INATTENTIONAL OR PERCEPTUAL BLINDNESS AND ITS SIGNIFICANCE TO AUDITORS

William Barrett, MFAcc, CPA/CFF/ABV, AVD[*]

Energy company management, internal auditors, or external auditors may have the need for the services of a forensic accountant. In fact, the topic of this article (or at least forensic techniques) applies to most auditors as well as management. A forensic accountant (FA or FAs) is a specialist with a particular questioning (skeptical) mindset. FAs are trained to systematically apply accounting, finance, economics, statistics, law, research, and investigative methods in the collection, analysis, and communication of findings for fact-finding, consulting, and litigation services (Crumbley, Heitger, and Smith, 1–3 and 4). FAs and auditors often investigate complex financial and business related issues. They convey their findings in a manner and format which is both understandable and accurately supported. To properly perform these services, FAs and auditors must be able to identify "substance over form" when dealing with an issue (Rufus, Miller & Hahn, 2013, p. 4).

Even the most experienced auditors while properly conducting their investigative services may fall victim to a phenomenon called inattentional blindness (IB), also known as perceptual blindness: whereby investigatory evidence "hiding in plain sight" is passed over, unnoticed.

Defining Inattentional Blindness

Simons (2007) states that IB refers specifically to the "failure of individuals to notice unexpected objects, and/or the failure to notice objects that are expected because they are engaged in another task" (para. 2). Simons (2007) also defines IB as a "failure of awareness" when the following are all present:

- Observers fail to notice a visual object or event;
- The object or event is fully visible and observers readily see it if they are looking for it;
- The failure to notice results from engagement of attention on other aspects of the display and not from aspects of the visual stimulus itself;
- The object or event is unexpected ("classifying a failure," para. 2).

Ward (2008) further elaborates that IB is predicated on attention. Attention is that process "by which organisms select a subset of available information upon which to focus for enhanced processing" (para. 1). Attention becomes divided [or selective] causing recognition difficulties when investigating multiple items/data

[*] The author is an Instructor of Forensic Accounting at George Mason University.

while using the same attention source (e.g., using vision to find unsigned checks and forged checks at the same time) ("2 filtering," para. 4).

The classic example—and even a demonstration—of IB is Simons' (2007b) video showing an ad hoc basketball game (no shooting baskets, only passing the ball in the elevator lobby of an office building) between the proverbial black shirts and the white shirts. The teams pass a black ball back and forth between themselves, while sometimes having the ball intercepted by the other team. In the original experiment, viewers were asked to count the number of times the white-shirted team passed the ball. While passing the ball back and forth, a person wearing a gorilla costume walks onto the scene, turns to face the camera, pounds his or her chest several times, and walks off. Simons (2007a) reports that approximately 50% of the viewers of the video failed to see the gorilla-costumed character.

Furthermore, Simons (2010) specified that IB is a phenomenon that overwhelms individuals even when forewarned that something unusual or unexpected may occur. For example, Simons reports on an experiment that featured running a version of the gorilla video that contained additional unexpected events. His results reflect that even individuals who knew the gorilla would enter the scene (because they had heard about or seen the original video) were less likely than others to spot the additional unexpected events. This version of the video is called: the monkey business illusion. The other events in the video consist of background curtains changing color and a player leaving the stage during the video. Simons found that 17% of those who knew that the gorilla would be crossing the scene spotted the other changes, whereas 29% of those who did not expect to see a gorilla crossing the scene spotted the other changes (p. 5).

Components of IB Relative to Forensic Accountants

Richards, Hannon, and Derakshan (2010) state that IB "occurs in everyday life and can be of minimal importance (e.g., failing to notice your friend at the cinema as you search for a vacant seat) or can have catastrophic consequences (failing to notice a child crossing the road)" (p. 513). They have conducted two experiments in IB to examine the relationships between performance and visual display (exp. 1) and between memory and training (exp. 2).

In experiment 1, Richards' *et al.* (2010) analysis revealed that IB diminishes and detection is enhanced when there was either a change of the visual data display(s) or when the displays had fewer items (p. 516). In experiment 2, Richards *et al*. postulate that IB is associated with working memory capacity (WMC): the ability to inhibit an irrelevant stimulus and maintain attentional focus on the task goal (p. 518). Their resulting data show that IB is significantly reduced when subjects were trained beforehand on the experimental tasks (Richards *et al.,* 2010, p. 521).

Another interesting hypothesis is Adams' (2010) suggestion that IB relates to cycles of mentality, called psychological time, which contrasts to scientific (i.e., clock) time. Individuals use scientific clock time to conform to society's demands

(e.g., work starts 8:45 a.m., Monday through Friday) and for events occurring anywhere in space (p. 491). Adams (2010) further explains that there is more to time than social demands and space for sentient beings; which he labels the Social Self. Therefore, psychological time, while possessing many of the qualities of scientific time, differs in that the Social Self registers experience and observation through a consciousness that vacillates between subjectivity and objectivity. This mental activity cycles between intentionality ("paying attention" or "I recognize this situation" or "Yes, that is what I am looking for") and accommodation. Accommodation is a point where the intentional act is satisfied (essentially canceled); thereby the mental activity cycle is complete which triggers the cessation of mental activity (pp. 495–496).

Adams (2010) explains that the cycle of psychological time to the individual may seem continuous because our Social Self has been taught that it is. However, it is illusionary because the "convincing impression we have of the visual world as a continuous, coherent plenum, is merely a construction understood by the Social Self, not a fact directly perceived" (p. 497). Therefore, after the moment of accommodation, the Social Self resides in a state of stillness (where there is no experience) while believing experience to be a continuous stream. These are moments of "timeless emptiness . . . and . . . black holes or discontinuities in experience . . . we skip over them in our understanding of experience" (Adams, 2010, p. 496). In these moments observable data and happenings in scientific clock time go unnoticed, causing IB.

Application of IB to Forensic Accountants and all Auditors

Kleinman and Anandarajan (2011) discuss why FAs and auditors (auditors as a whole unless discussed individually) should be skilled in understanding the various facets of IB, as well as the relevance of IB in FA and auditing education. To Kleinman and Anandarajan, auditors conduct their investigations using heuristics, which are

> experience-based techniques for problem solving, learning, and discovery used to speed up the process of finding a satisfactory solution; mental shortcuts to ease the cognitive load of making a decision. Examples of this method include trial and error, using a rule of thumb, an educated guess, an intuitive judgment, or common sense

(Webster's Online Dictionary, para. 1).

Kleinman and Anandarajan (2011) further state that heuristics, while facilitating the understanding of information, may act to divert the auditors' focus (p. 38). They opine that traditional auditing and forensic accounting teaching methodologies may not be sufficient in practice, nor are they adequate to maintain professional skepticism and exercise professional judgment. These academic researchers recommend incorporating courseware on cognitive failures (e.g., IB) where organizational behavior is subject to investigation/examination/audit, and on the difficulties auditors face in maintaining true 'objectivity' (p. 39). Furthermore, they state that auditors trained in understanding IB will be better adapted to:

1. Recognizing decision making affected by irrelevant or distracting factors,
2. Keep an open mind by constantly challenging what we think we know,
3. Continually posing counterfactual [or "if-then" scenarios],
4. Seeking a variety of inputs and opening ourselves to contradiction from others, and
5. By understanding that early investigative focus may lead to failed investigations in which innocents may be impacted and guilty parties remain free to commit bad acts (Kleinman and Anandarajan, 2010, p. 39).

In practice, Luippold (2009) analyzes 19 PCAOB audit reports from 2004 to 2007 to identify how clients "manage" many aspects of the audit that can lead/mislead auditors into incorrect reporting of earnings through IB baiting tactics. Baiting tactics are client diversions that make cognitive processing more difficult, thereby forcing the auditors, in their need for closure, to discontinue their search and miss earnings management errors while believing their audit procedures are complete (Luippold, 2009, pp. 8–10).

Luippold (2009) also conducted an experiment containing earnings management errors. He found that when "management diversionary statements led auditors to an area that was error free, these auditors were unlikely to identify the earnings management error elsewhere in the financial statements" (p. 12). He postulates that auditors became so focused on the diversionary areas, it left them with less attention available to devote to audit plan tasks, making them essentially blind to completing these tasks (Luippold, 2009, p. 23).

Regarding professional skepticism in practice and its relation to IB, Grenier (2010) hypothesizes that auditors, when auditing within their industry specialization (e.g., oil and gas), tend to develop a blind overconfidence and make more automatic, intuitive judgments based upon social norms and their own perceived ability in interpreting audit evidence. Grenier's experiments with auditors with specialized knowledge in the insurance industry found that subjects primed to be self-critical of their own judgments and decision-making became more professionally skeptical in observing and evaluating audit evidence (p. 36).

Kleinman and Anandarajan (2011) also take IB into the practice arena by analyzing the Leeson/Barings and the Madoff Ponzi scandals in relation to internal corporate IB and to securities industry IB.

Nick Leeson was a derivative trader as well as the head of the back office in Singapore for Barings Bank. From 1992 through 1995 he caused Barings to realize losses of more than one billion British pounds in unauthorized trading and hedging activities (buying and selling stock options, thereby being subject to margin calls when the Japanese market crashed). Leeson's dual and conflicting roles were noted by both internal and external auditors, but were dismissed by management due to the high degree of profits from his "known" trading. Leeson hid his losses in an off-the-books account he created when the auditors came around.

Management's dismissing statements to its auditors' report on Leeson's conflict of interests shows in practice Luippold's (2009) and Grenier's (2010) theorems (discussed above) on baiting/diversionary tactics and diminished skepticism leading to audit failures. Kleinman and Anandarajan (2011) attribute this perceptual failure (IB) to five existing heuristics:

1. *Anchoring* occurs when a person makes an initial judgment of performance and anchors future analysis to that original judgment. Here, Leeson was initially seen as "outstanding," leading his superiors to anchor their later judgments based on his prior superior performance. This anchoring may have led management to ignore red flags identified by the auditors and also to ignore the London office's questions about Leeson's repeated requests for money to meet margin calls.
2. *Framing* is the perspective from which a possible transaction is viewed. Leeson apparently framed every discussion with his superiors positively; thus gaining greater leeway to pursue larger transaction volumes despite concerns raised by Barings' internal auditors.
3. *Selective perception* exists when the expectation of seeing something influences or biases what one sees. Management profited from Leeson's activities, and apparently they wanted to believe that Leeson was a brilliant trader. Accordingly, his superiors expected no evil due to their selective perception, and they found none. A similar heuristic called *confirmation bias* is the tendency to seek evidence that confirms what one already believes, consequently downplaying or disregarding conflicting evidence.
4. *Illusory correlation* is closely related to IB-like perceptual failure. Management assumed that the presence of a bull market would result in Leeson performing well, and therefore they did not further investigate his performance.
5. *Attribution error* is the tendency for people to believe that they deserve credit for success while attributing failure to the environment. Management was happy to take credit for Leeson's success, and they did not search for red flags that could have proved otherwise (Kleinman and Anandarajan, 2011, p. 41).

The Leeson/Barings scandal is a consequence of IB caused by or intensified by the five heuristics discussed above.

In the Madoff Ponzi scandal, Kleinman and Anandarajan (2011) state that investors and other authoritative oversight bodies saw what they expected to see (e.g., consistently strong returns in an investment vehicle managed by someone with a strong reputation) (p. 44). This article does not go into the particulars of the Madoff Ponzi scheme as it is the most recent and renowned example of securities fraud. However, Kleinman and Anandarajan (2011) reviewed the Madoff scandal to asked, "Where is [was] the gorilla that caused IB?" (p. 47), while they enumerate a number of issues that either should have been pursued by auditors/

SEC or were raised by Harry Markopolos. Mr. Markopolos is the former securities industry executive and independent forensic accountant who reported to the SEC (in 2000 et seq.) that Madoff's wealth management was a massive Ponzi scheme. The FBI finally intervened in December 2008.

"So where was the gorilla with Madoff?" opine Kleinman and Anandarajan (2011). They consider the following factors that caused one of the biggest illustrations of IB in recent financial history:

- "Madoff refused to explain his investment strategy, saying it was "too complicated for normal people to understand."
- He was very secretive about his business, and he would not disclose his financial statements, keeping them closely guarded.
- Madoff mainly focused on one ethnic group: Jewish investors. No one thought to ask why.
- Madoff refused to meet directly with investors when they had questions.
- Madoff refused to disclose his investment strategy even to sophisticated analysts who requested this information.
- Whistle blower Harry Markopolos—in a published report—noted that, according to his calculations, it was impossible to make the profits Madoff claimed he was making, given the strategies he attributed to Madoff.
- Madoff reported only seven loss-making months in the period 1995–2008 (i.e., 156 months). This record is akin to a baseball player getting a 0.966 average without cheating.
- Madoff never disclosed his trading commissions (i.e., how much he was paying brokers for transactions). Markopolos suspected that no such disclosure occurred because no trades were made.
- Madoff charged very little for his hedge fund activities. Markopolos posed the question "why would a good business man work for mere pennies to the dollar?"
- Madoff, a pioneer in electronic trading having formed the NASDAQ, refused to provide his clients with online access so they could monitor their investments' performance.
- "Madoff's audit firm was a small firm in New City, New York. This firm had only one active accountant. How could one accountant review all of Madoff's extensive transactions? This one accountant was a close friend who had invested in Madoff's fund himself" (Kleinman and Anandarajan, 2011, p. 48).

"What happened? The warnings were ignored. So the cues combined comprise the gorilla dancing across the room" (Kleinman and Anandarajan, 2011, p. 48).

This gorilla of inattentional blindness is significant to the petroleum industry, including auditing and FA experts. FA and auditing experts must to be aware of

and schooled in overcoming this blindness as they hold themselves out as professionals to the public and other authoritative bodies as they collect, analyze, and communicate their findings for investigative consulting, auditing, and litigation services.

REFERENCES

Adams, W. A. (2010). Why Time Flies When You're Having Fun. *Journal of Consciousness Exploration & Research, 1*(5), 490–500. Retrieved from http://jcer.com/index.php /jcj/article/viewFile/73/74

Crumbley, D.L., Heitger, L. & Smith, S. Forensic & Investigative Accounting, 7th edition, Chicago: Commerce Clearing House, 2015

Grenier, J. H. (2010). *Encouraging professional skepticism in the industry specialization era: A dual-process model and an experimental test.* (Doctoral dissertation, 74). Retrieved from http://search.proquest.com.ezproxylocal.library.nova.edu/docview/787888593?accountid=6579

Heuristics. (2013) In *Merriam-Webster Online: Dictionary and Thesaurus online*. Retrieved March 3, 2013 from http://www.merriam-webster.com/dictionary/heuristics

Kleinman, G. & Anandarajan, A. (2011). Inattentional Blindness and Its Relevance to Teaching Forensic Accounting and Auditing. *Journal of Accounting Education, 29*(1), 37–49. Retrieved from http://search.proquest.com.ezproxylocal.library.nova.edu/docview/913481956?accountid=6579

Luippold, B. L. (2009). Managing Audits to Manage Earnings: The Impact of Diversions on an Auditor's Detection of Earnings Management. Doctoral dissertation, 106, (UMass Amherst). Retrieved from http://scholarworks.umass.edu/cgi/viewcontent.cgi?article =1106&context=open_access_dissertations

Richards, A., Hannon, E. & Derakshan, N. (2010). Predicting and Manipulating the Incidence of Inattentional Blindness. *Psychological Research (74*/6) 513–523. doi: 10.1007/s00426-009-0273-8.

Rufus, R. J., Miller, L., & and Hahn, W. (2013). The world of forensic accounting: Bridging the gap between theory and practice. Upper Saddle River, NJ: Pearson Education.

Simons, D. (2010). Monkeying around with the gorillas in our midst: Familiarity with an inattentional-blindness task does not improve the detection of unexpected events. *i-Perception 2010(1)*, 3–6. Retrieved from http://i-perception.perceptionweb.com/fulltext/i01/i0386.pdf

Simons, D. J. (2007a). Inattentional Blindness. In *Scholarpedia*. Retrieved March 1, 2013 from http://www.scholarpedia.org/article/Inattentional_blindness

Simons, D. (2010b). Inattentional Blindness Video [Video file]. Retrieved from http://invisiblegorilla.com/gorilla_experiment.html

Ward, L. M. (2008) Attention. In *Scholarpedia*. Retrieved March 1, 2013 from http://www.scholarpedia.org/article/Attention#Inattentional_and_change_blindness