

The Surreal Actuary

An Essay by Christopher Bek
christopher.bek@gmail.com

Summary—Surrealism is known for its visual artworks and writings and the juxtaposition of distant realities to activate the unconscious mind through the imagery. An actuary is someone who describes, predicts and plans for actual reality. The Bernoulli Model is a postmodern realization of modern portfolio theory.

Quotation—The First Coming taught us, do unto others as you would have them do unto you and the Second Coming will add to that, do unto yourself as you would have others do unto themselves. This is why I am interested in the Surrealist movement—because according to the Chicago Surrealist group, surrealism is about liberation through “resolv[ing] the contradiction between everyday life and our wildest dreams. It is about creat[ing...] a free society in which everyone will be a poet—a society in which everyone will be able to develop his or her potentialities fully and freely.” — *Sankofa (Christ 3.0)*. Works cited citation: Kelley, Robin D. G., “Foreword.” *Black Marxism*, by Cedric Robinson, Zed Press, 1983, pp. xxi.

There is an ancient story of three monks who were walking along a precipice, and see a starving lioness with her cubs down below. The youngest monk commented on how sad it was that she was dying. The middle monk formulated a plan to gather food and feed the lioness. The oldest monk saw it as an opportunity to do the right thing and proceeded to throw himself off the cliff so as to feed the lioness directly.

Surrealism is a cultural movement which developed in Europe in the

aftermath of World War I and was largely influenced by Dada. Dada or Dadaism was an art movement of the European avant-garde in the early 20th century, with early centres in Zürich, Switzerland, at the Cabaret Voltaire. Avant-garde describes new and unusual or experimental ideas, especially in the arts, and the people introducing them. The surrealism movement is best known for its visual artworks and writings and the juxtaposition of distant realities to activate the unconscious mind through the imagery. Surrealism in literature can be defined as an artistic attempt to bridge together reality and the imagination. Surrealists seek to overcome the contradictions of the conscious and unconscious minds by creating unreal or bizarre stories full of juxtapositions. Surrealism aims to revolutionize human experience. It balances a rational vision of life with one that asserts the power of the unconscious and dreams. The artist finds magic and strange beauty in the unexpected and the uncanny, the disregarded and the unconventional.

Actuarial Science is the study of risk, usually risk associated with insurance, pension, and investment plans. An actuary is a professional who practices this science. Actuarial science uses techniques from mathematics, statistics, business, economics, and finance. An actuary is someone who describes, predicts and plans for reality. Traditionally, actuarial risk exposure is the measure of potential future loss from a specific activity or event. Essential analysis of risk exposure for organizations often ranks risks according to the probability of occurrence multiplied by the probability of potential loss value (frequency times severity).

The Delphi is named after the Oracle at Delphi in ancient Greece, which

read: “Know Thyself” and “Nothing in Excess”. The Delphi method is a forecasting and value-defining process that employs multiple rounds of questionnaires completed by panels of experts or officers and directors, and where response summaries are provided after each round. The Bernoulli Model uses the Delphi for convergence on values, and to capture expert forecasts. Peter Bernstein wrote in his 1996 landmark classic *Against the Gods: The Remarkable Story of Risk*—A successful business executive is a forecaster first; purchasing, production, marketing, pricing and organizing all follow.

Forecasting is a technique of predicting the future based on previous experience and data. Forecasting models include expert opinion, derivative pricing, garch models and neural networks. I separated time-series data into the principal components of signal, wave and noise for a currency exchange rate study I conducted. Garch is a class of autoregressive conditional time-series models. Neural networks are forecasting methods based on mathematical models of the brain that is, in fact, a reality-predicting machine.

Integration. Convolution is a mathematical operation on two functions producing a third function. Numerical integration comprises a broad family of algorithms for calculating the numerical value of an integral. In probability theory, the central limit theorem establishes that the sum of independent random variables tends to be normally distributed. Closed-form integration algorithms include the central limit theorem, while open-form integration include Monte Carlo simulation. Monte Carlo simulation is a metaheuristic algorithm devised in World War II for optimization models. It is a mathematical process that is much like dreaming.

The Search for Value. Optimization theory or operations research deals with the application of advanced analytical methods to make better decisions. Linear programming is an optimization algorithm for a system of linear constraints and a linear objective function. The objective function defines the quantity to be optimized, and is the key component in the mathematical optimization process. Traditionally, it's a real-valued function, while the Bernoulli Model allows for a complex-valued, non-linear objective function definition. The algorithms for searching risk/reward space tend to be either global (eg. genetic algorithms) or local (eg. hill-climbing algorithms). A genetic algorithm is a metaheuristic method inspired by Charles Darwin's theory of natural evolution. Hill climbing algorithms are mathematical optimization techniques belonging to the family of local search. Global and local search algorithms perfectly represent surrealism if one considers dreams as global search and reality as local search.

Utility Theory. Daniel Bernoulli (1700-82) founded utility theory by writing a paper entitled *Exposition of a New Theory on the Measurement of Risk*. The theme being that the value of an asset is determined by the utility it yields rather than its market price. His paper delineates the all-pervasive relationship between empirical measurement and gut feel. The Bernoulli Model employs utility theory to translate external values into internal values. Translating back and forth between internal and external values essentially describes the surrealist movement; the circle of life from our dreams to the domain of the Everyman and back again to our dreams for more simulations. Dreams are the royal road to the unconscious, as Freud wrote.

The Complementary Principle. In what John Stuart Mill called the single greatest advance in the history of science, Descartes synthesized Greek geometry with Arabic algebra in producing analytic geometry. From that point forward, mankind had two different views of the underlying Platonic Form. Quantum theory is characterized by the principle of complementarity with its wave-particle duality. The Bernoulli Model employs the complementary principle though out by contrasting and comparing paradigms. The complementary principle personifies surrealism as it bridges the paradigms of actual reality with dreams and the unconscious.

The Camus Distribution. Modern portfolio theory uses the mean to represent reward and the standard deviation to represent risk—thus laying the groundwork for risk-reward efficiency analysis. The method of moments builds on mean and variance by adding skewness and kurtosis to represent the first four statistical moments. The normal and Cauchy distributions are continuous probability distributions, symmetric about the mean. The Cauchy is also the distribution of the ratio of two independent normally distributed random variables with mean zero. The Cauchy distribution has undefined moments, but the first four may be calculated by truncating the tails. The Camus distribution is a four-moment, closed-form distribution that I built by blending the normal with the Cauchy, using simulation-based optimization. My great dog-God Camus is on the cover of my book *Existentialism Now*.

Dogs and Horses are man's best friends. Dog is the dyslexic ontological argument for the existence of God. It is said that horses come three ways. The good ones are easy to break, the great ones are hard to break, but the very

best ones never completely break. Never-completely-breaking for me means not yielding to an argument that does not come in the form of a letter, essay and cheque. Delivering the planet into salvation takes resources. For the time being, most people are the first monk, while I am the second monk and not the third monk. So, answer the arguments of the surreal actuary, as I am an offensive player.

Whatever You Got. The 1983 movie *Terms of Endearment* has Shirley MacLaine and Jack Nicholson as next-door neighbors. Jack is a retired astronaut who is either sunning by the pool, or driving drunk to and from astronaut conventions with young women in his convertible. Shirley says to Jack: You're always playing the astronaut card. And Jack says: Hey Baby, you use whatever you got! That is my philosophy too! Whatever I got is firstly, the first six letters of my name spell—Christ. Secondly, the world desperately needs more Christs. And thirdly, my training, work and experiences have prepared me to be Christ 2.0 in a walk.

Closing Arguments. My plan to deliver the planet into salvation is three-fold. Firstly, make the most of the time we have left by getting in touch with innate reality. Secondly, extend the date of extinction as long as possible by having self-aware Beings take total freedom and total responsibility for planet earth. And thirdly, know God's thoughts so that we may save souls and ascend to Heaven. Surrealism can be defined as an artistic attempt to bridge together reality and imagination. An actuary is someone who describes, predicts and plans for actual reality. I am The Surreal Actuary looking to create a free society in which everyone is a poet and actuary who develops fully, filly, freely and responsibly.