

Introduction

“Experience teaches us no less clearly than reason, that men believe themselves free, simply because they are conscious of their actions, and unconscious of the causes whereby those actions are determined.”

—Baruch Spinoza, “Part III: On the Origin and Nature of the Emotions; Postulates (Proposition II, Note)”
from R. H. M. Elwes, trans., *The Ethics*, 1955, p. 54
(original work published 1677)

In the wake of the dot-com crash and the collapse of the US housing bubble, it is clear that non-rational impulses, such as the mania at the height of these bubbles and the subsequent panics that followed in the downturns, play a major part in collective human investment behaviour. These irrational sentiments, which have the capacity to greatly influence asset prices and at times feed financial bubbles that threaten to trigger great social unrest, have been given many names. The founding father of fundamental analysis, Ben Graham, and later his most famous disciple, the investor Warren Buffett, named them the manic-depressive *Mr. Market*; the economist J. M. Keynes referred to *animal spirits*; and the former US Federal Reserve chairman Alan Greenspan talked about *irrational exuberance*.

The inability of conventional economics to account for human irrationality renders the commonly accepted economic and financial theories void. Economists adhering to these conformist thoughts are at a loss as to how to adapt their theories to account for collective human behaviour that does not follow the “rational man” assumption. To date no one has been able to pinpoint and explain the mechanics of these forces, other than relating to them in anecdotal fashion or quickly glossing them over as an unknown variable.

Consequently, interest is, and has been, growing in developing alternative approaches to economic theory, such as *behavioural finance*. However, these newer concepts have proved uneven at best in predicting and explaining financial bubbles. They all fail to answer the two key questions: When and why are financial bubbles likely to form?

Given the dramatic impact such irrational fluctuations can have on asset prices, and on society at large, and the recognised, but generally overlooked, inability of fundamental valuation models to factor them in, it is vital that we identify the underlying drivers. Existing theory has proved incapable of doing so, but there is a way. However, to understand it, we must first delve into psychology and explore the collective unconscious and its archetypes—innate mental images that exist unconsciously in us all and affect our behaviour and judgment without our being consciously aware of it.

Recent developments in neuroscience have brought greater understanding of the workings of the brain and how it relates to the much more elusive concept of the mind. There has been a fundamental shift from the position that nurture is basically responsible for human development and behaviour, in other words, everyone is starting with a blank slate, to an acceptance and understanding of the powerful influence nature holds. Modern research supports the existence of an unconscious, with a part operating at a collective level, impacting societal movements, whether in fashion, political trends, even social unrest and revolutions—and the financial markets. Individually or collectively, human choices, including investment decisions, are affected to a large degree by the prevailing social mood or *zeitgeist*. The collective unconscious plays an important role in creating and directing these social mood swings.

The term *collective unconscious* was coined by the Swiss psychologist Carl Gustav Jung (1875–1961) early in the twentieth century during a period in which he was collaborating with his Austrian contemporary Sigmund Freud (1856–1939). Jung's thinking on the collective unconscious and its archetypes came over time to gain broad acceptance among the psychology profession and academics. Jung incorporated Freud's model of the unconscious, what Jung called the *personal unconscious*, but he proposed the existence of a second, far deeper form of the unconscious lying under the personal—the collective unconscious, where the archetypes reside. The personal unconscious comprises an individual's experiences that have been forgotten or suppressed into the unconscious. It is unique to each person. The collective unconscious, on the other hand, contains psychic material—the archetypes—common to mankind and therefore universal and impersonal throughout time and regardless of cultural context.

Archetypes can be seen as mental structures or thought patterns that through mankind's history have become hard-coded into our DNA. The purpose of archetypes is to support the mind's objective to maintain a holistic equilibrium in order to avoid the risk of neurotic collective behaviour; in a sense, it is a psychological survival instinct functioning on an all-encompassing human level. When activated by events or emotions that disturb the balance of the mind, such as pent-up aggressions not allowed by the conscious due to prevailing norms or moral conventions in society or the need for a release of self-reflection, archetypal forces begin to well up into the conscious in order to restore the mind's equilibrium.

There are many different archetypes, although not an infinite number. Some archetypes have the nature of a character, such as The Great Mother or The Warrior; others are related to situations typical to mankind, such as Birth or Death, or to an object, such as the Moon, the Sword, or Fire. Archetypes are comprehensive, timeless, and static, and appear in all cultures, though their manifestations can vary in different settings and time epochs. They are innate and as such are passed genetically from generation to generation.

As archetypes reside in the collective unconscious, the only tangible footprints from which they can be observed are in the form of symbols. These symbols could be specific words or expressions that seemingly spontaneously appear in our dialogue, or images that appear in our dreams. The level of frequency of their appearance indicates the urgency, the need, for the archetype to be expressed and begin to impact our thinking.

The triggering of an archetype such as The Warrior, by the suppression in the conscious of aggressive tendencies, for example, could give rise to the use of war-like metaphors in non-war-like contexts. War-related words could emerge in descriptions of sport—they invaded the pitch, the home team massacred the opposition—or as cultural trends, such as a sudden crop of war-related movies, or a fad for uniforms in fashion. At first, such metaphors are adapted and used by the collective community without awareness of the activation of a war-like archetype and the need by the mind to increase aggressive thinking to restore a holistic mind. The spread of such language and worldview can trigger heightened levels of aggression in society which increase the likelihood for riots and even wars, and would in the financial markets lead to excessive risk taking. And when such actions manifest, The Warrior archetype has fulfilled its purpose because it has helped restore the equilibrium in the mind, and it starts to recede and eventually becomes dormant again in the unconscious. Other societal examples of archetypes at work include the sexual repression of the Victorian era, which emerged as the hysteria and neurotic behaviour commonly displayed by women of the era. This of course flowed through into

fashion, with even grand pianos affected—dressed with curtains to hide the curvaceous legs so scandalously suggestive of womanly contours and likely to inspire impure thoughts. In the 1950s, the witch hunts and reds-under-the-bed paranoia of McCarthyism was another archetypal expression. As a simple rule of thumb, to identify the types of archetypes likely to be at work is to understand and pin down the existing taboos of the era.

When studying archetypal activation through its tangible manifestations, symbols, it is important to distinguish symbols from signs. Whereas a symbol contains an unconscious element of meaning, a sign just has the one meaning, like a stop sign means stop and nothing else. Through the study of symbols we see that people often say or write one thing and do or mean something completely different; this is what happens when the archetype is beginning to move from the unconscious into the conscious, without the person being aware of its impact on their thoughts and behaviour, or its wider, collective effect in altering the mood of society, or zeitgeist.

The emergence of the language of the archetypes and through its shifts, the symbols, whether in speech, literature, dreams, art, or photography, signals when the zeitgeist is about to change. They appear before the thought pattern leads to a change in behaviour. So by watching for these direct pipelines into the collective unconscious, one is able to tap into the developing zeitgeist and predict future trends, be they cultural or political—or investment behaviour. Whereas influences of archetypes and the unconscious have been studied on a number of mainly individual but also some collective human endeavours, very little, if any, research has been conducted on the potential impact of the collective unconscious on trends in the financial markets.

Recent advances in text analysis and text-mining techniques have been a boon for the advancement of the study of archetype-related symbols. Huge banks of global information, or Big Data, are now easily available for analysis via the Internet. Claims and theories previously considered “intangible,” such as the Jungian archetypes, and previously described in abstract terms, can now be defined and verified. Financial markets, with their extensive output and frequent updates of real-time data, provide fertile ground for statistical testing of the archetype hypothesis. By building a record of the appearance of archetypal symbols and analysing the frequency of their appearance versus financial indexes, one can attempt to predict price trends over time.

With this context in mind, the aim of this book is to demonstrate the workings of the collective unconscious and provide an empirically verified measurement methodology designed to capture the subliminal forces that influence human behaviour and in particular investment decisions, thereby

demonstrating how archetypes can give rise to financial bubbles. Through exploring the collective unconscious and using symbol analysis to quantify the impact of archetypal forces on human thought and behaviour, we can predict turns in markets and develop strategies to profit from them.

The generic features of the statistical tracking of archetype-related symbols also accommodate further research in other applicable areas of finance and deliver a new tool for use in fields such as political science, consumer behaviour, and marketing.

This book is written for anyone with an interest in:

- Behavioural finance with a focus on modelling and forecasting.
- Psychology with a highlight on how archetypes and associated symbols influence collective societal behaviour.
- Linguistics, especially text analytics and data-mining techniques.

The *Mystery of Market Movements* is structured in 10 chapters:

- **Chapter 1: “Psychology: A Primer”** gives an overview and history of psychology to provide a context of where the unconscious fits in. It also discusses the millennia-long difficulties in pinning down exact definitions of key psychological concepts, such as consciousness and the mind. In addition, Chapter 1 gives an introduction to the concepts of the unconscious and Sigmund Freud’s theories of the mind.
- **Chapter 2: “Archetypes and Symbols”** introduces Carl Jung’s view of the collective unconscious and its archetypes and how they relate to Freud’s ideas. It also discusses the circumstances required for archetypes to activate and the symbols that are the tangible manifestations of archetypes and thus can be deployed for measurement purposes.
- **Chapter 3: “How Archetypes Influence and Impact Behaviour”** highlights archetypal causations to phenomena such as zeitgeist, scapegoats, and hysteria in society.
- **Chapter 4: “Archetypal Influences in the Financial Markets”** provides examples of how archetypes cause financial bubbles.
- **Chapter 5: “Existing Approaches to Capture Sentiments in Financial Markets, and Why They Do Not Work”** gives a critique of the current financial forecasting models.
- **Chapter 6: “Developing a Conceptual Measurement Methodology Based on Archetypal Forces: Part I: Building Blocks”** discusses the building blocks, a highlight of the components that constitute the measurement units of the model.

- **Chapter 7: “Developing a Conceptual Measurement Methodology Based on Archetypal Forces: Part II: The Data”** gives data sources, provides a review of the requirements for suitable data sources, and includes samples of how the symbol selection is conducted.
- **Chapter 8: “Developing a Conceptual Measurement Methodology Based on Archetypal Forces: Part III: The Model”** provides the model and a step-by-step guide that gives insights on the statistical methods applied to develop and test archetypal symbol time series.
- **Chapter 9: “Examples of Archetypal Influences on the Formation of Financial Bubbles”** demonstrates the connection between specific archetypes and the dot-com bubble and US property bubble.
- **Chapter 10: “Conclusion.”**

The first two chapters give an introduction to the key concepts of psychology and its broader context, namely the unconscious and the archetypes that underpin the measurement methodology. Chapters 3 to 9 demonstrate archetypal manifestations in society in general and the financial markets in particular. These chapters also discuss existing models to forecast investor sentiments and their flaws and proposes a methodology for measuring and testing the forecasting capabilities of the fluctuation of archetypal symbols and their impact on financial asset prices. Recent bubbles are highlighted, and the influences of specific archetypes are discussed, as well as open areas of research.

Supplementing the book is a dedicated website, www.forecastrix.com, that presents continuously updated bespoke archetypal indexes with predictive capabilities to major financial indexes. The website will enable readers to track changes in archetypal mood patterns and enhance their investment decisions. The website also includes colour versions of the black-and-white figures appearing in this book.