

## Clods Online: Fraud and the Global Financial Crisis – How Brain Information Processes Undermine Our Ability to Yield Sound Decisions

Krystyne Pniewki, MSc. LLB (Honors)

Psychologist/Lecturer in Law

Deakin University

Waurin Ponds Melbourne

Australia

### Abstract

*This is an investigation into the putative link between the processes involved in making judgments and the resultant decisions which prove detrimental. This will be achieved through an examination of two well-known and very troublesome outcomes of these processes. The first is the ease with which people become victims of fraud and the second is the Global Financial Crisis. A possible or partial explanation for errant or unethical decisions lies in the fact that heuristics, which spill over into overconfidence are more likely to be utilized. However, 'reflective introspection', sometimes called 'reflective engagement' or 'reflective problem solving' which is underutilized, is far more conducive to individuals, organisations and institutions in making sound decisions.*

**Keywords:** Fraud, Heuristics, Global Financial Crisis, Neurological Processing

*"The information-processing shortcuts-called heuristics- which are normally both highly efficient and immensely time-saving in day-to-day situations, work systematically against us in the marketplace."*

David Dreman

*The Psychology of Market Success, (1980)*

### 1. Introduction

There is a plethora of recent literature about 'the psychology of decision-making' with authors exploring the biases and motivations that influence every choice we make, from which drink to buy to who to marry and the deeper issue of whether we have any real control over our decision-making ( Sternberg, 2010, Iyengar, 2010) with neuroscience suggesting that our choices are all made unconsciously (Avgouleas 2009). The psychology of decision-making is pertinent to areas such as financial fraud, both from the victim's perspective as well as that of the fraudster in that it may go some way in explaining how and why detrimental decisions are made. Further, the Global Financial Crisis is not immune from an analysis of its causes from the perspective of the psychology of decision-making ( Avgouleas, 2009).

### 2. Fraud – on line and off-line

A pertinent exemplification of a case of fraud can be seen in an episode on a UKTV comedy show called *My Family*. (UKTV, 2002) In this particular episode, Ben Harper, a dentist, buys what is purported to be a 'patch of Wembly Stadium goals-end subsoil' from the day his team won the Soccer Cup. His purchase was from a web site called Clods Online ( a 'clod' has the double meaning of either soil or an oaf !). The item consists of a glass box with a handful of soil in it. His son, Nicholas comments on the purchase stating, "Wow! Great scam! I wish I'd thought of it!" Ben becomes indignant, clutching his 'prized purchase' even closer as he adamantly responds, "It is *not* a scam, look it's even got grass growing out of it!" What would prompt Ben to believe in the veracity of the claims of Clods Online so that he decides to buy the piece of soil?

Just as in comedy, so in life, and we need look no further than the newspaper to find a Ponzi scheme involving betting on racehorses which has recently defrauded celebrities, sporting figures, and businessmen of \$15 million. (Hewitt, 2010). According to the Australian Securities and Investments Commission ( ASIC), one of the simplest yet most effective schemes it operates by using funds from new investors to pay interest to other investors. When the money coming into the scheme dries up or the fraudster spends it too quickly, the fraud is revealed.

The fraudster is encouraged to engage in such behavior because “the likely gains are enormous and the likelihood of apprehension and thus of conviction and punishment comparatively small...” (Wright, 2007, p. 19) Further the cost to locate and then pursue the fraudster through the courts is very time and cost consuming with no certainty that any or all the money invested or spent will be retrieved.

Therefore the scammed ‘Ben Harpers’ (if they ever consider or themselves as victims) and those drawn into the Ponzi scheme are unlikely to recover any of their money. In the latter it is noted that one investor tried to retrieve his \$60,000 and was lucky to obtain half that amount and another feared his life savings of \$250,000 would never be seen again. So how do seemingly intelligent people become easy targets for fraudsters and con-men that divest their victims of their hard earned money?

The central insight of all behavioural theories is that decision processes influence decision outcome (Kahneman, Slovic & Tversky, 1982). In making each day’s hundreds of tiny judgements and decisions such as –is it worth the bother of taking my umbrella? Can I trust this person? Should I pass the basketball or shoot it into the hoop?– it is unlikely that we reason systematically. Irving Janis’ (1986) research concluded that policymakers in government, business and education do not use *reflective problem solving*, preferring to make decisions mostly *by the seat of their pants/rule of thumb*. Such mental shortcuts (*heuristics*) usually allow us to make reasonable judgements but their efficiency can result in costly poor decisions.

More than thirty- five years ago, Tversky and Kahneman (1972) identified two types of heuristics which determine intuitive decisions, *representativeness* and *availability* heuristics. The *representative heuristic* is considered very powerful in that a person will judge the likelihood of something by intuitively comparing it to the mental representation of that category. For example, if a person is described to you as short, slim and likes to read poetry and you are to determine if he is a truck driver or a Professor of literature at Deakin University, it is likely that, as do most people, answer that he is the latter, as the description is *representative* of a scholar. However, in making your decision, it has also led to a dismissal of other relevant information such as the total number of professors versus truck drivers. Therefore to judge the likelihood of something, intuition compares it to a mental representation of that category (here scholars) whilst ignoring considerations such as logic and statistics.

The *availability* heuristic is utilized when judgements are based on the availability of information in memory and therefore if instances come readily to mind then the presumption is that they are common. Social judgements are affected in that anecdotes (for instance, about welfare fraud) are worth more than a thousand factual statistics because what comes easily to memory has most impact. A simple choice to buy a Tattslotto ticket in the hope of winning is influenced by news items showing happy winners of the lottery which come to mind readily. However, the reality of ‘striking it rich’ is roughly ten million to one, chances not much better than the odds of being struck by lightning. Further, life, health and theft insurance companies rely on showing people in mourning or having their possessions stolen, so that images of these events suggest a very likely occurrence and therefore prompt people to be insured (Cialdani & Carpenter, 1981). Therefore, perhaps a possible explanation as to why people tend to fall victim to scams if heuristics are used to form judgements about whether to join a ‘get rich’ scheme or as in the first example, to purchase team memorabilia to show allegiance. Fraudsters relate and create an image of wealth, or as in Ben’s case, loyalty to a team, and the victim, relying on intuition and/or confirmation of held beliefs, is soon parting with hard earned cash.

The *combination* of the use of intuition and eagerness to confirm the held beliefs, together with the ability to explain away failures combine to create *overconfidence*, the tendency to overestimate the accuracy of our knowledge and judgements and it therefore entails the failure to appreciate one’s potential for error when making decisions. Research shows that there is a bias towards optimism in predicting future events (Astin, 1991). First year university students were asked to predict if they would drop out permanently or temporarily before completion of their course. Only two percent predicted that they would, although nearly half of students entering a course do not earn a degree in the stipulated time. Decision- making, infected with *overconfidence* can be seen in stockbrokers and investment managers. For instance, the purchase of stock X, recommended by a broker who judges it is time to buy, is balanced by a seller who maintains it is time to sell. Despite their confidence, they can’t both be correct !

However, both the broker and the seller must market their services with confidence in order to outperform the market average in picking stocks despite evidence to the contrary (Malkiel 1985).

This impetus to outperform, which is perpetuated by schemes for the measurement and reward of performance in financial markets, can shape behavior. Longstaff, (2008) commented (six months prior to the G20 meeting following the GFC) that such schemes were an important part of the story of how it came to be that ‘so many good people made so many bad decisions.’ He maintains that conscious choices and a *reflective engagement* rather than ‘rule of thumb decisions’ (*heuristics*) would have stopped individuals, organizations and institutions from stumbling blindly into devastating consequences.

Thus both the *representative heuristic* and the *availability heuristic* are utilized in everyday decisions, usually for efficiency and can often prove to be useful. However, they can also be utilized with devastating effect. An example of such an effect will now be discussed.

### 3. *The Global Financial Crisis we had to have*

In 2009, in the wake of the Global Financial Crisis (GFC), it has been argued that the adverse influence of these *heuristics* (the behavioural element) was endemic to the crisis. As the GFC almost brought the world banking system to the brink of collapse it brought into sharp focus the inadequacies of the contemporary model of financial regulation, both nationally and globally. It has been argued that measures that the *G20 Summit* endorsed to address regulation procedures (such as increased disclosure, a stronger capital base and the enhancement of market discipline) are unlikely to be as effective as expected. This is due to the fact that behavioural elements have been ignored, specifically the role of *heuristics* or *rule of thumb* (Avgouleas, 2009). As explained above, most individual judgements originate in impressions and intuitions which may result in cognitive bias when they lead to systematic errors in estimates of statistics and known quantities. Thus the *representative heuristic* is used to evaluate probability and can lead to the generation of severe biases and the *availability heuristic* controls estimates of the frequency or probability of events which are judged by the ease with which such events come to mind.

Avgouleas, (2009) argues that ‘evidence shows that people anchor too much on the initial value, for example, on prevailing current interest rates or stock prices and subsequent adjustment is often insufficient.’ (p.31). He goes on to say that, ‘the adverse influence of the psychological situations can be traced in most of the identified causes of the GFC.’ (p.36) He exemplifies this by describing a number of scenarios of which two will be discussed here. Both the impact of *heuristics* and cognitive biases on market actors and the concomitant behavioural reasons limiting the corrective power of arbitrage can be seen in the Royal Dutch Shell situation.

‘Arbitrage’ refers to the simultaneous purchase and sale of an asset in order to profit from a difference in the price. It is a trade that profits by exploiting price differences of identical or similar financial instruments, on different markets or in different forms. It exists as a result of market inefficiencies; and provides a mechanism to ensure prices do not deviate substantially from fair value for long periods of time. Avgouleas (2009) points to the fact that ‘there was an absence of arbitrageurs throughout the crisis although there were many opportunities to make a profit from distressed assets that banks were willing to dispose of in fire –sales.’ (p.31) This, he maintains, was due to the ‘rule of thumb’ (*heuristic*) approach which ignored other relevant information.

Royal Dutch Shell was the merger between Royal Dutch Petroleum and Shell Transport in 1907 and independently incorporated in the Netherlands and England respectively. The merger of the assets was on a 60-40 basis and this was the basis for the division of cash flows. The shares should have traded at the 60-40 ratio but the history of the price movement of the stocks shows a deviation of over 35%. Avgouleas (2009) argues that this cannot be explained other than by reference to noise traders (who make decisions regarding buy and sell trades without the use of fundamental data. Such investors generally have poor timing, follow trends, and over-react to good and bad news). *Heuristics at work!* The *availability heuristic* and the impact of cognitive biases such as *overconfidence* provide convincing explanations for asset bubbles which are formed when the prices of assets are over-inflated due to excess demand. They usually occur when investors all flock to a particular asset class, such as real estate or commodities such as oil. This happened in 2005-2006 with real estate and in the summer of 2008 with oil prices.

Past research has shown that individuals frequently exhibit a bias towards optimism and *overconfidence* in predicting future events (Astin 1991). Thus in a rising stock market or any other asset, such as housing unsustainable beliefs are embraced that the price rises will continue indefinitely (Schiller 2000). Investors, susceptible to *overconfidence*, believe that they will be able to ‘escape’ before the asset bubble bursts.

Further, before the GFC, the *overconfidence* that markets would continue indefinitely led to massive credit expansion which was in turn fuelled by financial innovation. This market *overconfidence* turned a ‘blind eye’ to borrowers’ credit record, with underwriting standards weakening and mortgages extended to creditors with dubious credit. A closer look at what occurred will expose the role of *heuristics* as a strong factor in the causes of the GFC.

The ‘seeds of inevitability’ of the GFC were sown in a system that failed to take preventative action as early as 2006. Most financial and monetary economists failed to bring about and to communicate, on the basis of their projections, the impending implosion. In good times, however, people tend to ignore naysayers (*availability heuristics* at play!) and economists, like Professor Nouriel Roubini who predicted the crisis well in advance when he stood before an audience of economists at the International Monetary Fund in 2006 and warned that the United States was likely to face a once in a lifetime housing bust, sharply declining consumer confidence and ultimately a deep recession. Homeowners would default on mortgages, trillions of dollars of mortgage-backed securities unraveling world-wide and the global financial systems would grind to a halt ( in Cottier, 2009, p.8 ). Sound familiar? The audience was dismissive and understandably so as they were all living in their (then) luxury where unemployment was low and the economy was still growing. If it is accepted that *heuristics* played their part, it is understandable that no regulatory body or bodies intervened to warn of the consequences of financial and corporate activities which combined to result in the global economic crisis.

As the crisis unfolded, the blame and reasons for it have surfaced with a spectrum comprising anything from Michael Osinski ( in Patterson 2009, p. 92) a software programmer who maintains that the software he created assisted in the ‘time bomb’ that blew up the global financial system to neurological explanations via brain imaging ( Callaway 2009) as to why so few investors challenged foolhardy fiscal advice! However, perhaps the most succinct, whilst simultaneously comprehensive, explanation of the global economic crisis was from the Premier of the People’s Republic of China, Wen Jaibo (Elliot & Gumbel, 2009) , who identified a multifaceted crisis with four major players ( and which also happens to support the *heuristics* argument) is as follows:

- Prolonged low savings and high consumption
- Excessive expansion of financial institutions in the blind pursuit of profit (*see Osinski example below*)
- Lack of self discipline among financial institutions and rating agencies with ensuing distortion of risk assessment and asset pricing
- Failure of financial supervision and regulation to keep up with financial innovations

The use of Osinski’s software explains one aspect of this multifaceted crisis to which Wen Jaibo refers. It also provides a window onto the lack of any regulatory body or bodies to oversee such economic activity and the way in which *heuristics* could play victims directly into his software program.

The point at which it all went wrong is obvious from the following example of the type of software sold, and the fault can be laid squarely at the feet of the lack of any effective regulation to even investigate the product. Due to this attitude the *availability heuristic* was well utilized as Osinski’s software turned home mortgages, which were bundled into groups of thousands, into high-earning bonds. Thus mortgage rates went down and the demand for bonds rose. Through these Collateral Mortgage Obligations (CMO’s) Wall Street was able to find buyers around the world. However, these relied on prime mortgages with a high probability rate of repayment. Unfortunately, to increase the client base, the underlying collateral became Collateral Debt Obligations (CDO’s) and literally ‘anything’ was accepted as collateral, such as corporate bonds, subprime mortgage bonds (mortgage given again to those who had defaulted before) or, like CDO’s, simply air! Diversity of collateral was the aim and even if sub-primes defaulted again, they would be re-financed. Thus regulators and banks turned a ‘blind eye’, and due diligence was not given to the loans banks were writing and foisting onto the market. Nevertheless, not only was regulation a problem, but also the *overconfidence*, the bias towards one way of thinking to the detriment of any other and the prominence of the thought that the ‘good times’ were to remain forever. This ensured that the GFC was inevitable.

#### **4. The Future- how to ignore Heuristics ( or avoid the excuse that “My Brain Made Me Do It”)**

If *heuristics* are so endemic and can create havoc whilst also be utilized to effect in everyday decisions for efficiency, what other process or processes are available to counteract their detrimental usage? It has been posited that ‘reflective introspection/problem solving’ ( Sternberg 2010) can provide the answer.

Wise decisions are available, but time and effort are required in order to **reason systematically and reflectively** in the face of novel situations. For example upon arriving at home without a key the first step is to define the problem and then develop a strategy (perhaps try the back door, find an unlocked window). Unfortunately in a situation such as pre- GFC where all is going well and everyone is basking in financial euphoria the question would be, “What problem?” It is the capacity to be able to be aware of and consider other opinions (such as those of Professor Nouriel Roubini) that will ensure that biases cannot dictate behavior which will result in adverse consequences.

In order to become immune to schemes and goods proffered by fraudsters, it is suggested that more reflection is given before accepting any such offers. Several different options should be considered in preference to ‘rule of thumb’ decisions which are prompted by our reliance on *heuristics*. It is within us to be able to be wary of biases and not rely solely on what has been related to us without some critical thinking about what is being offered in return for our hard earned money.

In Sternberg’s ( 2010) book, *The Brain Made Me Do It*, he utilizes psychology, philosophy and neuroscience research which suggests that we lack free will and are slaves to ‘neurobiological determinism’. In other words, we depend on neuronal processing and if a misfire occurs, we are at the mercy of our brain – no higher process will be able to step in and to direct proceedings. However, he acknowledges that free will does exist and posits it is the sum of the whole, which is more than the sum of the parts. What this ‘more’ is, has yet to be defined. With respect to *heuristics*, it suggests that we cannot blame processes in our brain any more than our propensity to be at the mercy of *heuristics*. It is therefore about making conscious choices in line with an explicit framework of reflective thinking so that we do not fall prey to fraud. Therefore, utilising a system of reasoning with reflective thinking will further assist in diluting the effects of *heuristics*.

However, Avgouleas not convinced about the financial markets’ ability to immune itself against ‘behavioural’ finance in the future and has indicated that there needs to be adopted a radical approach to regulatory reform. His reform will be able to constrain the adverse impact of *heuristics* on banking institutions and excessive speculation and risk taking. Specifically, he proposes ( unlike the piecemeal approach of the G20) that the most effective means to address this would be by the establishment of a global licensing and supervisory regime. He provides a neat and succinct model for bank authorization and supervision (Avgouleas, 2009). Under this model, mandatory institutional segregation for the banking industry along business lines is suggested where the high risk/high return investment activities would remain outside the ambit of government guarantee ( enjoyed by savings and loan industry), limiting the scope for free riding. For those banks wishing to engage in higher risks, their expensive insurance premiums would reflect such risks. Further, they would only have limited access to the funds that deposits provide. With respect to international investment funds, a global licensing and supervisory scheme discharged by a new global licensing authority would be implemented. Avgouleas has conceded that, with regard to the pivotal role of *heuristics* in the GFC and the acknowledgement that ‘behavioural’ (*heuristically driven*) finance will be extremely difficult to address, it is necessary to ‘save the banks and markets from themselves’ by implementing the model in order to force a change in their behavior.

## 5. Conclusion

It is acknowledged that, faced with an offer ‘too good to be true’ there is a need to be wary. However, *heuristics* appear to be an endemic part of our psychological battery in making decisions. In seldom taking the time and effort to reason systematically, it is likely that, when faced with high pressure sales people, telemarketers or a Ponzi scheme, that there will always remain ‘clouds’ both on and off line.

It is posited that, with regard to the pivotal role of *heuristics* in the GFC and the acknowledgement that ‘behavioural’ (*heuristically driven*) finance will be extremely difficult to address, it is necessary to save the banks and markets from themselves by implementing the model in order to force a change in their behavior. As Avgouleas neatly puts it, “The debilitating consequences of the financial crisis on the global economy ...proved beyond doubt that doing much of the same is a gamble that Western governments can ill afford to take.!” ( Avgouleas 2009, p.59).

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