time.”

“Do you think that your theoretical analysis system can consistently make money on the financial markets or can it only be sporadically applied?”

“It’s a tried and true trading system based on the concepts of reversal and acceleration (continuation) of the trend.”

“So how does your trading system actually work?”

“Just like Schrödinger’s quantum cat!

“My Quantum Trading system is based on a model similar to the wave function that we apply in the proximity of the P-Space curvature points. Even though it might seem quite strange for a theoretical physicist to combine Schrödinger’s wave function and Einstein’s space-time curvature, we do it, and it works very well in our trading model. Fortunately, we are traders and we have more room than a scientist to arrange our models to make them effective to make money in the financial markets. We cannot be 100 percent positive if a top will form or not in advance, just as one does not know if Schrödinger’s quantum cat is alive or dead.

“Many physicists reacted to the quantum cat paradox with irritation because they believe that it does not have any ‘real’ consequences on quantum mechanics. Stephen Hawking said: ‘When I hear of Schrödinger’s cat, I reach for my gun.’

“Schrödinger designed a mental experiment using a cat as an illustration. A cat is closed up inside a box containing a sample of some radioactive material and a tube containing deadly hydrogen cyanide. The process of radioactive decay is itself quantum mechanical and accordingly can only be predicted to occur in a probabilistic sense. When an atom within the radioactive sample decays, a signal causes a hammer inside the box to drop on the tube, releasing the toxic gas and killing the cat. According to the layman, the cat is either dead or alive, but according to the principles of quantum theory, the whole system comprising the box, the cat, and its other contents can be described by a wave function. Assuming that the cat can only exist in two quantum states—alive or dead—the wave function for the box system involves a combination of these two possible and mutually exclusive solutions arising from observation. The cat is both alive and dead at the same time, a strange and irrational combination of these two states. Just as the electron is neither a wave nor a particle until a measurement is made, in the same way our cat is neither alive nor dead until you open the box and look.

“According to quantum physics, the cat is in an indeterminate state, alive and dead at the same time, until we open the box. In our real trading activity we can see if after touching the QPL the price forms bars that confirm the reversal itself according to traditional price dynamics. In this case we can use several filters to decide if we should open the trade after the contact between price and a QPL. In case of a break of the QPL we just follow the trend instead of trading for a reversal, and our target will be indicated by the next QPL, exactly like an electron jumping from one energy level to another one, according to Planck’s constant (h).

“If you are a more aggressive trader, you can open a short position exactly at the price where a QPL passes, always using a stop loss, and assume that the trend will reverse when the price touches the QPL level. I only take this position, however, if other algorithms of time and price agree on the same information. I have to use several equations at the same time. Luckily, the software we now use allows us to visualize all this in a matter of seconds.

“When the price is in proximity to the curvature point, we limit ourselves to observing its behavior at that specific point. About 70 percent of the time, it will invert, and the rest of the time it will break toward higher or lower levels. As in quantum physics, it is a problem of the cloud of probability. Our model is inspired by the wave function that describes price probabilistic behaviors.”

Trading with QPLs

When trading day to day, we usually wait for the time when the price reaches a QPL, and at that point we observe the price behavior. For instance, if the price touches a support QPL and is unable to break it within the first 60-minute bar, then, at the beginning of the second hourly bar, we buy long. If it happens that you are a more aggressive trader, you can open a long position just as the price touches the QPL, betting on a reversal of the trend.

We sell short if we're coming out of an uptrend. We buy long if we're coming out of a down trend precisely at the price that corresponds to the point of maximum curvature.

We can spot these points utilizing QPLs. We always utilize stop-loss to close the position in case the trend contradicts our initial position, and we can also use a stop-and-reverse order. If short-selling on stocks were disallowed, you could still buy put options to open a short position, or you could sell short the entire stock index by selling a future.

You can better understand the preceding discussion by studying the QPLs drawn on a CME Group EUR-USD future chart, as displayed in Figure 1.7. At point A we came from a bull trend showing higher highs and the euro breaks, without hesitation, the QPL at 1.5073. The run of the euro against the U.S. dollar continues until 1.5984, where another QPL blocks the price surge offering a strong resistance at point B. The euro is unable to break it and so price drops. At point C the euro tries its last attack on the same QPL, but fails to break it again and is finally ready for a reversal. At last, the price collapses.

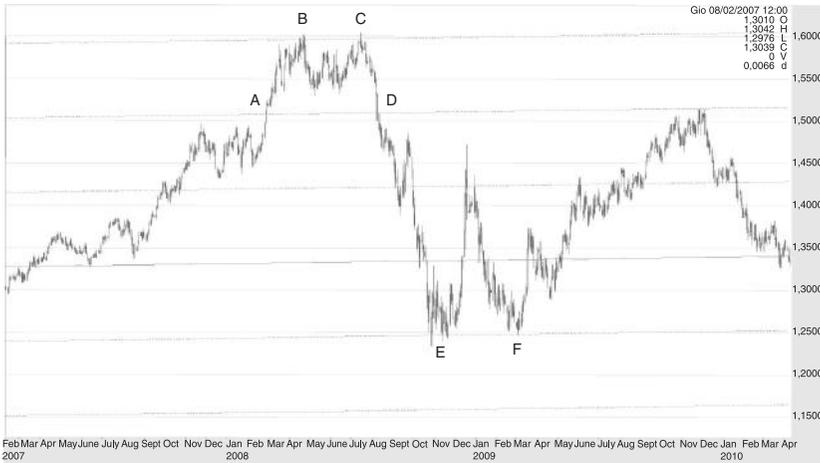


FIGURE 1.7 CME Group EUR-USD Future Daily Chart and QPLs

Isn't it amazing that a QPL passes exactly at the level of the all-time EUR-USD top before the double top was formed? And is it not astounding that another QPL offers support at points E and F at 1.2471?

At point F the trend reverses, reaching the next major top at 1.5147, where, at point G, just "by chance" another QPL is there to offer very strong resistance. Then the euro collapses again.

The price jumps up and down on the QPLs like a photon's trajectory deviated by a curved space, or like an electron jumping from one atomic orbital to another.

This is the magic of Quantum Price Lines. They will enchant you as you calculate them and draw them in a chart. Continue reading the next chapters and you will be able to do it, too.

"But doesn't this combination between physics, the theory of relativity, and the stock exchange seem strained?" asked Elena. "The first two are made up of mathematical equations and rational logic, and the third of volatility, unpredictability, fear, enthusiasm, and investors' euphoria, which push prices up and down in response to the latest news and data that surface on the market."

"Elena, what you say about news driving the markets is correct, but my model works all the same. The former doesn't exclude the latter. Rather, it seems that the phenomena happen simultaneously, not because they are connected, but because they are coemergent, following the principle of Carl Gustav Jung's notion of *synchronicity*."

"If you think that all of this is bizarre, I almost agree with you. But if you looked closely at recent financial trading history, you would discover some unsettling things. For example, did you know that one of the first formulas

for calculating the pricing of an option, put together by Black and Scholes, is based on Brownian motion? Brownian motion is a mathematical model used to describe the behavior of single, heavy particles present in fluids or fluid suspensions—for instance, the casual movement of pollen in water. The phenomenon was studied by Louis Jean-Baptiste Alphonse Bachelier and then by Einstein, who in 1905 wrote a study titled ‘Investigations on the Theory of the Brownian Movement.’

“The Brownian movement model of prices and financial stock is an essential element in current derivative products pricing as well as in other general financial activity. It is a movement adopted on probabilistic calculation. The mathematics behind the Brownian movement used in the financial field differ from the ones commonly used in the physics field and are based on the stochastic calculation of Russian L. Stratonovich; in finance, Black and Scholes would use it for their stochastic calculation based on Ito’s equations. Their initial intent was to check if the options and the warrants issued on various stocks offered a possibility for arbitrage. In many cases at that time, the windows of arbitrage were much bigger and more frequent compared to today, especially on warrants, and they made a fortune.

“To summarize, I invite you to consider Mr. Black and Mr. Scholes, no less bizarre than me. They used the Brownian model governing the movement of gas particles to calculate the most likely price of a stock option, while I use the theory of relativity and some concepts taken from quantum physics to calculate powerful and lucrative entry points for stocks, currencies, or whatever is traded in the financial markets with significant volume.

“My model, based in P-Space, is able to calculate the prices and times most likely to form a major or intermediate reversal in various financial markets, and it even applies to your favorite stock or currencies.”

“You do realize that being able to accurately forecast reversal points of the trend means making a lot of money. . . ,” observed Dave.

“Yes. And we have barely started to approach trading in a new way. Cheers to Quantum Trading!”

“Didn’t Einstein state that quantum physics was real, thus the world was crazy?” asked Dave.

“Yes, it’s true. But Feynman, one of the most important scholars of quantum physics, noted that even if a few people could understand the theory of relativity, there wasn’t anyone who could fully understand how quantum mechanics really worked. Years later, things don’t seem to have changed: Physicists apply the calculations established by the “founding fathers” of quantum mechanics, but they don’t ask themselves how and why these procedures are able to operate or what they really mean. This leads to the application of the so-called ‘standard model.’ Questioning the nature of the calculations at the base of his model was actively discouraged

by Bohr who advised people to limit themselves to the facts without getting lost in superstructures. These superstructures were instead much more important to David Bohm, who wasn't satisfied with the standard model of quantum physics and devoted his entire life to discover and perfect an alternative quantum model able to answer more questions. This caused him to be ostracized by the scientific community despite his brilliant research on plasma and a Nobel Prize already won."

I looked at Monika, who winked and smiled back. Quickly, I took her cue and wrapped up our gathering.

"All right, everyone, it's time to say goodbye. Enough talking about physics. It's time to dedicate ourselves to quantum biology!"

CHAPTER 2

How to Psychologically Prepare for Successful Trading

The most recent research in neuroscience shows that our brain seems to work in accordance to quantum laws. It means that all of us build up, day after day, our own reality. Every day we choose, consciously or not, the things we attract and manifest in our life: happiness or suffering, success or failure, prosperity or poverty.

Some scholars and scientists believe that quantum laws can affect not only the subatomic world, but also our daily lives. We can study these laws to dramatically improve our lives and create a better reality and achieve our life goals.

LIFE GOALS AND QUANTUM STRATEGIES

Consider the electron: In quantum physics there is a process called the “collapse of the probability wave function.” Collapse may be understood as a change in conditional probabilities due to the inference of the observer with respect to the observed phenomena. It means that the act of observing a certain particle carried out by the observer modifies the structure of the wave. So the electron appears, out of a pure energy state, as a particle of matter in a certain position between many possible positions because of the observer’s action.

Ultimately, what is thought, but energy in wave form?

We can consider a wave function related to every potential event and to the probability a certain event will occur, not just in the life of an

electron, but in our life as well. In this way, we can start a fascinating journey toward the “theory of everything.”

A quantum approach to daily life suggests that using your brain and the mind, its software, you can shape reality by attracting to you those things you need for a better life. If you can intensely focus on what you really want and keep your mind concentrated on what you have decided to manifest in your life, those things will come to you. It’s not easy and requires the ability to maintain your mind at a constant high energy level. You have to inhabit a lucid, sharp state of presence and awareness to be the director of the movie of your life.

There is an open debate between quantum scientists to decide if there could be a possible impact of quantum mechanics on our daily lives. If you speak with most physicists they would tell you that it’s absolutely crazy to think that you can intentionally cause the collapse of any kind of wave associated with your thoughts. They state that only the subatomic world is ruled by quantum laws. However, it seems that many prominent scholars and scientists attempting to develop a quantum philosophy disagree and are supporters of the possibility that quantum laws can also affect our daily lives.

If you read books written by contemporary scientists, such as Fritjof Capra’s *The Tao of Physics* or Amit Goswami’s *The Self-Aware Universe: How Consciousness Creates the Material World*, you can take a glimpse between the folds of reality and gain a better understanding of the principles of how Quantum Trading and quantum philosophy work.

If you are a physicist and you observe a probability wave of an electron and measure it, all of the potential events collapse into the unique, final event. It is similar to what Schrödinger points out with his cat in the box paradox, as we have already discussed in Chapter 1. The cat is both alive and dead at the same time, until you open the box and observe it.

Anything you can imagine potentially could be associated with quantum probabilities. You are the observer who creates the wave function representing your consciousness and thoughts. Consequently, awareness collapses into the particles composing what we usually call reality. As John Hagelin, a contemporary scholar, points out:

According to what quantum physics teach and quantum cosmology confirms Universe essentially emerges from thought and all of this matter around us is just precipitated thought. Ultimately we are the source of the Universe, and when we understand the power directly by experience, we can start to exercise our authority and begin to achieve more and more.

It seems that we are the creators not only of our personal destiny, but we could also be the creators of a universal destiny.

It is no wonder that the use of advanced mind techniques, based on quantum philosophy quite new in the West but very old in most parts of Asia, can cause many positive changes in your life. You can reduce stress, remove mental and emotional blocks that interfere with success, develop a more positive attitude, enhance creativity, improve relationships, and boost your motivation.

Science fiction or quantum reality? It's difficult to decide using only linear patterns of thought, which are very useful in solving daily problems, but inadequate in explaining the nonlocal relationship that exists between energy, matter, consciousness, and reality. What a big problem, but also extremely fascinating!

Though it has been mentioned in Chapter 1, it's crucial to remember that Richard Feynman, one of the greatest twentieth-century quantum physicists, stated that no one fundamentally understands all the implications of quantum physics, even though there are several nice models available, as well as elegant equations that make quantum mechanics consistently work.

Everything depends on how we use our thoughts. How we focus our brain activity directly affects and tunes the neurotransmitters secreted by the brain. Neurotransmitters are endogenous chemicals that relay, amplify, and modulate signals between a neuron and another cell. They influence our moods by increasing happiness or sadness, motivating us to achieve our goals, or amplifying the frustration that causes us to give up.

Neurotransmitters in turn stimulate our endocrine glands to produce a certain level of various hormones, the most powerful medicines or poisons that our body can produce. We can control their production by controlling our mind and our thoughts. Also the food we eat can affect our behavior and emotions. For example, often the food and drink we consume contains too much sugar, causing not only health problems such as obesity and diabetes, but also weakening our character, inclining us to be too self-indulgent and too easily give up. I eat everything, but when I have lunch or dinner I prefer to tap into some special food combination to enhance my energy and health and stimulate a good hormonal balance.

Just as food nourishes the body, thoughts and emotions nourish the mind.

Depending on the focus of our thoughts and emotions we can attract beautiful or ugly things to ourselves.

People usually complain that someone else is the cause of their sorrow, disappointment, anger, and bad luck. Instead of taking responsibility for their own life, they blame others. They are not interested in real life change. They are only interested in sticking to their frustrating life, and they repeat the same behavioral pattern every day.

They continuously find excuses for their fear and confusion. This is the typical mind structure of an eternal loser who wins all of the worst things he can experience. A born winner, whatever happens, takes responsibility for his life and does not waste time and energy blaming others. He doesn't complain or search for excuses. Rather he takes action to transform a problem into an opportunity to improve his life. He focuses his mind on pleasant emotions and he uses them to drive him toward success. He enjoys his life without focusing on fear and guilt, the feelings most responsible for unhappiness and failure. If you can get rid of fear and guilt you will enjoy a meaningful and beautiful life. It is, however, not that easy because contemporary Western culture is based on feeling regretful and sorry for yourself. Please notice that a sense of guilt is one of the most powerful instruments in mass mind control. If you want to be free you have to struggle, but believe me, it is worth it!

Condescending and self-indulgent people are actually involved, through their attitude, in manipulating others to gain their attention and favor, having chosen a weaker way to live. Giving up guilt, condescension, self-indulgency, and fear means renouncing manipulation of others and ourselves, unleashing power from within and opening the door of real freedom. Look within yourself and search for your truth. Jesus taught his disciples, "Then you will know the truth, and the truth will set you free."

Good or bad luck does not exist, or rather, it depends on the way we use our mind at a very deep level even if we are not aware of it.

ARE PORSCHEs AND SUPERMODELS EVERYTHING IN LIFE?

If you are able to forecast when a stock or a currency are about to reverse their trend it means that, if you trade the market accordingly, you can significantly improve your quality of life, and have more freedom and time to develop yourself. You can finally choose the life you want and be your own boss.

If Quantum Trading works so well, then why am I sharing this information with other people?

Besides making money to live according to my high standards and to afford nice things like Porsche and Jaguar cars, I like reading, writing, traveling, researching, teaching, and communicating to people my discoveries and experiences. Interacting with people is always exciting, and while you teach you often learn something new about the things you already know. So that's why I like teaching and writing. I always need new stimuli and I

don't like chemical stimuli coming from drugs. I don't want to be rich and bored. I prefer being rich and having a lot of fun!

I confess: Besides nice cars, I also like supermodels and going to parties where they also hang out. You remember the supermodel Adriana Lima in one of last year's Super Bowl commercials? Wow! Yet for a gentleman, cars and supermodels should not be everything.

When I was younger I lived as *if today were my last day*. As time goes by I've become wiser and I live as *if tomorrow will be my last*.

Nevertheless, there are many other significant things in life besides beautiful girls and cars, such as exploring the depth of the mind, achieving an emotional balance, and reaching a higher level of consciousness. That's why when I was younger I spent quite a lot of time traveling throughout Asia and I have visited India, Nepal, China, and Tibet. Over there you can learn a lot about yourself, your mind, and the universe.

So far I have written two other books about trading that were published in Italy, my country of birth. I am fascinated by the quantum physics approach to reality, and trading represents only one application of that, though it's a very useful one for making money and enjoying an exciting life.

HOW DO YOU PLAY THE GAME OF LIFE?

So, are you still there? Before starting with some other technical aspects of Quantum Trading, let's play an interesting game: the game of life and its strategies.

Stop for a moment, sit back, relax, and answer the following questions:

- Do you like your current lifestyle?
- Do you have enough time for yourself, your family, and your loved ones?
- Are you satisfied with your quality of life?
- Are you satisfied with your significant other?
- Are you satisfied with your income level?
- Did your investments in the past three years earn good returns?

If you answered "yes" to all of the above questions, I would like to congratulate you! You are a skilled player of the game of life and it's not really necessary for you to continue reading.

If, however, you answered "no" to two or more of the questions, then this book could be very useful. For some, the game of life is mysterious and you believe that some people are just luckier than others. Maybe you're

already good at earning money with your professional activity, but the return on your investments could improve. Most likely you've lost money in the stock markets during 2008 and 2009.

Perhaps you want to change your life and you're searching for other options. You want to be financially independent, but you haven't found the way to achieve what you want yet, and you are not yet familiar with Quantum Trading strategies. These strategies have enabled many people, the students who have taken our classes in Switzerland, to consistently earn money in financial markets even when the stock market falls, by trading futures, options, and forex (FX), and keeping losses under control with stop-loss orders.

In the next chapters you will find out that with trading options you can earn anywhere from 30 to 100 percent, and even more, of the option premium within a few days, in the case of a big market movement or change of implied volatility. Yes, you've read that correctly; there are no typos. To do so, however, you must keep risk under control, cutting losses immediately if the market goes in the opposite direction beyond a certain range; otherwise your dreams could turn into a nightmare.

If you choose to trade futures on commodities, stock indexes, and currencies or just stocks, and you always place a stop-loss order, you can achieve your life goals if you have a good trading strategy. If you don't remember to use stop-loss, sooner or later you will lose everything. Stop-loss is your insurance policy to stay alive and in good health in the very dangerous environment of the jungle of trading.

BUILDING POWERFUL STRATEGIES IS THE KEY TO SUCCESS

I strongly believe that trading is a metaphor for life.

If you follow the right strategies, you will be very successful. According to Neuro-Linguistic Programming (NLP), having the right strategies is the key to success in life. According to this discipline, losers follow the wrong strategies and refuse to change. In the end, they say they are unlucky. . . .

NLP studies how people create strategies to organize their thoughts, feelings, language, and behavior to achieve results, even if they themselves are unaware of the process. NLP teaches people how to make big changes in their lives. It proposes a methodology to successfully model the outstanding performance of geniuses and leaders in different fields.

This means that you can achieve extraordinary success if you are able to create a consistent and "congruent" strategy to achieve your goals. NLP cannot create miracles, but it can help you to understand how to build

an effective strategy to achieve the best results in the shortest amount of time.

NLP advises us to study how the most successful people, in the field you're interested in, have achieved their position. You should study their strategies and divide the entire process into a series of concrete, accomplishable steps. Then you need to clearly consider how to model your behavior, following a similar strategy. So you begin to take action step by step. As you move from one step to the next you have to check if each step is giving you the expected result. The final goal is eventually achieved when each intermediary step is successfully achieved. "Congruence" between one step and the next of your strategy is the key. Feedback process and control of the result of any step of your strategy are mandatory. In case the result you obtain from a step is not satisfactory, you need to come back to the previous step and correct the action related to it until you get the expected result. This process is not a cakewalk and most people give up and complain that they are unlucky, or they keep on making the same mistake without asking themselves what is wrong. Luck is about life change and committing yourself to following all of the steps and never giving up. If you fall down, take a rest, ask yourself what went wrong, and then focus on correcting your strategy to get the result you desire. No pain, no gain.

A key concept of NLP is that we form our own unique mental maps of the world as a result of the way we filter and perceive information absorbed through our five senses. Even if the sensory input and the information is the same, people process the same data using different sensorial strategies, obtaining different results. If each time you have tried to achieve your goals something has gone wrong, it means you are using ineffective strategies or you are repeating the same mistake. What we are used to calling reality, then, is not an objective entity. When we look at the world we are actually just selecting one way out of many to represent our experience. Reality, then, is only a mere representation. It is one possibility out of many, like the position of an electron that is found in a precise position only when observed, but that could actually be anywhere within the probability curve function, as Eisenberg and Schrödinger pointed out.

NLP techniques are very powerful for designing effective strategies to reach the best results in fields such as mental health, sports, politics, business, motivation, and trading.

NLP teaches us how to analyze a system of relationships and transactions, reduce it to its basic components described by sequences of representative sensory units, and then work with it. These techniques have become very famous within the past 30 years. They are used by the most successful people around the world to improve performance throughout various sectors.

I am positive that NLP can be useful to traders using various discretionary approaches. They would find it very beneficial for improving the application of their money management strategies, or positively conditioning their brain to imitate the top traders' risk management strategies. If, when you trade, you often lose what you've gained, your risk management strategy is probably not very good and you need to change it. When I teach my students Quantum Trading strategies, at the end of the course we spend several extra hours on trading psychology, NLP techniques, and much more. Trading psychology is what makes the difference between an excellent trader and a mediocre one.

Quantum Trading techniques can offer you the basic components with which to build up various effective strategies to be successful in trading and obtain wealth and freedom.

If wealth alone cannot bring you happiness, at least it can help you avoid many of life's annoyances. But what is real wealth? Wealth, for me, is just a tool to increase quality of life. Wealth itself is not the final goal, but merely an instrument for increasing your freedom.

It is very important to have dreams and life goals. Wealth can help you achieve them; yet, you also need a life-philosophy, some model that inspires and empowers you to obtain what you want to achieve. If you don't have dreams or goals that drive you, you will find it difficult to reach a significant level of wealth. Even if you do, you could lose your money sooner or later, or even worse, lose yourself. Intention, awareness, and knowledge are more important than objects that you merely own. If you continuously improve yourself and aim to reach a higher and higher level of knowledge and awareness, you will exponentially increase your personal power and improve your energy level. You will take a life quantum leap. Then wealth will come to you like a moth to a flame.

CREATING MOMENTUM IN LIFE

It is indeed possible to start from scratch, be successful, and achieve a lifestyle where you have everything you need to feel happy and fulfilled.

The key words are "no limits." I especially refer to your mental limits bounding people to a class B life. These boundaries are our beliefs, the most powerful software units of your mind.

Tony Robbins observed during one of his seminars that, "Beliefs have the power to create and the power to destroy. Human beings have the awesome ability to take any experience of their lives and create a meaning that disempowers them or one that can literally save their lives."

So, your life-potential is determined, or limited, by your self-belief. Our values and beliefs shape our actions. Anything is possible if you focus on passion and purpose.

This is what NLP suggests. Many examples of self-made millionaires confirm that.

It's very important to always check which beliefs guide your life and if your belief system is able to empower you to achieve your life goals. If not, then you had better change it.

A good strategy for success begins, like Paul Getty suggests, by "doing business with our own selves." In other words, it's very important to start by investing in ourselves and find an activity that permits us to exponentially increase our profits in relation to the time dedicated to the business until a critical mass is reached. Once you have reached a critical mass you can dedicate more time to doing what really interests you. So choose an activity that carries *momentum*, that is, a powerful shove in the direction of continuous growth and development.

If you are ambitious and feel you have many goals to reach, and yet within five years from now you are earning about the same amount that you earn now, something is probably wrong! Your life does not have momentum. Your growth is too slow and you don't have the potential to reach your top goals. If true, you will have to be content with being a spectator to your own life.

A great example of momentum comes from the biography of the legendary trader W. D. Gann. Coming from very modest origins and lacking any financial resources, he dedicated 10 years of his life to studying stock market charts in search of a cyclical law that could enable him to spot tops and bottoms of a trend. His love and passion for work along with his ability to focus 100 percent on studying hundreds of stocks and commodities charts led him to discover the "vibration law." Using this knowledge, he created techniques to analyze the financial markets and trading strategies to consistently beat the markets during his 45-year career on Wall Street. During this time he allegedly made a fortune of over \$50 million.

During his career Gann traveled with his private plane and loved to pilot it himself. He was one of the most respected personalities in the financial world. His life was filled with travels around the world where he studied ancient civilizations' wisdom in geometry and mathematical systems. It seems he was also a good friend and an advisor of the Rockefellers. He was inspired by the mathematical structure of the Great Pyramid in Giza to create very precise forecasting techniques. Gann wrote many books about trading, but he never commented publicly on his more secret techniques; those were only revealed to an inner circle of students and friends. He had a fear of being considered crazy by his clients, so he wrote only general, but accurate, books on trading concepts.

Even though this is not a book about Gann, we'll explore in the next few chapters some of Gann's approaches to the market. He was a visionary who, by 1908, had already thought of trading in terms of atoms and electrons, as he stated in a famous interview with *The Ticker Digest*. His existential path was oriented toward continuous growth. He lived a long and enjoyable life. Shortly before dying he wrote in one of his books that he had lived with fullness, that he felt satisfied, and that he wasn't scared of the last big journey awaiting him because he had obtained everything he desired in life through financial trading. Gann was a real master of utilizing options and futures to create momentum, and his life is a beautiful example of how passion, commitment, and focus can allow you to achieve your goals.

CROSSING THE BRIDGE

Let's begin this section with another couple of questions. Questions, according to NLP, are very important because they provide you with the key to unlocking your unlimited potential.

- How much time do you dedicate on a weekly basis to asking yourself if you are satisfied with what you have and if you're on track to reach your goals?
- How much time each day do you dedicate to finding strategies that can improve the quality of your life by working less and earning more?
- Are you sure that today's certainties will be here tomorrow? It's not a question of pessimism, but rather of realism, similar to the workings of the stock exchange.

By studying history, one can see how the biggest economic and social crises usually occur after financial crashes. The current big recession in the United States, stemming from the subprime mortgage and toxic derivatives crisis, has caused thousands of people to lose their homes and their jobs. Unfortunately their suffering speaks for itself.

Throughout the course of this book we will introduce very powerful trading strategies that will enable us to understand how it is possible to program constant returns in our trading, even if our starting capital is relatively small.

Before introducing our Quantum Trading strategies in the next chapter, we should take a moment and reflect on what it is that both influences and determines the results in our life. I believe this is necessary to attain the maximum benefits from these powerful instruments, which can generate a lot of wealth if used correctly.

Many people in the world believe that it's very difficult to attain what makes them happy because it usually does not happen for the average person. "Reality is really different," some say, "and it's not easy to get what you really want. If it were easy, everyone would be rich and happy." Their mind set simply doesn't allow them to think differently.

But are we sure that this is how it really is? There is a bridge in your life, beyond which exists a life of liberty and financial independence. Some might call it success; however, few people actually dare to cross this bridge. Most people are afraid of the risks they could take in crossing the bridge. Some even think it's prohibited to cross the bridge. Only once in a while does someone attempt to cross the bridge, even though everyone else thinks she's crazy and laughs at her. But when that person succeeds and reaches the other side of the bridge, the others say, "Look at her and what she did. How lucky she is to have become that successful!" These people are the ones who will never dare to cross the bridge and will instead stay where they've always been, complaining about everything.

There is also another type of person who says that he wants to cross the bridge, but not now: he doesn't feel like it today, but perhaps he will tomorrow. This person apparently contemplates the crossing, but is always indefinitely postponing it.

The lives of W. D. Gann and other people who have successfully crossed the bridge prove to us that it is possible to achieve what we want if we develop the right focus and direction.

Where is this bridge? It is a place in our minds that I hope you can cross as soon as possible, if you haven't already done so. And what is it made of? Perhaps Shakespeare would say that it's made up of the same material as our dreams.

I prefer to say that the bridge is composed of our belief system, which molds the way in which we see the world. What empowers us to cross the bridge are our values and taking a congruent, effective action.

We don't actually see the world for what it is in reality. We see it from our point of view and through our structured belief system. Our beliefs are the filters that we use to interact with reality. People always see reality through filters and "the map is not the territory," as the Polish-American scientist and philosopher Alfred Korzybski remarked.

We have to carefully examine our deepest beliefs and values. You will discover that often we are not fully aware of them. Beliefs and values are the compass that we use to direct our lives. To cross the bridge and achieve success we have to cultivate the right beliefs and values and change the ones that are not beneficial. If your beliefs tell you that it's possible to make a lot of money and enjoy life, then you will pursue your goals, in spite of obstacles, because you're sure of yourself: Your internal image of yourself is very powerful and motivating.

If, instead, your beliefs tell you that only those who are born privileged, or who steal, or who use unethical means to achieve the ends of wealth can become very successful, then you are bogged down in a murky swamp. It's time to start reorganizing your values and beliefs before making any other changes, or pursuing financial trading.

Now I have some other questions for you.

Take out some paper and a pen to write down your answers clearly and concisely. It is important to write your answers out because thoughts are often volatile and we're not used to systematically questioning our existential goals. Writing helps us organize our thoughts and pinpoint the answers. Do you remember? Asking the right questions helps you to unleash your power from within.

- What beliefs guide you in life? What do you really want to achieve in life? Look inside yourself and think of the most beautiful things on earth you desire. What are your beliefs about your ability to achieve what is really important to you?
- How would you like to live your life? What kind of person would you really like to be? What makes you happy? In other words, what fulfills you?

Now that you have focused your life goals, you need to review the strategies you intend to use to accomplish them. Perhaps you have already thought about what you want to achieve, but now you have to ask yourself if your beliefs and actions are in line with your goals, so please answer the questions below:

- Does your belief system allow you to live a first-class lifestyle?
- Are the strategies that you are currently using to manage your financial and professional life able to bring you everything you desire?
- How much have you improved your economic level, and what have you achieved compared to what you planned to achieve in the past 12 months?
- If you are already a trader, does your money management strategy and trading system help you accomplish your previously set goals?

So many questions! Isn't this supposed to be a book about Quantum Trading?

Don't worry; I consider this a preparation for developing a strong motivation and achieving extraordinary results with Quantum Trading! Using powerful instruments, like futures or forex spots, without having these top goals in mind, would be completely useless.

If you are totally motivated you can achieve really impressive results. Dedicate at least half an hour every day to orienting your life in the direction that you want it to go. Think of all of the most beautiful and motivating things that turn you on, feel the emotion associated with these images, and you will create a magnetic field of attraction. The secret to making everything work is creating a clear image of what you want, using vivid colors. Then, carefully examine the images as if you were projecting them onto a movie screen. Try to imagine the sensations and emotion of accomplishment and associate that feeling with the images as if they had already happened. And then take action. If you don't act, then you're only daydreaming.

If you have a good understanding of your mind, the thoughts and the mental images that you create will become reality, *nous*, and will develop an Entelechy—or rather, the process that perfects itself as it occurs—as Aristotle used to say.

When I spent several months in Tibet to study the structure of the mind, the first thing I was taught was how to observe the mind and the different structures of thought. Have you ever tried to be mentally quiet for one consecutive minute? It's almost impossible the first time you try. You need a lot of training and practice to control your mind.

What I want to suggest is not to switch off your brain, but instead to examine your thoughts as if you were an external, attentive observer. At first it's nearly impossible to do so, because you develop an acute observation of mental space, where you will find an endless flow, a chain composed of thousands of thoughts, streaming through your mind. At the beginning you will notice only the most prominent thoughts. As your mental presence strengthens you will find that there are subtle thoughts of which you are normally not conscientious. To identify their content you have to create a very specific focus. These thoughts flow unrelentingly and establish the deeper structure of our mind, which in turn generates our reality. The mind, according to ancient Tibetan wisdom, is *Kunjen Gyalpo*, “the king that creates everything.”

Western neuroscience and contemporary schools of psychology today confirm what has been known in Tibet for thousands of years. Transactional analysis, Gestalt principles, and NLP point out how we unconsciously accompany our decisions with a continual, subtle flow of comments and internal images, which drive our motivation for every action, important or banal. They are the underlying structure of our mental, emotional, and psychological reality. Whether or not we are aware of them, they are what determine who we are and what we will achieve.

If you pay close attention to your thoughts for awhile, you will discover the true and proper structures of your *metacomment*. Without delving into deep psycholinguistic analysis, we can say that some people possess a set of positive metacomments. When they start something new and encounter

obstacles, their inner voice tells them, “Come on, keep going, you can do it. Stick to your decision and get what you want.”

Others possess a set of negative metacomments. Any obstacle in the way of their goals, because of these metacomments, transforms into an impossible barrier: “Just drop it. If it were actually possible to achieve total financial independence, then everyone would succeed,” or “Yeah, I want to start this new process in my life, but not now, maybe next month when I’ll have more time.” They never get around to starting, or they continuously change their mind and abandon any effort because they feel discouraged. A determined willingness, applied to strategies you decide to put into action, can bring you outstanding results.

In any case it’s important to frequently evaluate and monitor your strategies. In trading, an excess of trust or distrust can be fatal, especially if we don’t understand how to create an efficient strategy by following the rules we were given at the beginning and applying them.

To be successful it’s not only necessary to have the right thought process, but you also need the appropriate strategies to realize your goals. You must monitor this process continuously to evaluate if you are applying the strategies appropriately.

Congruence in taking action means success. Incongruence means failure. Quantum Trading is a congruent system that allows you to be successful in trading. Anything is possible if you focus on passion and purpose.

P-Space Structure and Quantum Trading Algorithms

In the previous chapters we introduce the main concepts used to develop the Quantum Trading system based on QPLs. We offer a taste of how QPLs work in several charts. We also review the basic concepts of Einstein's theory of relativity, demonstrating how space is not uniform and how gravity, generated by the presence of a celestial body's mass, curves space.

One effect of curved space is that photons, or light particles, deviate from their linear path. The concept of a curved space and the phenomena of light deflection are fundamental for understanding P-Space and QPLs.

Now the moment has arrived to finally understand how to build the P-Space and study the equations to calculate QPLs. Then we'll know how to draw QPLs on our favorite stock or currency chart.

Let's briefly review the main properties of P-Space. P-Space is a multi-dimensional, virtual space composed of securities prices, time, and celestial objects within our solar system in motion, which curve space-time due to their mass, or gravitational effect. Other properties of P-Space include:

- It is an interactive, virtual structure ruled by entanglement and non-locality.
- The price movement of a stock or currency, and its top and bottom in P-Space show movements similar to a particle of light and an electron.
- P-Space is ruled by laws similar to the theory of relativity and quantum physics.

A study of geomagnetic storms, published by the Federal Reserve of Atlanta and discussed in Chapter 4, proposes that geomagnetic storms are

caused by sun-spot activity. The sun is the protagonist of a correlation between its spot activity and stock market returns. If we focus on this concept we can also consider the activity or movement of other celestial bodies in our solar system, such as the major planets, to discover other correlations.

If you place the planets in our P-Space you discover that, using a special operator to measure its curvature, their mass can curve the space-price-time enough to deflect the movement of the price of a security, which we treat as a photon in our example.

The effect of the curvature in the P-Space then is amplified. In our solar system the sun has the largest mass to curve the space and produces a higher light deflection effect.

However, in our P-space, the other planets can significantly curve the space in which the price moves, especially those with a larger mass. In P-Space the deflection magnitude is so high that the price can reverse its path. In our daily lives we perceive these phenomena as bottoms and tops in a security chart.

Basically the P-Space is a separate, virtual universe ruled by the theory of relativity and quantum laws where entities such as price exist, move, and act according to these laws.

To calculate the points of our P-space and find the higher level of curvature, we need a special operator. We call that operator the "P-Space Operator" (PSO).

To understand the importance of the PSO, it is useful to remember that Einstein didn't make any progress on his theory for more than 10 years, until he met Riemann and learned how to use Riemann's curvature tensor in his calculation of relativity. It allowed Einstein to calculate the magnitude of light deflection. The principle of deflection is shown in Figure 1.5 in Chapter 1.

PSO represents in my Quantum Trading model what Riemann's curvature tensor represented for Einstein in developing his theory of relativity. From now on we'll speak of the deflection of price instead of light deflection phenomena.

Einstein finally received official confirmation of general relativity when Arthur Eddington observed a solar eclipse on Principe Island in New Guinea in 1919. Fortunately, we do not need to wait for the next solar eclipse, as Einstein did, to confirm Quantum Trading theory. We can just apply Kepler's three laws for spotting the position of a planet and calculating its mass for a given period to measure its effects on price behavior.

If the price of a stock or currency is deflected in P-Space, it means that it has been affected by the mass of a planet and we'll see a top or a bottom, or at least a correction in case of minor curvatures for the corresponding price.

In geographical astronomy the geocentric position of a planet on the ecliptic is individuated by a set of spatial coordinates such as longitude,

right ascension, declination, and latitude. You can also use heliocentric coordinates to spot the position of a planet. In this case you are not observing everything from the Earth, as in the case of geocentric coordinates, but rather your point of observation changes.

A longitude's number always ranges between 0 and 360 degrees because planets, according to Kepler's three laws, move on an elliptical plane. In our P-space we commonly use both geocentric and heliocentric coordinates to spot curvature points that are then transformed into prices. From this point on we'll use the term *geo* to refer to geocentric and *helio* for heliocentric.

The ecliptic is the plane of the Earth's orbit around the Sun. The Earth's orbit, viewed from the side, like a circle viewed from the side, is a plane. So the ecliptic is the plane of Earth's circular orbit extended to infinity.

Ecliptic describes the centerline of what ancient Greek astronomers called the Zodiac, which extends eight degrees above and below the ecliptic. In other words, the Zodiac is a belt 16 degrees wide centered on the ecliptic, and it is the track on which planets move.

Now we will present Johannes Kepler's three laws, which help us to calculate the position of a planet.

Kepler's Three Laws

Johannes Kepler developed three laws that describe the motion of the planets across the sky.

1. The law of orbits: All planets move in elliptical orbits, with the sun at one focus.
2. The law of areas: A line that connects a planet to the sun sweeps out equal areas in equal times.
3. The law of periods: The square of the period of any planet is proportional to the cube of the semimajor axis of its orbit.

We could dig into all of Kepler's equations and the calculations you need to fix the position of the planets in P-Space and then calculate the higher-level curvature point; however, this would be superfluous since you can find them in many books of physics and astronomy. You can find free software on the Web, or you can consult the NASA ephemeris that shows the position of the planets in our solar system day by day.

Now we'll finally explain how to use the PSO to convert curvature points into prices to find unconventional, but very effective resistance and support levels.

This happens for the price deflection phenomenon due to the presence of a mass in the P-Space. Basically, in P-Space there are 360 possible

positions around the ecliptic. When a planet occupies one of these positions, it curves the P-Space in the same way that a heavy steel ball in the middle of a taut tablecloth will create an indentation, as we discuss in Chapter 1.

In P-Space, a given position of a planet can be transformed into a given price for a given time by making use of the PSO.

PRICE SPACE OPERATOR (PSO)

The PSO indicates the price of a security corresponding to a certain degree of curvature of P-Space. The PSO identifies powerful points of Support and Resistance.

CALCULATING A QPL

Tapping into the PSO, each day I can get a given potential price related to the points where the highest levels of curvature of the P-Space occur for a certain planetary mass. So, I obtain different price-points for each day of the year.

Below you will find the formula to calculate the PSO and PSO harmonics:

$$\text{PSO harmonics} = (N \times 360^\circ) + \text{PSO}$$

or

$$(1/N \times 360^\circ) + \text{PSO}$$

- where
- PSO = Longitude \times conversion scale
 - Long = Planet longitude (geo or helio)
 - CS = Conversion scale
 - N = The harmonic you need to use to approach the nearest relevant QPL of a security.

PSO Harmonics

When you are dealing with price securities showing higher prices than 360 degrees, you have to use the N harmonic to get a value closer to the securities actual price.

If you are dealing with price of a currency where the price is near 1, you have to use the inverse harmonic of $1/N$.

Assuming that CS is equal to 1 then PSO would be equal to Longitude.

If you want to calculate the curvature of P-Space and its price-point generated by the planet Saturn helio on October 11, 2007, the day of the historical S&P 500 top, you first need to find the helio longitude of Saturn on that day. This is equal to $150^{\circ}.33$.

$$\text{PSO} = \text{Long} \times \text{CS}$$

So, using $\text{CS} = 1$, $\text{PSO} = 150.33$.

S&P 500 shows a price of 1586, which is higher than 360, so we need to use PSO harmonics; otherwise, we would only have a price in the range of 0–360 degrees.

We'll add 360 to 150.33 n times.

The P-Space generates curvature points simultaneously at the following prices:

150.33	
$150.33 + 360$	510.33
$150.33 + (360 \times 2)$	870.33
$150.33 + (360 \times 3)$	1230.33
$150.33 + (360 \times 4)$	1590.33
$150.33 + (360 \times 5)$	1950.33
And so on.	

Because the S&P 500 futures price is 1586, very close to 1590.03, which is the fifth PSO harmonic, I anticipated a reversal on October 11, 2007. The historical top was made on exactly that day.

PSO EQUALS A QPL'S VALUE ON A CERTAIN DAY

The PSO, or its harmonics, show the price level where you can find a QPL on the same day.

Usually, in the case of swing trading where we want to trade the market for a movement lasting at least three to four days, we consider a lost motion, or a tolerance, of seven points with respect to a QPL.

In this case, at 1583—seven points below the QPLs passing at 1500.03—and following our rule, we opened a short position on S&P 500 selling futures.

The target price to take profit is provided by the lower QPL passing at 1230.33 on the same day. It changes its value every day. In this case we

are dealing with a slow planet, and the price associated with it in P-Space changes only a few cents a day, assuming that N is equal to 1.

In this example, we can say that within a few weeks the target price will be basically the same with respect to the one that we have calculated on October 11, 2007.

In fact, if we want to precisely calculate the same QPL value on October 22, 2007, the day when price reached the target price, we need to first check that Saturn's helio longitude is $150^{\circ}.72$, very close to the initial value of October 11. For instance, after 6 months, on April 22, 2008, the helio longitude is $158^{\circ}.19$.

You can draw on an S&P 500 chart these PSO points, and if you join them together you will obtain a line, which is the QPL.

A QPL, as you remember from the previous chapters, is generated by the curvature activity of an object in our solar system within the P-Space. If a price happens to be very near or touch a QPL, it can be deflected from its original trend and we'll see a reversal in a stock, commodity, or currency chart.

OBTAINING QPL

A QPL is obtained by joining day-by-day points of the PSO or the same PSO harmonic points.

This means that we have to exclusively join the points belonging to the second PSO harmonic to the third PSO harmonic, to the fourth PSO harmonic, and so on, without mixing one harmonic point with another.

To summarize: first we need to know the position of the planets, then we bring them into the P-Space. We then use a simple operator to transform the planet's longitudes into prices where the curvature is at its maximum level and could cause a reversal. We calculate for each day of the year the position in P-Space—expressed in terms of price—of all potential curvature points. Each individual point is a component of a QPL. If we join all of the points we get a support or resistance line that is a full QPL.

In case the price is higher than 360, we join all of the points of the same PSO N harmonic to get a full QPL. Why do we choose, among so many QPLs, only the fourth harmonic at 1590.33 for our October 11, 2007, S&P 500 trade? Simply because the fourth harmonic showed, on that day, a price that was the closest to the real S&P 500 price.

When the mass of two celestial bodies occupies the same degree of longitude of the ecliptic, the curvature point is much bigger than usual. The S&P 500 trade that I discuss with my friends in Chapter 1 is based on this model. Two planets occupied the same degree of the ecliptic;

astronomically this is called a conjunction. Their masses were added together and curved the space, and the PSO helped us to calculate their respective QPLs. In the proximity of the conjunction, the two QPLs stemming from each planet crossed and the price of the S&P 500 was tangent. So we faced a big drop of the index, as you can see in Figure 1.1 in Chapter 1, because price and the two QPLs were simultaneously in the same spot of the P-Space.

While it is easy to understand what “longitude” is, we need to discuss the conversion scale more extensively.

The conversion scale is an operator using a quantum approach for the solution of the curvature magnitude found in certain price points of P-Space.

Max Planck was the one who first took a quantum leap in particle physics. Planck stated that the problem of the emission of varying degrees of ultraviolet could be solved. The electrons are assumed to emit or absorb energy only in certain specific, discontinuously discrete amounts—which he called “quanta” of energy.

Also in our P-Space, the curvature magnitude (calculated as $PSO = \text{Longitude} \times CS$) depends on a factor increasing or decreasing its value by discontinuously discrete amounts, or “quanta.” This is mandatory for the calculation of curvature of our P-Space.

It seems that Gann was also interested in finding a relationship between Kepler’s three laws and stock prices. However, there is no evidence that he used a quantum approach for his calculations in this field; instead, he remains quite general and vague on this subject.

In fact, the value that can be assumed by CS in P-Space can be only one of the following numbers:

1, 2, 4, 8, 16, 32, and so forth. That is equal to 2 to the n power. Or, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$, and so forth. That is equal to 1 divided by 2 to the n power.

This means that the magnitude curvature in P-Space can be increased or decreased only in a “quantum” way.

CS is the suboperator we use to find different prices generated by P-Space.

If we have an index like the DAX at 8,000 or the Dow Jones at 11,000, we need to use a bigger value for CS to get a better fit and more accurate information. But try to remember that this value can be selected only from between the two equations described above.

For example, Uranus on October 11, 2007, showed a helio-longitude equal to 347.04. If we want to check out where the PSO is located using a CS value equal to 8, we will obtain the following results:

$$\begin{aligned} PSO &= \text{Long} \times CS \\ PSO &= 347.04 \times 8 = 2,779.20 \end{aligned}$$



FIGURE 3.7 AUD-USD FX Chart and Geo QPL: Major Top and Bottom

think that the planets themselves are able to cause a reversal in the financial markets and could be inclined to incorrectly associate the celestial object of our P-Space with astrology.

This improper association would be absolutely wrong because P-Space is a virtual space simulating Einstein's space-time, and PSO is a mathematical operator using increasing or decreasing factors, exactly like discrete amounts of "quanta" are used in quantum physics. Furthermore, PSO has nothing to do with the nature of planets studied in astrology, being instead a tool to calculate the curvature of P-Space, exactly as Reimann's curvature tensor was used by Einstein to calculate the light deflection phenomena.

In our P-Space, instead, we speak of the phenomena of price deflection.

So, from now on the letters we associate with the celestial objects in our P-Space are the following:

P = Pluto, N = Neptune, U = Uranus, S = Saturn, J = Jupiter, M = Mars, Su = Sun, V = Venus, Me = Mercury.

QPL Hierarchy

P, N, U, S, and J QPLs show the major tops and bottoms.

M QPLs show intermediate tops and bottoms.

Su, V, and Me QPLs show the minor reversals.

When you calculate the curvature of P-Space to forecast a major reversal, do not use Su, V, or Me QPLs alone, because you will be misled.

We start by taking the figure of the circle. If we take the circle as a unit, this corresponds to QPLs and their main harmonics. The circle can also be divided in the following ways:

- If we divide the circle, which is composed of 360 degrees, by two, we obtain 180 degrees. It corresponds both to 180 degrees, or a 50 percent division of a range.
- If we divide it by four, we obtain 90 degrees, which is equal to a 25 percent division of the range.
- If we divide it by eight, we obtain 45 degrees, which is equal to a 12.5 percent division of the range.
- We can also divide the circle by three, and we will obtain 120 degrees.
- Dividing the circle by six we obtain 60 degrees.

If you want, you can continue dividing the circle further.

We can use the number we obtained dividing the circle to calculate the QPLSHs, which are a division of two subsequent QPLs. Recalling the previous calculation of helio-Saturn QPL on October 11, 2007, and starting from $\text{Long} = 150^\circ.33$, we have the following for a $\text{CS} = 1$.

The P-Space generates curvature points simultaneously at the following prices:

150.33	
150.33 + 360	510.33
150.33 + (360 × 2)	870.33
150.33 + (360 × 3)	1230.33
150.33 + (360 × 4)	1590.33
150.33 + (360 × 5)	1950.33
And so forth.	

So, we can take the two QPLs passing at 1590.33 and 1230.33 and calculate the harmonics adding $\text{CS} (=1) \times 180 + 1590.33$, and we arrive at 1770.33.

The 180 QPL passes at 1770.33, or at 1410.33 ($1230.33 + 180$).

If you want to calculate a 90-degree QPLSH, you proceed in the same way, adding 90 instead of 180 to a QPL. We take 1230.33 QPL and we simply add 90, obtaining 1320.33. We can obtain another 90 QPLSH passing at 1410.33, if we add 90 to 1320.33.

You can obtain all the QPLSHs you need to spot intermediate tops and bottoms, preceding as we have just explained above. Furthermore, you can also use different numbers that are further divisions of 360, dividing by two the number we used above.

EXAMPLES OF POWERFUL QPLs AND QPLSHs

In the next few pages you will find many examples of very popular stocks, stock indexes, and currencies. If you have traded these securities you will find them very interesting and understand why the price reversed at the levels where you can find both QPLs and QPLSHs.

Figure 5.2 covers the period between August 2008 and October 2009. Each letter represents the point at which the price met with a support or resistance QPL. At point A we can see a top and at point B a bottom that in a while will become a double bottom. At point C you find another intermediate top.

The currency chart in Figure 5.3 shows the performance of the FX spot GBP–USD from May 2009 until August 2010. The five points (A, B, C, D, E) identify tops and bottoms that corresponded with QPLs.

In Figure 5.4, we can see how QPLs channel the price until the price bounces off a support and leaps up to point C, where it finds a resistance.

Figure 5.5 shows a major top at point B, stemming from the bottom of the QPL you find at point A. The price is channeled until point B, where a QPL acts as a strong resistance. Please notice how point B points out the first of a series of tops lying on this same price level. Finally, the price reverses until it reaches the next QPL at point C.

We can see in Figure 5.6 that price always reacts after touching QPLs. Point A marks a resistance that causes the price to fall until point B, a support. The price then breaks through the middle QPL touching point C, where we have another reversal and find support at point D.



FIGURE 5.2 USD-Yen Currency Chart: Support and Resistance QPLs



FIGURE 5.3 GBP-USD Support and Resistance QPLs

Figure 5.7 shows the major top at point A and the major bottom at point B.

NOT ALL QPLs ARE ALIKE

After having learned how to calculate QPLs and QPLHs, you are ready to learn more about the nature of different QPLs.

As we mentioned before, a QPL is generated by the PSO, which indicates in turn the price of a security corresponding to a certain curvature in the P-Space. The curvature is generated in turn by the presence of a mass



FIGURE 5.4 USD-CAD FX Spot Chart and QPL



FIGURE 5.5 AUD-USD FX Spot Chart and QPL

in P-Space associated with a planet. We showed that the curvature generated by Saturn provided through the PSO the historical top of the S&P 500 at 1583.

Not all of the QPLs are equally strong. Some are able to redirect the price from a bull or a bear campaign lasting years, and they show historical or major tops and bottoms. Others are weaker and the degree of P-Space curvature they convey can create only minor reversals. From now on we'll name the different QPLs with a letter because otherwise someone might



FIGURE 5.6 AUD-USD FX Spot Chart and QPL (Longer Period)



FIGURE 5.7 AUD-USD FX Chart and Geo QPL: Major Top and Bottom

think that the planets themselves are able to cause a reversal in the financial markets and could be inclined to incorrectly associate the celestial object of our P-Space with astrology.

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When you calculate the curvature of P-Space to forecast a major reversal, do not use Su, V, or Me QPLs alone, because you will be misled.

TRADING WITH INTRADAY QPLs

In the previous sections we have seen many examples of day charts, just to get acquainted with QPLs, but don't think that they can apply only on a daily chart and can be used only for long-term trading.

QPLs can also be used for intraday trading, and you can apply them to any time-frame chart, such as 5-, 15-, 30-, or 60-minute charts.

In the following charts you will see many examples of this.

In Figure 5.8 we have Hel M QPLSH (60-minute) and CS: 0.0625.

Notice in Figure 5.9 how the QPLSH eventually corresponds to a classical trend line. Actually a trend line needs at least two points to be drawn, while QPLs and QPLSHs do not need any points to be found, because they are generated by P-Space equations.

When Paul Dirac was awarded the Nobel Prize in 1933, he said in his acceptance speech, "The method of theoretical physics should be applicable to all those branches of thought in which the essential features are expressible with numbers."

He praised the importance of interdisciplinary study. The quantum world and the financial market actually have some characteristics in common. I hope that this study can represent how the appearance of randomness and mathematical similarity can function as a reservoir of ideas and creativity for both the quantum and financial world.

In the next chapters we will review W. D. Gann's life and trading ideas.

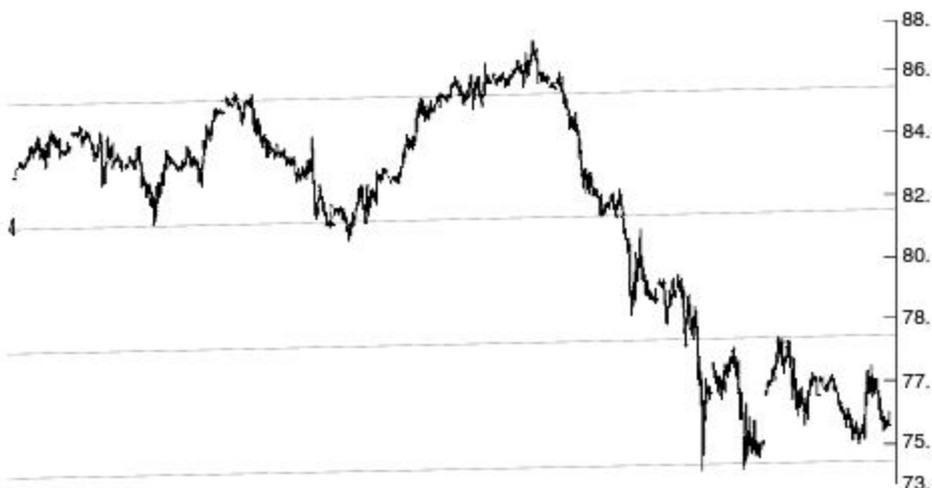


FIGURE 5.8 Crude Oil Future 30-Minute Chart and Intraday QPL (CS = 0.0625)



FIGURE 3.9 S&P 500 Index 60-Minute Intraday Chart, Hel V QPLSH (180) (CS = 0.25)

In particular, we'll study how Gann Angles really work because, despite many books about his techniques, this subject has never been treated in an extensive way. So, even with several kinds of software offering Gann Angles within their arsenals of tools, many people disregard the angles because they do not know how to use them, and they do not offer a rational approach for the conversion scale that relates time and price units.

We'll propose a quantum use of Gann Angles. Then we will use QPLs and Gann Angles simultaneously, and by doing so, we'll obtain powerful entry-levels for very profitable trades.