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**Are computerised profiling tools effective in support of AML
procedures as required by MLROs and compliance officers
in a banking sector context?**

An inquiry into determining effectiveness despite ambiguity

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**A dissertation submitted to the Department of Management
(Information Systems and Innovation Group)
of the London School of Economics and Political Science
for the Degree of Doctor of Philosophy**

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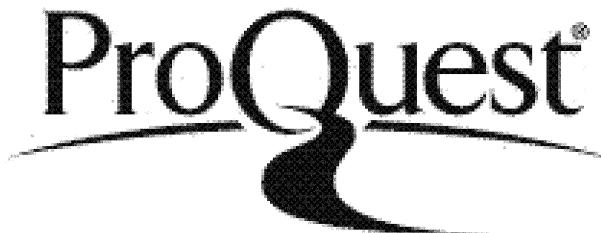
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Abstract

This dissertation aims to contribute to the emerging field of automated behavioural profiling tools/technology (AMLPT) as applied to anti-money laundering (AML) and fraud detection. We research the effectiveness of the use of profiling technology within the context of compliance Organisations located in large and medium-sized retail and commercial banks within the City of London. The phenomena of profiling and money laundering are quite complex. Subsequently, their study encompasses several academic disciplines: language use, artificial intelligence, categorisation, and the managerial domains of organisational behaviour, networking, and innovation. Using an interpretivist approach, we examine the AMLPT artefact's effectiveness through the use of Rogers' *Diffusion of Innovation* (DoI) theory, utilising a pluralist methodology that encompasses two case studies for contextual understanding of the domain and survey-based field work. In furthering our understanding of innovation within organisations, we utilise Organisational Effectiveness (OE) theory to provide an analytical framework for the fieldwork and measurement methodology.

The proliferation of AMLPT raises a variety of issues arguably more important than market share and technical functionality, particularly such issues as data privacy and the potential for the egregious use of personal or proprietary information (Schwartzau 1994; Jennings and Fena 2000; Lyon 2003). Furthermore, what was once perceived as "normal" identity management, data security and data privacy practice may no longer be acceptable in the application of next generation AMLPT in risk-aversive, highly sensitive global financial contexts. Moreover, are the cost and Organisational demands inherent in deploying AMLPT proportionate to the desired result (Bisantz and Ockerman 2002; Vavpotic and Bajec 2009). In understanding the effectiveness of AMLPT, we look beyond the traditional methods of information systems evaluation, and draw on other IS reference disciplines such as IS success and user competence, along with a variety of

Organisational effectiveness measures, and their applicability in further defining effectiveness through measures of innovativeness. Critically, we look to examine innovation in an Organisational context, rather than the more traditional domain of individual innovation, the core construct of Rogers' original (1962) work on diffusion.

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List of Acronyms

ABA:	American Bankers Association
ATCSA 2001:	Anti-Terrorism, Crime and Security Act 2001(UK)
AML:	Anti Money Laundering
AMLPT:	Anti Money Laundering (Behavioural) Profiling Technology
AML-CFT:	Anti-Money Laundering – Countering the Financing of Terrorism
AMA:	Advanced Measurement Approaches (Basel II)
AI:	Artificial Intelligence
BBA:	British Bankers' Association
BCCI:	Bank of Credit and Commerce International
BI:	Business Intelligence
BIS:	Bank of International Settlements
BSA:	Bank Secrecy Act (US)
BSU:	Behavioural Sciences Unit (US)
CFATF:	Caribbean Financial Action Task Force
CARICOM:	Caribbean Community
CJA 1993:	The Criminal Justice Act 1993 (UK)
CoE:	Council of Europe
CTR:	Currency Transaction Report (US)
DEA:	Drug Enforcement Agency (US)
DoI:	Diffusion of Innovation (theory)
DTOA 1986:	Drug Trafficking Offences Act of 1986 (UK)
EFF:	Electronic Frontier Foundation (US)
EIS:	European Information Society (EU)
EU:	European Union
FATF:	Financial Action Task Force
FBI:	Federal Bureau of Investigation (US)
FSRB:	FATF-Style Regional Bodies
FIDIS:	Future of Identity in the Information Society (EU)
FIU:	Financial Intelligence Unit
FinCEN:	Financial Crimes Enforcement Network (US)
FSA:	Financial Services Authority (UK)
G-7:	Group of Seven leading industrial countries – Canada, France, Germany, Italy, Japan, United Kingdom and the United States
GBP:	Great Britain Pound (Sterling)
GDP:	Gross Domestic Product
IMOLIN:	International Money Laundering Information Network
IDB:	International Development Bank
IMF:	International Monetary Fund
IVTS:	Informal Value Transfer System
JMLSG:	Joint Money Laundering Steering Group (UK)
KDD:	Knowledge Discovery through Data mining
KM:	Knowledge Management
KYC:	Know Your Customer

LCN:	La Cosa Nostra
MLCA 1986:	Money Laundering Control Act of 1986 (US)
MLDC:	Money Laundering Detection Core
MLR 1993:	The Money Laundering Regulations 1993 (UK)
MLRO:	Money Laundering Reporting Officer
MSB:	Money Service Business /Bureau
NCCT:	Non-Cooperative Countries and Territories (FATF)
NCIS:	National Criminal Investigative Service (UK)
NGO:	Non-Governmental Organisation
NTFIU:	National Terrorist Financial Investigation Unit (UK)
OECD:	Organisation for Economic Co-operation and Development
OE:	Organisational Effectiveness (theory)
OFC:	Off-shore Financial Centre
PEP:	Politically Exposed Person(s)
POCA 2003:	Proceeds of Crime Act 2003 (UK)
SAR:	Suspicious Activity Report
SEC:	Securities and Exchange Commission (US)
SOCA:	Serious and Organised Crime Authority (UK)
STR:	Suspicious Transaction Report
SQL	Structured Query Language
TA:	Terrorism Act of 2000 (UK)
TNC:	Trans-National Crime
UNODCCP	UN Office for Drug Control and Crime Prevention
USAPA:	PATRIOT Act (US)
USD:	United States Dollars
VAT:	Value Added Tax
WCO:	World Customs Organisation

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Introduction

This dissertation aims to contribute to the emerging field of automated behavioural profiling tools/technology (AMLPT) as applied to anti-money laundering (AML) and fraud detection. We research the effectiveness of using profiling technology within the context of compliance organisations located in large and medium-sized retail and commercial banks within the City of London. The phenomena of profiling and money laundering are quite complex, and subsequently their study encompasses several academic disciplines: language use, artificial intelligence, categorisation, and the managerial domains of organisational behaviour, networking, and innovation. Using an interpretivist approach, we examine the effectiveness of AMLPT artefacts through the use of Rogers' *Diffusion of Innovation* (DoI) theory, utilising a pluralist methodology that encompasses two case studies for understanding the context of the domain and survey-based field work (Mingers 2001). In furthering our understanding of innovation within organisations, we utilise Organisational Effectiveness (OE) theory to provide an analysis framework for the fieldwork and measurement methodology.

A Note on the Duration of the Research Project:

The field research began December of 2004 and finished in August of 2006; however, due to serious illness in the author's family, which necessitated repeated, extended international travel, the analysis and collating of the data took an additional two years. The final dissertation was written during 2009, and submitted in April of 2010.

Chapter 1. Problem Domain and Scope of Research

Type “profiling” into Google and the subsequent 4,360,000 hits (Wasel 2009) illustrates the many guises and sheer breadth of “profiling”. Profiling serves as an analytical tool in a variety of applications, be they characterising types of criminal behaviour or how much Coca-Cola is consumed in Boston, Massachusetts in a given year. Subsequently, a more formal definition becomes necessary, in this case, one culled from the Oxford Dictionary of the English Language. While we are concerned with the act of profiling, the definition is best found using the root word “profile”:

1. a. *trans.* To represent in profile; to delineate the side view or outline of; to draw in section; to outline. Also *fig.* (1715) LEONI *Palladio's Archit.* (1742) I. 21, I have profil'd the Imposts of the Arches. *Ibid.* 30 The method of profiling each Member. (1882) E. P. HOOD in *Leisure Ho.* Apr. 225 Instances in which he thus profiles his contemporaries. (1902) *Contemp. Rev.* Dec. 838 The delicate tracery of the leaves [was] profiled against the sunset sky.

Interestingly, in analysing the numerous definitions of a profile, either as a noun or verb, there is no reference to either *profiling* or *a profile* in a demographic context, nor is reference made to the profiling of a constituency. Furthermore, there is no mention of profiling as applied to an information system medium or within an information systems context. Lastly, there is no mention of profiling in a legal context. When “profile” is used as a noun, the definition given below provides a start in helping narrow the contextual parameters of the verb *to profile*, at least lexicographically, particularly in the use of “an attitude” as a definitive device.

Definition: to profile - A characteristic personal manner; an attitude, a policy (of a country, government, etc.). *low profile*: see LOW a. 23. (OED 2004) *This is of particular interest, as the “profiling tool” or “profiler” is trying to ascertain a particular “attitude” or behaviour more so than a general state of being* (author's italics).

While this may appear somewhat existential, the distinction becomes more apparent when investigating the design logic in the various AMLPTs discussed in later chapters, such as the choice of algorithm or data mining model that assist in categorising

the various detection methods used in profiling. However, the similarity to the other profiling definitions cited (relative to the specific focus of this investigation), substantiates that, as an infinitive, “to profile” appropriately describes the activity of using data, characteristics, monitored behaviour and other elements to create a profile. This can then be referred to in certain contexts as *a behavioural profile* (Canhoto and Backhouse 2008), which assists in further understanding of behaviour that may be of interest. However, it should be noted that, while defining one’s individual characteristics, such as intent or motive, and that such behaviour comprises a key locus in profiling, there is still much ambiguity in accurately defining “behaviour” (Canhoto and Backhouse 2007). In current practice, behavioural profiling sets out to assess a subjects’ situated actions, contextualising and classifying those actions and facilitating development of a relational understanding of suspect behaviour, particularly among actors of varying significance (Suchman 1987; Suchman 1993; Ashforth and Humphrey 1997; Star 2002; Yang and Huh 2008). At its essence, profiling depicts this effort to separate the “wheat from the chaff”, helping to narrow-down traits, habits, and other identifiers that result in the creation of accurate behavioural models.

Arguably, the proliferation of AMLPT raises issues more important than market share and technical functionality, particularly those regarding data privacy and the potential for the egregious use of personal or proprietary information (Schwartau 1994; Jennings and Fena 2000; Lyon 2003). Furthermore, what was once perceived as “normal” identity management, data security and data privacy practice may no longer be socially acceptable in the application of next generation AMLPT in risk-aversive, highly sensitive global financial contexts (Badenhorst and Eloff 1990; Birch and McEvoy 1992; Baskerville 1993; Backhouse and Dhillon 2001; Hildebrandt 2006). Moreover, we should also ask whether the cost and organisational demands are proportionate to their desired effectiveness (Bisantz and Ockerman 2002; Vavpotic and Bajec 2009).

In understanding the effectiveness of AMLPT, we look beyond the traditional methods of information systems evaluation, and draw on other IS reference disciplines such as IS success (DeLone and McLean 1992; DeLone and McLean 2003; DeLone, McLean et al. 2005; Wu and Wang 2006; Bradley 2008; Petter, DeLone et al. 2008), user competence (Munro, Huff et al. 1997), as well as a variety of organisational effectiveness measures, (Cameron and Whetten 1981; Fry and Slocum Jr. 1984; Cameron 1986; Lewin and Minton 1986), and their applicability in further defining effectiveness through measures of innovativeness (Rogers 1976; Van de Ven 1986; Van de Ven and Poole 1990; Slappendel 1996; Mahler and Rogers 1999; Rogers 2003). Critically, we look to examine innovation in an organisational context, rather than the more traditional domain of individual innovation, the core construct of Rogers' original work on diffusion (1962).

1.1 Applicability of the Research

To understand the impetus behind the use of behavioural profiling, specifically its applicability in countering money laundering within a context of banking and financial services, one must comprehend the behaviours and agency amongst several inter-related themes: money laundering as it relates to trans-national crime (TNC) and international terrorism, along with the role of institutional and organisational regulators, and subsequently, the place of AMLPT within the regulatory and compliance regime. While an in-depth analysis of global terrorism is beyond the remit of this dissertation, the convergence and resultant prevalence of these themes emanates from the events of September 11, 2001, when *al-Qaida* terrorists attacked the World Trade Centre in New York City, an event now commonly referred to as “9/11”. This event has served as a significant motivator for many of the laws, statutes and other formal instruments introduced on a global scale to halt the spread of money laundering as a means of

terrorist financing, and furthermore, has spurred on the introduction and development of behavioural profiling tools examined within the scope of this research. These legal and regulatory instruments have methodically created an enforcement regime charged with the prevention of terrorist financing since 9/11; yet addressing the more fundamental question, that of determining what is in fact money laundering or what may constitute terrorist financing (versus the legitimate movement of capital amongst individuals, groups or extra-national organisations) has proved problematic (Collier, Hoeffler et al. 1999).

There is considerable research available as to the use and accuracy of profiling technology when applied to business intelligence, or its traditional demographic uses such as product market research and consumer behaviour, as well as customer relationship management and analytics (Blahunka 2000; Osterfelt 2001). Profiling, when applied to detecting money laundering, is a relatively unexplored area of academic study. When viewed in an anti-money laundering context, behavioural profiling pertains to technologies tailored for use by compliance professionals within banks and other financial institutions and regulators, along with law enforcement, fraud investigators and other governmental entities. Indeed, such has been the demand for behavioural profiling capabilities that the market for AMLPT has shown considerable growth since the events of 9/11 (Brenneman and DeLotto 2001; Aberdeen Group 2002; FinCEN 2002; McGuire 2002). Given that since 2001 banks have been purchasing “profiling systems” on a regular basis, and subsequently spending a great deal of money and time on their purchase and implementation, understanding what (and why) banks are purchasing becomes of interest. On the surface, many factors seem obvious, such as automating the regulatory, compliance, and risk analysis functions; however, other domain issues are more subtle. These include the design and engineering of these technologies, (for instance, what rationale separates the various vendor’s product innovations or selection

of specific features and functionality), along with unforeseen ancillary uses, such as the potential for data abuse through use of AMLPT, due to the quantities of extremely sensitive information these technologies gather.

In some quarters, profiling technology is perceived as the “silver bullet” in helping identify current threats, along with providing a means to better classify behavioural types, to provide an historical context to prevent potential threats, and to deliver this information in a timely manner to interested parties worldwide. The use of AMLPT is an innovation in varying stages of early adoption and development (Rogers 1976; Olshavsky 1980; Bridges, Coughlan et al. 1991; Bunker, Kautz et al. 2000; Galliers, Swan et al. 2000; Moore 2002; Hausman and Stock 2003; Sadik 2008; Tucker 2008) and the subsequent dearth of long-term analysis provides opportunities for academic research in a variety of management, information systems, and organisational research disciplines.

Furthermore, for practitioners in the engineering and technology fields, understanding how profiling technologies are designed, specified, engineered, and brought to market, may uncover improvements in software development practices that, with additional refinement, could enhance the probability of detection beyond current capabilities. For civil libertarians, law enforcement and government parties, understanding the advantages, limitations and inherent complexities of the current generation of AMLPT could be of great benefit. Such understanding should enhance the contextual coherence needed to address the unforeseen consequences of the use of AMLPT, for instance, in addressing the legal ramifications regarding data protection, search, seizure and surveillance. Indeed, further research may firmly establish if the use of behavioural profiling is in fact the most efficient means of identifying and quantifying illegitimate behaviour.

Given the rapid proliferation of behavioural profiling, researchers seeking further understanding of the process of innovation adoption within organisations (in this case, through the adoption of AMLPT), may find several questions within this study insightful. For instance, if designers use practices perceived as innovative, to what extent do they contribute to enhancing organisational effectiveness and compliance practice? In an organisational context, how do innovative norms improve AMLPT performance? Conversely, in what way is the innovation and implementation process static, subsequently having a null or depreciative impact? To what extent is the input from traditional knowledge sources, such as professional associations, customers, or other interested parties, over-valued? Lastly, could these technologies be simply check boxes on a compliance list, a process that involves nothing more than compliance for compliance's sake? Given current regulatory pressures versus practical application, this last question could prove quite revealing as to the acceptance and legitimacy of behavioural profiling.

1.2 Current Academic & Practitioner Research

Distinctions in theoretical approaches abound in evaluating the current status of research into behavioural profiling and the use of AMLPT. From a cultural perspective, practitioner and academic research in the United States tends toward the techno-centric, focussing on racial profiling by law enforcement and other government bodies, as well as electronic surveillance and the resultant implications in both the real and virtual worlds.

Specifically, the locus of techno-centric research tends towards the applicability and effectiveness of data mining, knowledge management, business intelligence and other like technologies in addressing the aforementioned, and is usually undertaken from a functionalist perspective. Beyond the functionalist, techno-centric perspective, the US PATRIOT Act (USAPA), given its broad regulatory remit, is a primary impetus for

much of the purely social-institutional and organisational-centric research currently underway in the US, and is extensively grounded in constitutional considerations and the individual rights therein, along with investigations into the nature of the “surveillance state” (Bogard 1996; Lyon 2003; Vlcek 2008). Research in the European Union (EU) tends to focus on privacy and identity management (Brownsword 2008), in areas such as identity cards and biometrics (Prabhakar, Pankanti et al. 2003; Andronikou, Yannopoulos et al. 2008), a result of the long-established body of technology and procedural compliance instruments required by the extensive data protection regime in place, as well as the extant neo-socialist reality that defines financial regulation in the EU.

In the United States, academia, private sector, and NGO groups such as the Electronic Frontier Foundation (EFF), along with a diverse community of privacy advocates, have driven the investigations into USAPA and similar acts (EFF 2001); conversely, the EU took a decidedly more formalised, government-sponsored research approach and created a research body specifically to investigate not only profiling, but other privacy and data protection concerns resulting from technological impetus. The Future of Identity in the Information Society (FIDIS) was formed in 2004 to draw on a variety of disciplines to study the domains of identity, surveillance and other related norms that comprise the European Information Society (EIS) (FIDIS 2009). Portions of the core research used in this dissertation come from FIDIS-related investigations as well as the author’s participation therein.¹ Aside from FIDIS and localised academic research, AMLPT as a research domain has not been widely investigated. For example, how do all the various artefacts within the domain, (such as those of compliance, regulation and

¹ The reader is encouraged to visit <http://www.fidis.net/resources/deliverables/profiling/>, which contains a rich archive of research papers that address the European perspective on not only behavioral profiling, but also identity management and a variety of other domain-related subjects.

technology platforms) interact and shape the use of AMLPT artefacts, actions which Hildebrandt and Backhouse (2005) describe as “technique, technology, and practice”?

Research within the computer science fields of cognitive systems, “intelligent” machines and other artificial intelligence (AI)-based disciplines are dedicating more studies to improving the contextualising of profiling and the modelling of human behaviour, exploiting breakthroughs in the military use of semantic networks and knowledge discovery through data mining (KDD) (Fayyad, Piatetsky-Shapiro et al. 1996; Spence and Tsai 1997; Zhang, Salerno et al. 2003; Gersh, Lewis et al. 2006; Siau and Wang 2007; Wolff 2007).

A survey of practitioner contributions shows a marked tendency towards end-user organisational surveys and product delivery methodology, as well as positioning papers relative to deploying propriety technology, consulting services and support. AMLPT vendors use an information-oriented approach rather than one of traditional marketing, and stress technical sophistication through the use of “white papers” and case studies, rather than touting organisational transformation or vague statements promising “order-of-magnitude” improvements in AMLPT detection performance (Aberdeen Group 2002; Kentouris, Kite et al. 2002; Katkov 2006; Ltd. 2006; Sandman 2008).

Overall, current trends in AMLPT research within the finance sector continues to evolve, with an emphasis on improving contextual understanding of the social ramifications of AMLPT use. Much of this emphasis is a result of concerns now arising that these tools will no longer simply reside in the compliance group, but may indeed become a “customer service” aid, and therefore a means to determine one’s suitability for financial products and services. Such boundary-spanning use (Tushman 1977; Manev and Stevenson 2001) induces further lines of inquiry, such as:

- If similar technology can be employed in an actuarial fashion - for instance, to determine suitability for health care, insurability, and other lifestyle behaviours -

are there controls to ensure individuals are not the victims of ambiguity, erroneous categorical schemas or identity fraud?

Lastly, taxonomic, categorical and ontological ambiguity is consistently evident within the development and use of behavioural profiling, and is a recurrent contextual motif throughout this dissertation.

Chapter 2. Historical Context, Thematic Discussion and Research Question

Although this dissertation is specifically aimed at the use of technology in anti-money laundering methods, the subject's complexity demands a substantial analysis of money laundering regulations and the domain of AML-CFT, along with a discussion of the numerous socio-institutional considerations therein, so that technological factors can be placed in context. This chapter starts by supplying that analysis.

In practice, money laundering has evolved in parallel with the needs of the ever-increasing complexity of transnational crime and terrorism, particularly as a result of globalization (Cooper and Deo 2006; Stana 2006). Criminals are utilising the concept of the Trans-National Corporation (TNC) to spread their wealth, thus hindering the creation of a money “audit trail” that would facilitate tracking both cross-border financial crime and the trafficking of contraband (Naylor 1994; Robinson 1998; Blunden 2001; Naim 2005). Underworld figure Meyer Lansky was the first “mobster” to realise that if he had no money to tax, then the US Department of the Treasury’s income tax enforcement officers would have no cause to harass either him or his “business partners”. Lansky’s dictum was that “any money the Internal Revenue Service does not know about is not taxable” (Robinson 1998; Blunden 2001). Lansky’s motivation was Al Capone’s fall in 1931 through his subsequent conviction and imprisonment for income tax evasion, a crime some say pales in comparison to Capone’s record of murder, extortion and bribery. Lansky saw Capone’s mistake as an indelible lesson in how *not* to handle the proceeds of crime.

Looking for alternate means to dispose of large sums of cash, Lansky was one of the first criminals to recognize the benefits of Swiss banking secrecy laws and procedures. Subsequently, over a period of some 20 years, Lansky was able to squirrel away upwards of \$100,000,000 dollars, all profits from the mob’s various enterprises, such as gambling, racketeering, bootlegging and extortion, and make it invisible to

United States tax authorities. In his oft-cited work “*The Laundrymen*,” Jeffrey Robinson provides a succinct description of exactly what exactly constitutes money laundering:

“Money laundering is called what it is because that perfectly describes what takes place - illegal, or dirty, money is put through a cycle of transactions, or washed, so that it comes out the other end as legal, or clean, money. In other words, the source of illegally obtained funds is obscured through a succession of transfers and deals in order that those same funds can eventually be made to appear as legitimate income” (Robinson 1998).

Robinson and others agree that the exact timing of when the term “money laundering” enters the mainstream vocabulary is unclear. Its first use in the press was during the *Washington Post*’s reporting on the Watergate hearings in 1973, held to investigate the burglary of the Democratic National Committee’s offices, by individuals at the direction of White House officials, up to and including then-president Richard M. Nixon (Group 1973-2009). While other anecdotal evidence attributes the term’s origin to the use of coin Laundromats by American mobsters as a legitimate front to “launder” profits from their various rackets, Blunden (2001) disputes this, stating that “this is wrong - the term perfectly describes the cycle of transactions that dirty money passes through so that it becomes clean on the other end”. Following the trail of money launderers was often foiled by the bank secrecy laws in many of the target jurisdictions, particularly Luxemburg, Switzerland, and numerous Caribbean nations, such as Antigua, Bermuda, and the Cayman Islands. Many of these “offshore” entities that hid behind their nation’s various banking secrecy laws were created simply for the purpose of money laundering or specifically in many instances, tax avoidance; merely “following the money” in many cases was the best “process,” rather than any established “procedure” in tracking a money launderer.

In a 16-year period, from 1970 to 1986, the United States was in the midst of a battle between law enforcement and drug traffickers who appeared to be targeting the US from a variety of locales with illicit drugs such as cocaine, marijuana, heroin, and

hashish. This 16-year span encapsulated a period of intense innovation on both the part of traffickers and law enforcement. However, cocaine was the catalyst, as it provided traffickers with unprecedented profits, and specifically, the need to launder vast amounts of cash. Such was the scale and efficiency of the cocaine economy that the street price of a gram of cocaine dropped considerably, from a high of \$378.70 USD in 1981, to a low of \$169.20 USD in 1998 (Policy 2000). For example, Pablo Escobar-Gaviria's accountant states that such was the physical scale of cash processed monthly by Escobar's Medellin cartel, that he regularly spent \$2,500 a month simply on rubber bands to bundle the cartel's cash proceeds.² He even incorporated a "wastage" factor of 10% to his monthly balance sheet to account for cash that may have been eaten by rats or simply rotted away, given the unusual means taken to secret the cash around the cartel's various caches. One estimate of this "wastage" has Escobar losing \$400 million in cash to rot in the basement of one of his safe houses (Naylor 1999). Given Escobar-Gaviria's greatest run of profitability was some 13 years, from roughly 1980 until his death on the third of December, 1993, this represents an outlay of \$390,000 on rubber bands, simply to bundle notes (Gaviria and Fisher 2009).

While Escobar's "problem" was unique to the size of his organisation, the physical movement of drug profits created the need for criminal organisations to separate the "operational" or trafficking side of the enterprise, from that of the financial side, as money management demands were cutting into operational needs. Subsequently, other methods to integrate cash were further refined. For instance, along the US border with Mexico, money changing stores called "cambios" were doing a brisk trade in dollars for pesos, as were Mexican banks (Parker 1994-1995). These cambios, money remittance companies and other "Money Service Businesses" (MSBs) would morph, over the next

² On December 3, 1993, Pablo Escobar-Gaviria shot himself on the roof of a building in Medellin, having been cornered there by a combined force of Columbian national police and American DEA agents; his death had no apparent effect on the global flow of Columbian-sourced cocaine.

decade, into the preferred means of laundering, for not only drug traffickers, but also for trans-national criminals and terror organisations (FinCEN and Smith 2003; Passas 2003; Robinson 2003; Passas 2006).

However, the ease of integrating cash into both the Mexican and Canadian banking system was nothing compared to the ease of integration once the cash found its way to the Caribbean. “Banks” with no physical presence in places like Montserrat were “chartered” by a government desperate for hard currency. Money was now circulating around the globe in huge amounts, without regard to borders, institutional constraints, or provenance. Given that those who were primarily responsible for both generating and safekeeping these vast amounts of cash were making a fortune, little regard was given to any thought of regulation or government interference. This ambivalence was due in no small part to the fact that regulation in many areas of the globe simply didn’t exist, or existed in a vacuum and that the potential for huge profits mitigated the small risk that did exist. For instance, during the mid-1980s, it was estimated that the Cali cocaine cartel was moving annual profits of \$7 billion, at that time roughly three times the profits of General Motors; it was estimated by the start of the 1990s that the Cali Cartel was exporting 80% of the world’s cocaine (Robinson 2003; Control 2007; Gaviria and Fisher 2009). As a result of efforts in prosecuting drug traffickers, American authorities were beginning to prove adept at “following the money”, and it was an anti-drug cartel operation that provided the first significant “victory” against large-scale money launderers. Ironically, this first victory was against an off-shoot of Lucky Luciano’s original “French connection” heroin operation, wherein morphine “base” was moved from Turkey to Sicily, where it was then refined into pure heroin and moved on to Canada for distribution in the United States. Called the “Pizza Connection”, it moved approximately \$1.6 billion worth of heroin through Canada and the Northwest and Midwest of the United States over an 8-year period, from 1976 to 1984. Using a chain of

pizzerias, the Mafia - La Cosa Nostra's (LCN) intent was to launder the drug profits through pizza sales, and while successful at first, the large quantities of cash soon overwhelmed this method (Jacobs and Gouldin 1999; Paoli 2002; Robinson 2003; FBI 2009).

2.1 The Rise of Regulation: Ontological and Taxonomic Ambiguity

The scale of the “Pizza Connection” case, as well as growing evidence that money laundering and organised crime were inextricably linked in the majority of high profile cases then under investigation, spurred the United States Congress to pass the *Bank Secrecy Act* (BSA) in 1970. Also known as *The Currency and Foreign Transaction Reporting Act*, the BSA was the first legislative attempt anywhere to codify money laundering as a specific crime (BSA 1970; Currency 2000). The BSA required banks and other financial institutions to keep certain records as determined by the Secretary of the Treasury, as well as requiring banks and financial institutions to report any transaction, to include deposits, withdrawals, exchange of currency or other payment or transfer, over \$10,000 (BSA 1970).

While not specifically an anti-money laundering law, due to its primary aim of policing institutions rather than individuals, as well as requiring reporting of legal, or “clean” cash as a means to identify tax evasion, it still provided a paper trail that would prove helpful to future investigations in establishing the presence of money laundering (Amann 2000; Cuellar 2003; Gouvin 2003). The BSA was timely, as launderers were becoming more innovative, utilising complex layering and integration methods to legitimize their profits. For instance, criminals employed teams of old age pensioners, later known as “smurfs” (Richards 1999; Bell 2002). “Smurfs” were contemporary cartoon characters with a distinctly blue skin tone, and given that a large percentage of the hired pensioners were women with rinsed grey hair that manifested a distinctly bluish

hue, the name was uniquely appropriate (Bell 2002; Mathers 2004). Anyone willing to look the other way for a few dollars was employed for the sole purpose of moving and then integrating small amounts of money under the \$10,000 limit.

Such was the prevalence of smurfing that a specific law was created in the US, the *1987 Anti-Smurfing Statute*, which further clarified the original smurfing clause within the *Money Laundering Control Act of 1986* (Langford 2002). “Smurfing” would later be known as “structuring,” wherein a launderer knowingly arranges, or “structures” a series of transactions that 1) obscures the money source through multiple layers, and 2) distributes the integration efforts in multiple transactions under a specific regulatory threshold, thus avoiding the given reporting requirements of a particular jurisdiction (Plombeck 1988; Welling 1989; Cuellar 2003; Gouvin 2003; Mathers 2004). A further outcome of this statute were substantial improvements to the bank reporting provisos of the BSA, and more importantly, formalising the Currency Transaction Report (CTR) requirements. The CTR was the precursor to the Suspicious Activity Report, or SAR; one of the defining artefacts of the post-Millennial money laundering compliance regime in both the United States and the United Kingdom.³ The CTR became the primary reporting mechanism between banks and the legal/regulatory realm (Welling 1989).

Despite Congress passing the BSA, and in 1986, the *Money Laundering Control Act of 1986* (MLCA), as well as the United Kingdom’s enactment of the *Drug Trafficking Offences Act of 1986* (DTOA), the law in both the United States and United Kingdom would continue to struggle with establishing what constituted criminal money laundering. Moreover, many of the alleged “criminal” cases brought in the early 1980s were actually civil or regulatory infractions. In many cases, the legitimate sequestering of funds, sometimes referred to as “flight capital”, or the use of non-traditional tax reduction measures, was misconstrued as laundering (Nichols 1997; Rider 1999;

³ Examples of a US CTR and SAR and UK SAR, are provided in sections 8.1 and 8.2 of the Appendix.

Lewisch 2008). This confusion necessitates a key distinction: the difference between illicit flight capital and licit flight capital. Illicit flight capital are the proceeds of crime, while licit flight capital denotes actions taken by the wealthy to shield their legitimate income from the risks of “perceived excessive taxation, interest rates, inflation, and the business cycle” (Collier, Hoeffler et al. 1999; Kennedy 2003). This legal ambiguity would aid launderers and vex prosecutors, particularly when organised crime and cartel heads began to hire accountants and advisors well-versed in the loop-holes created by these procedural ambiguities (Naylor 1999; Amann 2000).

The 1980s would witness further regulatory proliferation, particularly at the international level, primary as a result of the Bank of Credit and Commerce International (BCCI) scandal.⁴ All through the decade, the US Drug Enforcement Agency (DEA) was investigating numerous drug trafficking and laundering conspiracies that encompassed a variety of locales, transaction sizes, and product mixes. The BCCI scandal unfolded as a result of a multi-jurisdictional operation, “Operation C-Chase,” (“C” for “cash”), which had begun in the summer of 1986 (Lohr 1991). C-Chase was a classic “follow the money” operation, driven primarily by US Customs agents, led by agent Robert Mazur.

C-Chase involved a “sting” operation targeting Medellin cartel members in Los Angeles, Miami, and New York (Circuit 1992; Passas and Groskin 2001). Acting as couriers, the cartel members laundered drug profits through the Tampa branch of BCCI; such was BCCI’s complicity in the cartel’s efforts, that employees suggested alternative means to structure accounts, as well as the use of other branch locations to mitigate the risk of detection (Passas 1996). C-Chase provided a wealth of information through the collection of 1,200 secretly recorded conversations and 400 hours of video surveillance, which exposed an offshore laundering web running through Britain, France, Italy, and Panama. Indictments were handed down in 1990 as a result of all the evidence gathered,

⁴ A case study of the BCCI scandal is included in section 8.3 of the Appendix.

which helped amass the convictions of 5 senior BCCI executives, as well as numerous cartel members and other criminal intermediaries (Circuit 1992; Robinson 2003).

However, while C-Chase represented a significant victory for US law enforcement, it revealed startling complacency in other international jurisdictions, the United Kingdom in particular. Significantly, while the BCCI investigation was the largest money laundering investigation to date anywhere, what was more startling was that the targeted “Laundromat” was not so much in BCCI; it *was* BCCI (Lascelles, Donkin et al. 1991; Passas and Groskin 2001; Robinson 2003). Given the scope of what was nothing less than institutionalised money laundering, as well as the vast scope and complexity of trans-national crime (TNC) exposed by the scandal and BCCI’s complicity, the international community finally began to acknowledge the threat posed by the proliferation of money laundering. Furthermore, the threat posed by well-funded transnational crime organisations and drug cartels was now augmented by the appearance of increasingly sophisticated fund raising techniques, both legitimate and illegitimate, employed by terror and “liberation” movements to fund their operations. Consequently, the need for a cohesive international approach was identified by central bankers, regulatory authorities, and national governments, albeit targeting only money laundering involving the proceeds derived from drugs trafficking.

In June of 1989, the finance ministers of the Group of Seven (“G-7”) countries – Canada, France, Germany, Italy, Japan, United Kingdom and the United States – met in Paris to discuss the threat posed by the proliferation of money laundering, and furthermore, what counter-measures were available, or should be developed, to curb the increasing abuse of the world’s banking system and financial institutions. Using many of the core anti-money laundering procedural recommendations outlined in the 1988 UN Vienna Conference, the Financial Action Task Force (FATF) was created. In addition to the members of the G-7, the President of the European Commission, and eight other

countries were also in attendance (FATF-GAFI 1990; Johnson 2008; FATF-GAFI 2009).

This task force was given the mandate of assessing money laundering trends and techniques, along with examining the efficacy of actions already underway at both the national and international level. Per its founding charter, dated July 16, 1989, this mandate was to:

“...assess the results of co-operation already undertaken in order to prevent the utilisation of the banking system and financial institutions for the purpose of money laundering, and to consider additional preventative efforts in this field, including the adaptation of the legal and regulatory systems so as to enhance multilateral judicial assistance” (FATF-GAFI 1990; Gilmore 1995; Doyle 2002).

These assessments resulted in the creation of a body of standards, incorporating measures designed to augment perceived omissions in the various national and regional anti-money laundering approaches then in practice. In 1990, the FATF issued its *Forty Recommendations*, the first in a series of reports that would provide a comprehensive, standards-based approach to combating money laundering. The *Forty Recommendations* would become the *sin qua non* of multi-lateral money laundering regulation, or as it was being described with increasing frequency, “anti”-money laundering (AML) regulation. The *Forty Recommendations* remain at the heart of international initiatives to counter money laundering, and while not legally binding, realise their efficacy through consensual persuasion and the practice of “naming and shaming” non-compliant nations. While generally accepted as the most consistent, if not necessarily effective organisational approach to date, the *Forty Recommendations* are not without controversy. Over time the *Recommendations* would prove to conflict with notions of sovereignty, “deliberative equality” – wherein all parties to a treaty or statutory instrument are treated equally – and the desire for economic “command and control” held by many of its member states (Wessel 2006).

2.2 Regulatory Excess – The Cayman Islands Case Study

The perils inherent in implementing such a far-ranging scheme are illustrated in the following case study involving regulatory sanctions against the Cayman Islands. These sanctions were spurred, in part, by perceived enforcement inconsistencies, stemming from the FATF’s primary regulatory method, a process known as “mutual evaluation”. Mutual evaluation consists of a visit by a committee, derived from member states, with expertise in law, financial regulation, law enforcement, and international co-operation. The committee evaluates the member nation compliance with the *Forty Recommendations*, flags problems, and identifies strengths and weaknesses in the member’s compliance regime. To date there have been two rounds of mutual evaluations (Johnson 2008). Pursuant to the “naming and shaming” process, both member and non-member states, should their AML processes be found wanting, face two significant FATF actions. Initially, “naming and shaming” occurs as a result of a non-compliant nation being placed on the “Non-Cooperative Countries and Territories” or NCCT list.

As a result of the FATF’s success in harmonizing AML standards, there is a significant stigma attached to nations placed on the NCCT list; consequently, they tend not to remain on the list for more than one evaluation cycle. The second, and more severe procedure, is the application of *Recommendation 21* that provides for a series of significant steps, requiring FATF members to apply special attention to transactions with named jurisdictions. *Recommendation 21* states that

“Financial institutions should give special attention to business relationships and transactions with persons, including companies and financial institutions, from countries which do not or insufficiently apply the FATF Recommendations. Whenever these transactions have no apparent economic or visible lawful purpose, their background and purpose should, as far as possible, be examined, the findings established in writing, and be available to help competent authorities. Where such a country continues not to apply or insufficiently applies the FATF Recommendations, countries should be able to apply appropriate countermeasures” (FATF-GAFI 2003).

The FATF's first NCCT Review was held in 1990. One measure resulting from this review placed The Cayman Islands on the NCCT list for "deficient" money laundering controls. The FATF's scrutiny of The Caymans was understandable to some extent, given that prior to the FATF's review, the US Treasury's Financial Crimes Enforcement Network branch (FinCEN) had expressed concerns over the Island's robust financial sector. As a result of a March 2000 report from the Island's financial authorities, which detailed the presence of 570 bank and trust companies, 2,230 mutual funds, and 499 captive insurance companies, FinCEN expressed concerns as to the Island's rather languid regulatory approach. Further concerns highlighted the fact that approximately 40,000 offshore companies had registered in The Cayman Islands.

Additional scrutiny called attention to the fact that most Cayman Islands financial institutions were not required to identify their customers, nor were they required to maintain records of customers, their financial transactions, or to document the opening of an account. For instance, Cayman Islands law makes it impossible for the supervisory and regulatory authority to obtain information held by financial institutions regarding their client's identity without a court order. Lastly, officials have no access to information relating to investment funds held by 15 or fewer persons. FinCEN did not explicitly call for sanctions against the Cayman Islands; however, FinCEN's observations, as those of a financial regulatory body of an FATF member state - and a very powerful one at that, did carry significant weight as a party to the mutual evaluation process (Sloan 2000; Wessel 2006).

The Cayman's NCCT listing caused considerable outrage among the Islands' regulators, bankers and neighbouring states, especially given the Islands' regulatory efforts prior to its NCCI listing. While the appearance of such a vast network of financial institutions could be construed as facilitating an unregulated banking "paradise", the Cayman Islands had taken significant steps, prior to the NCCT review, to improve both

the regulatory and reputational environment on the island. On the surface, the disparate nature of the relationship between small nations and the FATF was not as simple or as one-sided as it appeared.

As part of its founding ideals, the FATF, rather than being confined to the G-7 nations, initiated the formation of FATF-Style Regional Bodies (FSRBs) throughout the globe as an inclusive means for smaller nations to be FATF accredited. In 1973 the Commonwealth nations of the Caribbean basin formed the Caribbean Community (CARICOM) as a trade body, but did not include a regional crime fighting alliance. The expansion of drugs trafficking during the 1980s hastened the realization that a common approach against the commensurate increase in money laundering was needed. Several regional meetings resulted in a consolidation of law enforcement and regulatory efforts over several years, culminating in the Aruba Conference.

The Aruba Conference on Money Laundering in June of 1990 had resulted in 21 *Recommendations* with specific applicability to the region; however, as a result of the Kingston Ministerial Meeting on Money Laundering, held November 5 - 6, 1992, they were simplified to 19 *Recommendations* and unanimously adopted. Indeed, the CFATF was to exhibit an innovative and flexible approach in defining its anti-money laundering guidelines and regulations. Wilson and Rattray (2007) state that:

“Although complementary to the FATF recommendations the CFATF 19 *recommendations* were in some respects very forward looking. For example, action against politically exposed persons is a rather recent creation in the FATF anti money laundering panorama. However, *CFATF Recommendation Five*, promulgated in 1990 recognised the possibility that public officials, a political candidate or political party could be the recipient of tainted proceeds and as such, CFATF member countries were encouraged to criminalize such behaviour with the imposition of enhanced punishment or other sanctions such as forfeiture of office”.

Recognizing the need for identifying “politically exposed persons”, soon to be known as “PEPs”, was prescient, as it was not until publication of the EU’s *Third Directive*, and the Joint Money Laundering Steering Group’s (JMLSG) guidelines in

2006, that the term would enter the accepted anti-money laundering lexicon (Herridge 2007; Choo 2008). The PEP concept, while in later usage analogous to money laundering and terrorist financing, was initially concerned with corruption akin to influence peddling and political graft, an endemic problem in developing Caribbean economies.

Further disenchantment with the FATF process stemmed from the apparent “one-size fits all” nature of the *Forty Recommendations*. What was entirely appropriate for the developed world was in many ways unsuited for specific regional exigencies. It is perhaps telling that a FATF reference to PEPs does not occur until some 14 years later, in the 2003 – 2004 “*Money Laundering Typology Report*” (FATF-GAFI 2003-2004), the FATF’s annual report to members on trends, techniques and potential concerns relative to current money laundering practice.

This perceived lack of regional sensitivity, despite the promulgation of the FSRB relationship, coupled with the NCCI listing, caused the Cayman’s Financial Secretary, George McCarthy, to claim that “[t]he decision was made without due process, and is inconsistent with reports made by the FATF as late as last week... We were assured by the FATF that the review process would be fair and transparent throughout”. He further castigates the FATF, adding “that repeated requests that the FATF conduct an on-site evaluation of Cayman's anti-money laundering system were disregarded, as were requests to be given adequate time to respond to aspects of the FATF report with which Cayman disagreed” (International 2002; Wessel 2006). Further questions were raised as to the denial of due process and a fundamental lack of transparency as to the way in which the decision to list was reached.

What was in effect the “final straw” and illustrates the dubious nature of “deliberative equality”, were revelations from other Caribbean nations that European jurisdictions, Austria and Monaco specifically, were being allowed to rectify FATF concerns without being NCCT listed. Austria had been sanctioned for its practice of

anonymous savings passbooks, and Monaco for a variety of lapses in regulatory reporting and transparency. The FATF's hypocrisy in handling the situation was telling, and suspicions were raised among the CFATF's member states as to the true intention of the FATF's, and by extension, the Organisation for Economic Co-operation and Development's (OECD) inconsistent behaviour.

It was felt that the listing action was simply a way to marginalize the Cayman's considerable advantages as a tax haven, relative to European competitors such as Liechtenstein, Switzerland, and the Channel Islands. The Cayman's stay on the NCCT list was short, as the 2001 NCCT review found the Islands largely compliant, given their implementation of dedicated money laundering laws and other regulatory improvements. In this instance, the FATF's actions, given its imperious behaviour, was perceived as regulatory hegemony, in pursuit of a European competitive advantage in the financial services market. Wessel states “[t]he exclusion of the European jurisdictions was offered as evidence of an effort to reduce the flow of taxable capital from the high tax jurisdictions of EU to the lower tax regions of the Caribbean” (FATF-GAFI 2003; Wessel 2006).

The concept of “deliberate equality” is meant to provide individual nation-states, organisations, or individuals – all affected parties – the right to deliberate and participate in the formulation of regulatory policies, with clear criteria, and critically, that the criteria is applied unequivocally. As a result of the FATF's actions in the Cayman Islands and other cases, there is now substantial interest by practitioners of international law as to the legitimacy of the FATF's enforcement policies and procedures. There is a consensus among legal scholars that the FATF, when viewed through the lens of deliberative equality, is in jeopardy of de-legitimacy as an organisation, given its inconsistent behaviour (Doyle 2002; Wessel 2006). Indeed, such wariness would be a

significant consideration in the regulatory relationship between the United States, the EU, and supranational bodies such as the FATF throughout the remainder of the 1990s.

2.3 The United Kingdom's Regulatory Regime

Turning to the anti-money laundering regime in the United Kingdom, 1993 saw the passage of two significant pieces of legislation. The first, *The Criminal Justice Act 1993* (CJA 1993), introduced the concept of “mandatory reporting” as a result of requirements implemented in the EU’s *First Directive* on money laundering (1991). While the target of this legislation was again the profits of drugs trafficking, the mandatory reporting requirement broadened the reporting constituency far beyond that of the banking sector. Now anyone, be they solicitor, insurance agent or financial planner, who harbours suspicions as to the source of funds in their client’s possession, now had a duty to report their suspicions.

A secondary act to the CJA, though perhaps more significant in its long-term ramifications, were *The Money Laundering Regulations 1993* (MLRs), which compelled financial institutions to introduce formalised anti-money laundering reporting and detection procedures. The MLRs were, much as the CJA, a furtherance of the EU’s *First Directive* (Gill and Taylor 2004). *The Money Laundering Regulations 1993* mandated significant prevention measures, among them the creation of customer identification procedures, specific internal reporting procedures, and the implementation of systems and employee training to prevent money laundering (Rizkalla 1998; Stokes and Arora 2004).

Indeed, the *Guardian* newspaper, in their March 29, 1994 legal section, led with the header “Grassing on the Client”; the subsequent article then went on to detail the impact this “onerous looking missive” would have on solicitor-client confidentiality. The City of London was rife with speculation, but it was hard to argue against the intent of

the law. The MLRs specified that once a suspicion of money laundering was identified, the individual raising the concern had to report that suspicion to a “constable”(section 16, (1993). It fell to the UK’s National Criminal Investigative Service (NCIS) to serve as the recipient of these reports, as the “constable”, and to follow-up on money laundering inquiries, the balance of which constituted “suspicious activity reports”, or SARs. SARs were primarily generated by banks, as well as other financial services-related entities, solicitors, and other members of the new compliance milieu. While SARs had been a component of existing money laundering legislation since the *Drug Trafficking Offenses Act 1986* (Lander 2006), the mandated reporting requirements of the CJA/MLRs established the foundation for the current KYC-SARs regime, resulting in a substantial influx of SAR generation from 1993 onwards.

The *ad hoc* nature of this initial reporting environment hampered efforts to investigate legitimate suspicions, given that more often than not, SARs were being generated to “cover all the bases”, as much as to identify a suspicion of money laundering. Indeed, such was the volume that the NCIS was forced to prioritise SARs by institutional size and the “estimated” size of the crime. Subsequently, banks took precedence in this prioritisation process, in a relatively unsophisticated exercise that loosely resembled one of “risk-based” SAR assessment (Fleming 2005; Lander 2006). This emphasis on SAR activity, along with the extant requirements of “know your customer” (KYC), would form the nexus of legal and regulatory enforcement in the coming years, especially as a measure of compliance effectiveness. SAR generation, when weighed against the effectiveness and legitimacy of the information therein, would be a continually contentious subject, especially as reporting requirements increased in complexity and become more institutionalised. Such was their ubiquity that SARs, along with KYC procedures, would evolve to become the defining artefacts of money laundering regulation post-9/11. This was primarily a result of both increased FATF

influence and expanded national legislative requirements, requirements that mandated banks to implement standardised money laundering controls, inclusive of formalised processes and metrics (Middleton and Levi 2005; Harvey 2009; Harvey and Lau 2009). Subsequently, this regulatory expansion would help foster the development of AMLPT technology, in supporting efforts in quantifying their risk exposure as identified by SAR reporting and KYC procedures.

In the 1990s, authorities in the United Kingdom had been ambivalent towards a number of vehemently anti-Western extremists who were campaigning openly in support of jihad or "holy war" against the West and her allies. Belatedly realising the threat, and when coupled with the pending expiration of several acts addressing terrorism and security in Northern Ireland, the *Terrorism Act of 2000* (TA) was passed. The *Terrorism Act 2000* significantly broadened the definition of terror financing to incorporate acts that occurred abroad, and while still maintaining a UK-centric thrust, its significance lay in the incorporation of judicial procedures that complied with the definition of equivalent offenses under the *UN International Convention on the Suppression of the Financing of Terrorism* of 1999.

Meanwhile, as transnational terror fundraising was finally being given proper legislative attention, on May 20, 1997 the Chancellor of the Exchequer announced the reform of financial services regulation in the UK, and the creation of a new regulator: the Financial Services Authority (FSA) (FSA 2005). The FSA was created as a result of Parliament's passing the *Financial Services and Markets Act 2000*, and was to be the United Kingdom's single major financial regulator. One of the four stated aims of the FSA is "the reduction of financial crime, including plans to tackle money laundering (Sections 2-6 of *Financial Services and Markets Act 2000*)" (Rees 2001). As has been previously discussed, there had been an ongoing concern as to the breadth and complexity of UK money laundering and terrorist finance law introduced over the years.

Subsequently, agencies and individuals charged with fighting money laundering, such as the NCIS, Financial Intelligence Units (FIUs) and the now legislatively formalised role of Money Laundering Reporting Officer (MLRO), had been forced to draw on a variety of, at times, disparate instruments to detect and prosecute perpetrators, with varying degrees of success. With the creation of the FSA, it was the Government's intent to remedy this situation, even though it intended the agency to operate within the then-current anti-money laundering regime's regulations. These included the *Criminal Justice Act 1988*, the *Drug Trafficking Act 1994*, and the *Prevention of Terrorism (Temporary Provisions) Act 1989*; later provisions modifying and enlarging these remit of these Acts as contained in the *Terrorism Act 2000* would also be included.

The FSA's primary means of sanction from enforcement actions was a fine, which varied depending on the transgression. These could range anywhere from £500,000 to well over several million pounds (see section 5.2 for a discussion on the organisational response to fines levied early in the post-9/11 regime, circa 2003-04), and were initially directed at institutions. It would not take action against individual compliance officers until 2008, when Michael Wheelhouse of Sindicatum Holdings was fined £17,500 and his firm £49,000 for failing to implement proper money laundering controls (Lavan 2008). In 2006, in response to complaints of regulatory complexity, the FSA pronounced that it was streamlining the AML regulations, and that firms would no longer have to adhere to the letter of FSA regulations, rather, "...the emphasis will be on the senior management of regulated companies to make sure their own internal checks against money launderers are sufficiently robust" (BBC 2006).

In general, financial institutions have been provided a form of "safe harbour" from sanctions, save for the most egregious lapses, through adherence to guidance notes from the British Bankers' Association and Joint Money Laundering Steering Group, a process that preceded the formation of FSA. Started in 1990/91:

“The Guidance Notes have continued to evolve and gain in status since they were first published in 1990/91. Initially, they were published as a voluntary statement of good practice with the support of the Bank of England. In 1993 they acquired quasi-regulatory status by virtue of Regulation 5(b) of the Money Laundering Regulations 1993. Regulation 5 provides that in determining whether a person or institution has complied with the requirements of the Regulations, a court may take account of relevant guidance issued or approved by a supervisory or regulatory body...” (Mullen 2003).

FSA pronouncements normally take the form of guidance notes or the release of specific rule making and fact-finding on specific issues of concern with consultation from a variety of industry and regulatory bodies. A comprehensive organisational framework was now needed to manage not only the ever-evolving body of money laundering regulation, but also to analyse and process the increase in suspicious activity reports, a result of the enhanced reporting requirements mandated by the *Money Laundering Regulations 1993*.

Subsequently, the Government envisaged tackling all these requirements through imposing the remit of a single regulator: the FSA (Rees 2001). With the creation of the FSA, the UK now had a complex variety of bodies tasked with addressing financial crime, all with varying remits. The various regulatory bodies, organisations, statutes, standards, and other entities, recognised in the UK AML-CFT regime, in early to mid-2001, are referenced in figure 2.3.1.

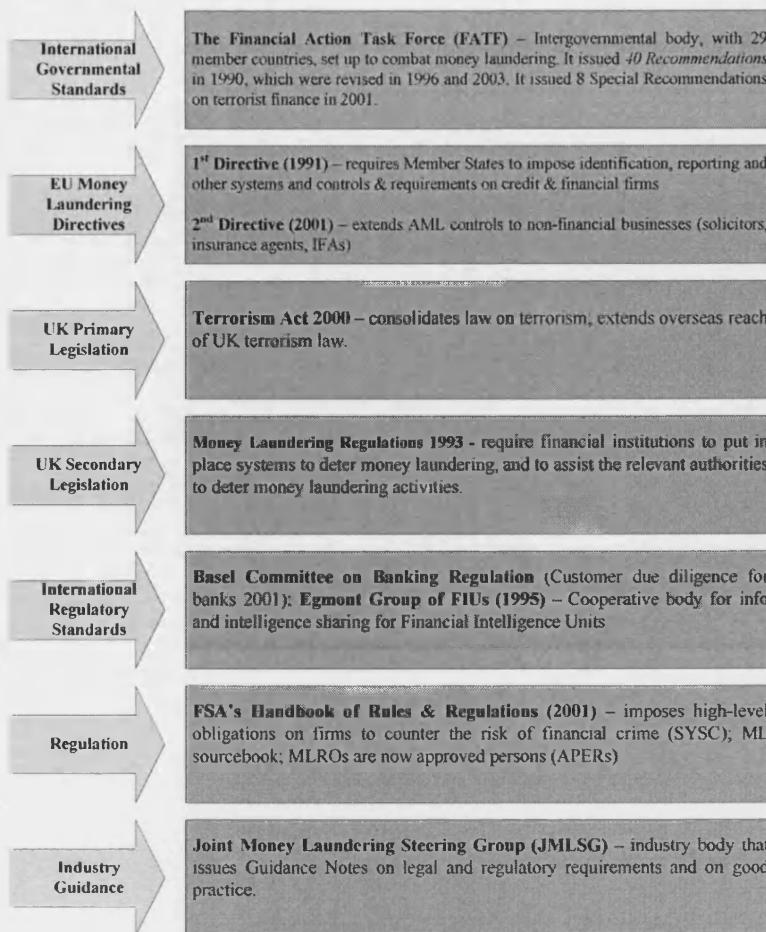


Figure 2.3.1 – The International & UK AML Legal & Regulatory Framework (from FSA (2003))

2.4 September 11th – Après le ‘Deluge: Regulation and the Dawn of the Age of Control

As a result of the attacks of 9/11, America assumed a war posture both globally and nationally: globally, by launching Operation Enduring Freedom, which removed Bin Laden's Taliban benefactors in Afghanistan; and nationally, on October 24, 2001, some 30 days after the 9/11 attacks, when Congress passed one of the most sweeping anti-terror laws in history: H.R. 3162, the “Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act of 2001”, or “USAPA” (FinCEN 2002; Olsen 2002). While USAPA’s effect on the average citizen would play-out over time, its impact on financial institutions, both

domestically and internationally, was almost immediate; the *laissez-faire* regulatory mores of the 1990s were about to give way to a new age of control.

USAPA was in many ways a “rush” job, and its 342 pages contain changes, some minor and others quite significant, to over 15 long-established statutes. It further introduced a variety of expanded surveillance powers that reduced legal checks and balances, particularly in the areas of electronic monitoring, privacy, and civil liberties (EFF 2001; FinCEN 2002). Of significance was the vastly increased scope of Federal power - power that entailed a distinct lack of focus on matters pertaining to terrorism. Many of these powers involved warrantless searches, wiretaps, and other intrusive investigative methods, as well as introducing a reduced standard of justifiable cause for a variety of potential offenses. At face value, many of these offenses had a demonstratively tenuous link to established law, particularly when viewed in the context of acts as sweeping and ill-defined as those introduced under USAPA (FinCEN 2002; Olsen 2002; Gouvin 2003; Vlcek 2008).

The need for control, as well as the impetus to be seen “to do something” would manifest itself through a variety of means, primarily though legal instruments such as USAPA, as well as military action. It was the sheer magnitude of the attacks that underpinned the demand - indeed the obsession - with control, regulation and accountability in the post-9/11 world. Somehow, *al-Qaeda* had been able to completely circumvent American money laundering prevention measures, and more worryingly, FinCEN and others charged with preventing the funding of such a crime had no idea as to how it had been accomplished.

Subsequently, it was clear that the old AML regime was done for. However, the roots of several problems, such as discovering how Bin Laden was able to thwart not only FinCEN, but also the entire US intelligence establishment, or highlighting the pervasive lack of multi-agency co-operation among US law enforcement, could be found

in a pre-9/11 philosophical debate. This debate involved balancing the relative fluidity of free markets against the increasing international call for more concerted global law enforcement and financial regulation, something that ran counter to American fiscal, social, and political sensibilities. Primarily, global efforts at financial regulation were viewed by some American authorities as a means to impose European-style tax harmonisation on US markets, an anathema to US elites (Bosworth-Davies 2007).

As was the case in the United States, prior to 9/11 the United Kingdom had a variety of anti-terrorism legislation already in existence, primarily as a result of the situation in Northern Ireland. The events of 9/11 provided much the same sense of urgency in the UK as in America, in regards to re-assessing those measures then in place regarding the funding of terrorism. Confronted with the need for re-vamping the measures then in place, the government was faced with the classic dilemma of open democracy: how to balance protecting the citizenry with allowing authorities greater powers to do so. While USAPA would make significant changes and amendments to 15 distinct existing statutes, the United Kingdom, by way of already having comprehensive anti-terrorism and criminal statutes in place, would require much less in the way of a radical overhaul.

However, while not as sweeping, the act that would be the UK's version of USAPA, the *Anti-Terrorism, Crime and Security Act 2001*(ATCSA), would contain similar structures that alarmed civil libertarians, and like USAPA, granted greatly expanded powers to the authorities. Furthermore, it also contained many enhanced police and surveillance powers that had little applicability to counter-terrorism, and was criticised for its swift implementation timetable for so important an act. Of great concern was Article 4, which on face value, appeared to conflict in many ways with the Human Rights Act – Article 4, having later been proved incompatible with existing Human

Rights law, would be overturned by the Law Lords on December 16, 2004. Helen Fenwick, writing in *The Modern Law Review* (2002) describes these concerns:

“It is equally commonplace to retort, as many commentators have done on numerous occasions, that measures aimed at combating terrorism will undermine rather than defend democracy and that counter-terrorist measures strike at democratic values if they are disproportionate to the aim of protecting them. It was said in debate in the Lords on the Anti-Terrorism, Crime and Security Bill: 'After the outrage of 11th September, the way to defend democracy is not to dismantle it; it is to strengthen it. Otherwise ... the Mother of Parliaments is being asked to put its name to achieving some of the aims of those who carried out the events of 11th September'. Those comments echo those of Tony Blair, the then Shadow Home Secretary, when he observed 'if we cravenly accept that any action by the government and entitled "prevention of terrorism" must be supported in its entirety and without question we do not strengthen the fight against terrorism, we weaken it'. John Wadham of *Liberty* finds: 'Draconian anti-terrorist laws ... have a far greater impact on human rights than they ever will on crime'.”

The ATCSA amends the *Terrorism Act 2000* (TA), which along with refining previous legislation was used to implement the 1999 *UN International Convention for the Suppression and Financing of Terrorism* as well. It included similar provisions to those that were later introduced in the *Proceeds of Crime Act 2003* (POCA), in particular the so called ‘negligence test’ for failing to report offences. Over the next several years, ATCSA and other laws would be further refined, especially the *Money Laundering Regulations*, which would see two further iterations, in 2003 and 2007 respectively. ATCSA contained enhancements to the TA’s existing money laundering statutes, primarily through clarification of the definition of terrorist financing and what constituted criminal activity in support of terrorism, as well as introducing civil actions in the area of seizure and forfeiture of terrorist cash at the UK’s borders. Further measures were introduced that allowed the freezing of assets of governments “who are threatening the economic interests of the United Kingdom or the life or property of United Kingdom residents”.

In a classic example of unintended consequences, this later proviso would be used by Prime Minister Gordon Brown on October 12, 2008 to seize £4bn of Icelandic assets

to cover the estimated £3bn of savings, both public and private, caught up in the collapse of Iceland's three main banks, Kaupthing, Landsbanki and Glitnir, as a result of 2008's global liquidity crisis (Telegraph 2008). Herein is the problem with such sweeping "anti-terror" instruments: a creative mind can make a case for almost any exigency outside of legislative intent. Brown's actions, while outrageous to the Icelanders, were not that unusual, given the Bush Administration's claims for the existence of Guantanamo Bay under the "war on terror's" mantra of "extraordinary times call for extraordinary measures".

2.5 Ambiguity and Quantification – how big is big?

As already discussed, the events of 9/11 spurred a world-wide legislative avalanche at all levels of government, regulatory agencies and law enforcement. However, this avalanche would expose flaws in the preconceived notions then in vogue as to the relationship between money laundering and terrorism. It was now clear that money laundering was no longer a benign component of criminal enterprise, but a deliberate means of facilitating the funding of terror operations as well as a means to hide ill-gotten gains. Subsequently, the anti-money laundering lexicon was expanded to include the concept of "terrorist finance" or more specifically, "countering" the financing of terror (CFT).

The resultant acronym of "AML-CFT" would, over time, become the descriptor of choice when addressing the rubric of anti-money laundering, terror financing, and those methods, processes and regulatory norms undertaken in its prevention. The first use of the term "terrorist financing" was revealed in the *UN General Assembly's Declaration on Measures to Eliminate International Terrorism*, released in 1994 (UN 1995; Bantekas 2003). Bantekas (2003) goes on to state that:

"Although the Assembly was not addressing any particular state, one has only to look at relevant Security Council resolutions of that time to understand that an

agenda had been established to confront state entities that were not only suspected, but known, to foster, support, and finance acts of terror.”

“Terror financing” covered a variety of activities: from drugs trafficking profits used in supporting terror groups, to smuggling, extortion, fraud and robbery. The absence of a universally agreed definition of “terrorism” would create insurmountable problems in trying to further address terror financing through international treaties and agreements. Aside from the ambiguities in establishing common ground as to what indeed defined “terrorism”, there was further ambiguity in differentiating terrorist activity from that of organised crime, given that both exhibited norms and behaviours that were more often similar than not. On one hand, terrorism is usually defined (or justified) as having an ideological motivation, while “organised crime” is provided no such out, given the perpetrator’s primary goal of financial gain. Indeed, such is the fine line delineating their mutual traits, that the *UN Convention Against Transnational Organised Crime*, issued in 2000, simply avoids the inclusion of terrorism in its definition of organised crime, despite the understood and manifest links between the two (Crime 2000; Bantekas 2003). Indeed, as organised crime has gradually assumed the mantle of transnational crime, the relationship between terror and criminality becomes more linear. Makarenko (2004) describes this phenomenon as the “Crime-Terror Continuum”, with organised crime on one end of this spectrum, and terrorism on the other end. The methods and common “purpose” of criminal and terror organisations converge along this axis, usually through the existence of a political environment, or even state-sponsorship, that is favourable to this convergence, such as in Somalia, or Afghanistan under the Taliban (Oehme 2008). Civil Wars are another fertile ground for nurturing this confluence. Given the anarchy inherent in civil wars, as well as the minimal or complete lack of socio-institutional restraints evident in such receptive

environments, these factors often contribute to what is referred to as the “black hole syndrome” as illustrated in figure 2.5.1:

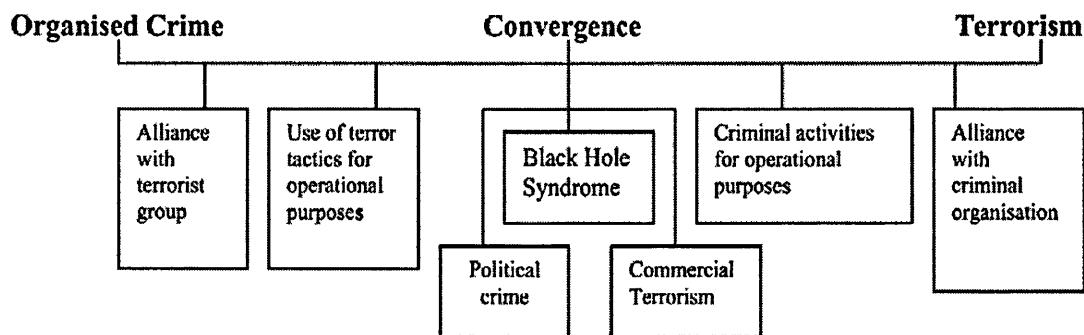


Figure 2.5.1 – Stages within the Crime-Terror Continuum (Makarenko 2004)

The “black hole” metaphor is apt for these incubators of transnational terror and crime. Such domains normally lack even a rudimentary legal framework, which then enables endemic corruption, resulting in a surfeit of criminal activity undertaken in the shadows – the black hole – unfettered and unhindered by any external or internal controls.

The operational tactics, techniques, and procedures of Columbia’s Medellin cartel, as well as those of the Taliban in Afghanistan, help provide an understanding how organised crime or terrorists and other similar groups, such as Islamic militants and insurgents, oscillate along the continuum. Moreover, the juxtaposition of their respective activity on the continuum further exposes the ontological and taxonomic opacity inherent in attempting to categorise criminal versus terrorist behaviour. We see the operations of the Medellin cartel progress left to the right on the continuum, one example being the use of terror tactics for operational purposes. Tactics that, in the context of cartel behaviour, are now labelled “narco-terrorism”, as employed against the Columbian government during the 1980s. Escobar’s war was more about Government interference in his trafficking routes and operational methods, than anything about revolution, politics, or ideology. Conversely, the Taliban move from right to left, using the criminal activity of narcotics

trafficking to fund terror operations throughout Afghanistan and Pakistan to achieve a supposed politico-religious goal. Thus, was Escobar simply a terrorist drugs dealer, or a drugs dealer who utilised terrorist tactics to wage war against the political establishment? Subsequently, are the Taliban simply a criminal drugs cartel using the goal of an Islamic state in Afghanistan to justify, indeed legitimise, ordinary criminal profiteering (Acharya, Bukhari et al. 2009; Gaviria and Fisher 2009; Peters 2009)?

Such distinctions further complicate the ontological dilemma that hampers many an AML-CFT investigation that, in the new age of “global” terrorism, attempts to follow the money. The fundamental question then becomes is the “crime” and the associated funds under investigation a judicial matter, or one for the security or intelligence services? Moreover, are the funds even ill-gotten? While this quandary is somewhat moot relative to organised crime, it is problematic in regards to terrorism in many respects. The ability of terrorist front groups to undertake legitimate fundraising under the guise of populist political struggle, support for “oppressed” minorities, or quasi-nationalistic causes, provides a semblance of legitimacy, thus serving as an excellent cover for *layering* their funds.⁵ The ontological challenges aside, what now becomes readily apparent, in almost a state of “me too” motivation, is the ongoing “laundry list” approach to tackling AML-CFT. It is clear that those drafting the plethora of proscriptive AML-CFT instruments, statutes, recommendations and concordats, are trying to cover every possible contingency, as well as every *modus operandi* a terrorist could possibly conceive.

What is glaringly lacking in current AML-CFT analysis is an idea of the scope of the problem; not that money was being laundered by trans-national terrorists, but by whom and in what quantities. Moreover, how could anyone seriously believe that merely creating an international regulatory maze would lead to any sort of effective curb, let

⁵ Examples of legitimate and illegitimate funding methods used by the Provisional Irish Republican Army and the Liberation Tigers of Tamil Elam (LTTE) are detailed in section 8.4 of the Appendix.

alone elimination of the problem? Indeed, most terror funding doesn't even pass through traditional banking channels, let alone is introduced into the system through typically Western means, such as cash direct deposit; in most cases, no bank is even minimally involved. Such transactions, known as Informal Value Transfer Systems (IVTS) are prevalent throughout the developing world⁶. The best example of an IVTS system is a cultural component of Islam, *hawala* banking. According to Interpol,

“Hawala is an alternative or parallel remittance system. It exists and operates outside of, or parallel to 'traditional' banking or financial channels. It was developed in India, before the introduction of western banking practices, and is currently a major remittance system used around the world. It is but one of several such systems; another well known example is the 'chop', 'chit' or 'flying money' system indigenous to China, and also, used around the world. These systems are often referred to as 'underground banking'; this term is not always correct, as they often operate in the open with complete legitimacy, and these services are often heavily and effectively advertised.

The components of hawala that distinguish it from other remittance systems are trust and the extensive use of connections such as family relationships or regional affiliations. Unlike traditional banking or even the 'chop' system, hawala makes minimal (often no) use of any sort of negotiable instrument. Transfers of money take place based on communications between members of a network of hawaladars, or hawala dealers” (Interpol 2002).

Given that IVTS transactions maintain no formalised records, nor offer any more complex categories than buyers and sellers, how can the significant volume of cash flow in such a system be quantified, let alone analysed for “criminal” intent? Such is the quantitative ambiguity as to scope of money laundering that even the FATF won’t venture a guess, and publicly states on its website that “however it must be said that overall it is absolutely impossible to produce a reliable estimate of the amount of money laundered and therefore the FATF does not publish any figures in this regard” (FATF-GAFI 2009). In fact, Beare and Schneider (2007), citing a somewhat apocryphal story, infer that the whole global AML ambit is predicated on complete conjecture:

⁶ The use of hawala, along with a diagram of a typical IVTS is included in section 8.5 of the Appendix.

“Despite reference from other agencies to FATF estimates on the magnitude of money laundering, FATF has not generated its own reliable data estimating the size of the World’s money laundering problem. Amazingly for an organisation that was created to focus specially on money laundering, *the estimate that FATF uses is from the IMF – and if the story is correct, from a figure scribbled on a dinner napkin*. In a speech at the plenary meeting of the FATF in Paris on February 1998, the managing director of the IMF, Michael Camdessus, while questioning the accuracy of this estimate, indicated that the 2 to 5 percent has come to be regarded as the general consensus:

I hardly need to say that the IMF regards the anti-money laundering actions advocated by the FATF as crucial for the smooth functioning of the financial markets. While we cannot guarantee the accuracy of our figures – and you have certainly a better evaluation than us – the estimates of the present scale of money laundering transactions are almost beyond imagination – 2 to 5 percent of global GDP would probably be a consensus range”. (Author’s italics)

Despite the fact that none of the agencies tasked with addressing money laundering at the international level has any idea of the challenge at hand, it is still the majority view of most politicians, regulators and central bankers, that money laundering represents a threat to global financial stability, given that its international element is “virtually undeniable” (Cuellar 2003). While the various estimates at hand are holistic in nature, and seek to quantify the scale of money laundering at an elevated level of abstraction, at a more practical level some estimates place the amount laundered in any particular year at around \$500 billion (Aberdeen Group 2002). While it categorically states that it does not attempt to quantify money laundering,

“...the FATF generally adopts the IMF’s rough estimate that the extent of money laundering in the world is 2 to 5 percent of the world’s gross domestic product (GDP), which amounts to roughly between US\$590 billion and US\$1.5 trillion. No empirical evidence supporting this estimate is given in documents or in reports issued by these agencies. Regardless of the lack of evidence to support claims of the extent of money laundering, estimates repeated by the World Customs Organisation (WCO), the Council of Europe, and the UN are drawn directly from the IMF and indirectly from the FATF sources” (Beare and Schneider 2007).

Peter Lilley, in *Dirty Dealing: the Untold Truth about Global Money Laundering* states that the problem is far greater, while also quoting the US\$590 billion to US\$1.5 trillion metric, he goes on to say,

“The United Nations Human Development Report of 1999 commented that organised crime syndicates grossed \$1.5 trillion per annum - which is more than many developed economies and multinational corporations. If you accept - and I think you should - that the scale of global money laundering each year is at least \$1.5 trillion then either the staggering, horrifying scale of the whole problem suddenly snaps into place or you are so bemused that you still don’t really believe it. To put that \$1.5 trillion figure into context, in real and comparative terms:

- \$1.5 trillion is \$1,500,000,000,000 - which when put like that is even more astounding.
- The estimated GDP of the United States in 1998 was \$8.511 trillion - thus the annual money laundering figure is 17% of this. Or to put it another way the GDP of the United States is only just five times that of Global Organised Crime Inc. In fact the figure of \$1.5 trillion is only dwarfed by three individual country’s economies.
- The largest corporation quoted in the Fortune 500 as of February 2000 is General Motors with a turnover of \$161,315,000,000 which is about a tenth of the amount laundered each year (or money laundering per annum is ten times the annual turnover of General Motors).
- The GDP of Switzerland is \$191,000,000,000 - just an eighth of the annual money laundering figure.

One could just go on - and the comparisons would become even more overwhelming. Normally when such a staggering financial value is placed on money laundering the normal reaction is one of incredulity and extreme scepticism. Combined with this is the claim that all such figures have no basis in actuality - that essentially they have been plucked out of thin air. The Australian, John Walker has addressed these problems in his work on ‘*Modelling Global Money Laundering Flows*’. The bad news for the sceptics is that output from the research and modelling process has produced a global money laundering total of \$2.85 trillion per year. Rare for someone who introduces a new economic model, Walker actually admits that he is not claiming that the model is yet producing accurate estimates of money laundering flows. That being said, the critical fact is that the total produced is almost twice as much as official estimates or calculations. The basis of Walker’s model is as follows:

(It) uses a range of publicly available crime statistics to estimate the amount of money generated by crime in each country around the world, and then uses various socio-economic indices to estimate the proportions of these funds that will be laundered, and to which countries these funds will be attracted for laundering. By aggregating these estimates, an assessment can be made of the likely extent of global money laundering...”

Lilley’s sources, while relatively verifiable, reflect a less than accurate picture, both chronologically and quantitatively, of the extent of post-9/11 money laundering, and

more importantly, where “traditional” money laundering deviates into the funding of terrorism. However, an understanding of the scope of terrorist funding can be extrapolated from available data, particularly as a result of research into the Crime-Terrorism Continuum, which suggests that a significant portion of laundered drug profits are funding insurgencies and terrorism, particularly in Afghanistan, Pakistan, and Southwest Asia, as well as attacks on the West (Mylonaki 2002; Makarenko 2004; Oehme 2008). The vexing issue of quantifying terrorism-related money laundering becomes even more doubtful in this regard, as, given the use of hawala and other forms of IVTS it becomes impossible to validate funding vectors with any degree of certainty.

When studying AML-CFT, what is glaringly evident, through the use of applied quantitative and qualitative research methods, is that the political posturing and oft-voiced military metaphors now in vogue are laughable; if the West is indeed waging a “war” on terror financing and money laundering, it has no idea of how big the “enemy” is, nor the extent of his resources, or for that matter who “he” is. Friedrich Schneider, Professor of Economics at Johannes Kepler University, in Linz, Austria, provides an excellent summation of the problems of quantifying money laundering on a global scale as it relates to drugs trafficking, as well as the debate on Walker’s and other methodologies used in attempting to do so:

“For 2000 the IMF (2001; 2003) as well as the World Bank estimate that 2-4% of the world gross domestic product (GDP) stems from illicit (criminal) sources or from money laundering activities. Agarwal and Agarwal (2004; 2006) estimate with the help of forecasts from regression analyses (taken from economic intelligence units), that global money laundering amounts to more than 2.0 to 2.5 trillion US\$ annually or about 5-6% of World GDP in 2006 (44.444 trillion US\$ in 2006). In the finance and banking sector the authors find a figure of US\$ 500 billion to one trillion in 2004 (Agarwal and Agarwal (2004). Recent IMF estimates on money laundering by the drug traffickers who “introduce” the proceeds gained through the role of drugs into the legitimate financial market amount to between 2-5% of world’s GDP, about 600 billion annually. The IDB (2004) reaches the conclusion that for Latin America a rough estimate appears to be somewhere between 2.5 and 6.3 % of annual GDP of Latin American countries. A great deal of

the money derives from drug-dealing, with total revenue of 338 Billion USD in 2006.

[Walker's] model of global money laundering is based on standard economic theory, in which he tries to develop an international input-output-model. The Walker model relies on estimates of the extent of various different types of crimes in single countries around the world, estimates of the proceeds resulting from these crimes and the probability of those proceeds being laundered (...) The model defines the types of data and analyses the need to be generated in order to effectively model global transnational crime and money laundering. Walker (2007) concludes that since 2000 global money laundering may account for as much as US\$ 3 trillion p.a. and that business fraud exceeds illicit drugs as a source of laundered money (...)

Peter Reuter (1983; 2007), who is quite critical to the findings of John Walker, comes to the opposite conclusion that neither on the national nor on the global level, credible estimates are available (Reuter 2007). He admits that the aggregate annual figure globally is in the hundreds of billions of dollars, but whether that figure is a small number of only a few hundred billions or even a trillion is unknown according to his research. He argues that the vagueness of such estimates is a result of both disagreements over how to conceptualise money laundering, as well as weaknesses in the techniques used to quantify it. As a consequence estimated changes in the volume of money laundering cannot be used as a measure to judge effectiveness of global anti-money laundering regime. He concludes that aggregate figures provide little value added for policy makers. He justifies his conclusion as follows: First, these aggregate findings conceal as much as they reveal. Second, the anti-money laundering control regime has been constructed not so much to reduce money laundering as to namely reduce income producing crimes, increase the integrity of the financial system and control corruption and terrorist financing (Schneider 2005) ”.

When compared to the stratospheric sums bandied about at the global level, money laundering in the UK pales in comparison; a variety of sources in the literature claim the range of laundered funds in the UK to be somewhere between £19 billion to £48 billion. The most consistently quoted figure, £25 billion, derives from the first complete money laundering threat assessment compiled by the National Criminal Investigative Service (NCIS) in 2003 (NCIS 2003). In placing this figure in context, according to the British Bankers' Association (BBA), the total amount of money on deposit in British banks in 2001 was around £2,750 billion (BBA 2001; Harvey 2005); therefore, using the NCIS

figure of £25 billion, laundered funds in the UK's banking system represent less than one percent of the total. This figure is relatively consistent in among government publications, academic literature and industry data, despite the fact that more publications are beginning to make a distinction among money derived from crime, money laundered for tax avoidance and the like, and terror financing. This contrasts with past practice that tended to simply lump the lot under the rubric of "money laundering" or "financial sector abuse".

For instance, in a House of Lords Report (2009), *Money Laundering and the Financing of Terrorism*, the same £25 million figure is referenced, except it is broken into greater detail. Referencing Home Office-supplied organised crime data from 2007, the report goes on to state that "organised crime alone generated an illicit turnover of some £15 billion a year, leading to money laundering through the regulated sector... of £10 billion a year". In comparing the situation 6 years later, deposit figures supplied by the Bank of England in July 2009, show £1,354.8 billion on deposit, so using the same ratio from the BBA figures⁷, laundered money is still around 1 percent of funds in the UK banking system, in this case, a little more, at 1.3 percent (England 2009).

While these numbers are reflective of what in essence is a stalemate in curbing money laundering, perhaps more disturbing are the apparent inconsequential outcomes from the shift towards a dedicated AML-CFT regime; more so, the gross disparity of reputed "successes" as reported by the UK's various enforcement bodies since the regime's inception. This is readily apparent when surveying a sample of figures from a variety of the major bodies tasked with regime enforcement, such as HM's Treasury, the Home Office, and the Serious and Organised Crime (SOCA) office. Their figures are generated from a variety of sources, such as MI5, the National Terrorist Financial

⁷ See Jackie Harvey (2005). "An Evaluation of Money Laundering Policies." *Journal of Money Laundering Control* 8(4): 339-345 for a concise over-view of further quantitative incoherence in the UK's AML-CFT regime.

Investigation Unit (NTFIU), which is under the command of Metropolitan Police's Counter Terrorist Command, as well as the NCIS, and as of 2006, now part of SOCA.

Writing in 2004, Bradley C. Bamford, of the University of Toronto, refers to a Home Office claim that "since 11 September a total of \$100 million in terrorist funds has been seized" (Bamford 2004). Given that dedicated measures to track terrorist finance were not in place until at least a year after 9/11, we can then say this figure accounts for monies seized from 2002 to 2004, roughly \$50 million a year. Averaging the historical sterling to dollar interbank exchange rate of 1.64 over this timeframe (Brodie 2009), the Home Office figure works out to £30 million a year, £60 million over the life of the claim.

In November of 2005, HM Treasury, in their *2005 Pre-Budget Report*, issued on December 5th of that year, included a "*Statement on Terrorist Finance*," that included yet another series of claims in the same timeframe:

"The CTF regime aims to disrupt the support networks that make terrorism possible. Since 2001, for example, there have been:

- £400,000 of cash seizures under the Anti-Terrorism, Crime and Security Act 2001;
- £110,000 of forfeited funds;
- £475,000 of funds seized under the Proceeds of Crime Act 2002; and
- £382,000 subject to Treasury asset freezes all in relation to terrorist cases.

(This does not include the £78 million that was frozen until 2002 as part of UK action against the Taliban)".

In the 2006 report *Countering International Terrorism*, under the heading *Successful disruptions – financial*, HM Government offers the same statistics verbatim, save for a slight increase in the amount of funds subject to asset freezing by HM Treasury, and some minor wording differences:

"Since 2001, in relation to terrorist cases there have been:

- £400,000 of cash seizures under the Anti-Terrorism, Crime and Security Act 2000;
- £110,000 of forfeited funds;
- £475,000 of funds seized under the Proceeds of Crime Act 2002; and

- £477,000 subject to Treasury asset freezes

(This does not include the £78 million that was frozen until 2002 as part of UK action against the Taliban).

If we are to believe the statistics published since the introduction of the post-9/11 AML-CFT regime, the only effective results have been a less-than-impressive 8% increase in the amount of frozen terrorist assets. Given that frozen assets are not necessarily indicative of a conviction for terrorism offenses, this is a spurious figure.

What is perhaps more telling, is that in the first 5 years of enforcement, it appears, at least from these figures, that the government has had no success in curbing terrorist financing, beyond those in 2001, yet the Home Office claims over £60 million in funds have been seized from 2002 to 2004 per Bamford. However, the Home Office is not the only agency unable to agree on an accurate metric in determining the scale of money laundering, let alone the effectiveness of measures to curb its proliferation.

Again, the whole issue of quantitative legitimacy aside, the question is still one of source, of iteratively determining if funds are simply criminal in origin or monies destined for the funding of terror that may, or may not be the proceeds of crime. As has been noted, understanding what constitutes terror funding is as much a semantic, indeed an ontological exercise, as one of determining the origin of funds through traditional law enforcement methods or intelligence gathering. However, making this determination will always be a subjective exercise in many ways, given the regrettable lack of specifics provided by regulators and government. For instance, the FATF continues its pattern of delivering vague pronouncements, specifically as it relates to CFT policy in this regard, notably in a rather meandering guidance note to financial institutions. Stating in *Guidance for Financial Institutions in Detecting Terrorist Financing* (FATF-GAFI 2002), the FATF recommends they take a more active role in CFT matters (Author's italics):

*“It should be acknowledged as well that financial institutions *will probably be unable to detect terrorist financing as such*. Indeed, the only time that financial institutions might clearly identify terrorist financing as distinct from other criminal misuse of the financial system is when a known terrorist or terrorist organisation has opened an account. Financial institutions are, however, in a position to detect suspicious transactions that, if reported, may later prove to be related to terrorist financing. It is the competent enforcement authority or the financial intelligence unit (FIU) then that is in a position to determine whether the transaction relates to a particular type of criminal or terrorist activity and decide on a course of action. For this reason, financial institutions *do not necessarily need to determine the legality of the source or destination of the funds. Instead, they should ascertain whether transactions are unusual, suspicious or otherwise indicative of criminal or terrorist activity.*”*

So then, the activity of how financial institutions ascertain whether a transaction is unusual or suspicious becomes crucial in understanding the viability of profiling. Complicating attempts at this understanding is the FATF’s observation that “determining the legality or source...” of funds, while convoluted, may be a tacit acknowledgement that attempts to quantify the problem are fruitless; perhaps it is better to focus institutions on those doing the laundering, rather than the laundering itself – the profile of the launder. Such a philosophical transformation would develop over time, much as a result of the exponential expansion of SAR activity, a result of increasingly onerous regulatory oversight, as well as a response to the ever-evolving innovativeness of launderers and their methods.

This transformation would first occur among AML-CFT practitioners, rather than in political circles, for several reasons: 1) the pervasive need among politicians to measure and to quantify “things”, however woeful those metrics may be, resulting in an institutional myopia to this subtle shift in money laundering methods; and 2) legislation and statutes were insufficient in practically addressing the problem. It was becoming increasingly evident that for banks and financial institutions, detecting money laundering was now, reputation risk and compliance mandates aside, equally about protecting

themselves from the politicians and regulators as much as from money launderers and organised crime (Bosworth-Davies and Malloy 2001; Bosworth-Davies 2007).

2.6 The Evolution of a Response: Profiling use pre-9/11

The idea that an accurate behavioural model is created through the profiling process has been used with some success in law enforcement, primarily in the study and apprehension of serial killers (O'Connor 2004). Yet these successes are tempered by examples such as the Washington DC sniper event. While the two shooters were a pair of black males of mixed ages, behavioural “profiles” of them range from angry white “Tim McVeigh”-types to a lone actor, despondent over a divorce or other life-changing incident. However, the simplest reason is that such large-scale, randomized shootings had never occurred before, so there was no *a priori* data from which to create even a rudimentary profile (Ransford 2002; Goodwin 2009).

The profiling of criminal personality is an investigative technique developed by the US Federal Bureau of Investigation (FBI). It is used for identifying the major personality, behavioural and demographic characteristics of offenders based on an analysis of the crimes they committed. It differs greatly from clinical profiling done by mental health professionals, and during an investigation, established suspects already identified are not profiled (Douglas and Burgess 1986; Bartol 1996; Cook and Hinman 1999). Among professional profilers, there is a common understanding that modern practice is an outgrowth of the efforts of criminal anthropologists to relate criminal psychology to physical characteristics of the criminal. According to O'Connor (2004):

“Jacob Fries (1820) started a long line of such inquiries that extended into the late 19th century (with Lombroso) and well into the 20th century with body-type theorists (Kretschmer, e.g.). There were also early legal scholars, most of them interested in the topics of insanity or responsibility, that made mention of how to infer personality characteristics from the manner and nature of crime. A significant figure in this regard is Hans Gross (1870), considered by some to have started the fields of applied criminology and criminal investigation around 1891 (Gross

1924). There is a science related to applied criminology called clinical criminology, but it is practiced mostly in Israel as the study of insanity. There is a tendency in England, Australia, and Canada to attach applied criminology to what is called profiling, but the university programs there are more applied social science curricula than anything else.”

As is evident in the above citation’s closing sentence, ambiguity as to what constitutes profiling is already a concern at this early stage – is it “applied criminology” or “applied social science criteria”? A contextual ambiguity is emerging as early as 1891, ambiguity that would continue through to the present. For instance, some criminal profilers maintain that AMLPT is nothing more than pattern matching, rather than a discrete set of defined characteristics, and that deductive, human-centric logic is superior and more apt for unveiling the nuances of human behaviour. Profiling, in the view of participant in the legal system, implies a degree of certainty in positively identifying behaviours and/or individuals engaged in criminality, a phenomenon described as *intuitive profiling* as Davis and Follette (2002) state:

“In each of these circumstances attorneys will argue, at least implicitly, that the party/defendant in question has the characteristics of a person likely to engage in the behaviour at issue-whether past (such as criminal activity or suicide) or future (such as future criminal activity and parenting skills)-thereby implying that the party/defendant more likely did (will) perform the behaviour...”

Furthermore, “essentially, the use of intuitive profiling to assess guilt relies on the following logic: ‘If persons who commit embezzlement are likely to be in debt, then persons who are in debt are likely to be embezzlers,’ or ‘If most A’s are B’s, then most B’s are A’s.’ Logically, of course, these conclusions are erroneous”.

Moving forward, the late 19th century until the early 1970s was a period of evolution, incorporating new tools and techniques: for instance, in the case where behavioural profiling was used in World War II to better understand Hitler’s motivations. The first real success with profiling was in the identification and successful prosecution of Albert De Salvo, better known as the Boston strangler. Using a series of techniques

developed investigating arsons, murders, and other high profile crimes, Dr. James Bussell, of the New York Police Department, working with the authorities in Boston, was able to create a “profile” of who might be the likely suspect strangling young women in Boston during the Fall of 1964. Because of this success, the FBI began forming its Behavioural Sciences Unit (BSU), led primarily by Howard Teten and Patrick Mullany. Before creating the BSU, both men had been instructors at the FBI academy in hostage negotiation and applied criminology, fields that already allowed exposure to the more psychological side of police work.

The success of the BSU is significant, offering some sort of assistance in 77% of cases, providing leads for stakeout cases 45% of the time, and actually helping identify the perpetrator or “UNSUB” (Unknown Subject) in 17% of cases (Tetan 1995; O'Connor 2004). From the 1990s to the present day, data mining and DNA matching have been used to solve so-called “cold cases” and have brought justice in long dormant crimes, much to the relief of those victimized.

2.7 Profiling as a Response to post-9/11 Regulation: Mitigating Risk and Ambiguity

With the introduction of the USAPA and its stringent financial reporting and identification clauses, the SAR and KYC processes became far more complex. Therefore, automating these processes became a priority, and the acquisition and use of behavioural profiling by financial institutions was deemed a necessity. When viewed in an AML-CFT context, profiling pertains to technologies tailored to the requirements of law enforcement agencies, financial institutions and regulators, and agents of the state. Profiling is a response to varying levels of regulation and control mechanisms generated by a variety of organisations. While banks have used profiling for collecting marketing data and developing new financial products, behavioural profiling is in direct response to the demands of regulatory compliance from three distinct hierarchical levels. Angell and

Demetis (2005) define these as transnational, international, and local. As we have seen, the complexities inherent in the regulatory milieu constantly evolve, given the reflexive interplay between banks and launderers, which over time has developed into a systemic motif within the domain (Angell and Demetis 2005).

As a result of this systemic approach, market demand for AMLPTs has shown considerable growth since the events of 9/11, as banks and financial institutions have needed to address not only KYC and SARs reporting, but also “watch lists” of suspected threats, as well as auditing and reporting above and beyond the local financial institution level (Brenneman and DeLotto 2001; Aberdeen Group 2002; FinCEN 2002; McGuire 2002). Yet, while incorporating ongoing improvements in the capability of behavioural modelling, as well as accommodating the “systems approach”, the current generation of AMLPT still do not fully replicate human behaviour due to a variety of factors, for instance, the need to analyse, cognise, and process large volumes of transaction data. This is particularly acute in large financial organisations where upwards of 18 million discrete transactions can be processed daily (Katkov 2006). In 1995, the US Office of Technology Assessment (OTA) (1995) issued a report, *Technologies for Control of Money Laundering*, that, while now over 14 years old, still has a great deal of contemporary validity in its assessment of the limitations of AMLPT, and also serves to highlight the systemic complexity in attempting to automate the profiling function. These include:

- A low incidence of money laundering relative to the total volume of transactions
- Lack of tested profiles
- Temporal and spatial dimensions of the profiles
- Dynamic nature of criminal conduct
- Similarity between licit and illicit conduct
- The need for multiple levels of analysis

In response to the difficulty in modelling these complexities, Gill and Taylor (2003), in one of the first comprehensive studies of the use of behavioural profiling tools in banks and financial institutions, investigated the development and use of profiling data used by a variety of financial institutions in the UK. They concluded that the preponderance of institutions tended to use a transaction threshold standard, incorporating a variety of triggers that alert the system to possible fraud. The criteria varied from institution to institution; Gill and Taylor state that the institutions they surveyed had narrowed down their criteria to 6 specific areas (table 2.7.1). These 6 areas are used in isolation or in combination, and in essence, represent the salient fact that money laundering does not exhibit any one specific trait.

Criteria	% Using	
	In isolation	With others
Over a particular sum	18.6	45.9
By certain clients	6.3	48.0
From certain locations	5.4	42.9
From offshore entities	11.1	59.0
Departing from past client behaviour	12.1	61.6
Departing from normal account, product or service behaviour		

Table 2.7.1 – AML Trigger Criteria - From Gill and Taylor(2003)

Gill and Taylor's "trigger" criteria are reflective of the current methodology of AML-CFT practice. This methodology looks to define a set of parameters or attributes that, like the profiling process, may indicate the presence of illegitimacy. Such categorical flexibility is understandable, given the myriad unsuccessful attempts to definitively describe and quantify money laundering. What has also emerged from attempts at categorisation, similar in their intent to those of Gill and Taylor, is the concept of "risk-based" anti-money laundering regulation. The requirement for risk-based AML-CFT in the UK is primarily the result of implementation of the EU's Third Directive on Money Laundering ("the directive"), which derives its position on risk and

the risk-based approach, from Basel II.⁸ The Basel II accords “expanded the prevalent notions of credit and market risk, and included operational risk. However, the qualitative nature of operational risk tended to confuse the more strictly quantifiable credit and market risk” (Angell and Demetis 2007).

Furthermore, the Basel II banking committee also states that it “recognises that the advanced measurement approaches (AMA) soundness standard provides significant flexibility to banks in the development of an operational risk measurement and management system” while “it is expected that supervisors provide flexibility in the practical application of such thresholds such that banks are not forced to develop extensive new information systems simply for the purpose of ensuring perfect compliance” (Basel 2004; Angell and Demetis 2007).

Although Basel II implies there is flexibility in the enforcement regime, the directive states that “there are considerable implications for what is referred to as risk-based supervision. Regulators will need to be more flexible themselves in their interpretation of compliance with AML guidelines. By necessity, risk-based supervision implies risk-based compliance, which in turn introduces the potential for (the risk of) considerable friction between AML stakeholders and regulators. The problems inherent in such vague notions of compliance therefore become ever more crucial as compliance cannot be easily quantified (e.g. a bank cannot be 84 per cent compliant; it either is, or it is not). The risk-based approach makes compliance even more complicated, because the risk of leaving a potential money-laundering case unreported still has to be addressed, but now the regulators must recognise that occasional failures are unavoidable” (EU 2005; Angell and Demetis 2007). While the *Money Laundering Regulations 2007* explicitly enshrined the concept of risk-based AML into UK law, the risk-base approach

⁸ See <http://www.bis.org/> for an extensive archive of information on the Bank of International Settlements, who oversees the BASEL process.

had been a component of EU law since 2005, as well as being adopted by the Joint Money Laundering Steering Group as early as 2004.

Essentially, risk-based AML-CFT is a method of developing and managing a firm's culture and business processes for fighting money laundering. Moreover, it is a tool that needs to be used both by the regulated and the regulator. Firms are required to act in a risk-based manner regarding AML-CFT, and management and staff need to be attuned to this in terms of what the regulator expects. Risk-based practices entail the deployment of automated and manual systems, along with processes and procedures that manage a firm's risk exposure to money laundering and other forms of financial crime. Such practices validate a firm's adherence to current AML-CFT regulatory requirements and monitor changes to the firm's risk profile through changes to the business or from external threats. A risk profile is the result of identifying and assessing the money laundering and terrorist financing risks facing the firm and its employees. Risk is scaled according to a variety of factors, through the firm taking account of its customers, products and services, delivery channels and geographical profile. These factors are then assessed as to their probability for risk exposure and the subsequent impact on the firm, should any of the constituent elements be exposed to, or became a conduit for, money laundering or terrorist financing.

Earlier on in chapter 2, we mention that much of the regulatory regime is fraught with ambiguity and subjectivity. However, the 3rd directive actually attempts to define risk-based methods with some certainty, and, as Angell and Demetis state, “does actually refer to the creation of risk-defined parameters, and the process of parameterisation for the risk-based approach becomes a little more concrete and explicit. Risk is represented by various parameters related to money laundering, such as large cash payments. Such parameters can be viewed as proxies for modelling money-laundering behaviour; however, they are likely to lead to knee-jerk acceptance among compliance officers that

all large cash payments are suspicious, and thus an increase in the reporting of false positives. In other words, there is a risk that the distinction between suspicious and non-suspicious will become a bureaucratic decision, and the code for the AML system is reduced to ticking boxes once again”. The field research demonstrates that while compliance consists of more than merely “box ticking”, it is still driven primarily by fear of sanctions by the regulator, rather than by any altruistic desire to curb money laundering. Indeed, a firm’s espousal of risk-based methods is in itself one more “tick box”, in that it serves to demonstrate to the regulators that a firm is “in compliance”. However, “compliance” could be construed simply as the existence of risk-oriented processes, rather than any meaningful deterrent.

2.8 The Locus of Activity – Identifying Money Laundering and Financial Crime

At its simplest level, money laundering involves three distinct operations: *placement*, *layering* and *integration* (Blunden 2001; Bedi 2004; Ltd. 2006). Placement is the physical disposal of the criminal proceeds, primarily cash. Placement involves a variety of methods, such as:

- Cash bank deposits that intermingle legitimate and illegitimate funds (to obscure any audit trail) and convert this cash to readily recoverable debt.
- Moving cash between jurisdictions.
- Making loans in cash to businesses that appear to be legitimate or are connected to legitimate businesses.
- Placing cash in the client account of a professional intermediary.

Layering is the stage in which the money is separated from its criminal source through the creation of transactions or “layers” that are designed to disguise the audit trail and provide a semblance of legitimacy. The success of the launderer in this process is due to a combination of ingenuity, the complexity of the layering, the competence of

their chosen intermediaries, and their overall knowledge relative to the legal environment in which they operate. The layering process may include:

- Rapid transfers of funds between banks and/or jurisdictions.
- Using cash deposits as collateral for underwriting legitimate transactions.
- Creating and exploiting networks of legitimate and “shell” companies among several jurisdictions.
- Reselling in legitimate markets those physical goods or other assets obtained with tainted funds.

The last “cycle” in the laundering process is integration, wherein the criminal proceeds are integrated back into the economy in such a fashion as to appear legitimate.

Integration can involve myriad steps, with some of the more common being:

- False or inflated invoices: paying inflated or deflated invoices for exports/imports.
- Real estate: using shell companies, criminals purchase property then sell the company’s assets for a “legal” profit.
- Front companies: the corporate governance laws in some countries allow the creation and operation of companies without revealing the actual owners, only the nominee directors. Criminals, as the shadow owners of these companies can then loan themselves tainted money in apparently legitimate transactions and pay themselves “interest” on the “loan.” This interest, in many cases, can be treated as a business expense for tax purposes with the resultant reduction in tax liability.
- Complicity of foreign banks: this hinders detection as it conceals money transfers. With the assistance of corrupt bank officers, tainted cash is used as security against legitimate loans. A particular country’s banking secrecy laws can minimize detection of such transactions. (Blunden 2001)

As the aforementioned description of the laundering process illustrates, launderers can employ a variety of means to complicate detection at any stage of the process, and moreover, that many of their subterfuges can use legitimate means. In order to detect anomalies, automated behavioural profiling tools attempt to emulate this

process, using computational logic to dissect those subterfuges and identify the slightest indication of possible fraud.

2.8.1 The Automated Transaction Monitoring System

This profiling action complements the “Know Your Customer” requirement and may include two tiers: a transaction analysis and monitoring component. These modules are intended to identify activities that may indicate the industry-accepted stages of money laundering: placement, layering, and integration. Depending on the profiling application in use, the configuration of these first-tier components may involve various combinations of analytical capabilities, and workflow management tools and data integration layers (see figure 2.8.1).

From these two tiers, the typical solution breaks the specific tier's functionality in to even finer granularity:

1. Configuration and administration component - deals primarily with integrating all the key components. Licensing, report generation, and other management issues germane to complex, client-server and web-based applications, may also be administered here.

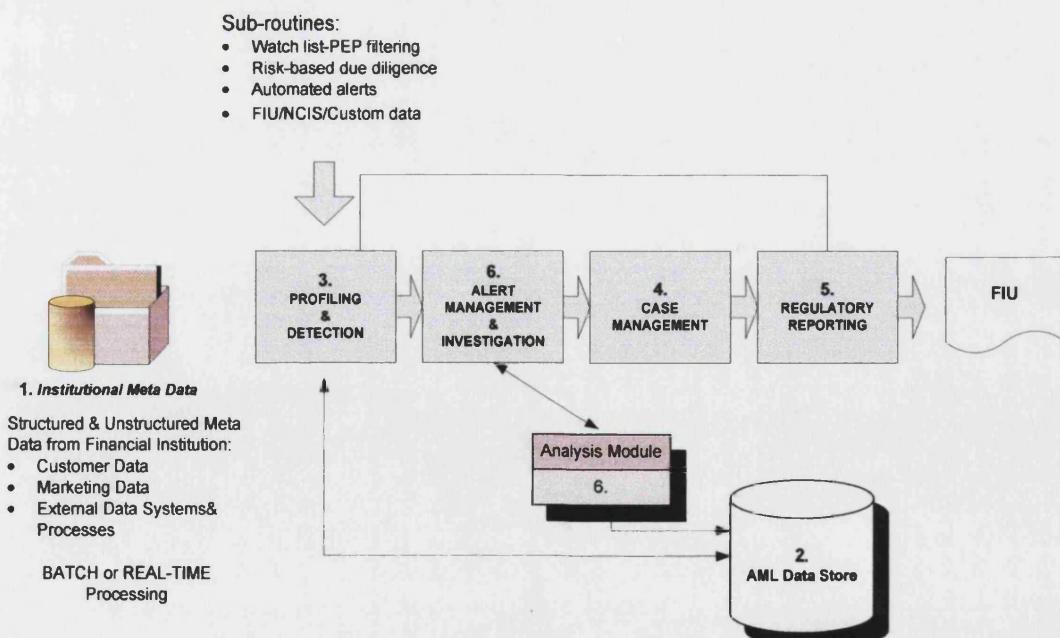


Figure 2.8.1.1 – Representative AML Transaction monitoring system (Adopted from Norkom (2009)

2. Data Warehouse - Most AML technologies have divided this function in two levels: one driven towards history, the data base-centric archiving of historical activity, using an existing data warehouse or an AML-specific “datamart” or in strict data mining terminology, a Knowledge Discovery Database (KDD) (Piatetsky-Shapiro and Frawley 1991; Fayyad and Uthurusamy 1996; Goh, Tsukamoto et al. 1996); the other layer is geared towards intercepting money laundering when it occurs, via transaction monitoring, ideally in real-time.
3. Money Laundering Detection Core (MLDC) - The MLDC is where the profiling “engine” resides, and as such, is the heart of any “profiling” system, regardless of engineering approach. There are three critical technology areas in use, depending on the vendor. They are:
 - a. The application of business rules and filters – e.g. anyone from a specific country depositing or withdrawing more than £2,000 is engaging in suspicious activity: SARs report processing occurs in this stage.
 - b. Statistical Analysis – For instance, a transaction having a value in the top 0.01% of all transaction in a specific geographic location and account type should be ear-marked for investigation. This approach may entail a combination of list-based comparisons (e.g. “PEP” (Politically Exposed Person” list) combined with a geographically determinate data set that is then analysed against statistical rules or mined against known behavioural determinants.
 - c. Neural, self-organizing networks or other AI methods – a transaction that does not conform to the historical pattern of similar transactions assigned a 65% probability to fraud or money laundering. This can be stochastically determined, clustered, or linked, depending on the data mining approach in use.
4. Internal workflow manager - Manages SARs reporting, KYC and due diligence reporting and report routing; forwards reports to regulators.
5. Regulation, policy and procedure engine – Manages incoming regulatory updates, audit inquiries, and automatically escalates SAR or exception report when monitoring activity encounters a clear regulatory violation.
6. Data management engine - Constantly updates the data models - given that targeted behaviour is never static - along with providing suggested changes to current profile configurations .This may be based on historical analysis of logs,

customised reports and database activity. These refinements may comprise the outcomes from regulatory analysis, input from professional bodies, and those changes generated by both commercial and governmental agencies, such as the FSA, JMLSG, American Bankers Association (ABA), International Money Laundering Information Network (IMOLIN) run by the UN Office for Drug Control and Crime Prevention, or other bodies such as FinCEN or the FATF.

While the sophistication of AMLPT is evident, what are less so are measures of effectiveness. AMLPT only identifies behaviour that may be indicative of money laundering; not a launderer's intent. Moreover, detection is only as accurate as the predicate assumptions that the compliance staff utilise in creating the profile criteria and data structures. Thus effectiveness becomes subject to a variety of random variables and conversely, increases the risk of false positives and other failure indicators. While in Chapter 6 we discuss the results of our research into effectiveness, the 1986 Brinks-Mat case study (see appendix 8.6) provides a detailed example of 1) the inherent complexity of a sophisticated money laundering operation; 2) how human analytical capability is vital in the detection process. Additionally, the Brinks-Mat case study exposes the role that "offshore" financial entities play in the licit and illicit movement of capital.

What is evident from the Brinks-Mat case study is that following the trail of money launderers was often foiled by the bank secrecy laws in many of the target jurisdictions, particularly those with lax internal financial controls. These offshore entities hide behind their nation's various banking secrecy laws, laws and regulations that were often created simply for the purpose of money laundering or in many instances, tax avoidance; as is evident in the Brinks case, merely "following the money" in many cases was the best "process", rather than any established "procedure" in tracking a money launderer. Further to tax avoidance and other economic motivations for money laundering, Masciandaro goes on to state that some offshore capital havens may practice deliberate avoidance of supra-national regulatory bodies as a matter of economic development:

“The economic and political analysis (Masciandaro 2004; 2005) can suggest a different perspective. It can be introduced and developed the assumption that lax financial regulation may be a strategic dependent variable for national policymakers seeking to maximize the net benefits produced by any public policy choice. Therefore, given the structural features and endowments of their own countries, policymakers may find it profitable to adopt financial regulations, that can attract also capital of illicit origin (money laundering services) or destination (terrorism finance services). The economic perspective suggests that money laundering can be considered a case of externalities, and the puzzle consists in the possibility to find a way to internalize the relative costs in the objective function of the OFC (offshore financial centres) policymakers (Masciandaro 2006)”.

Indeed, the opaque nature of offshore havens serves to further the ambiguity as to the intent of money laundering, more so the “predicate offense” that separates money laundering as a distinct offense from other suspect behaviours. Such behaviour could, for instance, comprise corruption or influence peddling aside from the typical proceeds of crime, and in many developing nations, the deterrence of such politically-motivated behaviour is often problematic or more so ignored (Naylor 1994; Blum, Levi et al. 1999; Naylor 1999). Chaikin and Sharman (2009) state that “corruption is the biggest single obstacle to development, while money laundering is at the heart of all profit-driven crime. The failure to appreciate the intimate linkages between these two crimes has undermined international efforts to combat these global scourges”, a similar challenge as that of identifying and isolating criminally-obtained illicit funds from those of terrorists and their supporters. Moreover, in certain instances, several nation-states or non-aligned territorial entities may actually encourage money laundering within their “jurisdictions” as a means of obtaining revenue or covert funding for intelligence activities, specifically Iran, North Korea, and autonomous regions such as Kurdistan and the tribal areas of Northern Pakistan such as Waziristan (Garcia 1997). For instance, in the emergent states of post-Soviet Russia, Kazakhstan in particular, the vast natural resource potential provides ample opportunity for money laundering. Such is the complexity of extant old-style corrupt communist cronyism that, when coupled with the ongoing sale of assets and

granting of licenses for a variety of exploitative purposes, the subsequent economics of these transactions are ready-made for the placement, layering and integration of illicit capital (Intelligencer 2010).

2.9 Desired Research Outcomes and Research Question

As the Brinks-Mat case study illustrates, it was human intervention that uncovered the complexity of the money laundering in question. While AMLPT was not in use at the time, it is still questionable if such technology would have been able to identify Noye's intentions, especially given how many banks and jurisdictions were involved. Of even greater consideration, were his innovative use of legitimate banking methods, such as account establishment and movement of capital. The case study demonstrates that money launderers constantly adopt ever more sophisticated and complex methods to move their funds. These methods appear to represent a variety of behaviours, inclusive of a variety of attributes; therefore, the profiling exercise must reflect these complexities. Further research may prove this observation questionable, but at this stage, this fundamental omission of a consistently accurate catalogue of complex behaviours, comprises one consideration in formulating the research question. The other concern is the level of interactivity within the innovation and adaptation process among money launderers and those tasked with their detection. Given that some institutions are at varying stages in the process of adopting profiling technology, and therefore exhibit a variety of behaviours and traits illustrative of varying levels of maturity, how effective is AMLPT in supporting compliance professionals?

Therefore, this dissertation will attempt to answer the following question: Are computerized profiling tools effective in support of AML procedures as required by MLROs and compliance officers in a banking sector context? The question can then be further dissected into two discrete considerations, the first being in what ways are

AMLPTs effective, and the second, how is this effectiveness and support measured in an organisational context? The following model illustrates the structure of the inquiry:

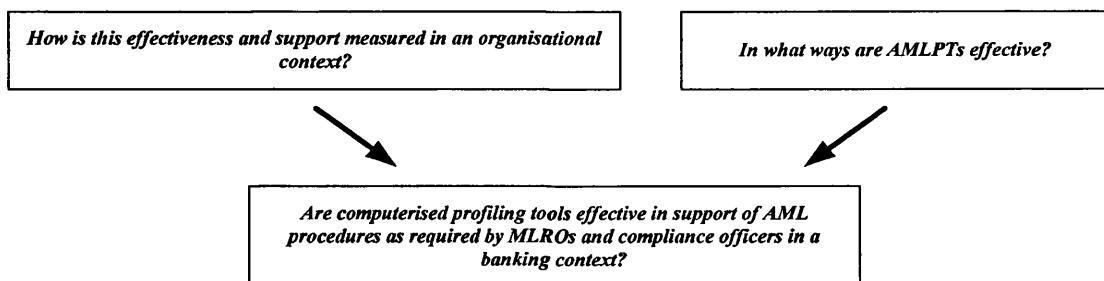


Figure 2.9.1 – Research Question Component Model (Adopted from Mustonen-Ollila and Lyytinen (2003))

In attempting to answer this question, we seek an understanding of the developmental contexts of AMLPT (Ciborra 1992a; Ciborra and Lanzara 1994f; Sorensen and Cornford 2003a); specifically, if their innovation, development, deployment, and organisational culture, (such as language, reasoning routines, and interpretive vocabularies, etc.), contribute to the effectiveness of MLROs and compliance officers, as well as the entire organisation ([Ciborra and Lanzara 1994f]).

Furthermore, can the iterative action of profiling provide a means of identifying abnormalities with any degree of accuracy? Innovation is an iterative process and also a catalyst for action; therefore, *Diffusion of Innovation* (DoI) theory forms the primary theoretical foundation (Van de Ven 1986; Slappendel 1996; Utterback 1996; Tidd, Bessant et al. 2001; Fonesca 2002; Rogers 2003).

However, establishing a clear understanding of the forms of innovation, such as the artefacts, behaviours and other traits that define the innovation process within compliance organisations, requires a form of ordering and structure for analysis. Subsequently, organisational effectiveness (OE) theory as articulated by Campbell, Cameron and others, along with theories espousing the role of technology in organisations, such as the work of Orlikowski (Orlikowski and Robey 1991a; Orlikowski 1992; Orlikowski 2000), and theories of categorisation, become important secondary

theoretical considerations, both as an object of study and as an structural means for this research. Categorisation is both a tacit and an explicit process. Using the work of Bowker and Star (Bowker and Star 1999; Star 2002), the author can draw on their tools and metaphors in discerning how categories and standards shape innovation, within the developmental context of profiling; for instance, as a means to classify the types of algorithms, data structures and organisational artefacts that comprise the creative process in building a profile. Moreover, Star's work can provide categories to identify what types of infrastructure exist, along with the role they play in supporting innovation and knowledge exchange. Orlikowski's use of structuration theory provides sound methods for understanding and interpreting the relationship between technology and organisations, as well as the various contexts embedded therein.

From an organisational perspective, classifying participants, business rules, and cooperative demands on knowledge workers, will further define the nature of these relationships, providing additional data to establish if the innovation process is indeed interactive or maintains a linear trajectory. Fundamental to this understanding of innovation and categorisation, is the question of how knowledge itself disseminates within an organisation, and for what purpose (Denzin 1983; Nonaka 1994; Carstensen and Sorensen 1996; Galliers, Swan et al. 2000). Language and communication facilitate collaborative structures so that innovation and improvisation can occur throughout an organisation.

Lastly, understanding organisational effectiveness is often dependent on grasping a collage of knowledge and action-centric considerations. For instance, how is organisational knowledge diffused and valued? In what ways are members of the compliance organisation collaborating with peers and colleagues outside the organisation? Is the organisational culture capable of sustaining innovative thought? How is this translated into action, or indicators of effectiveness or productivity?

(Kimberly and Evanisko 1981; Hirschheim and Newman 1991; Orlikowski and Robey 1991a; Suchman 1993; Mercer 2000) Lastly, collaborative networks, such as those found in compliance organisations, can be formal and informal, local and far-reaching, and comprise varying levels of expertise and obligation, all the while providing varying levels of value (Walsham 1993).

Chapter 3. Philosophical and Theoretical Foundations

In researching the phenomenon of behavioural profiling and the use of AMLPT, we draw from several academic disciplines: information systems, language, categorisation, organisational behaviour, and organisational effectiveness. In formalising the theoretical and philosophical underpinnings of the research, we describe in this chapter the two theories that will provide the interpretive structure for the data gathered in the fieldwork. The primary theoretical perspective is Rogers' *Diffusion of Innovation* (DoI) theory; we further draw on other innovation theorists such as Van De Ven and Slappendel, primarily in the analysis of *innovation in organisations* and *interactive innovation*, and where the *management of innovation* is considered (Van de Ven 1986; 1999; French and Martz 2008). Given that we examine AMLPT as an innovation within an organisational context, secondary theoretical support is derived from theories of technological use, and its adoption and effectiveness within organisations, primarily through Orlikowski's structuralist perspective and the Technical-formal-informal (TFI) framework (Liebenau and Backhouse 1990; Stamper, Liu et al. 2000).

Within this foundation, we further draw on research addressing the relationships among technology, organisational effectiveness and control, and their correlation to the organisational complexities inherent in IS innovation, adoption, and adaptation (Orlikowski 1991; Orlikowski and Baroudi 1991; Orlikowski and Robey 1991a; Orlikowski 1992; Swanson 1994; Fichman 2004; Jeyaraj, Rottman et al. 2006). As the innovation process can be measured through a variety of methods, understanding the organisational context wherein the innovation occurs is crucial for refining and developing the appropriate research methodology and evaluation metrics for this dissertation.

Philosophically, we assume an interpretivist position (figure 3.0.1) in researching AMLPT use within compliance organisations, consistent with the tenets of the sociology

of regulation, employing a *verstehen-like*⁹ method in analyzing the social (regulatory) impetus for the adoption of AMLPT, furthering an understanding of its role and efficacy in the existing social system of individuals, primarily compliance officers and MLROs within a banking domain. We look to understand this efficacy “within a realm of individual consciousness and subjectivity, within the frame of reference of the participants as opposed to the observer of action” (Stamper, Liu et al. 2000).

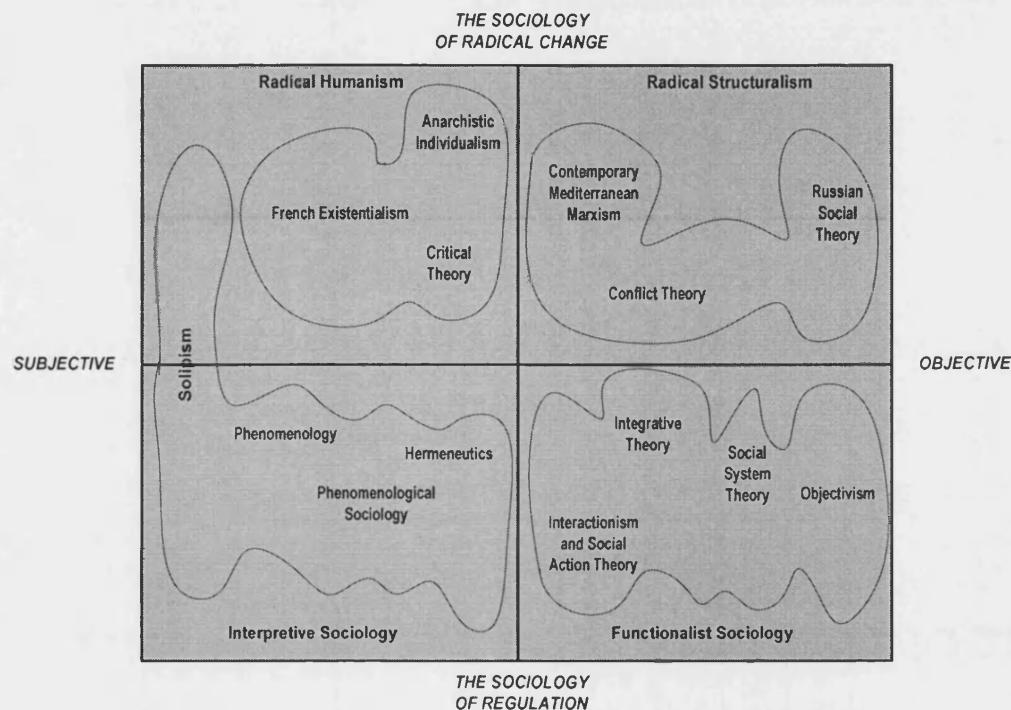


Figure 3.0.1 – Typology of paradigmatic explorations relative to social theory and the study of organisations (adopted from Burrell & Morgan (1979))

Furthermore, given the behavioural ambiguity that comprises the initial “understanding” of a profile subject and the subjective nature of exercise as a whole, the entire behavioural profiling process can be described as being created by individuals within the compliance organisation through a process “of assumptions and

⁹Loosely synonymous with “understanding” or “interpretation”; particularly associated with the German sociologist, Max Weber, whose antipositivism established an alternative to prior sociological positivism and economic determinism, rooted in the analysis of social action (Burrell, G. and G. Morgan (1979). Sociological Paradigms and Organizational Analysis. London, Heinemann.

intersubjectively shared meanings” (Burrell and Morgan 1979). Though the predominant theories of organisation tend to fall within the functionalist paradigm of social science, we maintain our interpretivist position relative to the study of the *process* of diffusion within the organisation, particularly given the traditional focus on the individual in diffusion research and the subjective nature of our analysis. While the interpretivist paradigm traditionally rejects the idea of an organisation, given that it “rejects any view which attributes to the social world a reality which is independent of the minds of men”, Burrell and Morgan go onto state both “interpretive and functionalist theories reflect a common concern for the sociology of regulation”. For the most part, interpretivist also focus on investigations into the means through which social reality is purposefully constructed and normalised from the perspective of those directly involved; subsequently, normalisation may manifest itself ontologically as a social system or organisation. While a deeper exploration of the interpretive paradigm reveals contradictions relative to the “existence” of organisations, Burrell & Morgan go on to state that:

“Theorists of all schools of thought within the interpretive paradigm tend to share a common perspective, in that their primary concern is to understand the subjective experience of individuals. Their theories are constructed from the standpoint of the individual actor as opposed to the observer of action; they view social reality as an emergent process – as an extension of human consciousness and subjective experience. Insofar as a wider social environment is accorded ontological status, it is regarded as the creation and extension of the subjective experience of the individuals involved. Ontologically, theories characteristic of the interpretive paradigm are indisputable nominalist; with regard to human nature, they are voluntarist” (Burrell and Morgan 1979).

In defining our research domain, we extend this understanding of “the wider social environment” to encompass the compliance organisation embedded within a banking context. Theoretically, while *Diffusion of Innovation* theory is primarily concerned with the individual nature of innovation, philosophically, the use of the interpretive paradigm compliments Rogers’ predominately individual-centric thesis. The interpretivist

paradigm provides sound philosophical methods for understanding innovation as an “emergent” phenomenon, not only as an individual behaviour, for instance from the perspective of the compliance officer or MLRO, but also as structured reality embedded in the “form” of a compliance organisation. Rogers’ inclusion of the *social system* as a fundamental unit of analysis acknowledges that systemic or organisational structures must be considered in properly understanding diffusion of innovations.

3.1 The Appropriateness of Diffusion of Innovation Theory

Historically, financial institutions have long been tasked with verifying the identity, and to some extent the source of their depositor’s funds, but the detail and subsequent volume of data collection that was now required post-9/11 has increased these requirements exponentially. Moreover, the need to identify (or profile) specific behaviour that could be indicative of terrorist financing was now mandatory. Financial institutions were faced with the need to completely overhaul their compliance systems, procedures and staffing requirements within a very compact timeframe and primarily through automation. Moreover, they were no longer facing traditional money laundering methods, so the need to develop, indeed *innovate*, new processes and procedures was paramount.

As discussed in Chapter 1, the desire to profile human behaviour, be it benign, commercial, or malicious in nature, is not a recent phenomena. However, the rapid adoption of automated behavioural profiling as an *innovation*, post-9/11, in the form of somewhat indiscriminate automated data collection mechanisms, has caused considerable consternation among legal, privacy, and social scholars. While there are social and legal norms interrelated within this research, primarily we look to understand the adoption of AMLPT as an innovation, rather than simply a social or legal phenomenon. This interrelation represents a thematic continuation of traditional works

on business and organisations, such as Schumpeter's *The Theory of Economic Development* (1934), wherein he argues that innovation is simply a re-synthesis of existing skills, resources, and other assets.

There is the tendency to "objectify" the concept of innovation in daily use, such as a new computer processor, or mobile phone. However, innovation scholars agree that innovation can take on a variety of facets. Rogers and Shoemaker (1971) contend that an innovation can comprise "an idea, practice, or material artefact," and that this heterogeneity can be reflected in classification schemes that discern between administrative and technical innovations, (Kimberly and Evanisko 1981; Slappendel 1996), as well as organisational, labour (work), product, and process innovations (Whipp and Clark 1986). Deconstructing the AMLPT artefact establishes a locus comprised of data that is then computationally manipulated, based on a series of assumptions systematically optimised to mitigate complexity and ambiguity. Therefore we categorise the AMLPT artefact as an information system (IS), embedded within "practices, products and processes" that span both the technical and administrative categories of the compliance function.

While innovation is an acknowledged phenomenon within IS research, and is usually defined as any "new way of developing, implementing and maintaining IS in an organisational context" (Swanson 1994), innovations are more generally regarded as "combinations of normative rules and resources, which stand at hand, or are acquired into the environment before any development activity starts" (Giddens 1984; Mustonen-Ollila and Lyytinen 2003). The study of IS innovation and adoption in the areas of processes and technology have been studied over the years by a number of IS scholars though no systematic tradition has yet to emerge. Past studies include among others Huff & Munro (1985), Kozar (1989), Nilakanta & Scamell (1991), Premkumar & Potter (1995) and Sauer & Lau (1997), (Mustonen-Ollila and Lyytinen 2003).

However, while innovation is viewed as an explicit, formalised process, what emerges from the body of previously noted scholarship is the neglect or exclusion within these studies, of a variety of intrinsic categories, behaviours and specific typologies germane to establishing the adoption and diffusion of an innovation. These omissions include the role of the organisation, task factors, and adopter taxonomies within the innovation domain, as well as the unique dimension of time; the one exception being Premkumar & Potter (1995), who covered multiple time periods in observing the adoption process. The use of longitudinal contexts in *Diffusion of Innovation* theory, such as an innovation's *rate* of adoption, provides a rich behavioural corollary. Writing in his paper, *New Product Adoption and Diffusion*, Rogers (1976) reiterates this unique linear research attribute, stating that "Diffusion studies are particularly able to rely on 'moving pictures' of behaviours rather than on 'snap-shots' because of their unique capacity to trace the sequential flow of an innovation through a social system". In furthering the suitability of diffusion theory, we also draw on the work of Jeyaraj, Rottman, and Lacity (2006), who examined research on the adoption and diffusion of IT-based innovations by individuals and organisations, analyzing 48 empirical studies on individual, and 51 studies on organisational IT adoption published between 1992 and 2003.

From this sample, they then analysed the "predictors, linkages, and biases in individual and organisational IT adoption research". In assessing these predictors, linkages and biases, they confirmed the neglect of consistently-applied evaluation norms in the majority of IS innovation diffusion research they surveyed; however, their work also helped to identify the narrow body of IS innovation scholarship that does indeed encompass a consistent and taxonomically exacting process and method for understanding diffusion of innovation by both individuals and organisations. Significantly, several of their "predictors" align with Rogers' 5 characteristics of an

innovation (shown in italics), to include Perceived Usefulness (*relative advantage*), Behavioural Intention (*trialability* and *observability*), and User Support (*compatibility*).

Accounting for semantic differences, Jeyaraj, Rottman and Lacity's work demonstrated further consistency with Rogers' adopter categories, particularly as they relate to innovation in organisations. Of the 11 theories examined, only three, Rogers (1962; 1983; 1995; 2003), Kwon and Zmud (1987), and Swanson (1994), were used in studies of organisational adoption studies, as illustrated in table 3.1.1. Further examination of their results establishes that Kwon and Zmud are derivative of Rogers more so than Swanson; in the former case, they use a six stage hybrid model of diffusion that combines Rogers with application implementation research, which is useful for contextualisation. Swanson posits that IS innovation "is fundamentally organisational innovation".

While acknowledging the role of the individual, primarily as a participant within "adopting subunits", Swanson's *Tri-Core* theory of innovation views innovation as an activity by discrete "types", more akin to a business or organisational process model, than specifically as a method of analysis for understanding the diffusion of innovation as a systemic phenomenon inclusive of both individual and environmental contexts.

Swanson's work has made valuable contributions to diffusion research, and has applicability within this work, more so in evaluating diffusion in organisations. However, given his organisational bias, and more so, the product, rather than process-centric nature of the *Tri-core* model, Swanson's work provides additional theoretical context, rather than directly contributing to this dissertation. In evaluating the theoretical suitability of the work of Rogers, Swanson, and Kwon and Zmud, as a foundation for this research, an objective weighing of the strengths and weakness of the three models resulted in selecting Rogers' as the most appropriate. Rogers' *Diffusion of Innovation* theory offers rich categorical and behavioural metaphors, metaphors that assist in

interpreting AMLPT's role as a stand-alone innovation, as well as providing a method to understand the means by which the *relative advantage* of AMLPT is communicated within the organisation.

<i>Theory</i>	<i>Main Author(s)</i>	<i>Used in Individual Adaption Studies</i>	<i>Used in Organisational Adaption Studies</i>
Innovation Diffusion Theory	Rogers (1983, 1995)	X	X
Perceived Characteristics of Innovations	Moore and Benbasat (1991)	X	
Social Cognitive Theory	Bandura (1986)	X	
Technology Acceptance Model	Davis (1989)	X	
Technology Acceptance Model II	Venkatesh et al. (2003)	X	
Theory of Planned Behaviour	Ajzen (1991)	X	
Theory of Reasoned Action	Fishbein and Ajzen (1975)	X	
Unified Theory of Acceptance and Use of Technology	Venkatesh et al. (2003)	X	
Diffusion/Implementation Model	Kwon and Zmud (1987)		X
Tri-Core Model	Swanson (1994)		X

Table 3.1.1 – Theories used in individual and organisational IT adoption research (Jeyaraj, Rottman et al. 2006)

Furthermore, Rogers also incorporates the unique dimension of time, such as the *rate of adoption* or rejection of an innovation, as a means to define the process and participants within the adoption decision process, and significantly, the role of the *social system* in the propagation of an innovation. For instance, given the rapid adoption of AMLPT tools post-9/11, the use of time as a metric becomes crucial in understanding the contributory factors to adoption, as well as helping to categorise adopter behaviours that may have led to early, rather than late adoption of AMLPTs.

3.2 The Genesis of Diffusion of Innovation Theory

Diffusion of Innovation theory is, as we have seen, just one method among many available to the researcher in understanding the innovation process; indeed, diffusion research is rich, multi-dimensional, and flush with categorisation, as Baskerville and Pries-Heje (2001) describe:

“There are various theories that relate to the diffusion of innovation, and each implies its own unique model of the process (Jaakkola 1996) We can define complementary models by selecting an analytical dimension and identifying contrasting characteristics along such a dimension. One dimension, widely used in organisational studies, to simplify a variety of models regards the extent to which conflict and competition (as opposed to consensus and regulation) characterize the behaviour of those involved in the diffusion of innovation process (Burrell and Morgan 1979). An ‘ecological’ view centralizes the conflict and competition in the diffusion setting, whereas a ‘genealogical’ view centralizes consensus and regulation (Baum and Singh 1994) With regard to innovation diffusion theories relevant to IT, the conflict-regulation dimension has also been used to distinguish the ‘micro’ perspective from the ‘meso’ and ‘macro’ perspectives (Damsgaard and Lyytinen 1997). The micro perspective is a genealogical view that relies on concepts from economics and innovation theory, and helps us to understand diffusion patterns among similar organisations and populations. The meso and macro perspectives are ecological views that use power dependency analysis on networks of interacting agents to understand how extra-organisational power dependencies shape the diffusion process”.

Early attempts at defining innovation resulted in what is now established as the *linear model of innovation*. This model describes innovation as flowing sequentially, from basic research to applied research, product development, and finally the marketplace as illustrated in figure 3.2.1:

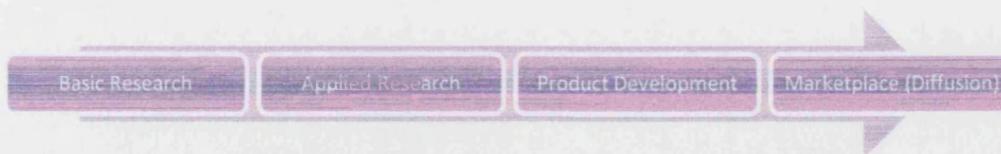


Figure 3.2.1 – The linear model of innovation

This model, sometimes referred to as “science (or technology) - push,” was set out for the first time in Vannevar Bush’s classic report, *Science: The Endless Frontier* (1945). Other contemporary theoretical contributions paralleled Bush’s seminal work,

emanating from both economists and researchers in graduate management schools, as summarised in table 3.2.1.

Mees (1920)	Pure science, development, manufacturing
Schumpeter (1939)	Invention, innovation, imitation
Stevens (1941)	Fundamental research, applied research, test-tube or bench research, pilot plant, (improvement, trouble shooting, technical control of process and quality)
Bichowsky (1942)	Research, engineering (or development), factory (or production)
Furnas (1948)	Exploratory and fundamental research, applied research, development, production
Mees and Leermakers (1950)	Research, development (establishment of small-scale use, pilot plant and models, adoption in manufacturing)
Brozen (1951a)	Invention, innovation, imitation
Brozen (1951b)	Research, engineering development, production, service
MacLaurin (1953)	Pure science, invention, innovation, finance, acceptance
Ruttan (1959)	Invention, innovation, technological change
Ames (1961)	Research, invention, development, innovation
Scherer (1965)	Invention, entrepreneurship, investment, development
Schmookler (1966)	Research, development, invention
Mansfield (1968)	Invention, diffusion, innovation
Myers and Marquis (1969)	Problem solving, solution, utilisation, diffusion
Utterback (1974)	Generation of an idea, problem-solving or development, implementation, and diffusion

Table 3.2.1 – Taxonomies of Innovation (from Goudin)

Bernard Goudin writes in *The Linear Model of Innovation: The Historical Construction of an Analytical Framework*, that the work of these pioneers:

“...led to the addition of diffusion in the much-quoted linear model of innovation: *Basic research* → *Applied research* → *Development* → (*Production and Diffusion*) Yet, it is important to mention two areas of research that contributed to the focus on diffusion and its integration into theoretical models of innovation. The first was the sociological literature, particularly on the diffusion of invention. This tradition goes back to W. F. Ogburn and S. C. Gilfillan and their contributions to the United States National Resources Committee’s report on technology and its social impacts (1933). The model Ogburn and Gilfillan suggested was one of the first descriptions of innovation as a social process. It included diffusion as a phase in the process but also the social impacts of invention, an ultimate phase. It was E. M. Rogers’ classic book, however, that would be most influential on the literature. In *Diffusion of Innovations* (1962), Rogers depicted the process of innovation as composed of four elements: innovation, communication (or diffusion), consequences on the social system, and

consequences through time (Rogers 1962). By the third edition (1983) of his book, however, Rogers had assimilated the economic understanding of innovation. The process of innovation now was portrayed as composed of six main phases or sequential steps: needs/problems, research, development, commercialization, diffusion and adoption, and consequences (Rogers 1983)".

3.3 Innovation, Infrastructure and Social Organisation

Rogers defines *diffusion* as "the process in which an **innovation** is **communicated** through certain channels over **time** among the members of a **social system** (figure 3.3.1). It is a special type of communication, in that the messages are concerned with new ideas" (Rogers 2003).

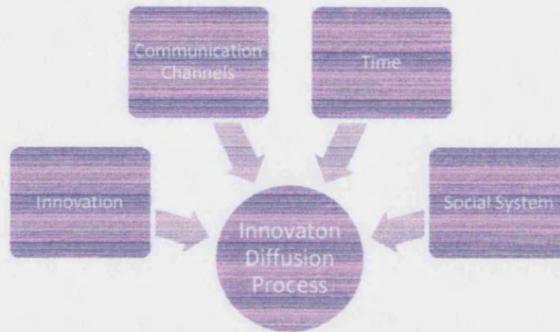


Figure 3.3.1 – The Innovation Diffusion Process Model (Adapted from Rogers(2003)

He further states that diffusion is "a kind of social change, defined as the process by which alternation occurs in the structure and function of a social system. When new ideas are invented, diffused, and adopted or rejected, leading to certain consequences, social change occurs" (2003). What is consistent in the literature is that innovation is not a spontaneous, isolated phenomenon. In an organisational context, diffusion occurs either as a result of external stimuli (adopting an innovation) or internal stimuli (*re-invention, re-structuring, or re-defining*). Within the diffusion process, this dissertation is primarily concerned with the *adoption of innovation*.

Angle and Van de Ven (2000) have shown that adoption simply means that the innovation has been developed outside of the organisation, and is the result of the

assimilation of a product, service, or technology new to the adopting organisation (Damanpour and Wischnevsky 2006). Invention is “the process by which a new idea is discovered or created” (Rogers 1976; Rogers 2003). In the case of IS innovation, the definition of “new” becomes subjective, given the derivative nature of technology and the penchant for “fads” and market-driven manifestations of “the next best thing”, rather than legitimate innovation (Abrahamson 1996; Swan, Scarbrough et al. 1999). According to Fichman:

“Much of diffusion theory was developed in the context of adopters making *voluntary* decisions to *accept or reject* an innovation based on the benefits they expect to accrue from their own *independent use* of the technology. Yet, adoption of IT may be *encouraged* by management (Leonard-Barton and Deschamps 1988) or even *mandated* (Moore and Benbasat 1991). Adopters, rather than making a binary decision to adopt or reject, may choose differing *levels* of IT use (Bayer and Melone 1989). In addition, the adoption decision of individuals or organisations may depend on the dynamics of community-wide levels of adoption (i.e., whether “critical mass” has been established) because of *network externalities* (Katz and Shapiro 1986; Markus 1987). These sorts of complicating factors are quite common in the context of IT adoption; hence, the opportunities to apply classical diffusion “as is” may be rare indeed”.

3.3.1 The Four Main Elements of Diffusion of Innovation theory

3.3.1.1 The Innovation – An innovation is an idea, practice/process or artefact/object that is perceived as new by an individual or other unit of adoption. “Newness” in the objective sense is of no concern, as whether or not an idea is perceived as “new” is a function of time, in that it is measured by through the chronological lag between an innovation’s first use or discovery. If an idea appears “new” to the individual, regardless of gestation, it is an innovation.

3.3.1.1.1 Perceived Attributes of Innovation – In Chapter 6, *rate of adoption* is used as one measure to establish the effectiveness of AMLPT. Given that an innovation encompasses a variety of activities or things, there is no “unit” of adoption per se, and it therefore becomes necessary to assign characteristics or attributes to an innovation so as to better understand why one innovation may be adopted over another. These attributes

create a normative infrastructure that can articulate organisational mood, as well as providing a metaphor for adoptive intent (Ciborra 2001; Star 2002). Rogers (1983; 1995; 2003) defines the 5 characteristics of innovations as:

- *Relative advantage* – is the degree to which an innovation is perceived as being better than the idea it supersedes.
- *Compatibility* – is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters.
- *Complexity* – is the degree to which an innovation is perceived as relatively difficult to understand and use. Any new idea may be classified on the complexity-simplicity continuum.
- *Trialability* – is the degree to which an innovation may be experimented with on a limited basis. It is positively related to the innovation's rate of adoption.
- *Observability* – is the degree to which the results of an innovation are visible to others.

Amongst participants, those innovations perceived as providing greater *relative advantage*, *trialability*, and *observability*, as compared to those perceived as more complex, experience greater *rates of adoption*. Among Roger's five attributes, *relative advantage* and *complexity* historically command the greatest consideration in explicating an innovation's *rate of adoption*.

3.3.1.1.2 Re-Invention – When individual or group users of an innovation alter, modify or change that innovation during the process of adopting that innovation, that transformation process is categorized as *re-invention*. Theoretical awareness of the presence of *re-invention* occurred among diffusion researchers during the 1970s; some view *re-invention* as a metric for quantifying the extent that individual use of an innovation deviates from the “core” idea initially adopted.

Moreover, individual promulgation of an innovative outlier norm exemplifies a form of *change agency*, particularly in *heterophilous* diffusion (Eveland, Rogers et al. 1977). Innovations are not invariant, and subsequently flexibility in adoption is a constant amongst participants, and customization manifests itself in a variety of ways,

not just as a structure to employ a new idea. *Re-invention* furthers the rapid diffusion of an idea, as well as enhancing the chances of an idea's *sustainability* over time. The ability to "tinker" with a proposed innovation improves an organisation's hospitality to the idea, as flexibility implies a more localised sense of control (Ciborra 1992a; Ciborra 1999c; Ciborra 2002).

3.3.1.2 Communication Channels – As *social systems*, organisations rely on communication to impart meaning, purpose, and intent, the effectiveness of which is determined by a variety of factors such as culture, knowledge sharing and structure, both formal and informal (Pierce and Delbecq 1977; Denison and Mishra 1995; DeCanio, Dibble et al. 2000; Boudreau 2004). A *communication channel* is the means by which actors generate and share knowledge and information. Diffusion is a variant of communication wherein information about a new idea is imparted within the message content; *in essence, the diffusion process is the means by which an individual communicates an idea to either a group or other individual* (author's italics). Essentially, this process involves 1) an innovation, 2) an adoption cohort or individual member of a group that has knowledge of, or experience with, the innovation being communicated; the *communication channel* is the mechanism utilised for communicating the innovation.

3.3.1.2.1 Heterophily, Homophily, and Diffusion – Humans communicate more readily with those they perceive to be similar, and therefore, in diffusion, the transfer of ideas occurs more readily among those sharing similar values, beliefs or socioeconomic position or status. *Heterophily* is defined as the degree of communication among those sharing certain dissimilar attributes and few similarities. Given their shared attributes, norms and social grouping, communication among *homophilous* groups tends to happen more readily and subsequently is more enjoyable or rewarding. Rogers states that a significant problem in the diffusion of innovation is that predominate parties within the innovative domain tend to be *heterophilous*, which leads to ineffective communication.

For instance, a *change agent* possesses certain institutional knowledge or a heightened *a prior* understanding of the need for adopting a proposed innovation. Given their unique contextual understanding, tacit concepts may not be readily understood or easily communicated. The subsequent need for explanation enhances diffusion *confirmation*.

Paradoxically, *homophilous* organisations with consistent peer cognisance and technical competence limit diffusion, as there is nothing new to communicate. Therefore, a modicum of *heterophily* must be present among those engaged in the communication process. The optimal context for diffusion exhibits a high level of *homophilous* individual and organisational norms, such as socio-economic status and education, differing only on their perceptions of the innovation. This is not to say that adopters must be always be predominately *heterophilous*, as perceptions of and hospitality to the innovation are more often than not related to one's education, socioeconomic status and other existentialities.

3.3.1.3 Time – The inclusion of time as a variable in DoI theory is unique within behavioural science research, given that a preponderance of behavioural research ignores the dimension of time; it is simply ignored or considered irrelevant. Although criticised, specifically as it relates to measurement, particularly when applied to a subject's recall of an event, the inclusion of time in DoI research is considered a strength. As a metric, time is critical in understanding diffusion in three key dimensions of diffusion, (1) in measuring the *innovation-decision process*, wherein an individual's cognisance of an innovation's invokes reject or acceptance, (2) the *adopter category* of an individual or organisation, which can be defined as an individual or group's *innovativeness*, as well as the relative "earliness/lateness" of an innovation's adoption when measured against other system members, (3) and lastly, the *rate of adoption* of an innovation by a system, normally gauged through measuring the number of adopting the innovation among the system's constituents within a common timeframe.

3.3.1.3.1 The Innovation-Decision Process - The manner in which an individual or organisation arrives at the decision to either adopt or reject an innovation is defined as the *innovation-decision process*. It can be described as the “process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to the formation of an attitude toward the innovation, to a decision to adopt or reject, to implementation and use of the new idea, and to confirmation of this decision” (Rogers 2003).

The evolution of diffusion scholarship has consistently demonstrated that an individual or organisation’s receptivity to a proposed innovation is not a spontaneous act; it is the result of a variety of risk-reward evaluations, but essentially, it is an information seeking and information-processing activity aimed at reducing uncertainty. Indeed, the definition of an *innovation-decision process* has undergone several iterations relative to defining the exact steps within the process. This process was first documented during Ryan and Gross’s seminal work (1943), wherein they conjectured that the adoption of an innovation is a conscientious process, as was demonstrated during their Iowa seed corn study. While not exactly emblematic of the five stages/steps currently accepted by most diffusion scholars, Ryan and Gross’s work established the understanding that adopting an innovation was neither spontaneous nor random. Moreover, further research over the next 50 years would show that the *innovation-decision process* consistently differs between individuals and organisations and these differences are further reflected in the complexity and steps within all facets of the *innovation adoption process*.

Essentially, the *innovation-decision process* “encompasses the timeframe from when the potential adopter first becomes aware of the innovation through to the point at which the potential adopter either adopts or rejects the innovation” (Rogers 2003). Rogers identifies five steps along the innovation-decision process continuum: *knowledge, persuasion, decision, implementation, and confirmation* (see figure 3.3.2).

Knowledge occurs when an individual learns of the innovation's existence and gains some understanding of how it functions. *Persuasion* takes place when an individual forms a favourable or unfavourable attitude toward an innovation. The *decision* occurs when an individual engages in activities that lead to a choice to adopt or reject an innovation. *Implementation* occurs when the individual puts an innovation into use. *Confirmation* occurs when an individual seeks reinforcement of an innovation-decision that has already been made but may reverse this decision if exposed to conflicting messages about the innovation.

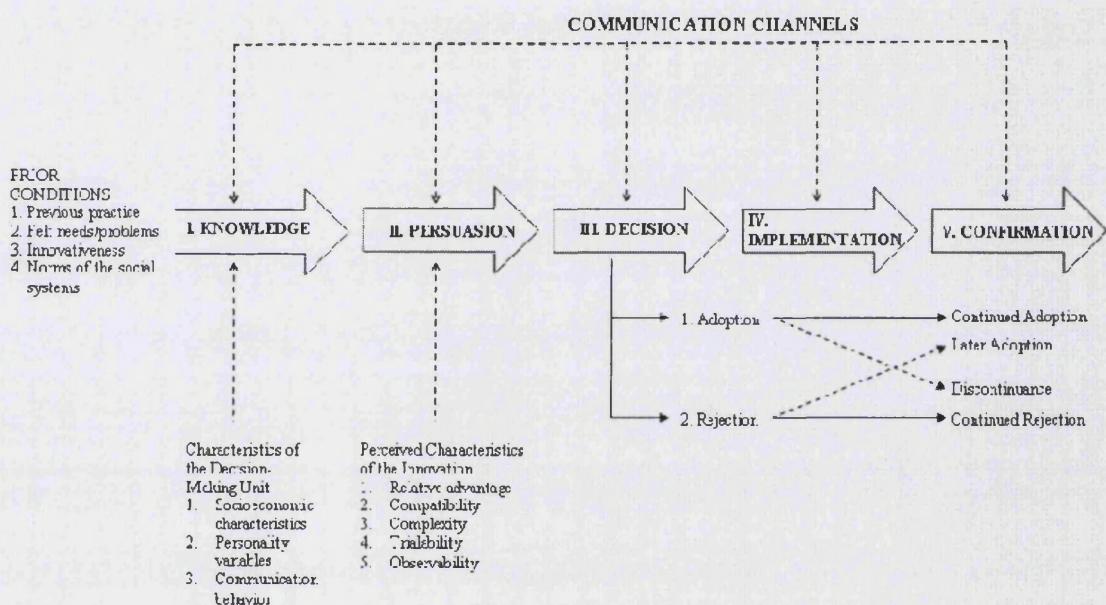


Figure 3.3.2 – A Model of Five States in the Innovation-Decision Process (From Rogers (2003))

3.3.1.3.2 Innovativeness and Adopter Categories - *Innovativeness* is defined as the “degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than the other members of a system”. However, Rogers addresses this potential ambiguity, stating

“Rather than describing an individual as ‘less informative than the average member of a social system,’ it is more efficient to refer to the individual as being in the ‘late majority.’ This shorthand saves words and contributes to clearer understanding.

Diffusion research has shown that members of each of the adopter categories have a great deal in common" (Rogers 2003).

Furthermore, the use of "shorthand" categorisation becomes more crucial the more one works within Rogers' theory. For instance, if an individual is included in the category of a *late majority adopter*, that individual is then categorised as an individual *homophilous* with those of a "relatively lower economic status, making little use of mass media channels, and learns about most new ideas from peers via interpersonal communication channels". Thus the utility of shorthand categorisation is fundamental to Rogers's work and provides an elegant medium to convey methods and roles as well as ensuring brevity does not hamper contextual understanding.

The use of *adopter categories* creates a taxonomy to gauge the proclivity of an individual to adopt new ideas as compared to other members of the *social system*. Rogers (2003) defines these *adopter categories*, as *innovators*, *early adopters*, *early majority*, *late majority*, and *laggards*. Rogers (2003) states that *innovativeness* is seen as a "continuous variable, and partitioning it into discrete categories is a conceptual device, much like the continuum of social status into upper, middle, and lower classes. Such classification is a simplification that aids the understanding of human behaviour, although it loses some information as a result of grouping individuals". Moreover, he goes on to state that "ideally, a set of categories should be (1) exhaustive, including all the units of study, (2) mutually exclusive, by excluding a unit of study that appears in another category from also appearing in any other category, and (3) derived from a single classificatory principle". Rogers developed a bell curve model (figure 3.3.3) of a *social system* based on the *inventiveness* of the members:

- 1) Innovators – 2.5%
- 2) Early adopters – 13.5%
- 3) Early majority – 34%
- 4) Late majority – 34%
- 5) Laggards – 16%

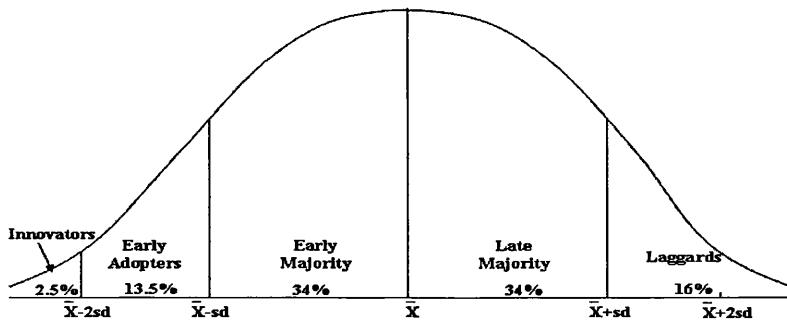


Figure 3.3.3 – Adopter Categorization on the Basis of Innovativeness (from Rogers (2003))

This model imparts use of two statistics, the mean (\bar{x}) and the standard deviation (sd) to divide a normal adopter distribution into five adopter categories with the approximate percentage of individuals included within the categories of *innovators*, *early adopters*, *early majority*, *late majority* and *laggards*.¹⁰

Innovators are the *avant garde*, actively pursuing and embracing unique, *sui generis* ideas; *innovators* are risk-tolerant, exploiting their considerable interpersonal networks and communication channels to ensure exposure to new thought, processes, and technologies. *Early adopters*, due to their position and status within a social system are receptive to change, yet because of their relative position, tend to be more risk adverse than *innovators* in accepting the adoption of a proposed innovation. Those in the *early majority* category trend towards adoption of an innovation just prior to the average member of a social system; *early majority* adopters more deliberate about their adoption decisions. The *late majority* adopters, also comprising about a third of the members of a system, are slower to adopt, and tend to be sceptical about innovation. Finally, the *laggards* are the traditionalists and the last group in a social system to adopt an innovation; they are suspicious of new ideas, processes, products, and services.

3.3.1.3.3 Rate of Adoption - Perhaps the least ambiguous application of Time as a dimension in diffusion is the *rate of adoption*, defined as “the speed with which an

¹⁰ The innovativeness dimension, as measured by the time at which an individual adopts an innovation or innovations, is continuous. The innovativeness variable is partitioned into five adopter categories by laying off standard deviations (sd) from the average time of adoption (\bar{x}).

innovation is adopted by members of a social system". Innovation adoption tends to follow an S-shaped curve as illustrated by figure 3.3.4. In interpreting the S-curve, it should be noted that it is innovation and system-specific, and describes the diffusion of a distinctly new or innovative idea among constituents of a particular system. It cannot be used to describe an innovation that is not adopted, (i.e., unsuccessfully), as the S-curve shows the extent to which an innovation propagates among all potential adopters within a *social system*.

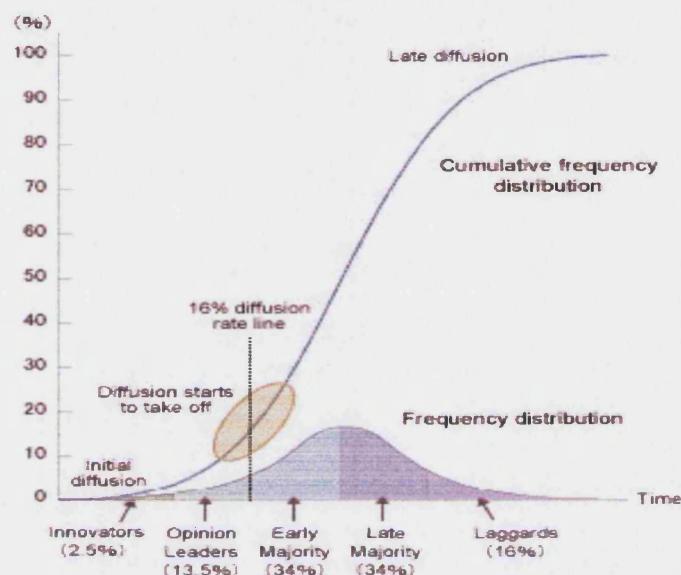


Figure 3.3.4 – S-Curve rate of adoption model showing rate of adoption over time; this is shown relative to innovativeness reaching critical mass, described as the point at which enough individuals have adopted an innovation that the innovation's further rate of adoption becomes self-sustaining. (Adopted from Rogers (2003))

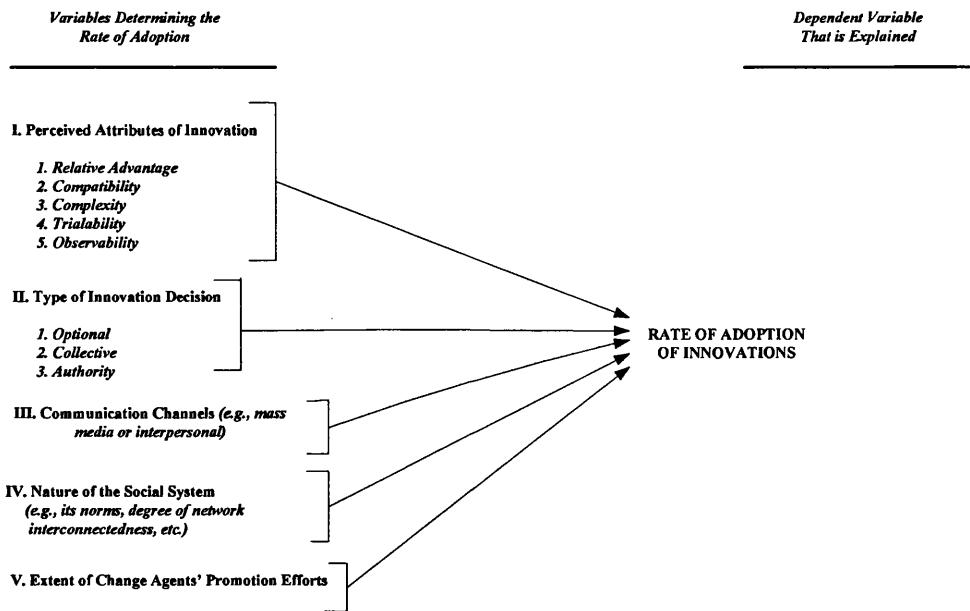


Figure 3.3.5 – Variables Determining the Rate of Adoption of Innovations (From Rogers (2003))

According to Rogers, the *rate of adoption* is “generally measured as the number of individuals who adopt a new idea in a specified period, such as a year”. He goes on to state that the “perceived attributes of an innovation are one important explanation of the *rate of adoption* of an innovation. Most of the variance in the *rate of adoption* of innovations, from 49 to 87 percent, is explained by the five attributes: *relative advantage, compatibility, complexity, trialability, and observability*” (Rogers 1995). Besides the five perceived attributes of an innovation, Rogers includes a further four variables: (1) the type of innovation, (2) the nature of *communication channels* diffusing the innovation at various states in the *innovation-decision process*, (3) the nature of the *social system* in which the innovation is diffusing, and (4) the extent of *change agents'* promotion efforts in diffusion the innovation; all affect an innovation's *rate of adoption* as illustrated in figure 3.3.4.

3.3.1.4 Social System – The fourth main idea in the diffusion of innovation is the *social system*, which can comprise individuals, informal groups, organisations and/or subsystems. Rogers defines *social systems* as “a set of interrelated units involved in joint

problem solving to accomplish a common goal". Moreover, diffusion "occurs within a *social system*. The social structure of the system affects the innovation's diffusion in several ways. The *social system* constitutes a boundary within which diffusion occurs" (Rogers 2003). Social structures comprise both formal and informal units that utilise a variety of interpersonal networks and communication structures, demonstrating varying levels of *homophily*.

3.3.1.4.1 System Norms and Diffusion - Analysis of normative behaviour provides a beneficial method of understanding standards within a *social system*; system norms inform individuals of the expected behavioural performance standard. Systemic norms can inhibit change if perceived as a threat to established tradition or cultural contexts and can operate at the local, organisational, governmental or nation level.

3.3.1.4.2 Opinion Leaders, Change Agents and Champions - Paradoxically, those possessed with innovative primacy within a *social system* are often looked upon with disfavour, given their apparent deviance from the *social system* norm; this accords these individuals low credibility status among the average members of the *social system* and limits their role in diffusion. Yet, certain other members of the system, while not individually exhibiting traits of *innovativeness* can influence the adoption or rejection of an innovation; Rogers categorises these individuals as *opinion leaders*. *Opinion leaders* are members of the *social system* they seek to influence, and their effectiveness stems from demonstrated expertise, competence, accessibility, or leadership that conforms to the system's norms.

The significant trait of *opinion leaders* is their position at the nexus of interpersonal communication networks; subsequently, they serve as the model to be imitated when it comes to either adopting or rejecting an innovation. The breadth of an *opinion leader's* interpersonal communication network provides heightened visibility to

that individual's *innovativeness*, and subsequently serves as a social model of innovative behaviour for the other members of the system.

Conversely, *change agents* are professionals external to the system but represent *change agencies* and potential innovation to the system and normally possess singular subject matter expertise. *Change agents* are often perceived as dissimilar to the rest of the members of the system, yet their influences on a system's *innovation-decisions* are normally viewed favourably given normative objectivity. *Change agents* often subordinate *opinion leaders* to gain acceptance within a *social system* to diffuse innovation or to mitigate the adoption of a potentially harmful innovation. *Champions* tend to be unique within *organisational adoption of innovations*. Rogers (2003) defines a *champion* as "a charismatic individual who throws his or her weight behind an innovation, thus overcoming indifference or resistance that the idea may provoke in an organisation". Those championing a particular innovation possess the ability to overcome barriers within the organisation, span boundaries and build consensus internally and externally to the organisation. Studies of innovation *champions* within organisations have demonstrated that the involvement of an innovation *champion* facilitates the success of an innovation within an organisation (Rogers 2003).

3.4 Diffusion of Innovation and the Innovation Process within Organisations

Of the three types of innovation decisions: (1) *optional innovation decisions*, (2) *collective innovation decisions*, and (3) *authority innovation-decisions*, the *innovation-decision process within organisations* normally involves either *collective* or *authority innovation-decisions*, as *optional innovation-decisions* are those decisions made by individuals independent of other system members. Rogers further suggests the category of *contingent innovation-decisions*, "which are choices to adopt or reject that can be made only after a prior *innovation-decision*" (Rogers 2003). In researching innovation, organisations are often perceived as:

“...constraints or resistances to innovations, as least to the extent that many problems are usually encountered in attempts to implement an innovation in an organisation. Alternatively, these difficulties can be seen as evidence that a particular innovation may not fit well with an organisation’s perceived problem, or that the innovation’s expected consequences are perceived by the organisation’s members as more negative than positive” (Van de Ven and Rogers 1988).

Rogers (1995; 2003) defines an organisation as a “stable system of individuals who work together to achieve common goals through a hierarchy of ranks and a division of labour. Organisations are created to handle large-scale routine takes through a pattern of regularized human relationships. Their efficiency as a means of orchestrating human endeavours is in part due to this stability, which stems from the relatively high degree of structure that is imposed on communication patterns”. He then defines 5 traits that comprise “a predictable organisational structure”:

1. **Predetermined goals.** Organisations are formally established for the explicit purpose of achieving specific goals and subsequently the structure and function of the organisation is determined accordingly.
2. **Prescribed roles.** Organisational tasks are distributed among various positions or duties; a role is a set of activities performed by an individual in a given position. A position is one’s place in an organisation – i.e., the “boxes” on an organisation chart.
3. **Authority structure.** Authority is unequal in most formal organisations; subsequently authority is hierarchically structured to specify who is responsible to whom.
4. **Rules and regulations.** The formal set of written procedures that govern decisions and actions by members of an organisation’s members.
5. **Informal patterns.** Every formal organisation is characterised by various kinds of informal practices, norms and social relationships among its members. These informal practices emerge over time and fulfil an important function in any organisation. Nevertheless, the intent of bureaucratic organisations is often to depersonalise human relationships as much as possible by standardizing and formalizing them.

Bureaucratic efforts to impart order, social rigidity, would suggest a less than favourable environment for innovation. Indeed, Max Weber’s (1958) “iron cage” metaphor, suggestive of authoritarian norms wherein rules, diktats, mandates and capricious control is accepted and acted upon by subordinates, and intimates drone-like

compliance rather than independence of thought. Such oppressive structure creates barriers and an endemic cultural resistance to change; yet, contrary to the apparent *status quo*, Rogers observes that “innovation goes on all the time in most organisations,” and constitutes “one of the fundamental processes underway in all organisations” (Rogers 2003).

The *diffusion of innovation within organisations* includes a number of structural characteristics and independent variables that influence the extent of innovation adoption or rejection. At an individual level, a *champion* or individual leader’s characteristics can positively further innovation. For example, innovations necessitating an individual *optional-innovation decision* “are generally adopted more rapidly than when an innovation is adopted by an organisation”, most often at the instigation of a *champion*. Conversely, individual adoption may not occur if the innovation is not first adopted by an organisation; moreover, the more individuals involved in executing an *innovation-decision*, the more prolonged the rate of adoption.

Organisational *complexity* is reflective of the levels of knowledge and expertise of individuals, and is positively correlated with *innovativeness*. Moreover, the more extensive an organisation’s level of formality, for instance, the degree to which it follows rules and exhibits complex hierarchy, the greater the probability organisational *innovativeness* is inhibited. Lastly, organisations demonstrating broad interconnectedness, via interpersonal network links within the *social system*, reflect greater levels of *innovativeness*. There is also a positive correlation between the amount of available resources in an organisation, “organisational slack”, as well as the size of an organisation; the larger the organisation, the more innovative.

Rogers formally categorises these characteristics as (1) *centralization*, (2) *complexity*, (3) *formalization*, (4) *interconnectedness*, (5) *organisational slack*, and (6) *size* (see figure 3.4.1). The *innovation-decision process within organisations* exhibits

more complexity and different stages than individual *innovation-decisions*, providing for two distinct phases (see figure 3.4.2). The five stages of the *innovation process within organisations* consist of: *agenda-setting*, *matching*, *redefining/restructuring*, *clarifying*, and *routinizing*. Phase I consists of the first and second stages (namely *agenda setting* and *matching*), while Phase II comprises stages three, four, and five (*redefining/restructuring*, *clarifying*, and *routinizing*).

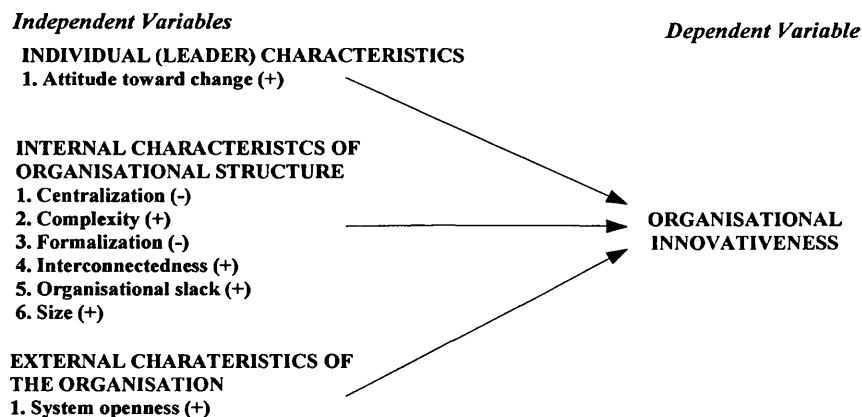


Figure 3.4.1 – Independent Variables Related to Organisational Innovativeness (From Rogers (2003))

Agenda setting takes place as the result of defining a general organisational problem and is a continuous process, existing in every system and determines the hierarchy of work within the system. *Agenda setting* “initiates the sequence of the innovation process, for it is here that the initial motivation to impel later steps in the innovation process” (Rogers 2003). Moreover, the *agenda-setting* stage, although initiating the innovation sequence, is not instantaneous; it is a time-dependent event that may involve several months or years.

Schroeder’s (1989) work in the Minnesota Innovation Research Program, from which much of the body of research on innovation in organisations derives, led him to conclude that “Innovations are not initiated on the spur of the moment, nor by a single dramatic incident, nor by a single entrepreneur”. Furthermore, the innovation process can

be spurred by knowledge of a particular innovation, rather than the identification of a particular problem or need for a solution; as explained in the definition of the individual-level *innovation-decision process*, perceived need can initiate the innovation process in an organisation, and similarly, knowledge of an innovation fosters a desire for that innovation.

Matching is defined “as the stage in the innovation process at which a problem form the organisation’s agenda is fit with an innovation, and this match is planned and designed”, and done effectively, can contribute to successful sustainment of the idea over time. *Fit* is particular to the *compatibility* of the innovation as discussed in section 3.4. *Fit* imparts a hospitable environment for the innovation. Indeed, Goodman and Steckler (1992), in their research into innovation within a health organisation, determined that an innovation’s success in fitting a particular need was highly dependent on whether it “found a home”. Such is the need for this “domesticity” that the matching decision demarks the stage between initiation and implementation as illustrated in figure 3.4.2.

Redefining/Restructuring occurs in the implementation phase of the innovation, and defines the process wherein the innovation is *re-invented* to oblige organisational requirements, structures and other contextual needs more exactingly, as well as when the structure of the organisation is modified to fit the innovation. During *re-invention* and *restructuring*, the organisation and the innovation undergo change, albeit at varying rates within this stage; moreover, unlike the more time-intensive *matching* process, past work by Tyre and Orlikowski (1994) established that the opportunity for modification or *re-invention* of an innovation occurred only fleetingly, and once this window had passed, the innovation was swiftly entrenched in the organisation’s structure, processes or culture, with little or no further availability for modification.

Van de Ven (1986) showed that “Innovations not only adapt to existing organisational structures, but they also transform the structure and practice of those

environments". In some instances, such is the impact of an innovation that the entire organisational structure is altered to accommodate its adoption. Rogers (2003), in discussing the concept of *innovation and organisational structures*, states that "implementation of a technological innovation in an organisation amounts to a mutual adoption of the innovation and the organisation.

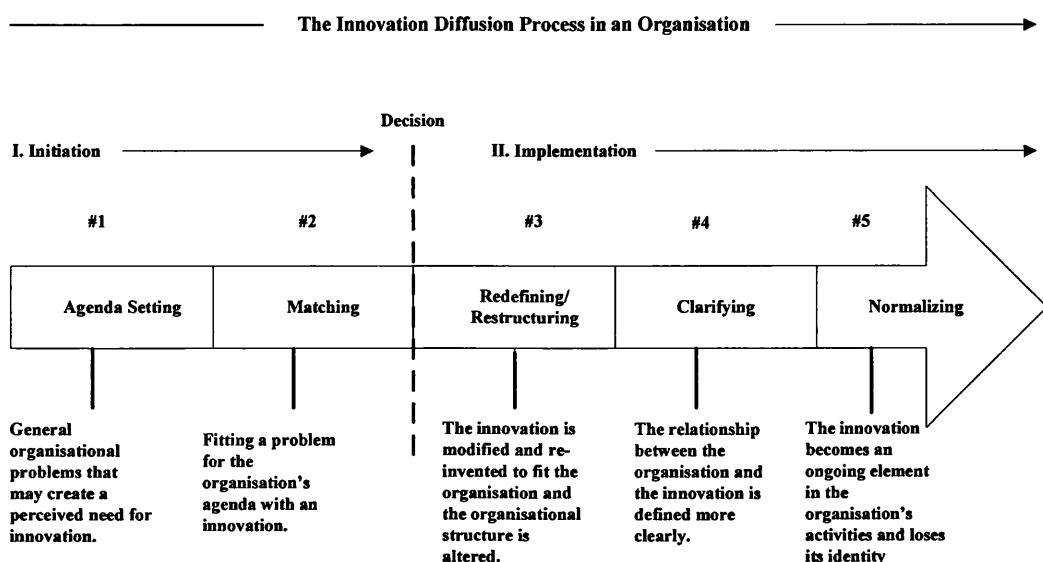


Figure 3.4.2 – Five Stages in the Innovation Process in Organisations (From Rogers(2003))

Typically, both change during the sub-process of implementation. This mutually adaption occurs because the innovation almost never fits perfectly in the organisation which it is to become embedded". Furthermore, Rogers goes on to state that,

"The redefining/restructuring stage in the innovation process in an organisation amounts to social constructionism, in which perceptions of the organisation's problem and the innovation come together and each are modified in the process. If the innovation comes from inside the organisation, individuals regard it as familiar and compatible and hence find it easier to give meaning to the new idea. When the innovation enters the organisation from external sources but the exact form that it takes is flexible and a good deal of re-invention occurs, the organisation's participants perceive the new idea as being theirs" (Rogers 2003).

Innovations that generate a great deal of ambiguity in an organisation or create high levels of discomfort through their adoption can create resistance to the introduction of a new technology. IT innovations in particular tend to cause such disruption which is

then responsible for the unique difficulties experienced in their adoption. Rogers (2003) describes such “disruptive” or “discontinuous” innovations as *radical innovations*, defined as “such a major change that it represents a new paradigm for carrying out some task”. Walsh and Linton’s (2000) work showed that in a variety of instances, the radical nature of some inventions give rise to an entirely revolutionary technology development such as microchips or mobile phones. The “radicalness” of an innovation can be ascertained by gauging the level of organisational knowledge needed to effectively exploit the idea; the more an organisation needs to learn, the more radical the innovation. Subsequently, some innovations are so radical as to defy normal adoption norms, creating the need for completely unstructured implementation processes as traditional sets of ordered responses are non-existent (Mintzberg, Raisinghani et al. 1976).

Ettlie, Bridges et al. (1984) provide another view of the concept of radical innovation, in this case, radical versus incremental innovation, wherein *incremental innovation* is characterised by the progressive adoption of an innovation through stages, stating that:

“One of the theoretical typologies that has emerged in the literature on organisational innovation is the dichotomy of radical versus incremental innovation introduction and adoption. One aspect of this dimension appears to be whether or not the innovation incorporates technology that is a clear, risky departure from existing practice. (Duchesneau, Cohn et al. 1979; Hage 1980) If a technology is new to the adopting unit and new to the referent group of organisations (Becker and Daft 1978), or if it requires both throughput (process) as well as output (production or service) change (Hage 1980), perhaps the magnitude or cost of change required by the organisation is sufficient to warrant the designation of a rare and radical, as opposed to incremental, innovation.

The longer an innovation is in practice, the greater the understanding of context and applicability; this understanding is defined as clarity. Clear communication of the intent in adoption of an innovation, as well as the perceived benefits thereof can mitigate ambiguity; therefore, should adoption occur too rapidly at the clarity stage, the potential for less-than satisfactory adoption results is greatly increased. As with the redefining/restructuring stage, clarity is also a social construction. Rogers (2003) explains the construction of clarity through a variety of questions as well as the means by which they may be answered:

“When a new idea is first implemented in an organisation, it has little meaning to the organisation’s members and is surrounded by uncertainty. How does it work? What does it do? Who in the organisation will be affected by it? Will it affect me? These are the typical questions that individuals seek in the clarifying stage. As people in an organisation talk about the innovation, they gradually gain a common understanding of it. Thus their meaning of the innovation is (sic) constructed over time through a social process of human interaction”.

Champions and other boundary spanners play a critical role in the clarity stage. They act as reliable sources for contextual understanding and social shaping of the idea that is favourable (Tushman 1977; Howell and Higgins 1990; Lawless and Price 1992).

Routinizing is the last stage of the implementation continuum. It is indicated by the incorporation of the innovation into the routine activities of the organisation as well as no longer being considered as a unique phenomenon. With the advent of routinization, the *innovation process* is completed, yet the opportunity for complications can arise. A supportive and closely related process to routinization is *sustainability*. The subject of much recent research, *sustainability* is described as “the degree to which an innovation continues to be used after initial efforts to secure adoption is (sic) completed” (Rogers 2003).

In ascertaining the level that an organisation sustains an innovation, it is necessary to gauge the level of *participation*. Green (1986) defines participation as “the degree to which members of the organisation are involved in the innovation process”. Participation can be described by involvement in activities such as the design process, group discussions, and other efforts directed at implementation of an innovation, thus ensuring its *sustainability* over time. Given the level of group involvement, *collective innovation-decisions* normally exhibit greater *sustainability* than *authority innovation-decisions*.

3.5 Critique of Diffusion of Innovation Theory

According to Fichman (2004), “the majority of prior research on IT innovation, and indeed on organisational innovation in general, had been done within what I will call the *dominant paradigm*. This paradigm is typified by the desire to explain innovation using economic-rationalistic models, whereby organisations that have a greater *quantity* of what might be called the ‘*Right Stuff*’ (i.e., greater innovation-related *needs* and *abilities*) are expected to exhibit a greater quantity of innovation (i.e., greater frequency, earliness, or extent of adoption”. While these observations are homogeneous to Rogers’ structural characteristics and independent variables, relative to innovation in organisations, they serve to reinforce the existence of the *pro-innovation bias* in diffusion research.

Perhaps the most serious inadequacy of diffusion research, the pro-innovation bias infers that all members of a system should adopt an innovation, which should then be diffused as rapidly as the system allows; such perceptions overwhelmingly assume an innovation is “good” – Fichman’s “Right Stuff” – and thus should be universally accepted. Moreover, given this universality, the innovation should not experience rejection or re-invention. While first identified by Rogers and Shoemaker as early as 1971, the pro-innovation bias continues to represent an ongoing problem for diffusion scholars, particularly in the area of causality, a result of an overwhelming reliance on correlational analysis of survey data (Rogers and Shoemaker 1971; Rogers 2003). The intellectual integrity of diffusion studies is potentially compromised with this oversight, as other rich diffusion research areas are ignored, such as why an innovation was not adopted or failed post-adoption, or was not subjected to *re-invention*. In some instances, the omission of these subjects may be a function of the available data. For instance, in the case of a successful diffusion effort, there is an extent *rate of adoption* that can then

be measured; in the case of failed diffusion, reconstruction is hampered by the lack of a visible or irregular audit path.

As a result of this lack of traceability, innovations that were initially adopted and later rejected, or simply rejected then become of little interest to diffusion researchers. *Re-invention* studies also pose their own unique challenges, given the variety of forms reinvention can assume, giving rise to methodological quandaries regarding classifying what is and is not “adoption”. Rogers states that the use of conventional methodologies by diffusion researchers, rather than struggling with taxonomic and/or methodological ambiguity, tended to focus their investigations on successful diffusion; thus, a pro-innovation bias entered diffusion research (Rogers 2003).

Consistent with the unique dimension of time in diffusion, are the problems inherent with its measurement, problems Rogers (2003) identifies as “methodological curses”. As diffusion is a process that occurs over time, the exclusion of time is not possible; this dependence creates a weakness when using *recall data* from adopters such as research respondents, as it relates to contextualising adoption, for instance, remembering the date on which they adopted a particular innovation. According to Rogers, this process essential involves “looking over one’s shoulder” and trying to “mentally reconstruct” an individual’s past innovation experiences. Such reconstructions are understandably “not very accurate and undoubtedly varies on the basis of (1) the innovation’s salience to the respondents; (2) the length of time over which recall is requested; and (3) individual differences in education, mental ability, etc.” (Rogers 1976).

Another critique involving bias is that of diffusion research siding with *change agents*, who promote a particular innovation, rather than those individuals considered *potential adopters*. Rogers (1976; 2003) categorises this shortcoming as *source bias*, and posits that this bias “is perhaps suggested by the words that we use to describe this field

of research: ‘diffusion’ research might have been called something like ‘problem solving,’ ‘innovation seeking,’ or ‘evaluation of innovations’ had the audience originally been a stronger influencer on this research”.

Given the preponderance of diffusion research is sponsored by groups, (defined as pro-source), rather than individuals, this introduces further categorisation within the problem of source bias, that of *individual blame* versus *system-blame*. *Individual blame* perpetuates the belief that an individual is answerable for their problems instead of the system of which the individual is a part. As the overwhelming concentration is “on the *individual* as the unit of analysis in communication research (while largely ignoring the importance of communication *relationships* between sources and receivers)” assigning blame to individuals is understandable, and moreover, “is often due to the assumption that the individual, as the unit of response, must consequently be the unit of analysis (Coleman 1958-59)” (Rogers 1976).

A fourth criticism of diffusion theory also pertains to this monadic aspect of adopters, relative to the consequences of adoption, specifically the distribution of perceived socioeconomic benefits among individuals within the system. When investigated, this issue of equality has demonstrated that diffusion often exacerbates the existing socioeconomic gaps between higher and lower cohorts within a system. Such socioeconomic disparity can be found in any system under investigation, but predominate in studies undertaken in developing nations. Equality gaps in an organisational context could include computational advantages, funding, and other structural mechanisms, in addition to individual considerations such as training, formal education and gender.

3.6 Secondary Theoretical Support – theories of technology use, adoption and effectiveness within organisations

Van de Ven et al. (1986) demonstrated that during the innovation process, ideas are transient; they proliferate “into divergent and parallel processes”. We have previously noted that an innovation can be changed by adopters through a process of *re-invention*, an activity normally occurring during the *adoption* and *implementation processes* (Rice and Rogers 1980; Rogers 1995; 2003). Comparably, other diffusion scholars such as Clark and Staunton (1989), have rejected notions of innovation as a static or isolated set of objects or practices; rather, they have emphasised examination of “complex innovation configurations and changes in an innovation’s features over time”. Such proliferation, change, and re-invention implies a degree of interactivity and subsequent modification of ideas within an organisation, resulting in “new organisational forms and management practices which tend to be embedded in social and historical contexts” (Slappendel 1996). Studies of technological innovation have consistently demonstrated that users or adopters continue to modify both technology and their understanding of technology far beyond its design and implementation.

In accepting this view of dynamic organisational behaviour, technological use and adoption theory rejects the notion of organisational absolutism - the inflexibility of Weber’s “iron cage”. An organisation’s ability to modify its form has resulted in a postmodern, anti-Taylorist acknowledgment of the interrelation of organisation and environment, rather than traditional memes of productivity and control. A survey of the early literature on innovation in organisations documents a variety of theoretical perspectives. One emergent perspective, as noted by Becker and Whisler (1967) was the “humanistic approach,” posited by scholars desiring to “explain innovation behaviour in terms of the personality characteristics of organisational participants, and a ‘structural approach’ used by those seeking to explain innovative behaviour in terms of structural differences” (Slappendel 1996). However, Pierce and Delbecq (1977) propose a third

perspective: “Organisational innovation can thus been seen from three perspectives. The deterministic structural model has captured the most attention; i.e. structure and context cause innovation. Alternatively, member values and attributes can be cast as the primary rival causal force in determining organisational innovation; i.e., elite values favourable to change best predict organisational innovation. Finally, the relationship between organisation and innovation may be interactively influence by both structure and membership”.

	<i>Individualist</i>	<i>Structuralist</i>	<i>Interactive process</i>
Basic assumptions	Individuals cause innovation	Innovation determined by structural characteristics	Innovation produced by the interaction of structural influences and the actions of individuals
Conceptualization of an innovation	Static and objectively defined objects or practices	Static and objectively defined objects or practices	Innovations are subject to reinvention and reconfiguration. Innovations are perceived.
Conceptualization of the innovation process	Simple linear, with focus on the adoption stage	Simple linear, with focus on the adoption stage	Complex process
Core concepts	Champion Leaders Entrepreneur	Environment Size Complexity Differentiation Formalization Centralization Strategic type	Shocks Proliferation Innovative capability Context
Research Methodology	Cross-sectional survey	Cross-sectional survey	Case studies Case histories
Main authors	Rogers March and Simon	Zaltman et al.	Van de Ven

Table 3.6.1 – Main Features of the Three Perspectives (from Slappendel (1996))

Table 3.6.1 provides an overview of these three perspectives, organised from left to right according to their historical precedence. While the individualist and structuralist perspectives have traditionally prevailed among most scholars of organisational innovation, both are being increasingly challenged by the *interactive innovation* process perspective (Slappendel 1996). In studying the organisational context of the AMLPT artefact, we assume primarily a structuralist perspective, as well as drawing from the interactive perspective in specific instances where applicable. The structuralist

perspective of technology is derived from Gidden's (1979; 1984) work in social constructivism, culminating in his theory of structuration. Structure in this context is "understood as the set of rules and resources instantiated in recurrent social practice". While technology can "exist" in abstract terms, it is not until it is used in some deliberate, repeated human activity that is then "structured" through this ongoing usage process. Orlikowski (2000) states that:

"Existing structuration models of technology examine what people do with technologies in use, positing such use as an appropriation of the 'structures' inscribed in the technologies. Such appropriation occurs when 'people actively select how technology structures are used' (DeSanctis and Poole 1994).

Appropriation is an apt metaphor for describing the action that humans exhibit in shaping the situated use of technology; moreover, appropriation captures this human agency "in terms of interaction with the structures embedded within technology," as well as the specific context of the technology structure" (Orlikowski 2000). As well as a method for the analysis of technology, structuration theory has also been adopted by a number of scholars in their research into organisational processes (Ransom, Hinings et al. 1980; Willmott 1981; Manning 1982; Riley 1983; Smith 1983; Spybey 1984; Pettigrew 1985; Roberts and Scapens 1985; Barley 1986). Their subsequent use of structuration resolves "the dilemma of choosing between subjective and objective conceptions of organisations, and allows them to embrace both (Willmott 1981; Dow 1988; Van de Ven and Poole 1990)" (Orlikowski 1992). Technology recursively facilitates and emanates from human action; Orlikowski defines this recursion as the *Duality of Technology*, the first of two premises she puts forth regarding the relationship of human action and technology. The second premise, "a corollary of the first, is that technology is interpretively flexible, hence that the interaction of technology and organisations is a function of the different actors and socio-historical contexts implicated in its development and use" (Orlikowski 1992). To illustrate these various

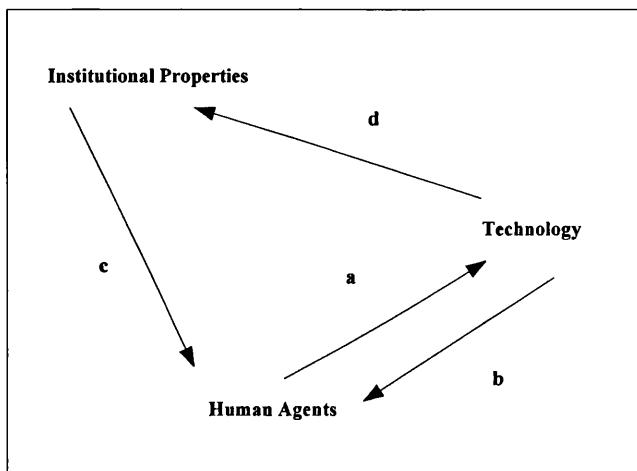
interdependencies and relationships, Orlikowski developed the *Structuration Model of Technology*, the syntax of which is uniquely applicable to attributes of diffusion of innovations. Such theoretical symmetry is useful in shaping the AMLPT *social system* and reification of behavioural attributes between diffusion and technology adoption and use. Significantly, the structuration model provides a richer taxonomic catalogue than that of DoI theory, providing the researcher with a more robust narrative and description vocabulary, particularly in regards to organisations (figure 3.6.1). The structuration model of technology consists of four discrete elements:

- a. **Human agents:** technology designers, users, and decision makers
- b. **Technology:** material artefacts mediation task execution in the workplace
- c. **Institutional properties of organisations:** structure, business strategies, ideology, culture, control mechanisms, standard operating procedures, division of labour, expertise, communication patters, as well as environmental pressures such as government regulation, competitive forces, vendor strategies, professional norms, technological awareness and socioeconomic conditions
- d. **Influence of human use of technology on organisations:** does the technology reinforce the (more often) or transform them (less often)

Using Orlikowski's (1992) vocabulary, we can then summarize the influences of the aforementioned elements within the structuration model of technology, as well as explaining the relationships illustrated in Figure 3.6.1:

- I. *Technology is the product of human action (arrow a).* As a human artefact, technology only comes into existence through human action, and is sustained by human action through the ongoing maintenance and adaption of technology.
- II. *Technology is the medium of human action (arrow b).* Because technology is use by workers, it mediates their activities; that technology also constrains the performance by facilitating it in a particular manner is an important corollary of this.
- III. *Human action is situated within organisations and shaped by organisational contexts (arrow c).* When designing, appropriating, modifying or resisting technology, human agents are influenced by the institutional properties of their setting.

- IV. *The manner in which human action impacts the institutional properties of an organisation (arrow d).* Does the action reinforce the organisation or transform it. Weick (1979) states that “technology is an ‘enacted environment,’” the construction of which is derived from organisational structures of “signification, domination, and legitimization”. The appropriation, indeed the adoption and implementation of technology tacitly suggests the change or reinforcement of signification, domination and legitimacy within a particular organisation or social system.



ARROW	TYPE OF INFLUENCE	NATURE OF INFLUENCE
a	Technology as a Product of Human Action	Technology is an outcome of such human action as design, development, appropriation, and modification
b	Technology as a Medium of Human Action	Technology facilitates and constrains human action through the provision of interpretive schemes, facilities, and norms
c	Institutional Conditions of Interaction with Technology	Institutional Properties influence humans in their interaction with technology, for example, intentions, professional norms, state of the art in materials and knowledge, design standards, and available resources (time, money, skills)
d	Institutional Consequences of Interaction with Technology	Interaction with technology influences the institutional properties of an organisation, through reinforcing or transforming structures of signification, domination, and legitimization.

Figure 3.6.1 – Structuration Model of Technology (From Orlikowski (1992))

3.7 Applicability of theories of technology use, adoption and effectiveness within organisations

The rich body of organisational theory relative to the adoption and use of technology provides a collage of perspectives. In keeping with the diffusion-centric approach of this dissertation, applicable choices narrow appreciably, as in the majority of

references surveyed, the predominate loci of research is the IT artefact itself, (i.e. individual approaches to MIS design and use (Culnan 1987; Prescott and Conger 1995)), rather than the organisation. As we seek an understanding of innovation as a means of gauging effectiveness within a *social system*, rather than simply a precursor to technocentrism, this “dominant paradigm” approach is severely limiting, unnecessarily restrictive and philosophically bereft.

The structuration model of technology seeks to extend contextual understanding beyond technological determinism (Orlikowski 2000). In shaping our understanding of the AMLPT artefact, its effectiveness, and diffusion within the AMLPT *social system*, structuration is realised as a dynamic process that is embedded historically and contextually. Contrasting with social models that related their components in a linear fashion, structuration compliments diffusion theory through its recursive interactions. As with the diffusion attributes of *re-invention*, *discontinuance*, and *sustainability*, the structuration model presumes that organisational elements may exhibit contrary behaviours and attributes, as well as undermining organisational or adoptive intent. A *social system*’s acknowledgement of these contradictions can enhance cognition of potential failure points, organisational dissonance, and instability, thus initiating the *innovation-decision process* (Orlikowski 1992).

The structuralist perspective, framed by the structuration model of technology, draws attention to the interrelation of organisation and environment and serves as a method to navigate complexity within the AMLPT compliance domain. Furthermore, this model allows the researcher to conceptualise and investigate the relationship between technology and a *social system* with diverse hierarchies, such as the individual MLRO, AML Group, and Bank-level compliance functions. This conceptualisation capability provides a method to surmount the problem of levels of analysis as identified by a number of organisational scholars (Rousseau 1985; Kling 1987; Leifer 1988;

Markus and Robey 1988), and more importantly, emphasises the benefit of comprehending the diverse layers through which technology interacts with an organisation or *social system*.

Significantly, “by moving across levels of analysis and boundaries of time and space, the structuration model of technology affords an examination of technology transfer among organisations” (Orlikowski 1992); such a lens further clarifies our understanding of individual and in particular, *heterophilous* organisational adopters, given the propensity for one organisation to adopt or reinvent another’s AMLPT innovation. The expansive character of *the structuration model of technology* mitigates the probability of investigating only discrete diffusion relationships; for instance, how technology influences adopters without investigating the *innovation-decision process*, or completely excluding the *social system*.

Interest in the efficiency, effectiveness, productivity or “excellence” of an organisation has spurred research amongst diverse fields such as economists, financial analysts, management theorists, management philosophers, organisational behaviourists, as well as countless papers in management schools. Yet, since Taylor’s pioneering work in 1911, empirical research has done little in the way of contributing to a comprehensive theory of organisational effectiveness (OE). However, in developing a means of measuring the effectiveness of AMLPT, we draw on the work of Lewin and Minton (1986), who, through extensive research into theories of organisational effectiveness emergent in the last 30 years, suggest that indicators and measures of effectiveness can be deduced from the literature. They state that:

“a number of authors have noted that when conducting or comparing organisational effectiveness studies it is important to specify whether it is the variables that *predict* effectiveness, or the variables that *indicate* effectiveness, that are of interest (e.g., Cameron (1986). In contrast, (table 3.7.1) illustrates a number of influential management and organisational philosophies all of which articulate (with the exception of the population ecology perspective) competing principles of management *presumed* to be causally related to the effectiveness of organisations,

without distinguishing between prediction and indicator variables. Indeed, it is often not possible to make general statements about whether a variable is of one type or the other, as what is a predictor variable in one context may be an indicator variable in another context (just as what is a means in one context may be an *end* or *goal* in another context). Thus in (table 3.7.1), we have labelled the last column Typical Effectiveness Attributes, and intend for the word attributes to encompass in meaning both *predictor* and *indicator* variables" (Lewin and Minton 1986).

While these competing management principles all attempt to answer questions such as: "What is effectiveness? What are its indicators? What are its predictors? Can it be specified or measured? Can it be related to particular perspectives, environment, behaviours or structures? Is it a constant or an ideal? Does it change with time and organisational maturity? Can't it be sought, gained, enhance, or lost? Why is one organisation effective at one time and not another, or why is one organisation effective and another not?" (Lewin and Minton 1986), there is no succinct path to an answer or answers. Given this is but a sample of potential lines of inquiry, as well as fertile ground for epistemological liberty, the lack of universal and resilient general theories of organisational effectiveness caused Goodman, Atkin and Schoorman (1983) to observe that "The general absence of strong theories has nurtured ad-hoc atheoretical and noncumulative empirical studies of OE". Somewhat pessimistically, they go on to state that the potential for resolving this ad-hoc approach is "unlikely, and call for a moratorium on further studies of organisational effectiveness" (Goodman, Atkin et al. 1983; Lewin and Minton 1986).

Indeed, this dearth of consistent rigor leads Van de Ven (1983), in his review of *In Search of Excellence* to state that "... current administrative theory does not explain or incorporate the contradictions and trade-offs inherent in organisational life," and furthermore:

"Most administrative theories begin with or search for internal consistencies in the nature of man and organisations and relegate contradictions, as indicators of either poor theory or anomalies, to an area outside the bounds of the theory. Correspondingly, most administrative theories are static and are rightly criticized

for their inability to explain the dynamics of change and development in organisational form and individual behaviour. There is a growing realization that a dynamic theory that can explain both stability and change should begin with and directly address the tensions and conflicts inherent in human institutions. Peters and Waterman have begun in this way”.

In addressing this lack of theoretical universality and implied intellectual inertia, Lewin and Minton (1986), argue:

“... the extent to which major components of a contingent behavioural theory of organisational effectiveness already exist, one incorporating the paradoxes and trade-offs inherent in real life organisations. We also propose in this paper an agenda for causal research on organisational effectiveness, and a research strategy involving the engineering of organisational effectiveness. This approach could lead to an inductive, applied, empirically-based theory of contingent organisation design. We stress the word "contingent" so as to express our belief in the futility of seeking a universal, overarching theory of effectiveness. *In other words, we suggest that organisation designs can be distinguished in terms of their effectiveness attributes, thus contributing to an increased rationality in the practice of organisation adaptation and re-design; to a comparison of organisations in terms of their relative effectiveness; and to the facilitation of on-going organisation self-evaluation and assessment*”. (Author’s italics)

What emerges from a review of Lewin and Minton’s suggested organisational designs and their inherent effectiveness attributes (see right hand column of table 3.7.2), is the commensurate applicability of the attributes of diffusion and adoption of innovation as an effectiveness measure.

Furthermore, structuralist notions of the relationships among the human actor, environment and organisation, particularly in the work of Yuchtman and Seashore (1967), and Lorsch and Morse (1974), provides further appropriate theoretical support in evaluating the receptivity to innovation within the AMLPT *social system*. According to Lewin and Minton (1986), Campbell (1977) provides another assessment of organisational effectiveness literature, suggesting:

“how criterion measures of organisational effectiveness should be developed so that they can be used to compare organisations, evaluate the effects of organisational development efforts, and determine what characteristics of organisations are significantly associated with organisational effectiveness as a

basic construct" (p. 13)". ... "Campbell also presented a taxonomy of the various criteria he found being used in the literature, to account for "all variables that have been proposed seriously as indices of organisational effectiveness" (p. 36)"."Campbell went on to suggest a relative lack of value in "objective" inquiry, arguing that the development of organisation-specific models based on clear, explicit assumptions would be generally more promising. Organisational effectiveness, then, would be the degree to which the organisation's 'end' objectives are accomplished subject to certain constraints".

Further to Campbell's observation on the need to evaluate organisational characteristics, a number of sub-theories of organisational innovation, (Burns and Stalker 1961; Thompson 1965; Aiken and Hage 1971), have identified several of these characteristics, for instance, the tendency of decentralised and informal organisational structures to be more hospitable (Ciborra 1999c) to innovation; such flexibility and openness has been shown to encourage new ideas. According to Subramanian and Nilakanta (1996), "A common thread running through all these sub-theories is that all innovations are not similar, therefore organisational characteristics will have different impacts on different types of innovation". However, compared to the larger body of research relative to organisational characteristics and innovativeness, Subramanian and Nilakanta found that "there are relatively few studies that have examined the impact of innovation of organisational effectiveness (performance)". In some cases, strategic attributes and measures, such as those "low cost," "high cost," and "middle of the road," as developed by Porter (1980), or Miles and Snow's (1978) generic types of strategic orientation, (prospector, analyser, defender, and reactor), have been used to build categorical schemas or interval scales to conceptualise innovation as an integral dimension of organisational strategy. For example, Miles and Snow's "prospects" demonstrate aggressive and creative strategies that are indicative of high levels of innovativeness (Subramanian and Nilakanta 1996).

What emerges from Subramanian and Nilakanta's work is that organisational performance and effectiveness has been measured "using a variety of measures, as there

are no guidelines available to help researchers choose an appropriate measure of organisational effectiveness and performance. Even when multiple measures of organisational effectiveness have been used, their selection has been rather arbitrary and without any basis in theory (see Lewin and Minton (1986))”.

Subsequently, “organisational performance or efficiency may be measured using measures of efficiency and/or measures of effectiveness”. In establishing the effectiveness of AMLPT in support of procedures used by MLROs and compliance officers, we have chosen attributes of innovation as our measure. Innovation theorists such as Damanpour, Szabat and Evans (1989), distinguish between two types of innovation, sometimes referred to as the “dual core” typology of innovation, which categorises the two types as either an *administrative innovation* or a *technical innovation*, and exhibit the following characteristics:

“Administrative innovations are defined as those that occur in the administrative component and affect the social system of an organisation. The social system of an organisation consists of the organisational members and the relationships among them. It includes those rules, roles, procedures, and structures that are related to the communication and exchange between organisational members. Administrative innovations constitute the introduction of a new management system, administrative process, or staff development program. An administrative innovation does not provide a new product or a new service, but it indirectly influences the introduction of new products or services or the process of producing them.

Technical innovations are defined as those that occur in the operating component and affect the technical system of an organisation. The technical system consists of the equipment and methods of operations used to transform raw materials or information into products or services. A technical innovation, therefore, can be the adoption of a new idea pertaining to a new product or service, or the introduction of new elements in an organisation's production process or service operations” (Damanpour, Szabat et al. 1989).

In maintaining theoretical unity with Rogers, we reject Damanpour et al.’s distinction of social and technical systems; innovation adoption and diffusion in this study is measured within a *social system* inclusive of the *technology system*. This

contention aside, the remaining distinctions provide a useful descriptive set in defining behavioural and process attributes when measuring effectiveness. In creating a categorical schema to measure organisational effectiveness of the AMLPT artefact, we have, up until this stage, primarily drawn on theoretical constructs.

While not ignoring practitioner contributions, such as those of Barnard, Sloan, Townsend and Peters and Waterman, much of their work is grounded in earlier theorists, such as Taylor, Fayol, and Trist and Bamforth. More so, particularly in the case of Sloan and Peters and Waterman, their case methods focused on too narrow a subject, concentrating more on management style than innovation. For instance, Townsend's effectiveness philosophy of support for local entrepreneurship closely resembles Peters and Waterman's effectiveness attributes of autonomy and entrepreneurship.

Table 3.7.1 compares samples from historical effectiveness attributes and Campbell's taxonomy with those of Roger's DoI theory, again illustrating the applicable of diffusion attributes with those of organisational effectiveness. We further develop these attributes as measures of effectiveness in Chapter 4's discussion on research methodology.

<i>Representative Effectiveness Attributes from Historical Survey & Campbell</i>	<i>Diffusion Attributes from Rogers</i>
Overall effectiveness	Innovativeness
Flexibility/Adaption	Compatibility
Fit	Compatibility Match
Environment	Social System
Objectives/goals	Relative advantage
Utilisation of Environment	Compatibility
Conflict/cohesion	Complexity
Achievement emphasis	Relative advantage
Managerial interpersonal skills	Change agency & Champions
Control	Degree of Centralization Size
Training & Development Emphasis	Formalization Degree of specialization
Role & norm congruence	Formalization Degree of specialization

Table 3.7.1 – Sample set of compatible attributes between organisation effectiveness and diffusion theories

<i>Management Orientation</i>	<i>Representative Thinker(s)</i>	<i>Effectiveness Philosophy Highlights</i>	<i>Typical Effectiveness Attributes</i>
Scientific Management	Frederick Taylor (1911)	Time and motion studies; importance of standards, planning, control and cooperation; functional organisation; “one best way”.	Production maximization, cost minimization, technical excellence; optimal use of resources; task specialization
Principles of Management	Henri Foyle (1916/1925)	First ‘complete’ inductive management theory; based on rules or ‘principles’; views management as a teachable skill	Division of Work; clear authority and discipline; unity of command and direction; order, equity, stability and initiative, <i>esprit de corps</i>
Human Relations	Elton Mayo (1933)	Importance of emotional factors; sociological concepts of group endeavour; satisfied workers are productive workers; need for managerial diagnostic and managerial skills.	Productivity through employee satisfaction; satisfaction through attention to worker’s physical and emotional needs
Decision Making and Information Management	Herbert Simon (1947)	Effectiveness subject to bounded rationality; input/output efficiency criterion; functionalization based on subsidiary objectives.	Resource savings through rational development of goals; efficiency of information processing.
Socio-technical	E. L. Trist and K.W. Bamford (1951)	Joint resolution of social and technical organisational demands; social systems view of organisations; enterprise as open system.	Degree of social/technological “fit” and congruence of technical processes.
Strategic Management and Design	Alfred Chandler (1962)	Structure follows strategy; vertical and horizontal integration, and rationalisation of resource utilisation.	Structure/strategic congruence, manifested as organisational growth, competitive attainment, environmental control and flexibility/adaption.
Human Resources	Douglas McGregor Rensis Likert (1961, 1967)	Importance of organisational needs vs. organisational demands; power equalisation; participative management concurrent satisfaction of competing demands: ‘productive workers are happy workers.’	Employee satisfaction, productivity; cohesion, loyalty, open communication
Contingency Theory	P. R. Lawrence and J. W. Lorsch (1967)	Organisation design based on environmental factors; ‘best way’ contingent on a variety of conditions and situations.	Differentiation error, integration error; organisation/environment “fit”
Population Ecology	M. T. Hannan and J. Freeman (1977)	Relative unimportance of management; environmental determinism	Survival
Practitioner Contributions			
	Chester Bernard (1938)	Orgs. Are cooperative Syst.	Executive action & examples
	Alfred P. Sloan (1963)	Multi – division structure/de-centralised admin./centralized review	Efficiency through economies of scale; ROI and MBO driven
	Robert Townsend (1970)	Decentralised , sppt. for local entrepreneurship	Profitability; staff accessibility
	Thomas Peters and Robert Waterman (1983)	“7-Ss” – structure, strategy, systems, skills, style & shared values	Bias for action; customer-focussed; lean staff; flexible structure

Table 3.7.2 – The Historical Search for Organisational Effectiveness (from Lewin and Minton (1986))

3.8 Critique of theories of technology use, adoption and effectiveness within organisations

The principle critique of theories of technology use, adoption and effectiveness within organisations is a reliance on the *dominate paradigm*, from both an innovation perspective – the “Right Stuff” – and their concentration on the IT artefact at the expense of organisational and environmental factors. The use of the dominant paradigm furthers the problem of pre-innovation bias at the expense of other points of analysis relative to rejection or reinvention of an innovation. Recent research, such as that undertaken by Petter, DeLone et al. (2008), is beginning to address both the skew induced by these pervasive paradigmatic assumptions, as well as the resultant pro-innovation bias. Moreover, much of the preeminent research on IT innovation dates from the early 1990s, and is dominated by studies into the efficacy of dated technologies such as computer-aided software engineering (CASE) or enterprise resource planning (ERP) systems (Prescott and Conger 1995). There is a growing body of scholarship in the area of innovativeness in the adoption and use of internet-centric technologies and displays a high degree of technocentrism.

Though structuration theory provides many useful tools to understand the relationship of humans with their environment, it lacks certain strengths relative to organisational analysis. The structuration model of technology does not readily address organisational form, a property that is considered more institutionalised; subsequently there is the need for further analysis of the relationship between diverse organisational forms and their interaction with technology and human agency. While useful in providing insights into “the limitations and contributions of prior concepts of technology”, the structuration model tends towards the techno-centric in many instances, focusing more on the “how” than on the “why” (Orlikowski 1991).

While there is a rich tradition of research into organisational effectiveness as well as defining a means of measurement thereof, the lack of universal and resilient general

theories of organisational effectiveness has created an environment where, as we have previously noted, Goodman, Atkin and Schoorman (1983) observe that there is a "general absence of strong theories (which) has nurtured ad-hoc atheoretical and noncumulative empirical studies of OE".

We have also described Van de Ven's concerns as expressed in his 1983 review of *In Search of Excellence* noted that "... current administrative theory does not explain or incorporate the contradictions and trade-offs inherent in organisational life". As a result of these theoretical voids, the researcher is then faced with extensive investigations that may or may not result in a useful, applicable research lens. While much of the problem is one of investigative time and energy, it perhaps exposes a more significant epistemological problem in the organisational studies field. Lewin and Minton (1986), propose "an agenda for causal research on organisational effectiveness, and a research strategy involving the engineering of organisational effectiveness. This approach could lead to an inductive, applied, empirically-based theory of contingent organisation design. We stress the word "contingent" so as to express our belief in the futility of seeking a universal, overarching theory of effectiveness".

Lewin and Minton ground their proposed theory in an engineering construct derived from the use of data envelope analysis (DEA), an unproven technique at the time of their research in OE analysis (Lewin and Minton 1986). This may only serve to add further complexities in understanding organisational effectiveness, due to the "problems inherent in specifying some joint preference function or in attempting to specify the weights in some multi-attribute effectiveness measure (Cyert and March 1963)".

Chapter 4. Research Methodology

In the following chapter, we outline the research methodological approach used in this dissertation. Section one presents our arguments for the use of a pluralist methodology, consisting of two background case studies and a survey, as the guiding research strategy. Section two outlines our data collection methods and tools. The chapter concludes with a reflection on the coherence of the approach presented and the goals of the dissertation.

4.1 Research Strategy

Cornford and Smithson (1996) observe that the information systems discipline, with its antecedents grounded in “the traditions of computer sciences, and the social science traditions of management and organisational studies, calls upon other numerous scholarly disciplines, such as those of psychology for understanding issues of human-computer interaction (Card 1983), economics in determining the business value of a company’s investments in information systems (Parker, Benson et al. 1988) or geography in exploring the effects of new telecommunications infrastructure on patterns of urban growth (Castells 1989)”. This multidisciplinary and diverse nature has, as we noted in Chapter 3, has caused much consternation among researchers both external and internal to the IS research discipline due primarily to the absence of a “general theory” of IS. Yet Robey (1996), who posits that the “threat” this diversity represents to the “tyranny of elites”, those monistic theoreticians who according to Pfeffer (1982) would ensure that “conformity and control are the price a field must be willing to pay in order to receive the price of political power and institutional legitimacy”; therefore, these monistic theoreticians are absent the benefits such diversity entails. In his retort to these elites, Robey states there are four key advantages of diversity that emerge from the IS discipline:

- “First, *diversity in IS expands the foundation upon which knowledge claims in the field are based*. For example, claims to knowledge about the use of groupware technologies may arise from both a controlled laboratory study and an interpretive field study.
- Second, *diversity attracts good people to the field of IS, where they can address applied problems that interest them*. [For example], the founders of IS all earned their degrees in other fields, and IS continues to attract scholars from related disciplines.
- Third, *diversity fosters creativity*. In fields with unified paradigms, shifts in thinking rarely occur because the mainstream thinking is rarely challenged.
- Finally, *diversity advances the valued principle of academic freedom*. If academia stands for anything, it stands for the freedom to pursue problems and exploit opportunities for expanding knowledge. Knowledge creation is admittedly not an efficient process, and academic institutions are usually designed to be fertile sanctuaries for individual researchers, any one of whom could produce breakthrough findings.”

However, acceptance of Robey’s “diversity manifesto” is predicated on two essential obligations, the first of which is the researcher imposing discipline on their choice of theoretical frameworks. According to Robey, this disciplinary obligation stems “from Landry and Banville’s (1992) application of Laudan’s (1984) essay on science and values”, which calls for the avoidance of the “unregulated, anything goes” theoretical *status quo* of early IS research. Robey’s second obligation “pertains to our commitment to the ideal of collaboration within the IS field” (Robey 1996). Further to Landry and Banville’s position, the diversity in the IS field calls for a *disciplined methodological pluralism*, a stance favouring “...a diversity of methods, theories, even philosophies, in scientific inquiry” (Landry and Banville 1992). Other diversity adherents include Kaplan and Duchon (1988), Lee (1991), and Gable (1994), all of whom have urged both the use of pluralist research methodologies, but also the extending of the pluralist position

beyond that of methodology, to include both positivist and interpretivist research paradigms. Mingers (1997; 2001; 2001) has written extensively on the desirability of methodological pluralism, deriving much of his perspective from the work of Bhaskar (1994), Tashakkori and Teddlie (1998), as well as Habermas (1979; 1984; 1987; 1993).

He presents two main arguments, the first of which is:

“...that the real world is ontologically stratified and differentiated, consisting of a plurality of structures that generate the events that occur (and do not occur). Different paradigms each focus attention on different aspects of the situation, and so multimethod research is necessary to deal effectively with the full richness of the real world. The second argument is that a research study is not usually a single, discrete event but a process that typically proceeds through a number of phases...” (Mingers 2001).

Mingers identifies further support for multimethod research in the work of Tashakkori and Teddlie (1998), which includes, in a variation of Laudan’s *Research Justification Triad* (see figure 4.1.2), the concept of “(1) triangulation – seeking to validate data and results from combining a range of data sources, methods, or observers, (2) creativity – discovering fresh or paradoxical factors that stimulate further work, (3) expansion – widening the scope of study to take in wider aspects of the situation (Mingers 2001)”.

The triad metaphor is a useful description for conceptualizing the multimethod philosophy suggested by Mingers, Landry and Banville, (as derived from Laudan), as illustrated in figure 4.1.3. Further to the triad metaphor, is Minger’s visual adaption of Bhaskar’s stratified and differentiated worldview, or in Minger’s term, “the multidimensional world” (figure 4.1.1). From this adaptation, using tenants of Habermas’s theory of communicative action, Mingers presents a categorisation of research methods based on the relationship to three worlds: the *material world*, the *social world*, and the *personal world*.

“Each domain has different modes of existence and different epistemological possibilities. The material world is outside and independent of human beings. It

existed before us and would exist whether or not we did. We can shape it through our actions, but are subject to its constraints. Our relationship to this world is one of *observation* (rather than participation or experience), but such observations are always theory and subject dependent. We can characterise this world as objective in the sense that it is independent of the observer, although clearly our observations and descriptions of it are not.

From this material world, through processes of evolution, linguistically endowed humans have developed, capable of communication and self-reflection. This has led to the social and personal worlds. The personal world is the world of our own individual thoughts, emotions, experiences, and belief. We do not observe it, but experience it. This world is subjective in that it is generated by, and only accessible to, the individual subject. We can aim to express our subjectivity to others and, in turn, appreciate theirs. Finally there is the social world that we (as members of particular social systems) share and participate in. Our relation to it is one of intersubjectivity because it is, on the one hand, a human construction, and on the other, it goes beyond and preexists any particular individual. It consists of a complex multilayering of language, meaning, social practices, rules, and resources that both enables and constrains our actions and is reproduced through them. One of its primary dimensions is that of power (Mingers 1992)" (Mingers 2001).

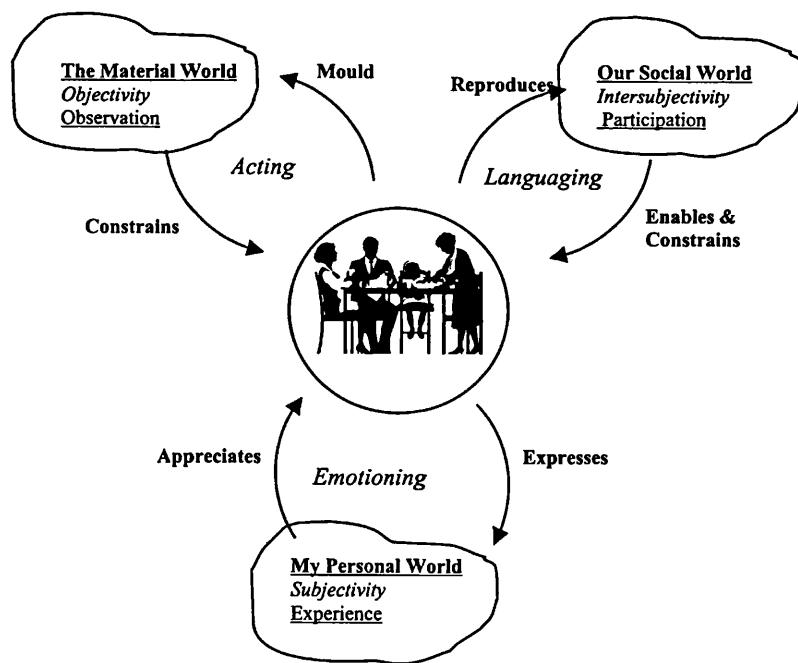


Figure 4.1.1 – Minger's (2001) Three Worlds Relevant to Research Methods (framework developed from work by Habermas)

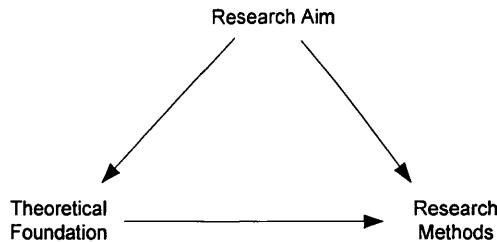


Figure 4.1.2 – Laudan's (1984) triad of justification; according to this representation, theoretical foundations for research and specific research methods are justified by research aims, or purposes. They should not be chosen because they conform to a dominant paradigm or because the researcher believes in their intrinsic value. Rather, theories and methods are justified on pragmatic grounds as appropriate tools for accomplishing research aims. Such discipline requires that researchers be clear about their aims, that they justify their choices of theory and method, and that they maintain a balance among the three positions on the triad (From Robey (1996).

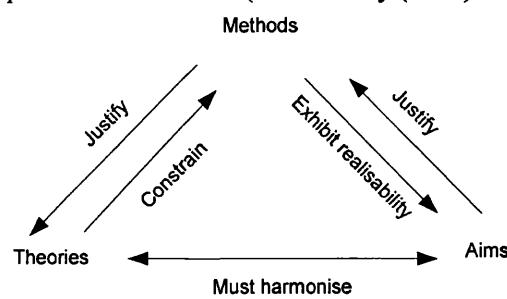


Figure 4.1.3 – Landry & Banville's Model for Implementing Laudan's Model

1. **Theories** - Are the theoretical foundations of the proposition adequately expressed? How is the proposition related to the present “theoretical corpus” of MIS? To what active fragments of this “fragmented adhocracy” is it more precisely linked? To what extent is it an original proposition as far as theory is concerned? Can it be identified with any of the MIS reference disciplines?
2. **Methods** - Does the proposition include a methodological part? Is it complete? Elaborated enough? Does it seem realistic? Is it viable? Does the proposition refer to orthodox methods?
3. **Aims** - What are the explicit or implicit aims of the proposition? Are there tensions between the implicit and explicit values? Who are the stakeholders to be considered for this research (managers? practitioners? academics?)
4. **Theories constrain methods (1 vs. 2)** - What general constraints does the theory put on methods? Is the method adapted to the nature of the theory?
5. **Theories must harmonize with aims and aims must harmonize with theories (1 vs. 3 and 3 vs. 1)** - Relative to the stated aims, how can progress be defined? Does the theory support the stated aims, and are the stated aims congruent with the theory?
6. **Methods must exhibit realizability of aims (2 vs. 3)** - Is the method well adapted to the aim(s)? Can the method assess the viability of the aim(s)? Would another method be more appropriate to the aims?
7. **Methods justify theories (2 vs. 1)** - Is the theory “in line” with the method? Can the theory be verified through this method? Can this method be complemented?
8. **Aims justify methods (3 vs. 2)** - Do we need a new method? Is the method a way of attaining the goals?

Using these principles, researchers in IS can justify their use of many individual paradigms and research methods. If a particular method cannot be justified, it should not be selected (Landry and Banville 1992)

Culnan (1987), using the results of her study of bibliographic citations, has recognised five sub-disciplines within information systems scholarship, arguing “that while MIS is still pre-paradigmatic, it has made progress, if one accepts the argument that MIS, like all social sciences, is a multiple paradigm discipline”. Culnan’s categories comprise research foundations, organisational approaches to information systems, individual approaches to information systems, information systems management, and information systems curriculum. The research methodology of this dissertation is in keeping with Culnan’s categorisations, in that it rests upon a research foundation within the interpretive tradition and seeks understanding of both the individual and organisational approaches to information systems use. Subsequently, the adoption of a pluralist multimethod research approach supports our use of the interpretivist paradigm in subjectively investigating the efficacy of AMLPT.

We choose to use Rogers’ work, as it is grounded in the sociology of communication and also Minger’s Habermas-inspired framework, as both are useful for categorising the interrelations of the *social system* under investigation. While the AMLPT artefact is a combination of several discrete technologies, it is nevertheless embedded in the social context of a compliance organisation and influenced by myriad factors therein, and therefore assumes the understood characteristics of an information system; it is not an isolated, self-perpetuating entity. Angell and Smithson (1991) make this distinction clear: “Information systems are *social systems* whose behaviour is heavily influenced by the goals, values and beliefs of individuals and groups, as well as the performance of the technology. As such, the behaviour of information systems is *not deterministic* and does not fit into any formal algorithmic representation (*author’s italics*)”.

4.2 Paradigmatic Foundations – grounded within interpretivist tradition

From a meta-theoretical perspective, we further develop our choice of the interpretivist paradigm through a brief discussion of differences between positivism and interpretivism, utilising the work of Weber (2004), Becker and Niehaves (2007), Orlikowski and Baroudi (1991) Chen and Hirschheim (2004), and Walsham (1995; 2006).

Positivism is “characterised epistemologies which seek to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements. Positivist epistemology is in essence based upon the traditional approaches which dominate the natural sciences” (Burrell and Morgan 1979). Convention categorises the differences between the two paradigms as those of *epistemological*, *methodological*, and *ontological* distinctions (Orlikowski and Baroudi 1991; Chen and Hirschheim 2004).

Epistemologically, positivists seek to build knowledge of reality beyond that of the human mind; epistemological assumptions “concern the criteria by which valid knowledge about a phenomenon may be constructed and evaluated. For example, the positivist world view asserts that a theory is true only if it is repeatedly not falsified by empirical events (Chua 1986; Orlikowski and Baroudi 1991)”; positivists are “concerned with the hypothetic-deductive testability of theories. Scientific knowledge should allow verification or falsification (Chen and Hirschheim 2004)”. Essential to positivist ontology is the belief that “the empirical world is assumed to be objective and hence independent of humans; reality exists objectively and independent from human experiences (Orlikowski and Baroudi 1991; Chen and Hirschheim 2004)”. Weber argues that the perceived ontological and epistemological paradigmatic differences are “spurious” for the most part. The substantive differences between positivists and interpretivists can be identified through the type of investigation and means of inquiry;

the classification methods used to communicate the results of those investigations, as well as the degree of the researcher's involvement, such as individual biases, hypothesis and assumptions, or other personal considerations as explicitly documented in their findings (Weber 2004).

Methodology is the significant delineator between the two paradigms. Positivism's emphasis on research approaches grounded in the scientific method is identified by the use of significant volumes of empirical data as well as diversity in its collection, and the use of methods such as laboratory experimentation and surveys. Such techniques are in marked contrast to interpretivism's use of case studies, phenomenology and other discrete methods. Yet even with such clear philosophical distinctions, selective paradigmatic adoption and pluralism is evident. As noted by Weber (2004), positivists may deploy interpretivist tools such as case study methods in their research, and conversely interpretivists may call upon the use of inferential statistics, surveys or other positivist methods in quantifying a particular behaviour. Further to Weber's (2004) observations, as well as those of Robey (1996), Mingers (2001; 2003), Landry and Banville (1992), Becker and Niehaves (2007), we present a similar view, arguing that bias towards "accepted" information systems' research paradigms, (the "traditional" or *dominant* paradigms (Orlikowski and Baroudi 1991)) and distinct research techniques, are grounded more in historicised conversations than on rational processes.

The ontological perspective of this research is concerned with developing an understanding of AMLPT. Furthermore, our interpretive perspective enables a means of comprehending individual behaviours and shared meanings among system members, (as well as those perceptions, social constructs and norms, created through formal and informal categorisation and communication), resultant from their systemic interactions (Kaplan and Duchon 1988; Walsham 1995). Orlikowski and Baroudi state that the interpretivist researcher presupposes "that people create their own subjective and

intersubjective meanings as they interact with the world around them. Interpretive researchers thus attempt to understand phenomenon through accessing the meanings that participants assign to them (Orlikowski and Baroudi 1991)", furthering Burrell and Morgan's assertion that individuals create their reality from a series "of assumptions and intersubjectively shared meanings" (Burrell and Morgan 1979). Through study of these social actions and their context, our interpretive research methods should result in "an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context" (Walsham 1993). Furthermore, this contextual understanding serves to further illuminate the connotations and social behaviours of the participating actors in a social setting (Hirschheim and Smithson 1986).

Research into Information Systems through the use of interpretive methods is well established. The acceptance of interpretive research in information systems has been steadily growing, as is evident in the early work of Orlikowski and Baroudi (1991), as well as Culnan (1986; 1986; 1987), and later that of Mingers (1997; 2003) and Walsham (1993; 1995). During the early-to-mid 1980s, an introspective discourse began among prominent information systems researchers, regarding the stature of information systems research relative to norms more emblematic of established scientific disciplines, primarily as they related to the existence of a dominant paradigm (Keen 1980; Hamilton and Ives 1982; Klein and Welke 1982; Benbasat 1984; Weber 1984; Mumford, Hirschheim et al. 1985; Culnan 1986; Culnan and Swanson 1986; Culnan 1987; Lyytinen 1987; Banville and Landry 1989; Hirschheim and Klein 1989).

Orlikowski and Baroudi, in their analysis of the evolution of the information systems discipline, further established that the nascent interpretivist perspective within published information systems research was taking hold against the prevailing positivist tradition. Mingers' later work illustrated this development, as between 1993 and 2000,

approximately 17% of the subject matter of papers accepted for publication in six well-known US and European-based journals assumed an interpretivist position. Later research by Walsham (2006) offered further evidence of this growth trend, as several journals have devoted entire “special issues” to interpretivist-based research.

The philosophical antecedents of interpretivism are found in the work of Immanuel Kant (1724-1803) and influenced more recently by the work of Dilthey, Husserl and Weber (Burrell and Morgan 1979). As one of the first philosophers to espouse the essential ontological and epistemological basis of interpretivism, Kant put forth the idea that *a priori* understanding must proceed any cognisance of the sense data of the empirical experience (Burrell and Morgan 1979).

Within the interpretive paradigm, two significant branches of interpretive philosophy are also relative to our use of interpretivist methods in the interpretation of information systems: *hermeneutics* and *phenomenology*. Grounding their theories in the early work of Dilthey and his notion of *verstehen* (Dilthey 1976; Burrell and Morgan 1979), Gadamer (1975; 1976) and Ricoeur (1974; 1976) are the preeminent exponents of this school, which espouse the belief that “we come to understand a complex whole from preconceptions about the meanings of its parts and their interrelationships” (Klein and Myers 1999). The exploration of the part relative to the whole and vis-à-vis is described as the principle of the *hermeneutic circle* and is foundational to any form of interpretive research.

Using an example from Gadamer (1976), in which he uses the example of translating the meaning of sentence into a foreign language, Klein and Myers (1999) further elaborate: “The process of interpretation moves from a precursory understanding of the parts to the whole and from a global understanding of the whole context back to an improved understanding of each part, i.e., the meanings of the words. The sentence as a whole in turn is part of some larger context”. Subsequently, interpretive researchers do

not accept an objective, positivist, single reality; rather, they attempt to explain the phenomena by acknowledging the variety of meanings, norms, and beliefs of the social system (Keen 1991; Orlikowski and Baroudi 1991).

Phenomenology, as articulated in the work of Heidegger (1962) and Husserl (1970; 1982), involves a level of interpretation at a far greater micro level, and attempts to:

“...articulate the essence (the most basic characteristics) of the human condition in terms of a number of elementary categories. Examples of such categories which have been used in information systems research are ‘embodiment,’ or ‘breakdown’ (Madsen 1989). What is important here is the recognition that these types of concepts were extracted from common, everyday experiences such as hammering, or misunderstandings in everyday language (breakdowns). Therefore, intrinsic to interpretive research is the attempt to relate particulars as may be described under the principle of contextualisation to very abstract categories; unique instances can be related to ideas and concepts that apply to multiple situations” (Klein and Myers 1999).

To maintain scholarly legitimacy as well as ensuring the future applicability of the research, it is important that theoretical abstractions and generalisations experienced and/or collected by the researcher, are carefully correlated to the pertinent details of the field work as closely as possible. Conceptually, abstraction supports the argument by Walsham that “the validity of the inferences drawn from one or more research method does not depend on the representativeness of the research methods used in a statistical sense”; more so “on the plausibility and cogency of the logical reason used in describing the results from the research, and drawing conclusions from them” (Walsham 1993). By adopting interpretive methods, we acknowledge that domain access to the research subjects is a result of social constructions such as language, consciousness, and shared meanings; subsequently, we assume the perspective of an “insider” within the research domain, observing and interpreting their communication and behaviour through a hermeneutic means within both an individual, immediate context as well as that of the larger social system (Trauth and Jessup 2000).

In shaping the research strategy and methodological framework, we acknowledge that our work is shaped by our *a priori* experiences, understandings and thus influences the way we formulate our understanding of the research subject (Butler 1998; Becker and Niehaves 2007). Indeed, such multi-perspective complexities compelled Walshaw to observe that:

“[i]nterpretive researchers are attempting the difficult task of accessing other people’s interpretations, filtering them through their own conceptual apparatus, and feeding a version of events back to others, including, in some cases, both interviewees and other audiences. In carrying-out this work it is important that interpretive researchers have a view of their own role in this complex process” (Walshaw 1995).

Orlikowski and Baroudi acknowledge this complex relationship between theory and practice, noting that “the researcher can never assume a value-neutral stance, and is always implicated in the phenomenon being investigated”. The extent of this implication has led to adopting constructivism theory as a means to gauge the extent of a researcher’s role within the research domain. Using concepts of “weak” and “strong” constructionist views, both variants “recognize that human actors enact their physical and social reality and that they come to share a set of meanings around this reality” (Weick 1984).

Orlikowski and Baroudi describe the two views thusly:

“In the “weak” constructionist view, the researcher attempts, through various data collection techniques, to understand the existing meaning systems shared by the actors, and thereby interprets their action and events in her recounting. As Fay (1987) puts it, “the social scientist is re-describing an act or experience by setting it into progressively larger contexts of purpose and intelligibility, . . . [and] reveals *what* the agents are doing by seeing what they are up to and how and why they would be up to that.”

In the “strong” constructionist view, however, the researcher is not merely presumed to describe a phenomenon in the words and categories of the actors, but is presumed to enact the social reality she is studying. Retelling the actors’ story is never fully possible, as the interpretive schemes of the researcher always intervene, and hence the researcher in part creates the reality she is studying through the constructs used to view the world. Astley (1985) writes:

The world of practice has its own "objective" reality, but since as scientists, our only recourse to that world is through what we see and do, our knowledge is unavoidably subjective in nature. The "facts" constituting our knowledge, are necessarily theory-dependent, since we can perceive nothing except through the knowledge structure in which perception is embedded... There is no direct access to reality unmediated by language and preconceptions."

The descriptive use of "weak" and "strong" imply a position based on a researcher's choice of principles relative to their perception of involvement, subjective measures that include, for example, those of hermeneutic contextual analysis, as they relate to the level of interaction among subjects. In the view of some positivists, such subjective measures may lessen the rigor of the research.

Klein and Myers (1999), in their discussion of formalised principles, counter that a use of a particular set of principles does not necessarily compromise the emergent nature of interpretivist-based research; however, they further state that what is incumbent on researchers is that they do not display unquestioned allegiance to such principles. The researcher should use principles as a means of validating the applicability and legitimacy of a position. Klein and Myers further affirm that using principles in interpretive research ensures that all the dimensions of a particular phenomenon have been explicitly considered, along with a means of evaluating the completed research in the future. The research approach in this dissertation assumes a weak constructivist approach, as our *a priori* understanding of the effectiveness of AMLPT is subjective, based on the historical context discussed in Chapter 2. We subjectively look to understand the *rate of adoption* as a measure of effectiveness of the AMLPT artefact in support of compliance officers and MLROs through interpreting a variety of qualitative measures.

4.3 Strategy of Inquiry: Structured and Unstructured Interviews and Survey

The research approach was initially to have been a case study of the first vendor to market with a viable AMLPT offering. What became apparent, after several

discussions with not only the initial research subject, but also other firms of a similar nature, was that a case study approach would be inappropriate, particularly in regards to the timing in initiating the research project.

The historical context of the research was comprised of several innovators with considerable financial opportunity at hand, combined with a narrow window of opportunity to seize market leadership. Subsequently, in investigating the suitability of our primary subject for case study research, their reticence, in allowing access to not only their intellectual property, but also to their overall operational methods, along with their sensitivity to market perceptions, resulted in the belief that such restrictions would have severely hampered the author's ability to collect meaningful data. Further complicating the situation was the ongoing effort from not only the primary research subject, but also secondary nominees, to recruit the author into their organisation, given the author's background. Furthermore, it was clear that commercial and intellectual property considerations would be an ongoing concern, when approaching the AMLPT artefact from a supplier/vendor perspective.

The author's later attendance at a gathering of AML-CFT professionals provided an opportunity to discuss possible research opportunities with members of the entire AML-CFT domain, to include practitioners, such as compliance officers and MLROs, (from within and external to the financial domain), as well as regulators, consultants, and other technology providers ancillary to those providing behavioural profiling technology. What was evident from these discussions was that the number of both users and providers of AMLPT, had increased exponentially since the author first approached the topic in 2004; moreover, interest in the *rate of adoption* of these technologies would not be served through use of case study methodologies. This research aims to assess the adoption and use of AMLPT as a measure of effectiveness in support of compliance officers and MLROs. In doing so, we seek a representative sample of organisational

types in the form of retail, commercial, and investment banks, and individual adopters therein, across that sample. Given the breadth of the research subject, the author concluded that a mixed methodology of structured and unstructured interviews to compliment and augment a survey-based approach would be more appropriate.

The use of interviews in qualitative research can be described as an “attempt to understand the world from the subjects’ point of view, to unfold the meaning of peoples’ experiences, to uncover their lived world prior to scientific explanations” (Patton 1987; Patton 1990). So extensive is the use of interviewing to acquire knowledge and information that some have posited “that we live in an interview society (Atkinson and Silverman 1977; Silverman 1993)”. Walsham argues that interviews:

“...are the primary data source, since it is through this method that the researcher can best access the interpretations that participants have regarding the actions and events which have or are taking place, and the views and aspirations of themselves and other participants. Even in the case of interpretive case studies being carried out as a participant observer or action researcher, it can be argued that interviews are still an important data source, since they enable researchers to step back and examine the interpretations of their fellow participants in some detail” (Walsham 1995).

Critical to the success of the interview process is the role assumed by the researcher, as well as their presentation style. For instance, Zuboff (1988) likens her interview technique to that of a “non-judgemental form of listening”; her technique compliments the interview approach of the author as well. Moreover, the author’s previous consultancy work involved the extensive use of interviews, document reviews, and analysis of a variety of organisational artifacts. This past experience was a key contributing factor to the author’s resultant choice of methodology.

The use of interviews provides a method to enhance the accuracy and strength of data gathered through questionnaires. The conversational nature of the interview process allows both researcher and respondent the opportunity to expound on topics to a greater extent than the limited scope of a constrained survey answer, as well as providing further

contextual insight as to the respondent's environment and perceptions of the research domain. The immediacy of the conversational medium between the researcher and the interviewee, allow for an expeditious method of further validating survey responses, addressing any potential or perceived ambiguities, as well as resolving misunderstandings or contextual omissions (Cornford and Smithson 1996).

The author's past experience in interrogative data gathering was enhanced by maintaining a high level of situational awareness. This awareness proved fruitful in exposing physiological forms of communication that appeared contrary to spoken responses. When observing such a response, a particular line of questioning could be re-phrased instantaneously, omitted, or adjusted to reflect any noticeable discomfort or apparent attempts to avoid a particular line of inquiry. Cornford and Smithson go on to state that this ability, to adjust one's line of questioning in an interview, allows the researcher the ability to "deal with much more complex topics than questionnaires and deal with topics for which different people may have very different perspectives" (Cornford and Smithson 1996).

These perspectives can also be shaped to some extent, as the researcher can impose structure on the way the interview instrument is configured, and in some instances, use different structural parameters on the same subject. Such parameters are categorised as structured or unstructured interviews. Furthermore, structural parameters can range from:

"...the totally unstructured interview, where the interviewer merely provides the topic and the conversation proceeds without any planning, to the totally structured, where the interviewer asks only pre-prepared questions in a pre-planned sequence, without divergence and with the minimum of explanation. This kind of interview may also be based on the completion of a questionnaire" (Cornford and Smithson 1996).

There are a variety of difficulties and deficiencies inherent in the interview method. From a practical perspective, many are primarily logistical. Depending on the

size and geographic distribution of the research subject, reaching interviewees can take considerable time and effort to organise. Hierarchy plays an important part, as access to executive level managers may be problematic due to their views on the validity of the interview as well as time constraints. Use of a sponsor within the organisation can mitigate both problems, as 1) they can arrange for a central location in which to conduct interviews, and 2) provide introductions to and intercession with interviewees who ordinarily would not speak with individuals outside the organisation, as well as providing insight as to who may or may not be an appropriate subject. The interview process requires considerable preparation prior to actually meeting the subject. Travel considerations aside, there is the exponential factors of both the number of interviewees and the number of questions the researcher intends to ask; time considerations increase proportionately to the size of the interview sample. Lastly, there is topicality. Cornford and Smithson observe that “some interviewees may not fully understand what information you require and, as a result, the interview rambles off into the realms of the irrelevant”. Moreover, particularly in regards to managers and executives,

“it can be very difficult to redirect the conversation back to your intended area, especially if the interviewee is a senior manager...often, especially with busy managers, the interview is subject to constant interruptions, from either telephone calls or colleagues” (Cornford and Smithson 1996).

While interviews are a useful and effective instrument in information systems research, we cannot, as Walsham states, “judge people’s views or attitudes solely by what they *say*” (Walsham 2006). The data collected from the interview and questionnaire will be used to create a survey, which constitutes the second element of our pluralist approach. According to Kraemer and Dutton (1991) “survey research is both the most widely used and most widely questioned method in the management information systems (MIS) field” (Vogel and Wetherbe 1984). The use of a survey is consistent with the group of methods that emphasize quantitative analysis, utilising collecting mechanisms

such as mail questionnaires, telephone interviews, or published statistics, to gather data for a large number of organisations, that are subsequently analysed using statistical techniques (Gable 1994). The goal of representative sampling is to discover relational commonality across organisations, thus providing grounds for reasoned assumptions germane to the research subject. The main advantage in the use of a survey is the ability to acquire opinions or data from a variety of organisations or individuals in a limited duration. They lend themselves well to a variety of means of distribution, such as email, the post, and by hand. As with interview methods, surveys also exhibit limitations and deficiencies, many similar in nature to those of the interview method.

For instance, there are the same considerations of time and effort. Designing an effective survey may involve considerable iterations, pilots and user feedback before the instrument can be deployed in a research setting. As with interviews, topicality is an issue with surveys, although different, in that surveys are predominately narrow in focus, and address a very clear line of inquiry, and leave little room for interpretation by the respondent. Sample size and subsequent poor response rates, often the result of poor survey design, can mitigate the effectiveness of surveys. Another is bias, which can result from variances, from enthusiasm to apathy, in respondents' efforts in completing a survey. Surveys involving the use of a particular technology are particularly prone to motivational bias, as those respondents with a high degree of affinity for the technology being surveyed may respond in disproportionately higher numbers than those less disposed to that technology (Cornford and Smithson 1996). Surveys provide no little or no longitudinal context to the research, and, according to Gable (1994) "often the survey approach provides only a "snapshot" of the situation at a certain point in time, yielding little information on the underlying meaning of the data. Moreover, some variables of interest to a researcher may not be measurable by this method (e.g. cross-sectional studies offer weak evidence of cause and effect)".

4.4 Research perspective – the neutral, outside observer

According to Walsham, the perspective of the researcher changes over time, assuming a spectrum of levels of involvement, as well as the different roles of inside and outside observer. Walsham discusses this at length, observing that “an interpretivist views these [roles] not as objective reportage, as the data collection involves the researcher’s own subjectivity” (Walsham 2002). At one end of Walsham’s spectrum we find the “neutral” observer, but “neutrality is not necessarily indicative of an unbiased observer. Bias results from our own history, our contexts, our own knowledge and prejudices in how we perceived phenomenon in certain ways, to see things in certain ways and not others”. In this sense, Walsham takes neutral to mean:

“that the people in the field situation do not perceive the researcher as being aligned with a particular individual or group within the organisation, or being concerned with making money as consultants are for example, or having strong prior views of specific people, systems or processes based on previous work in the organisation”.

The “full action” researcher occupies the other end of the involvement spectrum and tries “consciously and explicitly to change things in the way that they feel best” (Walsham 2006). Throughout the research project, the author sought to maintain a neutral stance, restating to the research subjects, throughout the project’s duration, that the purpose of the interview and survey methods were to gather data for academic and not commercial purposes. Since the completion of the study, several of those previously interviewed as bank employees have moved to firms that market AMLPT and are actively seeking the author’s data for marketing purposes; such advances have been politely discouraged.

4.5 Data Presentation and Analysis

According to Moore and Benbasat (1991), “the measurement of potential adopters’ perceptions of innovations has been described as a ‘classic issue in the

innovation literature’ and a ‘potential key’ for integrating findings within diffusion research” (Tornatzky and Klein 1982). Rogers developed several data categorisation and modelling tools that will be of use in the analysis, organisation and presentation of the research data and findings.

Using the work of Mustonen-Ollila and Lytyinen (2003), who have developed a series of useful models of discrete innovation behaviour, and using those models later in Chapter 5, we incorporate, for comparison purposes, micro-levels of individual innovation into a broader description of the social system’s perceptions of *relative advantage*, as well as creating metrics for evaluating effectiveness. We return to the relationship of our main evaluative model, which uses determinates in the *rate of adoption* as shown in figure 4.5.1, and associated measures of effectiveness as shown in table 4.5.1. Using the combined categories and attributes of diffusion of innovation and organisational effectiveness theories, we then created the first research instrument, the interview questionnaire. Further to this initial data gathering exercise, was the use of a general control questionnaire, which captured demographic and professional contextual information, such as years in banking, compliance, and education level. Both Rogers and Campbell are comprehensive in their categorisation schemas; Rogers, in identifying the attributes of innovation, and Campbell, those of organisational effectiveness. However, what is more difficult to discern, are the self-perceptions and psychological categories, relative to innovation and organisational effectiveness, entertained by the individual actors (Bowker and Star 1999; Star 2002; Andersen 2004). Andersen (2004) makes further note of the methodological challenges of “getting inside someone’s head”, as there is no way to independently validate what someone is thinking relative to the accuracy of what they articulate. The author constantly looked for subtle and instinctual patterns of behaviour and communication, particularly in power relationships: i.e. compliance manager versus an analyst. Further to this challenge, in analyzing the

interview narratives, as well as the subject's over-all behaviour during the research project, (an activity Potter (1996) categorises as "talk and texts interaction").

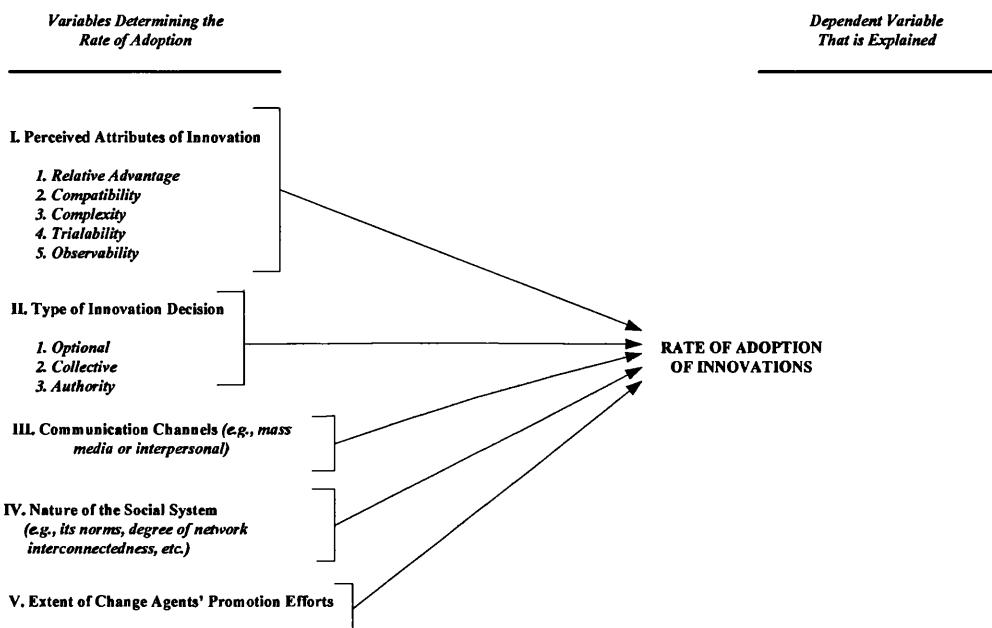


Figure 4.5.1 – Determinates in the rate of adoption

<i>Representative Effectiveness Attributes from Historical Survey & Campbell</i>	<i>Diffusion Attributes from Rogers</i>
Overall effectiveness	Innovativeness
Flexibility/Adaption	Compatibility
Fit	Compatibility
	Match
Environment	Social System
Objectives/goals	Relative advantage
Utilisation of Environment	Compatibility
Conflict/cohesion	Complexity
Achievement emphasis	Relative advantage
Managerial interpersonal skills	Change agency & Champions
Control	Degree of Centralization
	Size
Training & Development Emphasis	Formalization
	Degree of specialization
Role & norm congruence	Formalization
	Degree of specialization

Table 4.5.1 – Measures of Effectiveness

This aided in ascertaining and interpreting any additional tacit categorisation or meanings not articulated in the interviews, as well as identifying behavioural norms

counter to the answers given on the questionnaire (Maitlis and Lawrence 2003; Balogun and Johnson 2004; Maitlis 2005).

4.6 Unit of Analysis – Compliance Officers and MLROs in the City of London

The interviews and survey were conducted across a sample of 3 Large Scale Retail Banks (LSRB), 3 Medium Scale Retail Banks (MSRB), 1 Large Scale Commercial Bank (LSCB), 1 Large Scale Investment Bank (LSIB), and 1 Foreign Exchange House (FOREX). While bankers and other financial professionals possess their own unique culture on a macro level, (even more so at the micro-level, depending on their particular expertise), they all are discrete entities within an organisational *social system*. Organisations are polymorphic abstractions, and pose unique challenges in interpreting their composition, norms and other meanings.

Furthermore, depending on the discipline, they can be described in a variety of ways, further complicating the choice(s) of methodology in their study (Moore and Benbasat 1991; Orlikowski 2000; Mingers 2001). To ensure theoretical continuity, we refer again to Rogers (1995; 2003) definition of an organisation as a:

“...stable system of individuals who work together to achieve common goals through a hierarchy of ranks and a division of labour. Organisations are created to handle large-scale routine tasks through a pattern of regularized human relationships. Their efficiency as a means of orchestrating human endeavours is in part due to this stability, which stems from the relatively high degree of structure that is imposed on communication patterns”.

From an organisational standpoint, the research domain is shaped by the compliance group (cohort), or in some instances, the anti-money laundering (AML) enforcement unit or group; for purposes of consistency, we will use the *social system* categorisation of compliance group (the “organisation”) when referring to the AML-CFT function within the larger institutional context (the “institution”). Depending on the size of the compliance group, there may be several levels of compliance officer, but in all cases, there is a single Money Laundering Reporting Officer (MLRO), and all are

typically supported by a team of analysts, technical and systems specialists. Compliance duties were similar in all instances across the survey sample, with minor differences accounted for within both AML regulatory requirements and standard compliance practice and grounded in commercial considerations.

For instance, in the case of the Large Scale Investment Bank, they maintain a private client banking practice, and subsequently, use personalised “know your customer” due diligence procedures at the individual banker level, rather than largely automating the process as is the case in the Large Scale Retail Bank (LSRB). We did not include branch or sub-unit compliance functions, as 1) several banks insisted in vetting the author at each branch and sub-unit, which is a time-intensive process that would have prolonged the research project; 2) the exponential size in the survey sample that would have resulted from branch and sub-units, given that the LSRB in the sample had several hundred branch offices in the greater London area alone. Two of the research subjects required vetting of the author, and all mandated anonymity. The subject’s request for anonymity may be counter to ideas of academic freedom (Robey 1996), but this was understandable, given the highly sensitive nature of compliance work, such as the handling and security of large volumes of customer and commercial data, and the relationship with legal and national security authorities. The author received a great deal of cooperation in the execution of this project, due much in part to relationships forged at several conferences and professional meetings.

4.7 Data Collection

The data collection methods in this project employed a combination of structured and unstructured interviews and a questionnaire, from which a survey on innovation adoption and effectiveness attributes was developed. As previously discussed, interpretive research may utilise quantitative or qualitative methods, or even a

combination of both, as argued by a variety of scholars, such as Mingers (2001; 2003), Orlikowski and Baroudi (1991; 2000), as well as Kaplan and Duchon (1988).

The two methods differ not only regarding the collection tools used, but also regarding the type of analysis that they enable. This research project utilises qualitative data collection tools that, given the complexities within compliance organisations and the AMLPT artefact itself, are particularly suited for research requiring behavioural interpretation and understanding of the phenomenon holistically. This results in detailed descriptions of the individual members of the *social system* and their environment (Creswell 1998; 2003).

The primary data sources comprise the interview, questionnaire and survey. Lastly, as mentioned in the dissertation's introduction, the data collection phase of the project, and subsequent documentation of the findings, spanned a longer-than expected timeframe. The field work was accomplished from December of 2004 to August of 2006; the completed dissertation was submitted in April of 2010.

4.7.1 Secondary Data Collection

Secondary data sources draw on two literature-based case studies for contextual understanding, as well as documents and other domain artefacts such as data schemas and internal process documents. Therefore, given the breadth of material drawn from both sources, the author is confident that the data therein reflects a thorough examination of the subject phenomenon (Eisenhardt 1989).

In Chapter 2, we discussed the historical trajectory of the legal and socio-institutional motivations responsible for the rapid adoption of AMLPT. We further examined the subsequent expansion of regulatory oversight, through the threefold hierarchy of trans-national, national, and local regulatory bodies and organisations (Angell and Demetis 2005). We provided two case studies, the first of which addresses

the complexities and inconsistencies inherent within the trans-national compliance regime, through a study of the Financial Action Task Force's (FATF) imposition of sanctions on The Cayman Islands, for “non-compliance,” relative to the FATF's *Forty Recommendations*.

The second case study described the phenomenon of money laundering, through an examination of the Brinks-Mat gold theft in 1986. The Brinks-Mat case illustrates the complexity of a sophisticated laundering operation, as well as the various roles of those involved and included a typological comparison of the stages that comprise a money laundering cycle, as determined by practitioners and law enforcement. Lastly, given that the Brinks-Mat case was exposed primarily through human investigation rather than any automation, the case study raises a variety of questions as to the necessity of the use of sophisticated and costly AMLPT.

Further secondary data sources included AML-CFT policy and procedure documents, graphical user interface representations of AMLPT schemas and profile monitoring, as well as training and support materials. Analysis of these materials provided significant contextual understanding of the process and workflow norms of day-to-day affairs within the compliance groups under study, as well as a means to compare processes and techniques across the cohort (Saunders, Thornhill et al. 2007). Specific insights from secondary data analysis illuminated categorical attributes for refining innovativeness and effectiveness attributes, as well as comprehension of the automation of AMLPT processes beyond those of behavioural profiling.

A cross section of secondary data sources is provided in table 4.7.1.1. Several scholars of research methods have stated that a bias may occur in the initial stages of data collection, primarily a result of the way it is prepared and coded (Stewart and Kamins 1993; Saunders, Thornhill et al. 2007). Given the intent of this research, and the need to contextualise the meaning and use of a variety of compliance phenomenon, as

well the paucity of domain knowledge in the literature at the time of the study, we accept the risk of bias. In acknowledging the potential for bias, we further submit that documentary evidence is not necessarily evidence of MLRO and compliance organisation practice. The next stage of the data collection process was incorporating the analysis of the secondary data sources with that of the data collected through the primary data collection process.

Source	Artefact Type
Physical	<ul style="list-style-type: none"> • <i>AML-CFT Compliance Policies & Procedures Manual</i> • <i>KYC-SAR Reporting Procedures</i> • <i>Suspicious Activity Reporting form (minor variances per firm)</i> • <i>Check-lists and abbreviated references for team members</i> • <i>Desktop AML references for tellers, brokers & customer service</i> • <i>Training materials for Compliance team and customer service</i>
Electronic Screen-shot	<ul style="list-style-type: none"> • <i>User-interface schemas for AML-KYC process monitoring</i> • <i>Politically exposed person ("PEP") monitoring</i> • <i>Desktop KYC data capture for new accounts</i> • <i>Profile data capture (proprietary and vendor generated)</i> • <i>Sample profiling process and "dashboard" use</i>

Table 4.7.1.1 – Secondary Data Collection Sources

4.7.2 Primary data collection tools

The primary data collection process involved two stages. Stage one consisted of two discrete parts: the first of which consisted of formalising the analysis of the secondary data sources and creating a sub-set of questions that were then incorporated into a comprehensive questionnaire. This process was then followed by a series of unstructured interviews. It should be noted here that, given the amount of time that had elapsed between the initial research proposal to the start of formal data collection, the author had developed several collegial relationships among those receptive to the study. These relationships facilitated a series of ongoing conversations topical to the research

subject matter, and this *a priori* knowledge significantly enhanced the content and contextual understanding of the author's structured and unstructured interviews.

Following methods suggested by Bell (2005), the questionnaire was piloted through several iterations, using the study sample of compliance professionals. Participant feedback from the pilot included reducing the number of questions to improve the response rate (DeVaus 2002; Edwards, Roberts et al. 2002), along with improving the coherence of the questions (Fink 2003; Saunders, Thornhill et al. 2007), so as to avoid antagonizing participants in general (Walsham 2006). The pilot questionnaire was then formalized for use in part two, the structured interview process. The semi-structured interviews comprised a generalised catalogue of topics and specific lines of inquiry depending on the context of interviewee's role.

Using a style of open-ended questioning developed by the author from past consulting work, the semi-structured interviews provided a relaxed means of rich data collection, as well as providing the subject an opportunity to further develop their responses. Once completed, the voice recordings, (where applicable), from both sets of interviews were then transcribed. The data collection benefits aside, the process of refining the questionnaire was helpful in reducing the time in preparing the formal survey instrument; table 4.7.2.1 illustrates the breakdown of the interview participants:

<i>Role</i>	<i>Project Participants</i>	<i>Unstructured</i>	<i>Structured</i>
Head of Compliance	6	4	2
Compliance Officer	2	2	2
MLROs	6	6	6
AML Analyst	7	3	4
Audit & Compliance	3	-	3
Multi-role	2	-	2

Table 4.7.2.1 – Breakdown of Interview participants by role and interview type

It should be noted that semi-structured interviews incur a higher chance of reliability issues, given the probability of different researchers drawing different

conclusions from the same interview data (Moore and Benbasat 1991; Easterby-Smith, Thorpe et al. 2002). Furthermore, there is the reluctance of an interviewee to provide further data or to appear ignorant of the subject matter, as well as articulating subtle, off-topic biases about the topic (Cornford and Smithson 1996; Saunders, Thornhill et al. 2007). Yin (2003) notes that the researcher should be aware that semi-structured interviews pose difficulties in attempting to draw generalisations from general population data. This is also the case in this study, as the entire interview sample is far less than the population of compliance officers in the City of London. Subsequently, while it is not possible to generalise from this study to compliance officers in the City of London in general, we may still make generalisations from the research sample.

The structured interviews comprised an interviewer-administered questionnaire, based on questions refined from the pilot, using identical content for all the subjects. The literature identifies the main disadvantage of interviewer-administered, rather than self-administered questionnaires, as that respondents may be inclined to select a response more to the liking of the interviewer rather than the correct answer (Fink 2003). The author, given his existing relationships with the many of the subjects, believed the immediacy of an interviewer-administered questionnaire mitigated this concern, and as Saunders, Lewis et al. (2007) state, interviewer-administered questionnaires are a “suitable method [of interviewing] due to the increased response rate of this method and the ability to route different subgroups of respondents”. This method also accounts for the inevitable requirement to simplify obtuse or ambiguous questions (Oppenheim 2002). The survey questions were drawn from the secondary data collection exercise, and extrapolate certain productive lines of inquiry identified in the structured interviews, as well as utilising new questions.

In addition to the secondary data sources, the survey questions of AMLPT effectiveness emerged from the research foundation described in the previous chapter.

This foundation enabled further understanding of the cause and effect relationships between the respondents' stated perceptions of innovation attributes such as *relative advantage* and their applicability in measuring AMLPT effectiveness, in support of the compliance function. Investigating this link between opinions and behaviours is also in line with Ciborra's (1999c; 2001) entreaty for researchers to scrutinize perceptions, moods and emotions among individual members of a *social system*.

Rather than attempt a large-scale survey, the author felt it more practical to approach compliance colleagues, which were primarily senior managers or heads of compliance, whose responsibilities included an AML-CFT component. From these initial contacts, the author selected a small sample from a variety of financial institutions, following a non-probabilistic sampling method: purposive sampling. Given the small sample size, and our interest in understanding specific phenomenon in great detail, purposive sampling is suitable for survey-based studies (Saunders, Thornhill et al. 2007). To enhance the rigor of the survey, we called on several of Patton's survey axioms, the first of which is that 1) the selection of specific units for the exercise is dependent on the research's objectives; 2) the researcher should strive for maximum variation within a homogeneous sample; and 3), while the survey sample in our case is unlikely representative of compliance officers and MLROs in general, the survey data should assist the researcher in documenting uniqueness and emerging themes (Patton 1990).

The survey was divided into three parts. Part one consisted of 15 questions, based on a 5-point Likert scale (Judd, Smith et al. 1991; Corbetta 2003). Each question defined a particularly characteristic of AMLPT innovation, as well as measuring individual perceptions of innovativeness and receptivity to adoption of AMLPT. Part two consisted of 10, 5-point Likert scale-based questions, addressing measures of organisational effectiveness as a result of the adoption of AMLPT. Part three consisted of 5 questions regarding job category and demographic information from the survey respondents. The

survey was distributed both in person and electronically, via a centralised web-based interactive form.

The author was fortunate to have achieved a 100% response rate, with no question left unanswered. When coupled with the author's past experiences in consultancy, which is highly dependent on participative and interpretive methods, the survey and secondary sources provided a rich, in-depth understanding of innovativeness and organisational effectiveness among the compliance organisations surveyed. While not exclusively utilising the "insider" perspective (Walsham 1995; 2006), the project called upon the researcher's skills of observation, as well as the systematic recording of descriptions and narratives, to interpret and analyse the behaviour and norms of the survey sample. The use of observation throughout the research process provided clarity as to the differences in what activities individuals actually undertake (Stewart and Kamins 1993) rather than their articulated perceptions of action. Additionally, observational acuity allows the researcher additional familiarity as to the respondents' context (Saunders, Lewis et al. 2007).

4.8 Conclusion

We undertook this research to measure the effectiveness of AMLPT in supporting the roles of compliance manager and MLRO in a banking context. A variety of scholars in fields such as diffusion research, organisational effectiveness, and information systems have all acknowledged the inherent difficulties in measuring the effectiveness of technology. Instead, we chose to attempt to measure effectiveness through the lens of Roger's attributes of innovation, which can be quantified through indicators derived from theory.

Therefore, the primary theoretical grounding of this dissertation is *Diffusion of Innovation* theory, (with its antecedents in communication theory), as expounded by

Everett M. Rogers (1962; 1983; 1995; 2003). We chose diffusion of innovation theory for several important reasons:

- The theory's use of individual and organisational behavioural categories, as well as a means to classify and identify the communication of those behaviours;
- The author's experience within a variety of contexts involving technology adoption and use by individuals and organisations in general;
- The unique dimension of time as a core theoretical element in diffusion of innovation theory. While banks have used some form of automated SAR processing for some years, the rapid adoption of AMLPT, and the concurrent expansion of legal and regulatory requirements, necessitated a method to quantify this accelerated rate of adoption and the subsequent impact on the extent compliance environment;
- The theoretical alignment with organisational effectiveness theory, our secondary theoretical foundation.

The use of organisational effectiveness theory, with its roots in organisation theory, provided a further means of understanding how environment and the composition of an organisation influence an organisation's relationship with technology, as well as the norms, behaviours and processes it may develop in mediating that relationship.

Specific to the use of organisational effectiveness theory, was the linear emergence of effectiveness criteria, particularly through the work of Lewin and Minton (1986), Campbell (1977), Cameron (Cameron and Whetten 1981; 1986; 1986; 1986), as well as derivative work by Orlikowski (Orlikowski and Robey 1991a; 1992; 2000), that addresses the relationship between organisations and technology. While both theories have their origins in different fields, both theoretical lenses provide not only complementary but also compatible methods and techniques to evaluate the phenomenon. Lastly, the descriptive, and therefore subjective nature of both theoretical fields, accommodates a hermeneutic method in analysing the phenomenon under study.

Chapter 5. Fieldwork

This chapter describes the result of analysing responses to questions concerning the effectiveness of AMLPT in supporting the compliance function within a small sample of banks in the City of London. The sample cohort was drawn from a variety of compliance professionals: heads of compliance, compliance officers, money laundering reporting officers, money laundering analysts, audit and compliance personnel, and systems and technical members of staff (“multi-role” employees). All members of the cohort had a minimum level of three years or more in their role, and represent compliance organisations in large-scale retail banking (LSRB), medium-scale retail banking (MSRB), large-scale commercial banking (LSCB), large-scale investment banking (LSIB), and foreign-exchange banking (FOREX).

The following sections present the data collected in the survey. The first section is a representative synopsis of the typical money laundering detection processes evident among the cohort. The remaining sections present the data as collected per the methodology outlined in Chapter 4, as well as summarising the salient empirical findings as to the efficacy of AMLPT in support of compliance professionals.

5.1 Money Laundering Detection in Banks in the City of London

This section discusses the typical cohort compliance organisation’s processes, procedures and tools used in the detection of money laundering. For purposes of analysis, cohort compliance organisations may also be referred to simply as an “organisation” or “organisations”; the use of “institution” represents the bank as a whole, unless otherwise noted. Organisations represented by the cohort exhibited some differences in their approach to detection, usually in the reporting hierarchy or technical methods deployed; however, given the legal and regulatory reporting structures required by the Financial Services Authority, the basic output from AMLPT, in the form of

suspicious activity reporting, watch list maintenance, and other responses to “flagged” accounts or other detected anomalies, was relatively uniform across the cohort. Except for the LSIB and FOREX, the remaining institutions all maintain extensive branch-level reporting structures that then roll-up to the compliance organisation at the headquarters level.

The level of products and services provided by the cohort varied based on the institution’s respective market niche. The LSRB and MSRB’s services typically involved, at a minimum, provision for current accounts, savings, automated teller machines (ATM), personal and mortgage loans, and pension-related products. They also engage with other third-party providers of credit-cards, insurance and brokerage products. The LSCB’s services included the provision of consumer and business credit as well as intermediary functions such as payment clearance. LSIB services included traditional financial advisory services such as mergers & acquisition advice, securities underwriting and asset management. The FOREX house in the cohort specialises in currency conversion and international payments and settlements.

5.2 Description of the AML Compliance Function

Within the organisations represented in the cohort, the AML function is found within the compliance group, usually directed by a money laundering reporting officer (MLRO), supported by money laundering analysts, and technical and systems support personnel. The 1986 Financial Services Act established “compliance” officer as a unique role relative to the specific policing of, at that time, irregularities in shares trading. The creation of the Financial Services Authority (FSA) in 1997, included one of its four stated aims as “tackling money laundering”, and as a result, formalised the AML function in financial institutions, and also further clarified the role of MLRO. The events of 9/11 subsequently broadened the AML remit, to also include countering the financing

of terrorism (CFT). Given the volume of transactions now falling into the review process, the introduction of automated behavioural profiling systems was spurred by the need to more accurately identify suspicious transactions beyond those identified through manual SAR processes. Prior to 9/11, cohort organisations maintained a relatively relaxed approach to countering money laundering, which reflected the over-all ambivalence towards the subject among financial institutions across the United Kingdom. This relaxed approach is reflected in the following comments by a head of compliance:

"I've been doing this [compliance] since 1994. Back then, "AML" as a term didn't really exist in my vocabulary, we just talked about "money laundering," and even then, it was just something on the list of things to look for in our compliance list - really nothing more than one more box to tick until the FSA came into the picture... When we did get audited, the FSA would use their list, and as long as their list looked to match ours, we were ok. So basically, our job in compliance was to make sure we met the FSA requirements more so than anything having to do with catching a money launderer." [Head of Compliance, LSRB]

The post-9/11 compliance environment reflected a concerted effort by the FSA to enforce money laundering regulations more rigorously. Between December of 2002 and September of 2004, the FSA issued £5,345,750.00 in fines to 5 top-tier banks:

<u>Financial Institution</u>	<u>Fine Amount</u>	<u>Date</u>
Abbey National Companies	£2,320,000	10 Dec 2003
Bank of Ireland	\$375,000	2 Sept 2004
Bank of Scotland Plc.	£1,250,000	15 Jan 2004
Northern Bank	£1,250,000	7 Aug 2003
Raiffeisen Zentralbank Osterreich	\$150,000	6 Apr 2004
Royal Bank of Scotland (RBS) Plc.	\$350,000	17 Dec 2002

Table 5.1.1 – Early regime fines to institutions (FSA 2003)

These fines significantly altered the priorities of compliance groups throughout the industry, as much from the negative media exposure as the regulatory ramifications; indeed, the media attention would be somewhat quantified as “reputational risk,” as mentioned in section 2.7’s discussion of risk-based compliance. One of the survey participants, an MLRO, was at a bank that received one of the more substantial fines, stating that:

“We were in shock really; I mean, pretty much all of us in the group thought of the FSA process as being a paper exercise, and as long as we could show we had a manual, and someone who could talk intelligently about the thing [AML], we were sorted; we didn’t really have a whole lot of staff assigned to AML duties, when I think about it. My head of staff got the chop, and then the next head of department made sure it became all about the fine. Everything we did from there on out was to avoid a fine, rather than anything that could be described as proactively trying to prevent dodgy money coming in.” [MLRO, MSRB]

The entire cohort expressed the same problems with resourcing the AML department, as well as observing a general inclination towards “working to the regulation”, rather than purposely going above and beyond those measures required by existing SAR and KYC procedures. A common theme in the interviews was the ongoing fear resulting from the FSA’s punitive approach to regulatory enforcement, as well as the exponential volume of SARs being generated in response in fear of FSA sanctions, rather than actual money laundering.

23 of the 26 survey respondents cited these fears as their firm’s motivation for purchasing AMLPT or developing it in house. A money laundering analyst from the LSRB sums up this common motivation:

“We did some analysis in, I think, late 2003, or early 2004, and our SAR filings had increased by 650%. As we basically used a manual process, it was almost impossible to try and extract any kind of meaningful data from them, and the FSA was getting more demanding about their content – what the SARs were telling us. If we didn’t automate the process, we’d soon get to the point where all we were doing is processing SARs at the expense of our other duties.” [ML Analyst LSRB]

The adoption of innovation in the survey cohort exhibited varying *rates of adoption*, and was primarily incremental in nature. However, given the oft-expressed FSA-induced motivation for the adoption of AMLPT, it may also be categorised as *preventive innovation*. Roger's describes *preventative innovation* as a “new idea that an individual adopts now in order to lower the probability of some unwanted future event” (Rogers 2003). In this case, the unwanted future event is twofold in nature: 1) that the organisation fails to identify a laundering transaction; and 2) FSA sanctions. As the organisations went through the trial period of adopting AMLPT, it was clear to the cohort that the probability of detection would soon increase, while fear of FSA sanctions would be alleviated to some extent. As AMLPT *champions* emerged during the trial period, competence in cohort organisations increased commensurately, as *observability* and *homophily* among the compliance organisation highlighted AMLPT’s potential. Moreover, the high level of *homophily* allowed for greater *clarity* and *routinization* in the use of AMLPT’s, once the trial was complete.

The *innovation matching process* among cohort organisations, varied based on the size of the organisation, as well as the perceived need to implement dedicated resources in support of AMLPT. At the beginning of the research project, the entire cohort had some form of automated compliance process in place, such as Politically Exposed Person (“PEP”) watch lists, SAR transaction reporting and monitoring, and in the case of the LSRB, MSRB, and LSCB, some rudimentary automated profiling tools.

The ability of larger organisations to adopt first-generation forms of behavioural profiling tools was more a function of the existence of large IT support organisations and large data stores, than any dogmatic philosophical belief. The need to introduce automation, the result of an ever-increasing workload, as well as the emergence of the need for dedicated AML-CFT staff, caused the entire survey cohort to re-organise their respective compliance groups to maximise resources and expertise. In the majority of

cases, this involved simply assigning new titles or responsibility, or changes in reporting line. The typical compliance organisation is represented in figure 5.2.1:

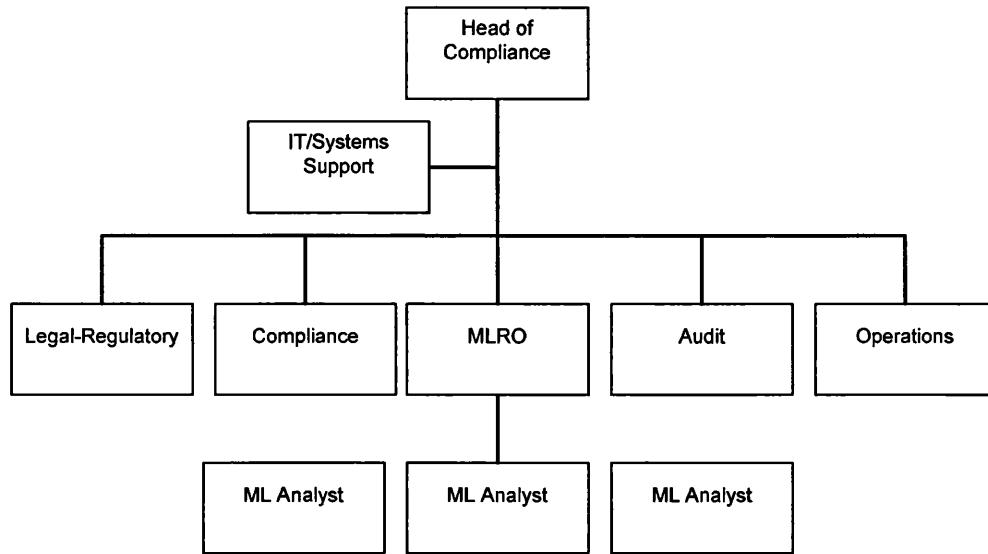


Figure 5.2.1 – Typical survey cohort compliance organisation reporting structure.

As expertise in the AML process improved through the process of *routinization*, cohort respondents indicated that informal relationships among other banks became more formalised. While detection expertise remained relatively static, AML process improvements spurred inter and intra-institutional communication, resulting in increased exchanges of practice knowledge, as well as improved relationships with not only the FSA, but also other regulators and law enforcement agencies, such as the National Criminal Investigative Service (NCIS). Furthermore, financial intelligence units (FIUs) within the banking community, and also at the national level, became more intrinsically interconnected as a result of the improved analysis afforded the cohort through the deployment of AMLPT. One MLRO observed:

“Before we automated, everything was very serial. We’d get a SAR from some external source, like the NCIS, or internally, from a branch, or those we’d generate, and we would investigate it, act on it, and just forward it on; we never did this simultaneously, as we didn’t have the manpower or a process in place. The nice thing about using [AMLPT] is it centralises things for us, and we can

then also be proactive back to the authorities, the FSA – whoever – about a particular client, or localised behaviour.” [MLRO MSRB]

Internal communication improved as well per the cohort. *Heterophilous* diffusion of AMLPT began within the compliance group. For instance, a fraud investigator might detect behaviour indicative of money laundering, and rather than simply file a SAR, they would now actively forward the SAR with contextual information based on their original suspicion of fraud. In the instance of LSRB, LSIB, and MSRB, the analytical capability of AMLPT was used to mine existing marketing databases, from which a variety of demographic information could be derived as to transaction patterns, or customer locale relative to higher rates of SAR generation, all of which can be mined to create a profile of a customer’s financial behaviour. Cohort members also stated they derived a *relative advantage in status*. Marketing staff and investment product managers from within cohort banks actively sought out cohort staff, to inquire as to the legality and compliance of new service offerings, rather than expose their organisations to potential adverse effects from ill-conceived product launches. Prior to the use of AMLPT and other automated methods, cohort members stated that such was the nature of the volume of manually processed SAR and KYC information, that they could never have entertained such cross-organisational relationships.

5.3 Innovation within the Compliance Organisation

While line-of-business responsibility for AML-CFT compliance procedures fell under the aegis of the Head of Compliance, primary responsibility lay with the MLRO unit, headed by the money laundering reporting officer. In the case of the LSIB and FOREX organisation, the titular role was that of compliance officer, with the primary duty of MLRO. Figure 5.3.1 represents the staff and role configuration identified in the structured interviews; the column on the far left identifies the cohort, and then reading from left to right, the staffing level and responsibilities. The top level organisational

matrix frames the over-all reporting structure of the typical cohort MLRO unit. Over the course of the study, the FOREX cohort experienced some disruption within their MLRO unit, as their business was being acquired by a larger foreign exchange company. This resulted in the consolidation of roles among the audit, training, and FIU liaison functions reflected in figure 5.3.1; this consolidation was a frustrating process, as is evident in the quote from one of their money laundering analysts:

*“Our work load was incredible. The FSA had just released new guidelines on MSBs [money service bureaus], where a good deal of our business takes place. Not only were we having to learn how (...) ran compliance, we had to re-jig our whole KYC game for the MSB regulations and prepare for a b***** FSA audit...they always seem to drop in at the wrong time.”* [ML Analyst FOREX]

The average MLRO unit consisted of 14 staff, spread across the various functions as determined by the cohort institution’s business needs. The policy units tend to be staffed more than other areas, primarily a result of the ever-changing regulatory climate, especially in the early days of the post-9/11 AML-CFT regime:

“It seemed like we got a new ruling on the most silliest of things sometimes two, three times a day. My staff were swamped for while, just keeping up on all the puff the FSA and the Americans were churning out, almost as a matter of course, rather than anything of use. I saw amendments to one particular regulation appear something like 5 times in 3 days. It was all just so silly – bonkers really; we just pressed on... ” [MLRO LSIB]

The MLRO is responsible for setting the “tone” or culture of the compliance organisation, and serves as *champion* for new ideas. The MLRO in all cohorts was identified as an *early adopter* of AMLPT, and in one case, an *innovator*, as he had a technical background and had developed a rudimentary profiling application in 1998 (Cohort adoption categories are further detailed in section 6.3). The MLRO serves as a *communication channel* in the diffusion of AMLPT innovation, both within and external to the compliance *social system*. The MLRO participates in steering committees, professional organisations, and other policy-setting bodies, and may serve as a *change agent* to other compliance or audit functions external to their organisation.

This *change agent* role is particularly important, as given the high profile of AML post-9/11, mitigating the reputational risk of the entire institutional *social system* is a holistic responsibility of all the institution's members, not just those in the compliance organisation.

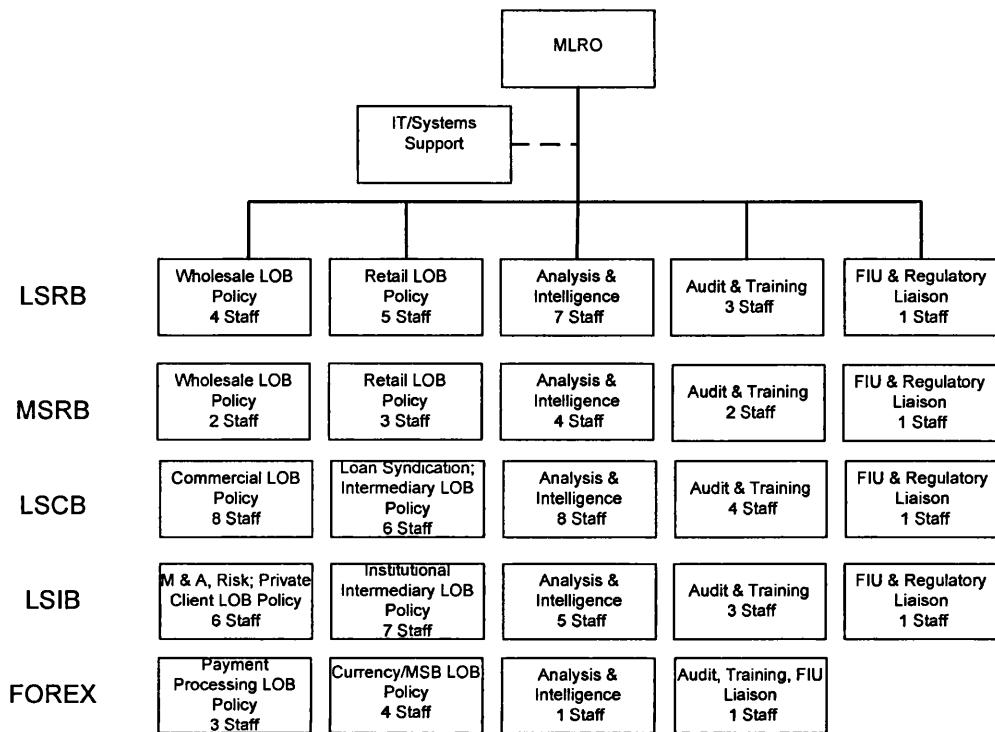


Figure 5.3.1 – Roles and staff levels in cohort organisations.

To those members of the *social system* not familiar with the nuances of money laundering, it is usually perceived more as fraud-related activity, given the potential financial losses the institution incurs from money laundering, fraud and fines; subsequently, the MLRO is tasked with shaping the nature of the *social system* as to its receptivity of AML-CFT as a discrete phenomenon and not simply fraud by another name.

In analysing the MLRO *social system*, the top-down nature of the *social system*'s structure results in predominance of *authority innovation-decisions*, and given the *homophilous* nature of the *social system*'s goals and values, *authority innovation-*

decisions are normally met favourably. Figure 5.3.1 shows that, while roles may change, the *social system*'s structure remains constant. In the case of the LSRB and MSRB, which maintain a higher proportion of consumer banking services, the policy unit reflects this retail-focussed reality. Conversely, the LSCB and LSIB, with their emphasis on commercial and institutional banking, reflect this in their staffing considerations in risk, mergers and acquisitions, and other market-specific policy areas.

Role specialisation was high among the cohort, in not only profiling, but also in monitoring new and amended regulations and advisories, and a logical response to need for regulation and policy dissemination internally and externally to the *social system*. Along with MLROs, the audit and training staff act both as *change agents* and *champions*. They are tasked with maintaining organisational efficiency through education and professional development, and also undertake internal auditing and monitoring of the compliance organisation; subsequently, they are also in a position to advocate for the MLRO, for example, in the adoption of new work practices, along with influencing the *innovation-decision process*, as is evident in the following observation by a cohort compliance manager:

“My group was a bit in the dumps early days, as we were just swamped with audits, rule making and visits by higher-ups, all worried that we’d get one of those huge fines we’d been hearing about. I rallied the training staff and got them to help me sell my plans for automation through shifting my team’s perception of the IT. They’d always thought it [IT] was a way to keep tabs on them, rather than make their job easier. I also implemented a bonus structure that partially was tied to IT competency, and that really made acceptance of the behavioural stuff [AMLPT], when we first piloted it, a non-issue.” [Compliance manager MSRB]

The use of training, throughout cohort organisations, was crucial in the *persuasion phase* of adopting AMLPT, as well as increasing its over-all *rate of adoption*. Moreover, the use of face-to-face training, in supplementing computer-based training (CBT), was another significant factor, as it allowed for a more favourable AMLPT

piloting process for *early adopters*. Analysts, much like the MLRO, are not only *early adopters*, but also *re-innovators*.

As the analysts are the primary users of AMLPT, they are responsible for AMLPT's *sustainability* and *routinization*, and for *re-inventing* the technology to meet external innovation in the form of new money laundering methods and behaviours. They are the boundary spanners within the *social system*, as well as another *communication channel* to those external to the *social system*:

“The more we understood how profiling works, the more we embraced it. The data analysis options were pretty limitless, as the MLRO could come see me, explain some certain behaviour the fraud staff had identified, and I'd just run-up a quick piece of SQL code and see what it [AMLPT] told us... it was brilliant. When we started cross-mining [pulling data in from other bank data sources, such as marketing and investment customers] we got really good at predicting what branches would be more susceptible to a particular type of laundering or card scam or whatever.” [ML Analyst LSRB]

5.4 The Money Laundering Detection Process within the Survey Cohort

Given the pervasive regulatory oversight of the compliance *social system*, it is not surprising that the techniques, processes, and organisational norms demonstrated by the cohort organisations were all similar in nature, differing only in measures specific to their market segments. The application of regulations to practice, is through adherence to guidance from the Joint Money Laundering Steering Group (JMLSG) (Herridge 2007), a consortia formed from members of the British Banker's Association (BBA)¹¹, whose extensive guidelines comprise the baseline performance standard demanded by the FSA (FSA 2008). At the heart of the JMLSG guidelines, a result of *The Money Laundering Regulations 2007* is the entry into law of the risk-based approach, as discussed in detail in section 2.7. Subsequently, cohort AML-CFT efforts were focussed on the monitoring

¹¹ The JMLSG has been producing Money Laundering Guidance for the financial sector since 1990, initially in conjunction with the Bank of England, and latterly to provide regularly updated guidance on the various Money Laundering Regulations in force - those laid in 1993, 2001 and 2003 (from www.jmlsg.org.uk).

and detection of suspicious behaviour through automated risk analysis in the form of behavioural profiling. While the risk-based approach had been somewhat formalised since 2005, and conceptually even earlier by some early adopters, the formalisation of the risk-based approach provided consistent measures that alleviated some of the FSA's past penchant for arbitrary auditing measures and subsequent disciplinary action.

Relative to using the risk-based approach, what emerges from the structured interviews is the sense that adoption of AMLPT is no longer a defensive measure; rather, the ability to be more analytical, and therefore more selective in defining suspicious transactions, has improved the probability of detecting actual money laundering. This is in contrast to the previous methods used by the majority of cohort MLROs, wherein the lack of any formal analytical process often resulted in the need to flag every transaction that even hinted at impropriety.

Understanding the broader nature of what constitutes suspicious behaviour, now allows an analyst a means to focus on individual innovation, which can then be directed at uncovering more subtle, discrete behavioural norms that, when individually analysed prior to the introduction of AMLPT, may not have spurred further analysis. Now, with the ability to mine additional logical links and assumptions, a richer picture of suspect behaviour can be gleaned more readily from seemingly unrelated behavioural factors. This is significant, as the *social system* includes not only internal innovation, but also external innovation in the form of new techniques and avenues employed by money launderers themselves. It is a classic situation of on-going *re-invention* and consequence throughout the *social system*, inclusive of both legitimate and illegitimate *adoption behaviour*. The following discussion illustrates the common methods used in the monitoring and reporting process within cohort organisations, to a level of detail that is germane to defining and categorising AMLPT innovation in the *social system*.

5.4.1 The Monitoring Process

Monitoring refers to the process undertaken to identify suspicious behaviour within customer transactions across the entire institution. Those transactions that appear as unusual are then routed to the MLRO unit for further scrutiny. The MLRO is responsible for analysing every transaction alert, and, should an analyst determine a transaction is indeed possibly illegitimate, a suspicious activity report is generated and forwarded on to the national financial intelligence unit (FIU); the cohort monitoring process typically follows the sequence illustrated in figure 5.4.1.1. While there are differing actions within the monitoring process across the cohort, monitoring sequences within the transaction workflow remains relatively constant among cohort organisations. Factors such as turn-around time may vary, based on the amount of unusual transactions under scrutiny at any given time. For instance, external requests from the FIU, law enforcement, or other interested party; other determinates include normal staff absences due to illness and holidays, all of which create variances in processing time.

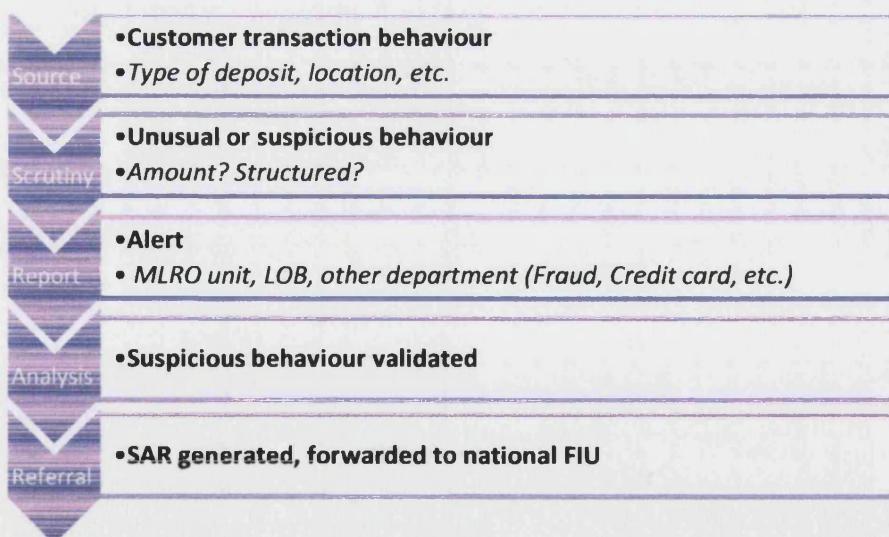


Figure 5.4.1.1 – Monitoring process for flagged transaction

The MLRO unit constantly assesses transaction volume among the bank's various business units, branches, and partners for indicators of money laundering and

terrorist financing. Essentially a proactive task, the monitoring function is also supplemented by external contributions from law enforcement and other compliance organisations external to the MLRO unit. Law enforcement at both the local and national level will irregularly report back on a successful prosecution resulting from an MLRO-supplied SAR. The FIU's confirmation of a SAR as genuine, although sporadic, serves to improve not only the relationship with the authorities, but also in further refining the pool of behavioural attributes used in developing SAR profiles. Additionally, the SAR feedback from the FIU is one of the few clearly defined linkages between the compliance process and actual money laundering.

Given the speculative nature of defining what is indeed suspicious, much of the contextual understanding of criminal intent is derived from public sources, such as the media. Several cohort members mentioned the fact they had independently investigated potential laundering activity, for example, as a result of a news item in the press or on television; the use of such secondary sources is described by the FOREX MLRO in an unstructured interview:

"I'll be on the couch watching telly, and there'll be a news item on some unusual card skimming scam at the local petrol station, and it's typically through some method we've not yet seen or that the fraud guys haven't yet passed-on to us. The geezers are always trying something new, and it's rare we first hear about it from the FSA or the coppers." [MLRO FOREX]

5.4.2 Developing the Behavioural Profile for use in AMLPT

In measuring the effectiveness of AMLPT in support of MLROs and compliance officers, a brief discussion of the monitoring process as it relates to developing the actual profile with AMLPT is helpful. In the last section we described the process by which a suspicion is transformed into a SAR, and passed on to the FIU; the analysis of those suspicions is where behavioural profiling becomes of use. In understanding what defines a suspicious or unusual transaction, versus a normal or routine movement of money, the

context of the transaction becomes the key delineator. In section 2.5, we discussed the problem of defining money laundering versus the legitimate movement of capital for tax avoidance versus terrorist finance. In essence, it is a subjective dilemma, given the infinite manifestations of criminal conduct; therefore, there is no way to operationalise intent - the *modus operandi* of a launderer.

Subsequently, the abnormal profile is defined in terms of “normal”, with a normal profile representing the typical behaviour of, for instance, a current account customer in a retail bank. Rules are then developed from this normalised behaviour, whereby abnormal behaviour can be contrasted or profiled, such as large withdrawals from a newly opened account over a short period of time (referred to as “defunding”), or the repeated use of small payments, (“structuring”) to a business in an area known for drugs dealing or benefit fraud. Behaviour can be profiled but not consistently quantified, for instance, in the case of legitimate flight capital; moreover, there are no models that compliance professionals can call upon, to ensure 100% accuracy when analysing an account’s behavioural profile against *known* attributes.

Thus, the main function of the MLRO unit, the analysts in particular, was to constantly “massage” the data, *re-structuring* and *re-defining* known abnormal behaviours against the incoming flow of newly suspect behavioural indicators:

“The hardest part of my job is interpreting what other members of the team see as suspect; while we of course have a set of what we call baseline indicators, everyone interprets them slightly differently. Using the software, I compare and contrast again and again against our known suspect profiles until I find the mean behaviour, and that’s what generates the SAR.” [ML Analyst LSRB]

He then goes on to observe that:

*“Reconciling all the different reporting vectors [groups external to the MLRO unit] can be horrid. We do a great job of drilling KYC into the counter staff, so they’re always the largest contributor to my work load. But, and it’s a big but, there is a huge difference based on geography and ethnic mix, so counter staff in some areas just submit more SARs to cover their a*** so to speak. It can really skew my analysis, especially when benefits get paid, or around the holidays,*

when we process lots of foreign remittances from places like Pakistan, Sri Lanka, and other places with known terrorist connections. The fraud team up their inputs around benefits time too, so it's a huge lot to sort through." [ML Analyst LSRB]

Monitoring and profile development, when categorised as adoption behaviours, primarily involved the adoption attributes of *re-invention* at the individual level, and *re-defining* and *re-structuring* at the organisational level. Survey respondents indicated an immediate recognition of *relative advantage* though the deployment of AMLPT, and were able to identify significant subsequent improvements in effectiveness, details of which are reviewed in the analysis contained in Chapter 6. What is further evident is that the *social system* supports adoption of AMLPT, but also considers the AMLPT artefact as two discrete entities: the profile and resultant SAR, along with the embedded analysis activity throughout the entire profiling process:

"Our 'products,' if you can call them that, are the profile and the SAR. My existence is based on ensuring that we provide valid data to the authorities, so we constantly analyse it, never really stopping. The SAR in a way is sort of a living thing to us, as is the profiling data that kicks one out, so the data is never static in the data mart. We are always massaging it; our work is an ongoing conversation of "what ifs?" [MLRO LSCB]

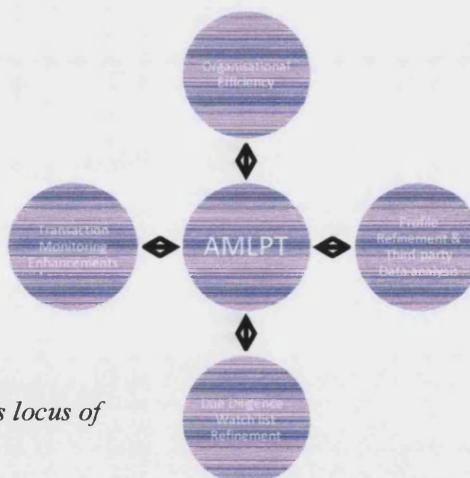


Figure 5.4.2.1 – AMLPT as locus of innovation

Further to this observation, is the sense that the AMLPT artefact serves as a *locus of innovation* (Prescott and Conger 1995), in both process and technical innovation, as well as in the adoption of new organisational methods. For instance, the intelligence role

undertaken by cohort money laundering analysts involves collating incoming data from a variety of internal and external sources; the analysts must then constantly *re-invent* different analytical methods depending on the data source and contents of the data; figure 5.4.2.1 illustrates the locus model and its interdependencies.

Figure 5.4.2.2 represents the typical steps in the creation of a profile as identified by the survey cohort. This data includes third-parties, such as brokerage houses, or in the case of the foreign exchange house, money service bureaux. Retail and commercial bank data includes account information, customer demographics, such as occupation, age, and locale, as well as risk underwriting data, and other quantifiable measures that can then be contrasted with subjective criteria, such as perceived intent. Figure 5.4.2.3 illustrates the workflow of the profile, as well as the illustrating the relationship of certain steps to their discrete components. The AMLPT artefact attempts to replicate human behaviour through translating an algorithmic manipulation of human or “fuzzy” behaviour into structured query language (SQL) calls on a catalogue of behavioural attributes resident in a centralised database.

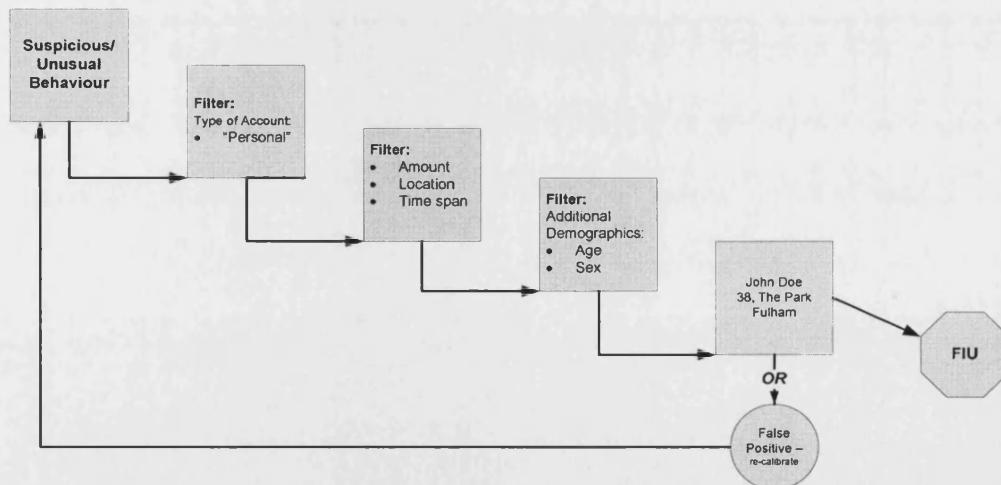


Figure 5.4.2.2 – Filtration sequence in profile development

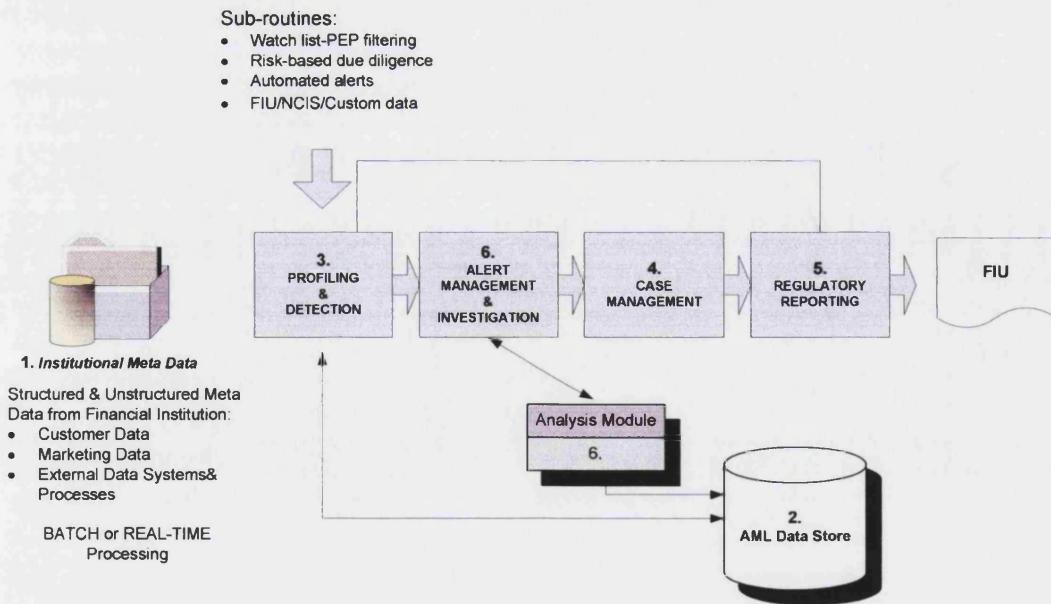


Figure 5.4.2.3 – Transaction monitoring workflow and discrete components(adopted from Norkom (2009))

The multi-role analyst works closely with the money laundering analyst, using standardised statistical and data mining techniques, to construct the relative fields within the data tables, which are then processed by AMLPT’s analytical “engine”.

The survey cohort identified the analytical engine as an area of *observability*, and it was in turn the subject of varying levels of *re-invention*, *re-defining* and *re-structuring* by members of the *social system*. External *re-innovation* was usually the result of vendor-supplied AMLPT being upgraded through service level agreements, as well as improvements in technical functionality; vendor-supplied AMLPT accounted for 4 of the 5 installations among cohort organisations. The FOREX cohort uses an in-house developed system and commercially-obtained watch-list and due diligence software.

Relative to *re-invention* and *re-structuring* of AMLPT’s configuration, the cohort identified the principle reason for these behaviours as staff familiarity with data mining and expert/AI-based technology that provides AMLPT’s core analytical function. These technologies follow the natural progression of database development that has occurred over the last 10 years, and is derived from advances in the *business intelligence* (“BI”),

data warehousing, and *knowledge management* (“KM”) disciplines. Further to developments in these three areas, some vendors have exploited parallel developments in complementary applications such as data mining, and the more AML-relevant *knowledge discovery in databases* (“KDD”) method, using modules for specific customer needs. These data mining technologies have converged within the market, to provide a variety of data repository and analysis products for use by analysts and data specialists in developing behavioural profiles.

In further *re-structuring* the profile itself, evaluative rules and behavioural attributes are consistently monitored for effectiveness, and discarded if they generate too many false positives, or fail to produce alerts altogether. However, they are not necessarily completely eliminated, as they can be utilised as a control in the development of new behavioural rules and profiling attributes. The survey cohort identified a variety of cognitive, routine, and evaluative norms used in constructing unique profiles through specific, rather than general attributes; the use of an entire or general range of available attributes would have proved problematic in generating meaningful data. Profiles are created to identify specific, rather than generalised behaviour and therefore, the profile is constantly subjected to a process of *re-definition* or *re-structuring*.

For instance, formalised profiling norms have evolved from data obtained from external sources, such as marketing or customer service, and may include an account holder’s occupation, marital status or specific event data, such as the date a customer began a relationship with the institution. Once all the data elements are collated and incorporated into the SQL instructions, the AMLPT engine is engaged, and a report generated as to the findings. From this report, the money laundering analyst then extrapolates any anomalies for further analysis, or generates a SAR for distribution to external authorities such as the FIU. The cohort group’s monitoring processes also

includes the use of watch lists¹², which are databases of known money launderers and politically exposed persons (PEPs). This is perhaps the least sophisticated of monitoring measures deployed by the cohort, and all cohort organisations use a subscription-based, vendor-supplied database. Connectivity of these databases with the AMLPT system is simple, and watch-list filtering is included in all profiling exercises.

5.5 Social System Attributes: formal and informal behaviours

Embedded formal norms within the cohort organisations originate from a variety of policies, procedures and documents, as well as training methods. At the institutional level, cohort members, except for the FOREX house, provide all newly hired employees with guidance on identifying money laundering, as well as a reference handbook. Counter staff receives further instruction in KYC procedures, as well as basic fraud awareness training. The FOREX staff received individualised role-specific training, although the FOREX MLRO acknowledge this was not as thorough as necessary, given staffing shortages. Table 4.7.1.1 illustrates a reflective sample of the hard-copy and electronically-sourced documents reviewed in this dissertation.

Among the cohort, content of AML-CFT awareness and policy guidelines and publications were derived from JMLSG and FSA sources, typically in template format, and were uniform in their content across the cohort. Electronic references were available throughout cohort organisations, and used a single upgrade and revising process controlled by the MRLO unit. However, it could be problematic to ensure all externally generated regulatory guidelines were current:

“I have eleven people assigned to policy, audit, training, and liaison (with the FIU), as well as my MLRO, and we still have a problem keeping up the flood of FSA rules. They change all the time, especially at the end of the year. I wish they would do a better job of organising the rules online, as it’s really time consuming”

¹² Watch lists are dynamic lists of suspected launderers, terrorists, or other “persons of interest”, supplied to financial institutions by FIUs and national intelligence agencies. These lists can be updated daily in some instances, and the volume of updates is proportionate to increases in regulatory demands.

for my team to reference a particular ruling in most instances, and then, god forbid, if you've missed something and they audit you, you're in for some grief."
[Head of Compliance LSRB]

The profiling process in each cohort organisation is extensively documented, and provides a cognitive framework for developing profiles and determining appropriate attributes, as well as guidelines for SQL query creation. Internal documents supplement the vendor-supplied user manuals, which the cohort found to be less-than satisfactory, and in one case, felt the vendor's delivery of poor user documentation was deliberate:

"Of the eight analysts we have on staff, 7 have over 10 years of database experience; they can write a SQL query. Yet when we were negotiating the contract for our system, the vendor was trying to sell me consulting that cost twice as much as the system! We said "no" at first, but when we saw how poor the documentation was, we almost agreed. Then during the pilot it became real clear to us that we could figure it out, once the implementation techs from the vendor had sorted-out the network gremlins and the like. We've not had them back since..." [ML Analyst, LSCB]

Documents also function to impart meaning and a sense of cohesiveness and purpose in the MLRO unit. They emphasise the need for discretion when dealing with customers that may be under scrutiny, as well as stressing the vital role of compliance in maintaining the institution's reputation, as well as that of the UK's financial markets. This is further reinforced by the abundance of stern warnings on internal documents, reiterating the penalties for money laundering itself, as well as the failure to report evidence of such activity, let alone assisting in its perpetration. All cohort members detailed the extensive vetting procedures for compliance employment, as well as the penalties for even the appearance of impropriety. These policies, as well as the volume of supporting documentation used in defining formal norms, provide organisational structure through a variety of meanings; however, informal norms contribute as well, shaping the *social system* and its receptivity to innovation.

The insular nature of the compliance function, coupled with its internal regulatory remit, all contribute to a perception of institutional isolation among

individuals with the cohort. Throughout cohort trial periods, AMLPT's *observability* and *relative advantage* heightened the perception of value of the compliance function at the institutional level. However, all cohort respondents indicated an atmosphere of "us versus them" in their external communications with the larger institutional *social system*, despite communicating the *relative advantages* of AMLPT. This was primarily a result of *authority innovation-decisions* in the *early adoption phase* of AMLPT in 3 of the 5 cohort organisations that mandated AMLPT use (see section 3.4).

The other two cohort organisations were *early majority adopters*, and conflicts with the institution were mitigated through the use of *change agency* and AMLPTs *observability*, as well as *compatibility* with the extant goals and values of the institution's *social system*. The author observed *individual innovation* through a variety of methods and meanings evident in the actions of cohort members, primarily in their *re-invention*, *re-defining* and *re-structuring* of individual tasks within the monitoring process, encompassing those of both a technical and administrative nature.

"After we had understood the place of transaction monitoring software in our daily lives, we were able to recapture a lot of time we'd lost on managing documents and manual SAR reporting. It allowed us to combine and streamline all the duplicate advice from the regulators into one set of policies and procedures, greatly simplifying our references, as well as training new staff."
[MLRO MSRB]

Informal *homophilous* communication was mediated through discussions on technique and practice, and occurs throughout cohort organisations, most often through training sessions, group meetings, and external participation in professional organisations. Several individual cohort members mentioned the value of professional associations in contributing to *re-structuring*, primarily in interpreting FSA regulations and reconciling them to practice. Regulators and law enforcement engage in *re-invention* on a consistent basis, formally and informally communicating newly observed methods of money laundering, as well as successful countermeasures. Conferences such as those

organised by the Association of Certified Anti-Money Laundering Specialists, (ACAMS), were cited as particularly beneficial.

5.6 Effectiveness behaviours

Relative to organisational effectiveness, all cohort members stated that AMLPT had contributed in three key areas: detection rates, turn-around time, and over-all efficiencies in process management. Furthermore, AMLPT *fit* within the scope of the organisations' *objectives* and *goals*, and did not limit organisational *adaption* and *flexibility*. Cohort members expressed a great deal of satisfaction with these last two effectiveness attributes in particular, stating that:

"At the time of the 2005 London bombings, we were hit with a huge influx of SAR review requests, as all our counter-staff were paranoid about 'Middle Eastern-looking people' with large cash deposits. We needed to tighten-up our trigger criteria, such as what really was 'large,' and before, it would have taken months in Excel; with [vendor's name], it took the process down to hours, as well as allowing 'on the fly' modelling. We could adapt it to any situation the teller staff could throw at us." [MLRO MSRB]

As a measure of organisational effectiveness, AMLPT's *fit* was manifest in several ways within the existing environment, both from a technical and organisational perspective. This was especially the case in the larger organisations within the cohort, as a result of the extent of the existing information systems infrastructure. *Fit* allowed a high degree of *environmental utilisation* as a further indicator of organisational effectiveness. The introduction of AMLPT required a minimum amount of configuration, along with some vendor-supplied consulting, and no hardware installation, except in the case of the FOREX house. In terms of *complexity* and *cohesion*, the *trialability* of AMLPT provided ample time to address the *complexity* of both its introduction and potential deployment. Cohort members stated that the *complexity* of AMLPT lay not in its technology, but more so in organising the vast amounts of data it provided and the resultant analytic permutations therein.

Complexity was addressed by process modifications and training; mitigation of *complexity* was further realised through increasing familiarity with AMLPT over time. Measuring effectiveness through the OE attribute of *emphasis of achievements* was derived from indicators obtained from the amount of SARs processed, detection rates, and other non-compliance specific indicators, such as system up-time, reliability and technical proficiency. Improvements in detection rates, a result of improvements in the accuracy of SARs reporting, were the main effectiveness indicators across cohort organisations, as well as the most readily quantifiable (see figure 5.6.1). The OE effectiveness attributes of *role and norm congruence* directly contributed to improvements in detection rates and reporting accuracy as a result of well-developed training and personnel development across cohort organisations.

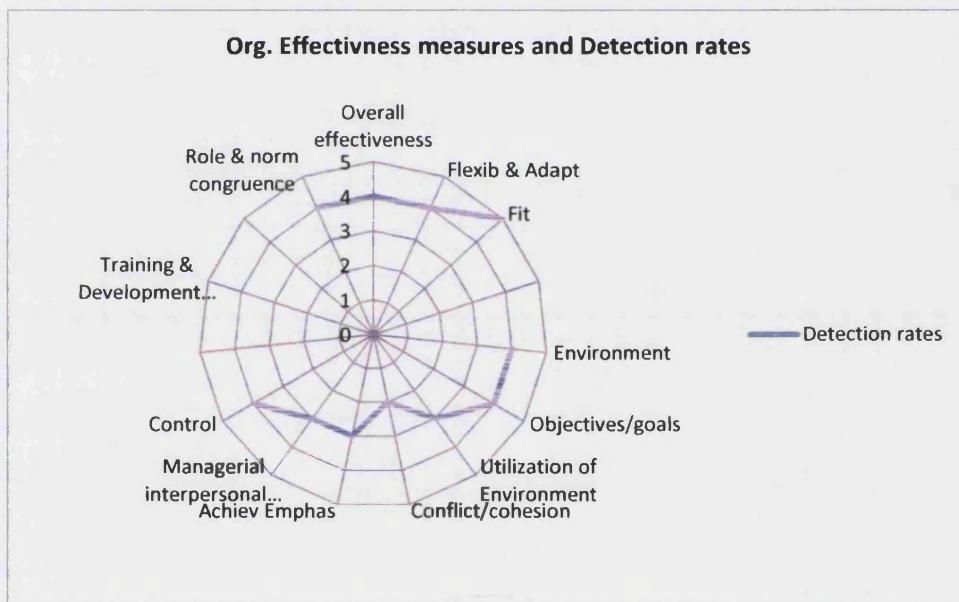


Figure 5.6.1 – Organisational effectiveness attributes as measures of effectiveness in improving detection rates.

The FOREX house was lacking in formalised training, but due to staff longevity, still enjoyed acceptable detection rates. *Role and norm congruence* stem from formalised role and job descriptions that are further refined through testing and professional certification. Furthermore, given the time involved in vetting compliance

personnel, there is limited staff turn-over and high job satisfaction among the cohort, even though there is a great deal of *control* exercised throughout all levels of the organisation, at both procedural and physical security levels.

5.7 Key Findings

Through structured and unstructured interviews, document analysis, observed behaviour, and survey results, three key conclusions emerge from the study. The first is that, while innovation is a constant theme within the use of AMLPT, it does not mitigate the inherent ambiguity of the behavioural profiling exercise. Profiles are rarely derived from empirical sources, nor is there a uniform definition of money laundering across cohort organisations, or for that matter the banking industry as a whole. What can be construed as “definitions” are relational, rather than exacting and thus qualitatively measured; subsequently, innovation occurs in response to these ambiguities and attempts to bridge the gap between qualitative and quantitative processes and subsequent measures of effectiveness.

Second, all manner of innovation behaviours and attributes manifested themselves, primarily those of *re-invention* at the individual level, and *re-defining* and *re-structuring* at the organisational level. Furthermore, the *organisational adoption process* of AMLPT, as well as that of the five states of the *innovation-decision process*, followed Rogers’ continuums with some examples of linear deviation. Moreover, the AMLPT artefact serves as a catalyst, a locus of innovation, in both technical and administrative functions within the *social system*. Third, AMLPT improved organisational effectiveness throughout the *social system* at both individual and organisational levels, as defined by the combined organisational effectiveness and innovation criteria outlined in section 4.5. Sections 5.7.1 to 5.7.3 describe these findings in detail.

5.7.1 AMLPT does not mitigate the inherent ambiguity in identifying money laundering

No uniform exact definition of money laundering exists either within cohort organisations, or the banking industry as a whole. Money Laundering can be identified by certain attributes in a holistic fashion, but not quantified. Therefore, the nexus of cohort deterrence efforts are cash transactions within a customer account and associated behaviours. Account behaviours have been refined and quantified within existing meanings, to define what constitutes acceptable and unacceptable transaction norms.

Definitions of “money laundering” varied among the cohort, from very specific descriptions of laundering activity, to a generalist conceptual description of money laundering and the larger domain. Analysts within the cohort maintained the most consistent descriptive narrative of money laundering behaviour, as well as understanding the ambiguity in defining a suspect transaction. They viewed the profiling exercise holistically, acknowledging AMLPT’s significant role, but only as one of several factors that contributed to the monitoring process. Other considerations included the source of the data when determining how unusual a transaction is versus the source’s suspicions, as well as the current intelligence from the FIU and other intelligence and law enforcement agencies.

Moreover, the regulatory *social system*, while demanding that banks and other financial institutions monitor their customers’ account behaviour, as well as reporting any suspicious activity to the FIU, provides no definitive understand of what is indeed “suspicious.” While the secrecy inherent in criminal enterprise may account for some of this ambiguity, a large part of problem is due to the lack of a closed-loop in the SAR reporting process. Once a SAR is passed on to the FIU, there is no consistent method to resolve the disposition of a SAR between the compliance organisation and the FIU; closing this loop would allow compliance organisations the ability to calibrate their profiles accordingly, based on either a negative or positive confirmation of their

suspicions of laundering activity. Essentially, all cohort organisations operate through a process of “deliberate speculation” in ascertaining the identity and behaviour of money launderers; subsequently, many of the attributes and definitions utilised by cohort organisations are not necessarily reflective of recognised norms of launderer behaviour.

Furthermore, these behavioural conjectures and suppositions may involve a value judgment, such as a customer’s economic and demographic circumstances, relative to their legitimate use of cash. For example, a customer’s attempts to use different branches to deposit small amounts on a regular basis may appear to be structuring; alternatively, it could be simply matter of convenience, based on where they work in proximity to where they live, or the type of services a particular branch may offer.

5.7.2 AMLPT spurred innovation in cohort technical and administrative functions

The survey, as well as the author’s observations, confirmed the existence of a variety of innovation behaviours. As AMLPT diffused throughout cohort organisations, favourable *innovation adoption decisions* occurred at individual and organisational levels. Adoption rates were *incremental*, and varied, from that of *individual early adopters* (MLROs), to *early majority adopters* at the organisational level. Among the cohort, in the *early adoption stage* of AMLPT, the primary attribute was that of *preventive adoption*, give the external regulatory threat. The MLRO demonstrated *individual adopter attributes* in the context of the *innovation-decision process*. MLROs across the cohort were tasked with piloting AMLPT, and served as *champions* and *change agents* within the compliance organisation. Once adopted, AMLPT’s diffusion maintained the trajectory of Rogers’ innovation process in organisations, particularly in the *re-defining* and *re-structuring* stages, as defined within the *implementation phase* of the process of organisational innovation. AMLPT’s *trialability* in certain cohort organisations, resulted in several vendor pilot projects, demonstrating varying levels of

success within these pilot projects; all pilots eventually resulted in the adoption of AMLPT. Lastly, AMLPT primarily supported the technical component of the profiling process, primarily in the areas of speed, flexibility and scale.

Re-invention within administrative processes improved the execution of reporting and other daily tasks. Furthermore, the variety of data generated by AMLPT, as well as AMLPT's ability to model suspect behaviour, exposed cognitive variances within cohort compliance organisations. These variances were due to factors such as dissimilar role and skill levels, professional background, or technical mastery. Cohort organisations used training to eliminate these variances as much as possible, for instance, incorporating AMLPT into training cycles, to create scenarios and simulations of suspect behaviour. Additionally, scenarios could then be matched to regulatory procedures, providing analysts an understanding of money laundering behaviour from the regulator's perspective, as well as testing the correlation between practice and theory.

5.7.3 AMPT and organisational effectiveness throughout the social system

AMLPT contributed to organisational effectiveness in three key areas: detection rates, turn-around time, and over-all efficiencies in process management, a result of its high degree of *fit* within the scope of the organisation's *objectives and goals*, as well as AMLPT's furtherance of organisational *adaption* and *flexibility*. AMLPT's ability to model suspicious behaviour resulted in improvements in detection rates; moreover, modelling also improved the cognitive abilities of analysts, enhancing their ability to quickly verify a suspicion, thus shortening SAR turn-around time. Aside from the profiling process, the centrality of AMLPT enabled cohort organisations to realise addition efficiencies in data processing, reporting, and general work flow.

Furthermore, AMLPT's reporting and analysis capabilities were used to enhance training, as well as providing a uniform cognitive device for communicative action

among all members of the compliance organisation. The use of AMLPT contributed to formalising a variety of compliance processes and procedures, and enabled the constant reinforcement of the value of uniformity in roles and norms, which was critical for MLROs in maintaining organisational effectiveness.

Prior to the introduction of AMLPT, the analysts tended to manage AML knowledge, meanings, and norms at the expense of performing other supporting roles within the organisation. The use of AMLPT reduced the primacy of analysts as knowledge managers, facilitating communication of shared meanings, common knowledge, and information across formal and informal boundaries between the compliance organisation and other *social systems*.

5.8 Concluding remarks

Chapter 5 described the profiling process and AMLPT innovation as a measure of organisational effectiveness. The data collected from the fieldwork provided additional context to the role AMLPT plays in the *social system* beyond that of a technology artefact. Furthermore, the ambiguity that surrounds money laundering, as well as the vagaries of human behaviour, in the form of criminal intent, ensures the speculative essence of profiling will prevail for some time.

The circumstances described in chapter 5 demonstrate that innovation correlates to organisational effectiveness, as specified in the main research question as presented in section 2.9. This dissertation aims to determine if computerised AMLPT profiling tools are effective in support of AML procedures, as required by MLROs and compliance officers in a banking context. The results of the field work, as discussed in chapter 5, established that using innovativeness as a measure, AMLPT is effective in supporting compliance professionals. Furthermore, the detection of money laundering is an inexact, subjective process; just as subjective are the measures used to determine the

effectiveness of the profiling process. In Chapter 6, an analysis is provided as to innovation behaviour and organisational effectiveness and the use of AMLPT.

Chapter 6. Analysis

What is clear from the research findings described in chapter 5 is that innovation adoption behaviour, in support of AMLPT innovation, is as much a response to the regulatory milieu as it is to the ambiguity inherent in the process of detecting money laundering. Moreover, the role of the *social system* in sustaining innovation is more critical to the *adoption process* than first thought at the outset of the research. The analysis provided in this chapter addresses the effectiveness of AMLPT as measured through an analysis of innovation adoption attributes identified in chapter 5.

Furthermore, we present an understanding of the various forms of innovation evident among the cohort, as well as the non-AMLPT artifacts, behaviours, and other traits that shape and define the innovation process. In addition to an analysis of innovation behaviour, we further examine the various forms of ordering, meaning, and structure used in cohort compliance organisations in support of AMLPT, through the work of Bowker and Star (Bowker and Star 1999; Star 2002) and Suchman (1987; 1993).

Rogers states that the adoption of an innovation may be due the actions of an individual, a *change agent*, or *champion*, as much as from a perceived need. The research identified several instances, where individual compliance officers attempted to implement AMLPT without executive sponsorship; such action is emblematic of classic *early-adaptor* behaviour, as well as that of a *change agent*, both critical in the diffusion of innovation. In most cases, the *champion* or *change agent* role was assumed by a MLRO, compliance officer or a senior analyst, and was normally the result of an *authority innovation-decision* in 3 of the 5 cohort organisations.

In the remaining two cohort organisations, AMLPT adoption resulted from *collective innovation-decisions* within the compliance group(s). The decision process, as noted in chapter 5, was more a response to the FSA's punitive approach to regulatory

enforcement, rather than to the exponential volume of SARs being generated as a response to fear of FSA sanctions.

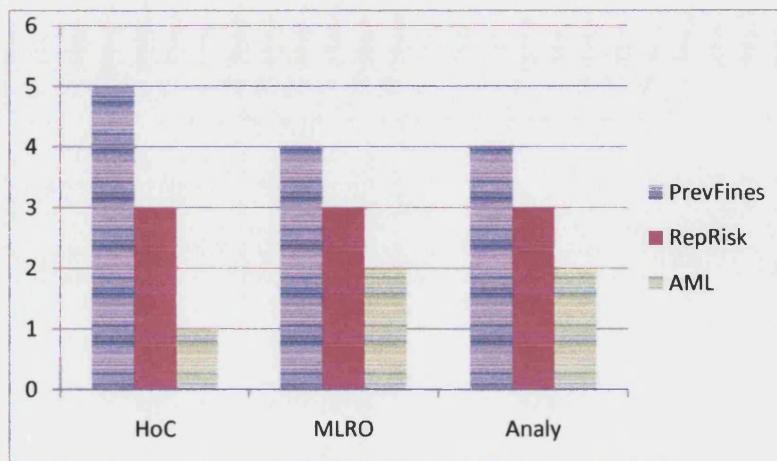


Figure 6.0.1 – Managerial motives for authority innovative-decisions

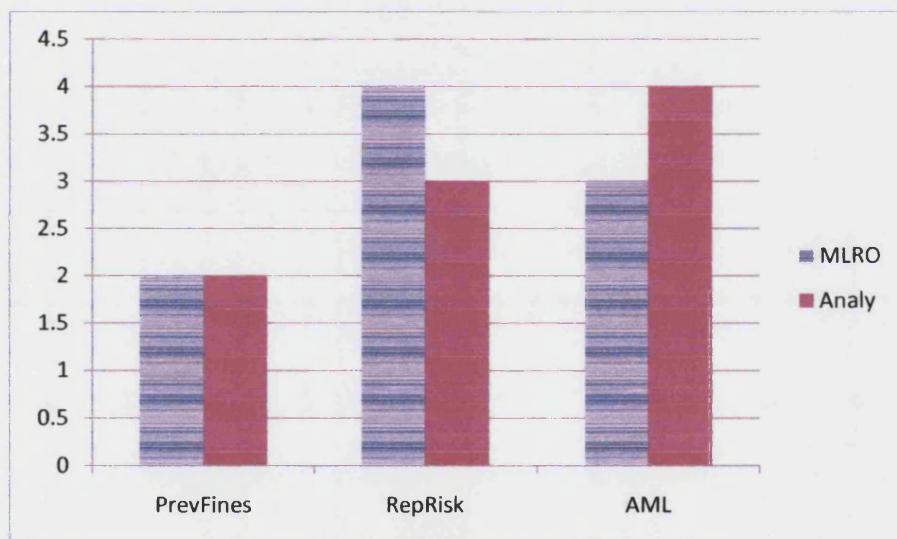


Figure 6.0.2 – Managerial motives for collective innovative-decisions

In analysing the response data, and given that the primary adoption impetus was predominantly *authority driven*, a discrete analysis of management perception of adoption (see figure 6.0.1) reveals more a concern with structure than with process;

regulatory ramifications such as preventing fines, (“PrevFines”) and reputational risk (“RepRisk”), are the main concern, more so than detecting money laundering (“AML”).

Management roles are consistent with cohort roles of head of compliance (“HoC”), compliance officer or MLRO (“MLRO”), and analysts (“Analy”). While analysts were typically subordinate to compliance officers or MLROs, their seniority and supervisorial role across the cohort was considered a valid metric for gauging the foundational motivations in adoption of AMLPT.

Figure 6.0.2 represents the foundational motivations for the collective innovation-decisions for AMLPT adoption among the 2 cohort members who were early majority adopters. Additionally, the difference in adoption criteria is a function of several formal and informal factors (see table 6.0.1). As the authority-driven organisations (ADO) were early adopters, they already had some experience with formalised AML processes as a response to pre-9/11 UK anti-money laundering regulations.

Type of Innovation Decision	Formal	Informal
Authority	<ul style="list-style-type: none"> • Regulatory Remit • AML processes in place pre-9/11 • Semi-Automated SARs processing • Rudimentary in-house profiling tools 	<ul style="list-style-type: none"> • Low initial financial risk due to existing IT infrastructure • Resource-heavy • Vendor incentives • Peer status • Market analysts
Collective	<ul style="list-style-type: none"> • Regulatory Remit • Limited AML processes pre-9/11 • Institutional-focus (LSIB) 	<ul style="list-style-type: none"> • Bias towards in-house AMLPT • Investment banking culture hostile to AML regulations • Cost (FOREX house)

Table 6.0.1 – Formal and informal stimuli for types of innovation decisions among cohort organisations

Moreover, from an informal perspective, the ADO’s existing IT infrastructure allowed for a relatively inexpensive trial period for these organisations. It was clear also, based on the author’s experience that *early adopter* organisations took advantage of formal roles and organisational norms that were structured around SARs and KYC

processes; lastly, the eventual SAR reports were then archived. This historical data, post-9/11, would comprise the source data for later rudimentary profiling exercises, prior to the introduction of AMLPT and other formalised automated methods

AMLPT vendors, who themselves were early market innovators, were able to gain favourable pricing, under the guise of “beta” testing. A high level of AMLPT *critical mass* resulted from this convergence of competing vendor offerings with vaguely quantified, regulatory-inspired need, resulting in peer-level derived *opinion leadership*.

While Rogers’ defines *opinion leadership* as mostly an *individual innovation attribute*, (closely allied with that of *change agency*), this function was assumed by financial technology analysts aligned with the *social system* of compliance technology providers, more so than the micro system of compliance professionals. Further analysis shows this was the result of these analysts’ adopting one particular vendor’s espousal of “artificial intelligence”, as a means of behavioural profiling, more than any consensus among the compliance professionals’ *social system* as to a clear *relative advantage*. Indeed, *early adopter* behaviour was as much “management fad” (Abrahamson 1996; Swan, Scarbrough et al. 1999) as that of a calculated assessment of *relative advantage*.

The *collective decision organisational adopters* (CDO), as *early majority adopters*, while ahead of industry peers, were more deliberate in their *adoption decision process*. This was a result of not only ignoring the bias of industry analysts supporting acquisition of “sophisticated” AMLPT, but also that the FSA had not mandated use of automation, only just the requirement to consistently report SAR traffic. CDO adopters recognised the *relative advantage* of AMLPT in practical matters, such as automating and centralising both the SAR and monitoring processes, as well as facilitating improved reporting capabilities to the FIU and other regulatory bodies. Analysis shows that much of the momentum around the use of automation, not just in profiling, but all aspects of compliance, was due to the anticipated increase in the volume of SAR reporting that the

post-9/11 regulatory environment mandated; subsequently, innovation emerges as a means to handle these increases and other monitoring requirements.

An innovation's *rate of adoption* is relative to the receptivity of a given *social system*, and while much of the following analysis addresses the *social system's* effects on *rate of adoption*, this analysis will also argue that AMLPT remains a technical artifact as much as a catalyst for innovation. Therefore, AMLPT must also be conceptualised as an IT system, a system that is the product of, and medium for, human action, and is also the result of influence from institutional conditions and consequence (Orlikowski 1992). Furthermore, AMLPT may be discretely categorised as to its role, using the work of Markus and Robey (1988) and Orlikowski and Iacono (2001). Markus and Robey articulated a number of distinct ways of analysing and conceptualising the relationship between organisational change and technology, theorising that technology can assume a variety of roles, such as those of "an independent variable, a dependent variable, or as one of a number of players in an emergent process of change (where the outcomes are indeterminate because they are situationally and dynamically contingent)" (Orlikowski and Iacono 2001). Orlikowski and Iacono, using Markus and Robey's work, have identified 14 conceptualisations of technology,

"...looking for commonalities and differences, and found we could cluster them into five broad metacategories, each representing a common set of assumptions about and treatments of information technology in IS research. Our labels for these metacategories signal the primary conceptualization of technology that distinguishes each category: the *tool* view, the *proxy* view, the *ensemble* view, the *computational* view, and the *nominal* view" (Orlikowski and Iacono 2001).

Orlikowski and Iacono's categorisation provides an elegant structure of meaning, yet AMLPT does not fit well in any specific category. The results from chapter 5 demonstrate AMLPT's ability to assume a variety of roles, but primarily as a medium for action. A variety of meanings and roles are embedded in the AMLPT artifact at any one time, resulting in dynamic influences throughout the compliance organisation. Indeed, in

rejecting a distinct vision of AMLPT as either a tool or proxy, (while all valid categorisations), we argue such categorisations do not adequately describe the effects of AMLPT within the *social system*. As noted previously, the AMLPT artifact is certainly a tool as much as an IT system, but the tool metacategory provides excessively static descriptive categorisations of AMLPT's dynamic, multi-variant computational form.

While Orlikowski and Iacono's proxy view is grounded, to a great extent, in Rogers' 1983 work, they emphasise the techno-centric view of diffusion; they say nothing of the consequences of innovation on the larger *social system* as a whole, nor on the distinct forms of individual versus organisational innovation. Therefore, a more appropriate understanding of AMLPT's centrality in the *social system* is found in the ensemble or "package" view of technology. This analysis is further supported by Orlikowski and Iacono's observation that:

"Over the years, a number of researchers have been dissatisfied with the *tool* and *proxy* views of technology. Kling and Dutton (1982) point back to a key insight of Ivan Illich (1973) who argued that while the technical artifact may be a central element in how we conceive of technology, it is only one element in a 'package,' which also includes the components required to apply that technical artifact to some socio-economic activity. Kling and Scacchi (1982) further developed this insight into what they called the 'web of computing,' which includes the commitments, additional resources such as training, skilled staff, and support services, and the development of organisational arrangements, policies, and incentives to enable the effective management and use of new technologies" (Orlikowski and Iacono 2001).

Kline and Scacchi's (1982) observation of the importance of "additional resources such as training, skilled staff, and support services, and (...) policies, and incentives" was very much a factor in the *rate of adoption* of AMLPT as determined in this research. For instance, the author's past experiences with a variety of technology firms reinforced the prevailing view of the limited value most companies place on training; this was not the case in cohort organisations. Rather, the cohesive nature of cohort compliance organisations was significant in informal knowledge exchange, which

was then formalised through training, specialisation, and role normalisation. Training methods included real-world examples of profiling exercises rather than scenarios, which imparted a sense of urgency and purpose instead of theory-based classroom work. Furthermore, it was clear across the cohort that AMLPT was embraced as a package of technologies and processes, to be opened, tinkered with, and refined, rather than Latour's "black box" (Latour 1987) and therefore, a position in compliance was inclusive of a variety of roles beyond simply transaction monitoring.

6.1 How Innovation Adoption Emerges

Chapter 5's fieldwork catalogued extensive evidence of a variety of adoption behaviours, attributes, and roles. The survey data, as well as the author's observations, confirm that, while Rogers' linear models of individual and organisational innovation typically indicate a linear continuum, this was not demonstrated by the data. The following analysis demonstrates *innovation adoption* among the cohort was linear in some respects and initially *preventive*; it then became progressively iterative, then reflexive at times. Furthermore, *rate of adoption* was consistently *incremental* throughout the *social system*; behaviour Rogers does not acknowledge. Moreover, certain behaviour was regressive or interpolated and therefore, subject to *discontinuance* or outright rejection; for instance, in the *re-structuring* or *re-defining* of the parameters or specific attributes of a suspicious transaction. However, cohort *discontinuance* behaviour ran counter to Rogers' description, in that, while Rogers' states that discontinuance imparts rejection of an adoption, cohort members never outright rejected AMLPT. Rather, *re-structuring* and *re-defining* were used to modify AMLPT's profiling output and other characteristics to match the needs of the *social system*. Furthermore, Rogers' makes no mention of *incremental rates* of adoption; instead, he uses "stages" as a metaphor for what is essentially a chronological phenomenon. Indeed, the stages, or

increments, in which the *rate of adoption* occurs, provides a useful benchmark for understanding organisational effectiveness, as derived from the use of AMLPT, and was used throughout the research.

Gatignon, Tushman, et al. define *incremental innovations* as “those that improve price/performance advances at a rate consistent with the technical trajectory” (Gatignon, Tushman et al. 2002). As illustrated in Chapter 5, this is one appropriate description of AMLPT innovation, as, despite vendor claims to the contrary, AMLPT is derived from existing forms of data mining, knowledge management, and business intelligence gathering. While proprietary algorithms may provide perceived speed or accuracy improvements, those cohort organisations that developed in-house technology enjoyed similar performance to those deploying vendor-supplied AMLPT. Thus, AMLPT is an *incremental*, and not a *radical innovation*, as its composition is consistent within the current technology trajectory of data mining and other similar applications.

In returning to the analysis of how adoption emerges, the findings in chapter 5 illustrated that *preventive innovation* was the initial impetus for the adoption of AMLPT, at first a result of the threat of FSA discipline, and later, in combination with the JMLSG’s formalisation of reputational risk. What also emerges from this preventative posture, a consistent theme throughout the research project, is that AMLPT is deployed as a hedge against the regulator. Such behaviour is exemplified through cohort efforts directed at constantly refining monitoring methods and the quality of reporting, all under the rubric of “best practice”. This preventive posture has been informally institutionalised across the cohort and, while not openly advocated, represents a substantial informal foundation of the compliance function across the cohort.

As an *incremental innovation*, cohort member use of *bricolage* or “tinkering” (Ciborra 1992a; Louridas 1999) was consistently evident in furtherance of *re-invention*, *re-structuring* and *re-defining* of AMLPT’s place in the *social system*. Thus, the resultant

effectiveness of AMLPT in supporting MLROs and compliance officers varied in some instances, based on how adept the *social system* was in balancing these distinct systemic actions. Indeed, metaphorically, these actions assume a Borromean dependency (Angell 2009), in that innovation, *re-invention* and tinkering appear as separate yet interdependent actions and attributes throughout the cohort; these actions and attributes further organisational effectiveness through this interdependence, effectiveness which is absent from the AMLPT artifact as a situated, stand-alone entity.

6.2 Countering the inherent ambiguity in identifying money laundering

The findings in chapter 5 served to illustrate that compliance efforts, while formalised and highly structured, are still significantly dependent on subjective analysis in defining behaviour indicative of money laundering; moreover, this is further complicated by the lack of a universal description of what is indeed “suspicious”. Significantly, what emerges from the survey responses, as well as observed behaviour, is that the cohort categorises this subjective analysis as a process akin to “deliberate speculation”, as to the identity and behaviour of money launderers. Subsequently, many of the attributes and definitions of money laundering utilised by cohort organisations are not necessarily compatible with recognised norms of launderer behaviour; rather, they are indicative of the individual organisation’s perception of those behaviours, relative to a regulatory standard.

The empirical findings in chapter 5 further demonstrate that the adoption and use of AMLPT innovation in cohort institutions, is primarily a response to regulatory requirements for deterring money laundering as much as one of mitigating reputational risk or, for that matter, emblematic of keen interest in deterring money laundering. However, as the cohort became more versed in AMLPT use, as well as with the nuances

of regulation, mitigation of reputational risk soon became the *raison d'être* of the compliance group.

Subsequently, effectiveness is measured through qualitative and subjective values such as detection rates, SAR processing time, and improvements in process efficiency in pursuit of regulatory compliance; thus, the *innovation-decision process* is derived from efforts to improve cohort organisational effectiveness, through identification of a variety of individual and organisational stimuli comparable with innovation attributes. This section analyses AMLPT innovation as a response to this ambiguity, and the commensurate innovation behaviours identified among the cohort; identification of those of individual and organisational stimuli comparable with innovation attributes, and the resultant measure of effectiveness, is analysed in section 6.2.5.

6.2.1 A Context for Innovation

Aside from occasional subtly expressed scepticism regarding the regulatory regime, cohort organisations demonstrated professionalism, dedication, and a high level of role and norm congruence relative to the task at hand. The MLRO or compliance officer role, throughout the cohort, is instrumental in creating not only a localised organisational culture, but also in interpreting the formative context of the social system as a whole, and while at times demonstrating procedural and technological determinism, typifies innovativeness and flexibility as well (Ciborra and Lanzara 1994f). From the findings in chapter 5, the individual *innovativeness* and adopter behaviours of MLRO and compliance officers are ranked as to their frequency, and at what level the behaviour is most prevalent, as illustrated in figure 6.2.1.

The MLRO and compliance officers benefited, conversely, from a high level of *homophily* within their organisations. While Rogers' states that *heterophilous* communication among a *social system* is more conducive to diffusion of innovation, the

findings in chapter 5 do not support this. Rather, what the findings determined was a high level of *homophilous* communication, supporting receptivity to AMLPT and its *rate of adoption* and *sustainability*. AMLPT's *observability* complimented the institutional goal of fraud avoidance and risk mitigation.

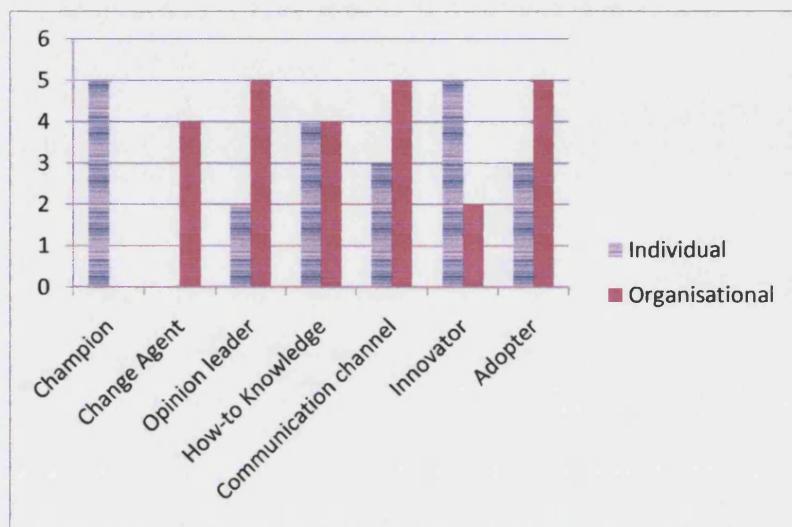


Figure 6.2.1 – Distribution, frequency, and level of MLRO/Compliance officer behaviours

Organisations that would have been traditionally *heterophilous* to those of the compliance function, such as those of marketing and customer support, evidenced *homophily* through the use of boundary spanning individuals (Tushman 1977; Tushman and Scanlan 1981), and *change agents*. *Homophilous* and *heterophilous* behaviours were demonstrated across the cohort organisations, as well as at the institutional level, and included the following attributes and behaviours as illustrated in table 6.2.1. Also emergent from the findings is the critical role of the *change agent* in organisational innovation. While individual members, such as analysts and supporting staff displayed *innovativeness* at the task and routine level, the MLRO or compliance officer created the environment. Their interpretation of the formative context, particularly in regards to regulation, as well as their grasp of social perceptions of fraud, risk and terrorism, was

significant in embedding a sense of purpose (Ciborra and Lanzara 1994f). ment within which innovation could evolve.

<i>Heterophilous attribute/behaviour</i>	<i>Homophilous attribute/behaviour</i>
Customer focus	Fraud avoidance/risk mitigation
Tradition	Data sharing
Hierarchy	Innovativeness
Structure	Collegial

Table 6.2.1 – Homophilous and heterophilous behaviours across the cohort compliance organisations & institutions

Given that compliance was a neglected function prior to 9/11, such *cosmopolitanism* was important in expediting AMLPT's *rate of adoption* among the cohort. Given chapter 5's findings that AMLPT is a locus of innovation, it is appropriate that the focus of cohort adoption and innovation is found in the monitoring process and resultant SAR generation. The next sections provide an analysis of innovation within both these activities.

6.2.3 Innovation, deliberate speculation, and behavioural profiling

Chapter 5 demonstrated that transaction monitoring, inclusive of profiling, is an exercise in deliberative speculation. Deliberate, as it comprises a conscientious series of steps and analysis; and speculative, as it is grounded in conjecture as to the nature of profile subject. Analysts' are essentially attempting to operationalise a guess at intent or motive; therefore, the context of the transaction becomes the key delineator as to its legitimacy. Nonetheless, cohort organisations, in attempting to operationalise a conjecture, do operate from a variety of known variables, a result of pervasive regulatory guidance and legislative requirements. However, that which is pervasive is not necessarily indicative of efficiency. As chapter 2 illustrated, legislators, through use of anti-money laundering laws, are trying to mitigate a highly dynamic and increasingly complex phenomenon with static measures, measures that are ineffective in many cases. Moreover, the economics of compliance are *ceteris paribus*; the more extensive the

regulatory environment, the higher the cost of compliance, in the form of staff and technology. A detailed analysis of compliance costs, relative to chapter 5's findings, is included in section 6.3.1 of this chapter's discussion on innovation and organisational effectiveness.

While many of the processes, procedures, and organisational behaviours in support of AMLPT adoption were consistent with the linear trajectory of innovation diffusion and adoption, *innovativeness* assumes an incremental and non-linear form within the AMLPT artifact itself. Significantly, analysis of the findings illustrates that *innovativeness* assumes both an internal and external influence, which Rogers typifies as *interactive innovation* consistent with *critical mass*. *Critical mass* defines the point at which enough individuals in a system have adopted an innovation, so that the innovation's *rate of adoption* becomes self-sustaining (Rogers 2003). *Critical mass* resembles *routinization* in many ways, yet Rogers (2003) includes *critical mass* in his discussion of *diffusion networks*, specifically as means of defining communication among adopters in a *social system*. As chapter 5's findings illustrate, interactivity is more a task and role-specific series of actions, rather than one of communicative action; we argue, that given the findings from chapter 5, this is a rather narrow definition. Furthermore, the findings show that *interactive innovation* is as much a function of innovation within a single *social system*, as within a "network".

Moreover, although a means to foster communication, *interactive innovation* appears more aligned with *re-invention*, *re-definition*, and *re-structuring*, (all of which are specific individual and organisational adoption attributes), rather than those of an *entire social system* or *diffusion network*. This also raises another ontological issue with Rogers, in that a *social system* implies an almost limitless form, yet *diffusion network* implies that a network could include numerous *social systems*, or vice-versa; he makes no distinction. Moreover, he makes no mention of *interactive-innovation* in an

organisational context, which is inconsistent, given that *re-invention* and *re-structure* semantically imply a level of interactive, reflexive, and reciprocal behaviours.

While Roger's linear models provide a sound structure for analysis, they are by no means absolute. Specifically, they inadequately account for the dynamic, as well as the *incremental* nature of innovation, adoption and interplay within AMLPT innovation and its *social system*. Moreover, Rogers' categorisations make no accommodation for the multiplicity of roles and attributes an individual may assume at any one point along the continuum, as well as their relevance; furthermore, he makes no accommodation for measuring incidences of the recurrence of a specific adopter attribute as exhibited *within* a discreet stage along the continuum. This omission was evident within an incremental-type process, such as the *re-defining*, *re-structuring* and *normalising* stages of the *implementation phase* of the *organisational innovation process*. An innovation is said to lose its "identity" in the *normalizing* stage of the *implementation phase* of the innovation process within an organisation.

However, analysis of chapter 5's findings establishes that AMLPT never lost its "identity" within the MLRO unit, given how deeply it is embedded within cohort organisations. Rogers' makes no accommodation for levels of *normalization* or what constitutes identity; it is assumed that once the innovation becomes "an ongoing element in the organisation's activities," it becomes "invisible." Perhaps Rogers is tacitly acknowledging that *normalization*, and subsequently, an innovation's "loss" of identity, imply transcendence from defined role to ubiquity; innovation then assumes the mantle of infrastructure - something that, according to Star (2002), things "run on". This notion of infrastructure is an appropriate metaphor for the duality of AMLPT, as it is both ubiquitous and invisible to some extent, as well as being imbued with "status," as a locus of innovation within cohort MLRO units.

In returning to the analysis of the AMLPT artifact and its locus position, figure 6.2.3.1 illustrates the various external and internal stimuli evident from chapter 5's findings, relative to *re-inventing* (RI), *re-structuring* (RS), and *re-defining* (RD) both monitoring and SAR reporting:

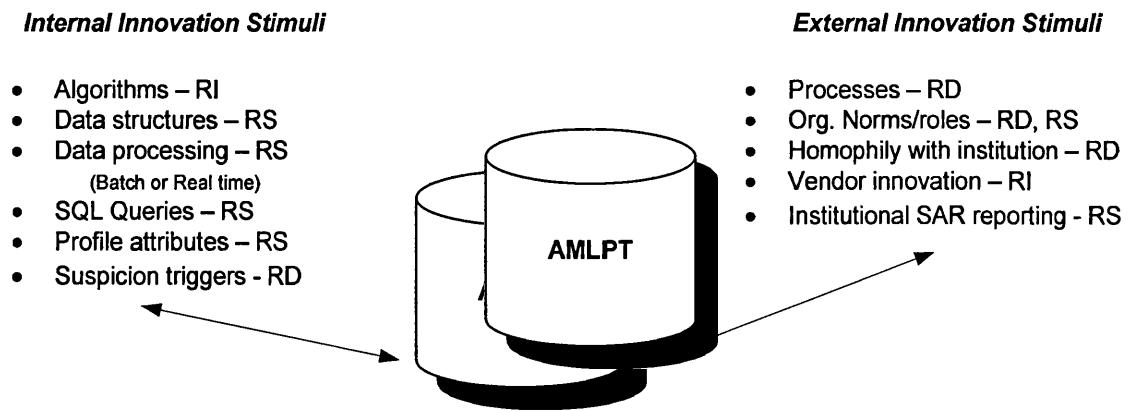


Figure 6.2.3.1 – Internal and external AMLPT innovation stimuli

As AMLPT use escalated among the cohort, *heterophily* gave way to *homophily* and, in keeping with its locus position, AMLPT mediated data exchange and communication among *homophilous* members of the *social system*. *Internal stimuli* was in response to technical demands for capabilities such as improved processing speed, along with data configuration demands for use in refining profiling attributes and other performance enhancements. *External stimuli* were in the form of information and data exchange from organisations within the institution, but external to the MLRO unit, such as fraud detection or marketing, as well as regulatory authorities. Other external stimuli were in response to market innovation, or the result of vendor-supplied upgrades through service level agreements, as well as practitioner process improvements to match those of upgraded technology.

In analysing MLRO innovation within the profiling exercise, as described in chapter 5, three distinct levels emerge. These levels are closely aligned with those of the technical-formal-informal (TFI) framework, as articulated by Liebenau and Backhouse

(1990), as well as Stamper, Liu et al. (2000) and others. The TFI model defines an information system through these three distinct, yet interrelated levels, in much the same manner as the Borromean dependency describes the relationship among the attributes of innovation, *re-invention* and tinkering as separate, yet interdependent behaviours embedded within the AMLPT artifact. The findings from chapter 5 indicate that AMLPT facilitated the technical component of the profiling process, primarily in the areas of speed, flexibility and scale.

We previously noted that profiling efforts involve deliberate speculation, as to the nature of a suspicious transaction within a typical banking transaction. In further analysing chapter 5's findings, it is clear that innovation can be construed as a series of actions to address perceived analytical inefficiencies within transactional data, in support of attempts to identify attributes of illegitimacy therein; suspicion is established through linkages with a discreet set of behavioural variables, rather than distinct affinities.

However, further analysis demonstrates that attempts to *re-define* and *re-structure* behavioural attributes and other linkage factors, given the relatively limitless permutations therein are problematic. Thus profiling can never fully identify which transaction patterns indicate money laundering or other suspect activity, and therefore, will always be inherently ambiguous. MLRO units attempt to resolve this ambiguity through both external and internal innovation stimuli, especially through utilising a variety of data sources, given that analysis from chapter 5 suggests that the activity of behavioural profiling is essentially one of ongoing data mining. Furthermore, the findings indicate that the ability to harness a breadth of data sources, not only quantitative data alone but also qualitative data, substantively support an analysts' probability of identifying a suspect transaction, given this broader perspective of customer behaviour. However, this perspective is limited in several ways.

First, while all the institutions surveyed required universal reporting of suspected money laundering or other illegitimate behaviour when discovered, it is reported and disseminated in a restricted manner. Staff members are not allowed to discuss their suspicions with anyone except the MLRO unit, nor are they allowed to alert a customer involved in a suspect transaction. Second, as the MLRO analysts only react to suspicion reported from external sources, they cannot proactively deter money laundering; they can only further qualify their assumptions, which can then only assume meaning from actual external stimuli. Conversely, the AMLPT innovation is quantitatively data-driven, and can only “think” in very set parameters and therefore is of limited value in money laundering detection. The analysis demonstrates that, given such limitations in the current manifestations of AMLPT, innovation is driven by a desire to mitigate these technical limitations as well as furthering regulatory compliance. In addition to comprising a variety of data sources, such as marketing or customer data, external innovation stimuli is inclusive of processes within the institution that may benefit the compliance organisation, as well as vendor-supplied training on their respective AMLPT system. Vendors provided other forms of stimuli, through improvements in areas such as algorithmic logic and transaction processing capacity. Therefore, the presence of a variety of technical and organisational factors that enable the use of AMLPT infers that technology cannot be evaluated in isolation (Backhouse 2005; Halperin 2006).

6.2.4 Innovation and formal norms within the MLRO-compliance organisation

The analysis in section 6.2.3 illustrated that innovation is driven by a desire to mitigate a variety of technical limitations within AMLPT, as well as furthering over-all regulatory compliance. These intentions are also embedded in the formal norms within cohort organisations, and as illustrated in table 6.1.1 and originate from a variety of policies, procedures, and documents, as well as training methods.

What is immediately apparent from chapter 5's findings is the generalist nature of formal money laundering policies, procedures, and guidance among cohort organisations. The findings note that much, if not all of the source documentation for employee AML-CFT policies and procedures were verbatim representations of regulations and guidance issued by the FSA and JMLSG. However, further analysis reveals exceptions to the verbatim use of documents sourced from regulators and professional bodies. These exceptions were in documents specific to institutional practice for reporting suspicions of money laundering, as well as supporting processes such as KYC and PEP due diligence. It was previously noted in chapter 5, that many of these specifics were based on an institution's market segment.

<i>Institution</i>	<i>New Account KYC Vetting Requirements</i>
Medium-scale Retail Bank (MSRB)	One-page application form and KYC vetting through electronic verification via the electoral roll.
Large-scale Commercial Bank (LSCB)	Photocopy of VAT registration, personal utility bill and a passport or photo driving licence of person opening commercial account/applying for loan.
Large-scale Retail Bank (LSRB)	Photocopy of utility bill and passport certified by a solicitor, doctor, postmaster or justice of the peace.
Large-scale Investment Bank (LSIB)	Four-page application form, inclusive of details of employment (salary, benefits, pensions), investments and other income; original copies of passport or photo driving licence – or – Photocopy of VAT registration, personal utility bill and a passport or photo driving licence of person opening commercial account/applying for loan.
FOREX House (requirements for MSB branches)	<i>de minimis</i> transaction limit of £1,500. This is a limit above which customer identification must be verified, and below which a risk-assessment is made before deciding whether or not verification in the form of driving licence or passport is required.

Table 6.2.4.1 – Cohort institutionally-mandated New Account KYC Vetting Requirements

Moreover, further differentiations among processes and procedures are evident, such as the importance each MLRO unit assigned to a specific behavioural attribute, or to steps in the due diligence process. For instance, there are significant disparities among

cohort institutions as to the documentation necessary to open a savings or current account as noted in table 6.2.4.1. Some institutions collected information on employment or professional affiliations, though not required by the FSA for new customer KYC, while others requested simple proof of identity and residency in the form of a utility bill and photo identification.

Despite these disparate requirements, proof of UK residency and photographic identification was the uniform minimal KYC requirement across the cohort. Counter staff, as well as other customer-facing employees, were provided guidelines for evaluating customer behaviour or transaction attributes that could indicate potential money laundering. Evaluative parameters included nervousness or furtive behaviour, the size or frequency of deposits or withdrawals, based on historical account data displayed on a teller's workstation, as well as identification documents. Cohort institutes all used similar guidelines, although with different weighting criteria for each specific behaviour, attribute, or transaction type.

Interpreting what triggers a SAR was a source of contention within some cohort MLRO units. While formalised methods of assessing a suspicious transaction narrowed the potential for interpretive flexibility, nevertheless, some analysts were stricter than others in respect to the importance of certain behaviours, usually from experience. For example, younger analysts tended to adhere to guidelines more closely than analysts with five or more years in the role. Counter staff maintained an absolutist approach to suspicious transaction reporting, leaving the interpretation of a particular customer's behaviour to the MLRO unit. At the institutional level, training constantly reiterated the need to report suspicious activity, as well as ensuring that absolute discretion was followed throughout the process.

Training within cohort compliance organisations, in addition to extensive use of real-world data and scenarios, also constantly stressed the need to maintain vigilance and

awareness of emerging threats and trends in launderer behaviour. Analysis from the informal interviews highlighted the fact that training with real-world branch-supplied data, often led to more effective analysis of externally-supplied SAR reports. Often a branch would report a series of suspicious transaction patterns that would then emerge in another branch's service area; the MLRO, having already created a profile from the first branch's data, could then expedite analysis of the other branch's suspicions, as well as hastening the disposition of the original SAR. While this type of information exchange was formalised at institutional level, inter-institutional SAR data exchange, while informal, was just as useful, if not more so. Indeed, while formal norms provide a sound, quasi-positivist foundation for cognising the MLRO's mandate of deterring money laundering, informal norms provide an interpretive lens as to the beliefs, politics, culture, and other socio-institutional considerations embedded within AMLPT innovation and the compliance *social system*.

6.2.5 Innovation and informal norms within the MLRO-compliance organisation

What is clear from the informal interviews, and subtly emerges from analysis of the structured interviews, is a general sense of scepticism as to the purpose of the MLRO's activities, as well as to the AML-CFT regime on the whole. Ontologically, there is a distinct perceptual difference as to effectiveness when measured through the constituent attributes of "informality" as it relates to the TFI framework, and formal indicators of effectiveness as an outcome of the research question. The present discussion addresses informal systems through analysis of those informal perceptions and meanings within the *social system*, as they relate to AMLPT as an IT artifact and its environment. Therefore, effectiveness, as it relates to informal considerations within the TFI framework, is understood as a completely subjective measure of not only AMLPT, but other socio-institutional factors as well.

Analysis from the findings illustrates that, with few exceptions, the more intimately involved a respondent in the deterrence of money laundering, the more they negatively perceive the factors of AMLPT, regulation, and the AML-CFT regime in general. Figure 6.2.5.1 rates perceived satisfaction with these factors on a scale of -1.5 (negative perception) to +1.5 (positive perception). For instance, the majority of heads of compliance (“HC”), whose remit also covers fraud, financial, and criminal risk mitigation, along with other non-AML-CFT responsibilities, expressed an overall high degree of satisfaction with regime *status quo*.

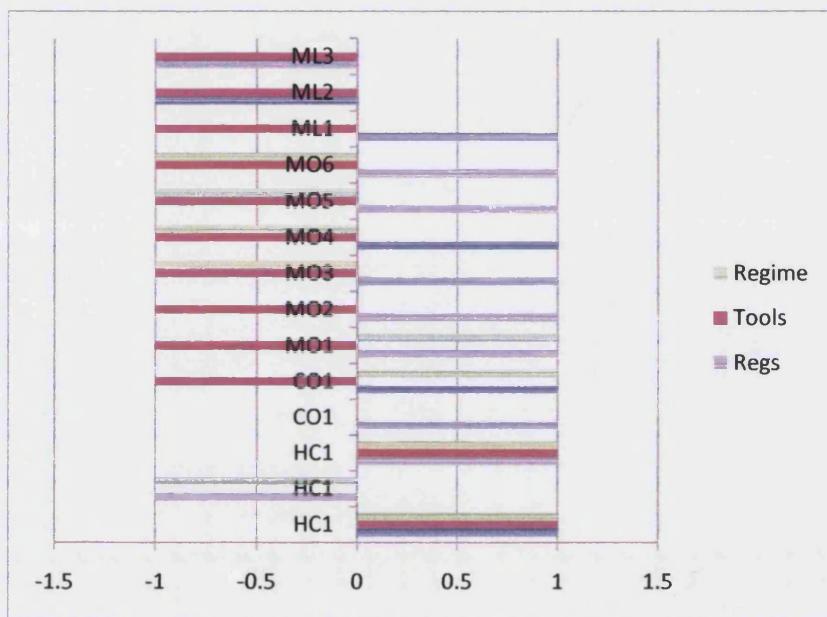


Figure 6.2.5.1 – Cohort perceptions of AML-CFT regime, tools, and regulations.

However, MLROs and analysts, (“MO” and “ML,” respectively), expressed either no opinion, or a less-than favourable option of all but the regulatory *status quo*. Satisfaction levels also correlated with experience as indicated in figure 6.2.5.2 (*scale increased to improve legibility; therefore -0.5 rather than -1.5 for negative perception; years in role equates to 20-year scale on X axis*). Institutional perceptions of AML-CFT varied among the cohort, and exerted some influence on perceptions within the MLRO and compliance functions.

Within the investment and commercial banks, given their commercial, business, and institutional focus, AML-CFT was perceived as an “inconvenience” – part of the “cost of doing business”. Board level opinion, as ascertained by cohort respondents within these institutions, was that “companies do not engage in money laundering, only criminals and terrorists” – i.e. individuals, rather than “entities”.

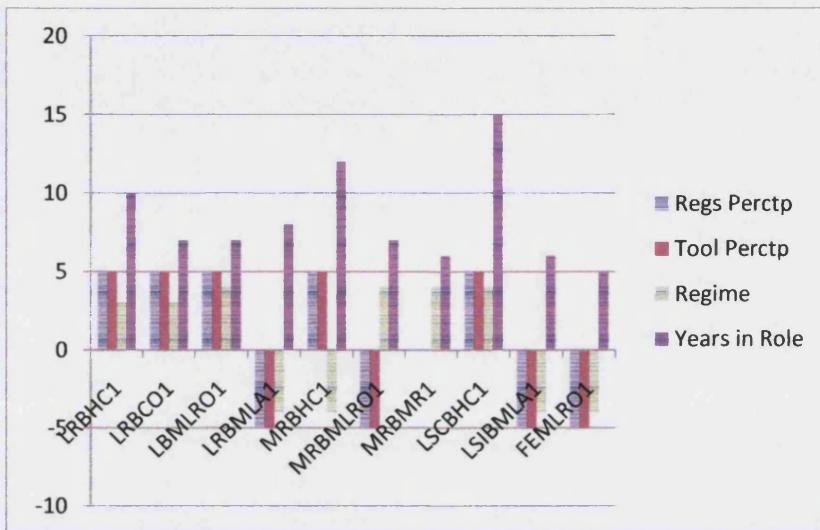


Figure 6.2.5.2 – Correlations in perceived effectiveness of AML-CFT elements, relevant to experience

This perception was due in great part to the infrequent level of SAR activity in these institutions, and the general philosophy, as to the relationship between investment and commercial bankers and their customers, that operations were conducted by “gentleman’s agreement” rather than anything driven by regulatory requirement.

Furthermore, there was a subtle hostility to the compliance process in general, and subsequently, AML-CFT efforts within respondent organisations often adhered to the minimum acceptable standard. Among the retail banks, AML-CFT enjoyed a somewhat better reputation, and was perceived as helping to ensure that not only were the institution’s fiscal and regulatory responsibilities being met, but also as an acknowledgement of the threat terrorist financing represented to national security. Among the cohort, such a stance was one of the few incidences of an articulated ethical

and moral causality for support of the MLRO function. Further analysis and informal interviews confirmed though, that the primary motivation was reputational risk more so than any other consideration. Both retail banks in the survey were among the oldest and largest in the City, and were very keen to ensure they were not the subject of any regulatory action. In the LSRB, the head of compliance was a board-level position, and contributed to the positive perception of the MLRO unit's efforts within that institution, as well as to AMLPT's *observability*.

Consequently, this unit had the largest AML-CFT budget of any cohort member, along with the largest staff. This funding advantage did not necessarily translate into more effective detection rates; indeed, this organisation had been an early adopter of AMLPT, and had continued to spend a significant amount on ever-increasingly sophisticated tools. Yet, in analysing the data from chapter 5, they realised no greater *relative advantage* than that of the MSRB in terms of detection rates and processing improvements in SAR volume. In general, analysis of the informal systems surrounding the AMLPT IT artifact is illustrative of an over-all neutral or negative perception of value, with few clear benefits demonstrated relative to individual, organisational, and institutional needs. Utilising the analysis of chapter 5's findings, as discussed through use of the TFI framework, we now turn to an analysis of the effectiveness of AMLPT as measured through innovation attributes.

6.3 AMLPT innovation, organisational effectiveness, and the AML-CFT Regime

The findings from chapter 5 indicate AMLPT contributed to organisational effectiveness in three key areas: detection rates, turn-around time, and over-all efficiencies in process management. However, before undertaking an analysis of chapter 5's findings as to innovation as a measure of effectiveness, a discussion of the larger

understanding of effectiveness, within the greater compliance domain, provides valuable additional context for interpreting the findings.

6.3.1 The AML-CFT regime and measures of regulatory effectiveness

The previous analysis of AMLPT's informal systems acknowledged a general dissatisfaction with the extant compliance regime, as well as the tools and regulations used to ensure institutional adherence to FSA fiat. However, despite this dissatisfaction, compliance organisations, in order to ensure reputational integrity, maintained an organisational dedication to AML-CFT practice, and worked to specific, quantifiable measures relative to FSA guidelines. "Success" is not measured in this research, given that there are no officially published results as to deterrence rates. The FSA publishes statistics that highlight SAR activity, but this only indicates the amount of *potentially illegal activity identified* across the regime; it does not quantify the volume of ongoing money laundering activity in the United Kingdom at any one time. The findings illustrate that, much of the scepticism voiced by cohort members is grounded in what many described as a "numbers game".

For instance, AMLPT's parameters can be set at any threshold, to identify whatever behaviours the analyst deems appropriate, such as, for CFT purposes, certain geographically-unique activities, or to create a deliberate increase in SAR inquiries at a particular time, often when the organisation is aware of the likelihood of an FSA audit. Such warnings are a result of the informal inter-institutional communication channels among larger MLRO units within the City. While not indicative of unlawful or unethical behaviour, such measures indicate the interpretive elasticity that is the result of the FSA's ever-changing requirements. When coupled with the inherent ambiguity of the phenomenon of money laundering itself, it is understandable that MLRO units experience the occasional crisis of confidence. Moreover, there is the monotony of the

exercise; during the timeline of the research project, a total of only 6 SAR reports issued by the entire cohort, from among the 115 processed in a two-year span, resulted in additional investigation by the FIU.

To put cohort SARs reporting in context, in 2005, the year of the London transit system bombings, only 195,000 SARs were reported across the entire UK reporting regime; less than 1% (2,100) were judged to be of interest to counter-terrorism authorities (SOCA 2006). These low reporting volumes were typical when compared to industry standards as surveyed by KPMG (2007), a leading consultancy, and reflect one of the primary contentions among cohort members: the costs of compliance do not justify the insignificant returns, aside from those of reputational assurance and avoiding fines. Section 2.5's discussion, of the difficulty in quantifying the extent of global money laundering, also exposes the SAR reporting process to the same charges of quantitative incoherence, only more in terms of return on investment. In 2005, the SAR regime was expected to cost the private sector approximately £60 million (KPMG 2004; SOCA 2006), with some estimates ranging from a low of £29 million, to as high as £96 million (Harvey 2005).

Harvey has done significant work on the issue of SARs return on investment, and using a base average of £26 million for associated compliance costs for key agencies, NCIS and FSA (SOCA had not yet been created), she then extrapolates the total cost using an average derived from conservative projections of private sector costs, coupled with key agency costs, and comes up with a range of £52 - £116 million per year in compliance costs. For 2005, the FSA's goal for confiscation orders, a successful prosecution resulting from a SAR, was £60 million. Using her base yearly SAR average of 65,000, compiled from data inclusive for the years 2001 – 2004, and adding it to 2005's SAR total of 195,000, results in a total SAR count of 260,000. Using this total, and an average cost of between £800 and £1,800 per SAR, results in only £230 in

recovered assets (Harvey 2005). We noted in section 2.5 that *identified* money laundering activity accounts for less than one half of one percent of the entire UK banking sector; put another way, in 2003 an estimated £25 billion was laundered in the UK, with only £30 million being recovered, some 0.12 per cent (Harvey 2005).

Harvey's conclusions seem at odds with not only mathematical reality, but also with the figures supplied by other scholars, (Walker (2007) and Schnieder (2005)), and governmental institutions (HM Treasury). While Harvey's work is thoroughly referenced, the analytical dissonance is understandable, given the breadth of figures accessed by the author to provide further context in quantifying the SAR reporting process in the UK.

Though an extensive analysis of the current UK SAR regime is beyond the remit of this dissertation, researchers are encouraged to view current regime metrics with the appropriate scholarly scepticism. Additionally, when analysing the UK's CFT regime with other components of HM government's "Prevent" counter-terrorism policy, further value for money questions arise. For instance, outreach programs to Muslim communities throughout the UK have met with less than successful outcomes. In Luton, the hometown of the July 7, 2005 London bombers, and more recently, the suicide bomber in Stockholm in December of 2010, over £550,000 has been spent with little or no meaningful counter-intelligence to show for such a large expenditure (Evans 2010). With these ambiguous regime metrics in mind, we return to the analysis of chapter 5's findings as to the relationship of AMLPT innovation to organisational effectiveness.

6.3.2 AMLPT innovation as a measure of organisational effectiveness

The value in iterative piloting of the questionnaire was evident in chapter 5's findings. The combined categories and attributes of diffusion of innovation and organisational effectiveness theories were significantly compatible, and provide a valid

method of evaluation. This confirmed the observation in section 4.5 that both Rogers and Campbell are comprehensive in their categorical schemas, as to innovation attributes and organisational effectiveness. There was concern, however, as to understanding and interpreting the self-perceptions and psychological categories of the respective theories.

With regards to the finding from chapter 5, this was not the case; the contextual information derived from the structured and unstructured interviews provided a rich variety of contextual information, which furthered the interpretation of meanings embedded in the data acquired from both formal and informal research methods. Much of the analysis regarding cohort perceptions of the regime and their activities relative to regulatory compliance, were the result of the author constantly observing numerous subtle and instinctual patterns of behaviour and communication, as well as engaging in informal conversations with cohort members.

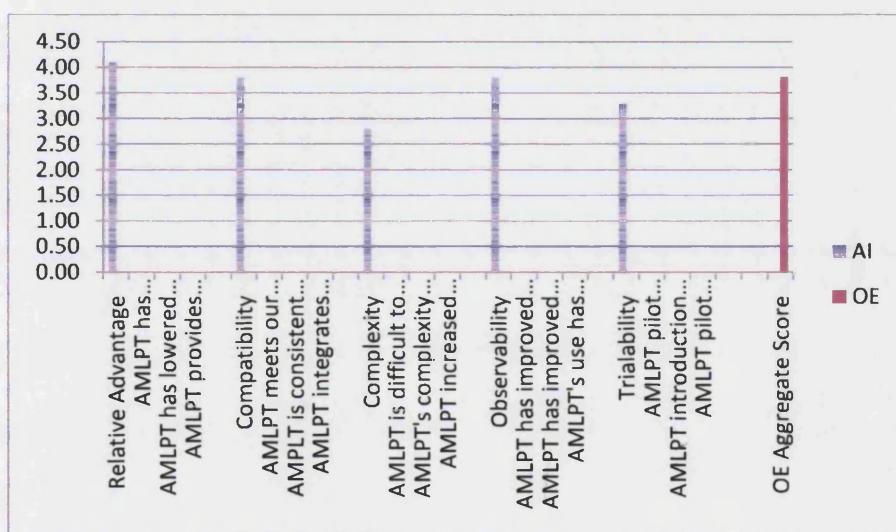


Figure 6.3.2.1 – Lickert aggregate correlation of AI and OE attributes as a measure of AMLPT effectiveness (5.0 = high; 1.0 = low; “complexity” was indicated at a mean of 2.8, and therefore, AMLPT exhibited low complexity)

The findings in chapter 5 confirmed the utility of this method, as well as the arguments of Maitlis (Maitlis and Lawrence 2003; 2005) and others (Andersen 2004), as to the value of consistent observation as a means to uncover and interpret tacit

categorisation and meanings; meanings that might have been deliberately or unconsciously omitted in survey and interview responses. Furthermore, this ability to “see beyond” the answer was, in part, due to the many collegial relationships the author established during the research.

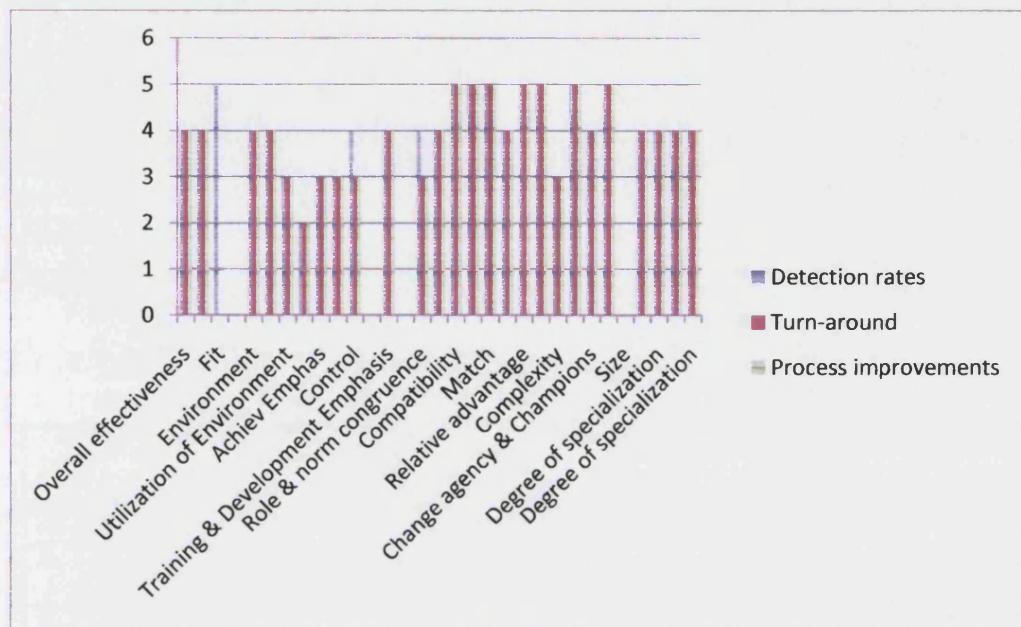


Figure 6.3.2.2 – Individual correlations of AI and OE attributes as a measure of AMLPT effectiveness (5.0 = high; 1.0 = low)

In designing the survey, Rogers’ five *attributes of innovation* (AI): *relative advantage, compatibility, complexity, observability, and trialability*, were assigned a like set of organisational effectiveness (OE) values, drawn from Campbell. The applicability of these categorisations was demonstrated throughout the findings in chapter 5. A categorical schema was then created to correlate AI values to OE values, using the aggregate of Lickert responses (figure 6.3.2.1), and then as individual correlations per value as illustrated in figure 6.3.2.2. However, while the attributes of both theories were congruent for measurement purposes, initially, the use of both of Rogers’ organisational and individual attributes within innovation adoption exposed apparent descriptive redundancy.

<i>Representative Effectiveness Attributes from Historical Survey & Campbell</i>	<i>Diffusion Attributes from Rogers</i>
Overall effectiveness	Innovativeness
Flexibility/Adaption	Compatibility
Fit	Compatibility Match
Environment	Social System
Objectives/goals	Relative advantage
Utilisation of Environment	Compatibility
Conflict/cohesion	Complexity
Achievement emphasis	Relative advantage
Managerial interpersonal skills	Change agency & Champions
Control	Degree of Centralisation Size
Training & Development Emphasis	Formalisation Degree of specialisation
Role & norm congruence	Formalization Degree of specialisation

Table 6.3.2.1 – Original “Measures of Effectiveness”

<i>Representative Effectiveness Attributes from Historical Survey & Campbell</i>	<i>Diffusion Attributes from Rogers</i>
Overall effectiveness	Relative Advantage
Flexibility/Adaption	Compatibility
Fit	Relative Advantage Compatibility
Environment	Social System
Objectives/goals	Relative advantage
Utilisation of Environment	Compatibility
Conflict/cohesion	Complexity
Achievement emphasis	Relative advantage
Managerial interpersonal skills	Change agency & Champions
Control	Compatibility Complexity
Training & Development Emphasis	Compatibility Complexity
Role & norm congruence	Compatibility Observability

Table 6.3.2.2 – Revised and consolidated “Measures of Effectiveness”

Subsequent comparative analysis, using the original “measures of effectiveness” (table 4.5.1) to the categories that emerged from chapter 5’s findings resulted in a revised, consolidated version as reflected in **bold** in table 6.3.2.2. Other descriptive redundancy was identified among Campbell’s work, but this was attributable to the considerable historical pool of literature Campbell drew from, in articulating his view on “how criterion measures of organisational effectiveness should be developed so that they

can be used to compare organisations, evaluate the effects of organisational development efforts, and determine what characteristics of organisations are significantly associated with organisational effectiveness as a basic construct" (Campbell 1977). Furthermore, he articulated a taxonomy of the various criteria evident in the literature, as a means to account for "all variables that have been proposed seriously as indices of organisational effectiveness"; the attributes listed in the table of measures of effectiveness, are drawn from this taxonomy, and represent both the unique categorisations, and redundancies as he compiled them in 1977. Given their compatibility with Rogers' attributes, the redundancies are listed as a means to demonstrate the breadth of categorisation available to the organisational effectiveness researcher.

Of the five attributes of innovation: *relative advantage*, *compatibility*, *complexity*, *observability*, and *trialability*, the findings from chapter 5 determined that *relative advantage* and *compatibility* were the most prevalent (see figure 6.2.3.3), followed by *complexity*, with the remainder equally distributed.

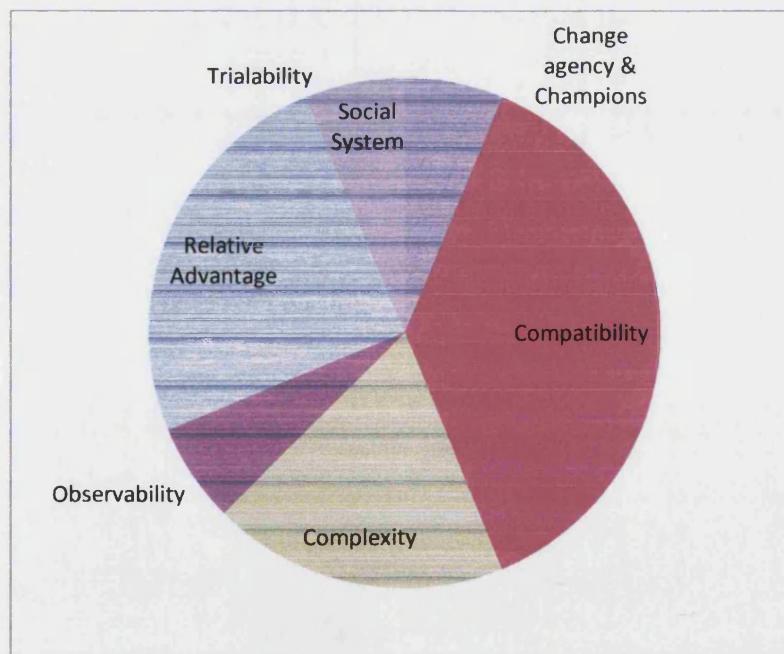


Figure 6.3.2.3 – Frequency of Innovation Attributes

As to measures of organisational effectiveness (OE), *fit* was congruent with *relative advantage* and *compatibility*, as AMLPT supported cohort goals of deterring money laundering, as well as providing a means of automating the process, which increased efficiency throughout the *social system*. Consistency in *role and norm congruence*, as well as *control*, also resulted from *demonstrated compatibility* and *relative advantage*, as staff maintained and improved proficiency at profile creation and detection methods, as well as standardising processes.

The ability of AMLPT to ensure repeatable processes was significant in supporting *role congruence*, particularly at the FOREX house, given their staffing shortage. *Consistency* and *congruence* created increased effectiveness in staff training, shortening the time between hiring and deploying a new hire as a meaningful resource. The findings from chapter 5 show that *complexity* was far more apparent than first articulated in the survey, when compared to informal acknowledgement of not only the *complexity* of AMLPT, but also the ever-changing, and oft-times ambiguous regulatory remit. The analysts in particular complained more about regulatory *complexity*, while the MLROs and compliance officers complained about *complexity* relative to both AMLPT and regulatory requirements. When an analyst did express a complaint about AMLPT, it wasn't that AMLPT was too technically complex, rather that the system generated large amounts of unstructured data. Such large volumes of data increased the demands on analysts, along with exponentially increasing the pool of potential behavioural variables, which in turn, created more analytical demands.

Further analysis shows that Campbell's OE measures support a centrist, controlling model of effectiveness, specifically the OE attribute of *control*, and it is appropriate that cohort members perceived the greatest measures of effectiveness relative to AMLPT use in controlling the flow of SARs throughout the transaction monitoring process. As was noted in chapter 5, *control*, and *control* as manifested through the OE

attribute of *environmental utilisation*, was driven primarily by the analysts. The findings also show that manual SARs processing has been completely replaced by AMLPT; furthermore, the centrality of AMLPT has served to improve not only *control*, but also intra- and inter-organisational communication.

6.4 A summary of the findings and their applicability to the research question

The analysis offered in chapter 6 provides a variety of illuminating insights and interpretations of the use, deployment and inherent characteristics of AMLPT, not only as a technical instrument, but also as an organisational phenomenon as well. The use of diffusion of innovation and organisational effectiveness theories allowed a rich assessment of not only AMLPT's embedded attributes, but also of those tasked with its use, as well as the ramifications of that use, for instance in the form of SAR reporting, that culminated from these combined actions. It is clear that the transaction monitoring process is fraught with ambiguity and supposition. More so, the findings show that using quantitative inputs to model qualitative-based behaviour is questionable at best; the analysis demonstrates that innovation is best used to improve qualitative measures within the profile; that is to say, the *re-defining* and *re-structuring* of known behavioural attributes, rather than striving for perfection of the unknown through techno-centric innovation.

Furthermore, the research demonstrates a contribution on several levels. First, that AMLPT is insufficient by itself as a means to deter money laundering. It must be used in an environment wherein users appreciate its limitations and innovate accordingly. Second, the research firmly established that there is no single, universally acknowledged set of parameters that define money laundering. As current detection methods emphasise relational methods of linking known suspect behavioural types to perceived illegitimate behaviours, AMLPT cannot "learn" those behaviours without rules

or set expectations. Therefore, detection is at the mercy of what is known – the rules – versus the need to identify what is unknown. However, despite these limitations, AMLPT's role as a medium for information and communication provides significant organisational benefits to general organisational efficiency and to specific processes such as SAR reporting and transaction monitoring.

Lastly, the analysis determined that measures of an innovation's *rate of adoption* are appropriate as means to gauge organisational effectiveness. Cohort organisations displayed a variety of both traits that reflected improvements in detection rates and other quantifiable measures. Innovation is also an appropriate tool for understanding a variety of organisational behaviours, beyond those of how organisations adopt and adapt to new technologies. While grounded in communication theory, diffusion of innovation theory demonstrated a potential for use beyond traditional diffusion analysis, and provides methods for understanding iterative and incremental thought processes across a variety of organisations and technical competencies. The action of behavioural profiling, as embedded within the AMLPT artifact, is essentially a subjective method, and is shaped by human judgement as well as a variety of technical, formal, and informal contexts, in creating a representation of money laundering behaviour. AMLPT as a system is revealed as a means to broker a variety of behaviours, actions, and information that is dependent on both internal and external stimuli, from which a deliberate suspicion can be articulated into some form of actionable meaning. Moreover, this broker role is subsumed into the predominate role of innovation locus, wherein formal and informal behaviours and norms combine to identify, interpret, and address conflict, cohesion and motive, through innovation, *re-structuring*, or *re-interpreting* meanings in regulation, social mores, and criminal intent.

The social sciences are rich with research addressing the problem of ascertaining criminal intent, motive, or other predictive attributes; therein is the perceived benefit of

AMLPT as a means to detect money laundering or other forms of acquisitive crime. AMLPT is the natural progression of financial technology: sophisticated algorithms, coupled with data mining and vast computational power that can provide a solution that in this case, answers the question of “who”, rather than “what”, as is often the case in complex stock trading, currency exchange, or other computationally-demanding financial transactions. This dissertation argues that innovation is a natural response to the inherent ambiguity in behavioural profiling and addresses both the technical and socio-institutional responses, from a learning perspective. The profiling process is as much about the preconceived notions of the MLRO, as it is the computational capabilities of AMLPT; the MLRO accounts for not only criminal intent, but also that of institutional risk tolerance, the regulatory mood and other subjective measures that extend the level of *re-inventiveness* within a set of specific attributes. At the socio-institutional level, compliance is perceived as a hedge against the tyranny of regulation, and what many in the cohort perceive as capricious rule-making. Profiling is a self-fulfilling activity in many ways, in that the very profile itself is based on identifying behaviours that trigger events predicated on extant norms, rather than any spontaneous event.

Furthermore, the research in this dissertation establishes that technical sophistication is but a means of manifesting, of translating, human conjecture into a machine-readable representation of suspicion – nothing more. It cannot, with any degree of certainty, identify a money launderer; it can only report behaviour that may indicate a pattern of criminal intent, but ultimately, it is human acceptance of conjectural probability that results in a SAR. AMLPT is the classic “silver bullet;” a technological solution touted as a means to master, to slay, the complexities of the transaction monitoring process. Furthermore, this research has shown that AMLPT is effective in automating certain processes, as well as facilitating communication within the compliance organisation. More so, AMLPT provides effective improvements in the skills

and intellectual capital within the compliance group, which in turn, improves over-all organisational effectiveness; however, as a stand-alone deterrent to money laundering, AMLPT is of marginal benefit.

This dissertation sought to determine if computerised profiling tools are effective in support of AML procedures as required by MLROs and compliance officers in a banking context. The research analysis throughout chapter 6, argues that is indeed the case, albeit through means above and beyond that of simply automating a set of processes and procedures. In its role as a locus of innovation, AMLPT is effective in communicating action to individuals, as to their roles, tasks, and behaviours, from both external and internal stimuli. Furthermore, it then acts as a means of processing, of brokering a variety of data, in support of a process we categorise as deliberate speculation.

Given that speculation and conjecture comprise the impetus for the profiling exercise itself, we further determined that AMLPT is effective in supporting this process. However, the complexity of human behaviour is not easily quantified, and AMLPT fails in this regard. Moreover, given the volume of data AMLPT is capable of processing, it then becomes of question of cognisance, of attribute overload within the MLRO unit. Selectivity then enters the process, and any probability of further quantifying accuracy degrades accordingly. In a variety of methods, AMLPT translates not only man-machine communication, but selective informal attributes as well.

The research showed that the institutional perceptions, of not only AMLPT, but also that of the compliance function as a whole, were reflected in the varying perceptions of legitimacy regarding the entire compliance and regulatory regime. Subsequently, this dissertation established that the much of the perceived effectiveness of AMLPT was due in part to socio-organisational receptivity within the compliance and institutional *social systems*, as much as that of AMLPT's perceived technical benefits. Lastly, this

dissertation reasserts the legitimacy of interpretive inquiry as a method for cognising technology; it further underscores the appropriateness of Orlowski's (1992) observation that technology is a product of, and medium for, human action, as influenced by institutional conditions and consequences.

Chapter 7. The Contribution, Future Research Directions, and Conclusion

The following discussion surveys the contributions of the research in the areas of practice, theory and methodology. Several contributions are significant, while others serve to validate the efforts of previous researchers in the areas of innovation and Organisational studies. Lastly, potential areas of research that validate and further expand on the findings presented in chapter 6 are identified for future investigations.

7.1 Contributions to Practice

The discussion in chapter 6 as to the effectiveness of AMLPT in support of MLROs and compliance officers, as measured through attributes of innovation and organisational effectiveness, demonstrated that the experiences of the cohort were typical of those of the financial sector, based on examples from the literature, and industry commentary. The ambiguity inherent in defining money laundering, indeed, even quantifying the scope of the problem, in addition to establishing a consensus as to what constitutes a suspicious transaction, was a consistent theme throughout the research. Moreover, this ontological incoherence is acknowledged by not only regulators such as the Serious Organised Crime Agency (SOCA), but also a growing body of academic researchers.

The impact of financial crime cannot be understated; however, what is at issue is the lack of a uniform approach by regulators at the national and international level. The lack of uniformity results in the escalating costs of enforcement, not only of deterring money laundering, but also other forms of acquisitive crime; furthermore, the research demonstrated that cohort organisations realised few tangible benefits from their significant outlay in money and resources in deterring money laundering, aside from those of preserving reputational integrity and avoiding sanctions. The current regulatory remit is far more pervasive than when the AML-CFT regime first came to prominence

post-9/11. The need to collect ever-increasing amounts of data within a variety of commercial transactions, such as registering a car, or obtaining a passport, now affects privacy at all levels of society (Schwartau 1994; Jennings and Fena 2000; Lyon 2003), but even more so within the banking industry itself. In terms of “the greater good”, only one cohort member interviewed during this research articulated a national security ethos as to the importance they place on AML-CFT policies. However, it was taken for granted by the majority of cohort members, that the entrenched banking ethos of customer privacy, as to a customer’s account and transaction history - their monetary privacy (Donaghy 2002) - was of even greater importance.

In general, banks share a great reluctance to the sharing of proprietary customer data, and this was reflected early on in the study, in the *heterophilous* behaviour among the cohort. While this reluctance was somewhat abrogated by regulatory need, data exchange was often problematic, given that the data a MLRO requested in support of transaction monitoring, was not the typical marketing and demographic data traditionally shared inter-departmentally. The minutiae of details required for effective profile creation was considered to be “too intrusive” in some cohort organisations, and often times resulted in prolonged negotiations, or required the intercession of senior management outside of the compliance organisation, to gain the requisite access.

This dissertation empirically reflected many of the difficulties inherent in identifying and quantifying money laundering identified by the FATF (2009), Beare and Schneider (2007), and the many other sources mentioned in chapter 2. The inestimable nature of money laundering engenders complexity as to the identification of legitimate and illegitimate transactions, as well as to the interpretation of the myriad permutations of licit and illicit capital movements among financial institutions, resulting in, more often than not, deterrence methods driven by rote process, rather than by any investigative justification.

Furthermore, the empirical research identified new concerns in the use of AMLPT, along with several process and task enhancements, as well as improvements to work practice for AML-CFT practitioners deploying AMLPT. In highlighting these potential improvements, the research provides practical contributions for two constituents within the social system (see also table 7.1.1):

- Heads of compliance tasked with not only deterring money laundering, but also other forms of acquisitive crime, such as fraud and identity theft;
- MLROs, in their capacity as direct managers of the technical and organisational employment of transaction monitoring, KYC-due diligence tools and processes, as well as training and skills development.

In highlighting the practitioner contributions relevant to heads of compliance, some additional commentary may be of assistance in clarifying the context of the contribution. The exposure of large corporate frauds in the 1990s, as well as the emergent threat of terrorism has transformed the nature of compliance. In the City, research by Bosworth-Davies (1993) and others, had demonstrated that the compliance function was viewed with distain, and perceived as “looking over one’s shoulder” while doing business. However, the BCCI scandal,¹³ along with acknowledgement among regulators, such as the FATF and FSA and law enforcement in general, of the ever-increasing spread of trans-national crime and global terrorism, elevated the compliance function to one of prominence. While still perceived in some quarters as a “necessary evil”, institutions in the City can no longer function without a significant investment in compliance, and have now accepted this fact, albeit reluctantly.¹⁴ Subsequently, with the further regulatory responsibilities of the post-9/11 compliance regime now an ongoing concern, heads of compliance must look to improved efficiencies among technological, organisational, and structural elements within their businesses.

¹³ A case study of the BCCI scandal is included in section 8.3 of the Appendix.

¹⁴ In 2004, the FSA estimated these costs at £174 Million; no more current figure is available; see http://www.fsa.gov.uk/pubs/other/ml_cost-benefit.pdf. In 2005, the SAR regime alone cost an estimated £60 Million; see section 6.3.1 for a detailed discussion of SARs compliance costs.

The research demonstrated that AMLPT, while not optimal as a deterrent to money laundering, provided significant improvements in internal communication among not only the compliance function, but with the institution as a whole. From a business perspective, AMLPT was able expeditiously to generate reports and other outputs, detailing a variety of regulatory and compliance metrics. Cohort compliance heads were then able to detail comprehensively their organisation's efforts, and enhance those measures already in place to protect an institution's reputation, with not only the regulator, but also among competitors and customers alike.

The first practitioner contribution is in the area of management process. In the view of cohort heads of compliance, this research project uncovered capabilities that were transformational in the perception of AMLPT, from simply a technology medium to one of vital informational content, and contributed to improved data and knowledge exchange among the discrete regulatory and compliance functions of fraud, risk mitigation, data privacy, and AML. As a result of this transformation, cohort heads of compliance acknowledged the following result:

- Use of AMLPT as an information broker, rather than simply as a stand-alone technology, provided them greater visibility across their entire organisation, along with the ability to allocate and delegate management responsibilities more efficiently, and the means to manage reputational integrity more consistently.

MLROs from the research cohort also benefited from the same transformational perception of AMLPT's place in the organisation, but in more localised terms. The practical contribution for MLROs were realised in a number of functional areas, mainly in transaction monitoring and SAR processing.

The benefits of this transformation were evident primarily among work practices in the use of external data sources. This was a result of the research process having enabling a revaluation of existing technological determinism within the MLRO unit. Rather than depending on AMLPT alone, staff recognised the importance of interactive,

non-technical external profile stimuli, such as marketing or demographic-type data, customer account data sourced at the branch level, or other data inputs not traditionally included in building profiles.

Furthermore, the MLRO unit began to solicit input from other relevant groups, such as the fraud department, rather than depending on a single, unidirectional data source for feeding the profiling process. In addition to improving the quality of externally derived data, the MLRO unit's ability to identify useful profiling attributes also improved as a result of the increased volume of richer data. An additional benefit of diverse data sources was that cohort MLROs were able to realise improvements in training in data analysis skills, which, in some groups, created the need for additional analyst roles. The increased staffing requirements were due to the greater breadth of data sources, and the commensurate increase in the volume of incoming transaction data.

The most significant contribution to practice from this research, concerns the re-defining of the MLRO unit's comprehension of innovation attributes, such as *re-invention*, *re-defining* and *re-structuring*, as a means of improving work practice and productivity. These improvements were realised within the behavioural profiling process, as well as in the over-all use of AMLPT, and in general improvements in organisational efficiency. When the research project commenced, cohort members articulated an understanding of the author's use of categories of innovation as a means to identify cohort behaviours; however, by the end of the research project, they also grasped the utility of these categories in providing a method of measuring the performance of AMLPT. As a contribution to practitioners, it is important to note here that the transformational benefits of AMLPT were realised among a limited sample of financial professionals; however, they can also be recognised as general improvements to the entire AML-CFT practitioner community. Given the scope of practitioner literature and conferences, as well as the growing interest in behavioural profiling among academics,

the author is confident that the practical contributions identified here will be of benefit to compliance practitioners at all levels of the compliance function.

The research in this dissertation highlighted the fact that, as a result of pre-existing techno-determinism, the MLRO unit had not considered the potential improvements in communication and work flow that AMLPT offered, aside from those of analytics. Prior to the introduction of innovation attributes to the MLRO unit, informal structures with the unit had created a predictable work flow that was principally alert driven. While this remains unchanged, the cycle time of the profiling process was improved, by incorporating external data sources that were now analysed for attributes indicative of illegitimacy. The research demonstrated that branch teller staff generated the greatest volume of suspicious activity reports. However, with the introduction of additional external data sources, the MLRO had a means to correlate branch-level SAR reporting against activity reported by the fraud department, or from other, previously unexploited sources, such as the customer support organisation. This allowed the MLRO unit the ability to prioritise and proactively identify potential suspicious transactions, through more deliberate analysis based on multiple sources, rather than only branch-level SAR reporting.

The research illustrated the fact that without *re-defining* and *re-structuring* these external data sources, analysts were limited in their ability to create a richer qualitative picture of a suspicious transaction. Therefore, among cohort analysts, the research contributed to formalising the process of *incremental innovation*. *Incremental innovation* took the form of *re-definition* and *re-structuring*, of both external and external data sources, which resulted in improved productivity by reducing the number of false-positives. Prior to formalising the acquisition process for external data, these sources were usually ignored, and the aggregate profiling data was often “stale” and not

reflective of institutional changes in customer account information, or other contributory factors that often had a direct impact on the accuracy of a profile.

Within the *social system*, the research determined that, from not only from chapter 2's discussion, but also within the findings in chapter 5, that both the regulatory milieu and deterrence practices, such as those commensurate with AML-CFT measures, are highly subjective. Subjectivity also exists at the regulatory level, as money laundering cannot be quantified in any meaningful way. This has resulted in ever-increasing levels of bureaucracy and rule-making to cover every possible contingency.

Furthermore, within the AML-CFT domain, there is a great deal of subjectivity surrounding the definition of illegitimate behaviour. For instance, legitimate tax avoidance can be "confused" with illicit capital movements, or that an Islamic charity immediately implies a front for jihadist funding.

Moreover, the proceeds of ordinary acquisitive crime are often miscast as "terrorist funding" due to subjective determinations by either intelligence agencies or law enforcement. Subjectivity also exists at the AMLPT level, as a result of social prejudice, institutional conditioning, and personal biases, often a result of historical precedent as previously identified chapter 2. Additionally, organisational biases also impart subjectivity, as identified in chapter 5.

<i>Practitioner Level</i>	<i>Description of Contribution</i>
Head of Compliance	AMLPT as information broker provides greater visibility into compliance organisation, thus affording HoCs the ability to better allocate management responsibilities and manage reputational integrity
MLRO	Use of innovation attributes to improve work practice and productivity within the behavioural profiling process and over-all use of AMLPT
Social system	Regulatory milieu and deterrence practices are highly subjective; money laundering cannot be quantified; results in ever-increasing levels of bureaucracy and rule making to cover every possible contingency or launderer behaviour.

Table 7.1.1 – Summary of dissertation's contributions to practice

7.2 Contributions to Theory

The theoretical origin of this dissertation is found in diffusion of innovation theory, notably in the work of E. M. Rogers (1962; 1983; 1995; 2003). Diffusion of Innovation theory was chosen for this research as it provides rich categorisation and behavioural metaphors; metaphors that help interpret AMLPT's role as a stand-alone innovation, and the process by which the *relative advantage* of AMLPT is communicated within the organisation. Furthermore, diffusion of innovation theory is unique in its use of time as a dimension, for instance in accounting for the *rate of adoption* or rejection of an innovation.

Furthermore, the use of time provides a framework or continuum, for defining the steps, actions, and participants within the *adoption decision process*, all of which are useful elements in understanding how and why individuals and organisations chose to adopt a particular technology. Lastly, DoI theory provides a rich analytical method for understanding the role a *social system* plays in the *adoption process*, which was of significant value in this research, given the focus on both individual and organisational innovation adoption. Moreover, given the rapid adoption of AMLPT tools post-9/11, the dimension of time was useful in providing insight into the contributory factors of AMLPT's rapid rate of adoption and deployment, as well as categorising behaviours that may have led to early, rather than late adoption of AMLPT.

Overall, the research catalogued extensive evidence of a variety of adoption behaviours, attributes, and roles that were consistent with Rogers' characteristics of innovations and adopter behaviours. The research findings presented in chapter 5 and the subsequent analysis in chapter 6, presented some interesting contributions for the body of diffusion of innovation theory, and are described in the following section, and summarised in table 7.2.2 at the end of this section.

The findings resulted in several major and minor theoretical contributions. First, the research further validated two of the four critiques of DoI theory as articulated by Rogers: pro-innovation bias and source bias. Subsequently, three minor theoretical contributions emerge from the findings in regard to bias. Second, the research findings identified two significant limitations in diffusion of innovation theory, limitations that are not acknowledged by Rogers.

Fichman (2004), Orlikowski and others (Orlikowski and Baroudi 1991; Orlikowski and Robey 1991a), as well as Rogers (2003) and Rogers and Shoemaker (1971) all warn of the potential for pro-innovation bias in assessing adoption attributes, such as “earliness” in the adoption of an innovation, or the extent or rate of an innovation’s adoption. Prior to embarking on the research project, the growing significance of transaction monitoring (and therefore AMLPT) within the post-9/11 AML-CFT compliance regime, led to the author initially entertaining a pro-innovation bias. This was based on reviewing the technical literature on AMLPT, as well as conversations with practitioners. From the technical review and informal conversations among *early adopters*, the overwhelming perception was that AMLPT as an innovation was “good” – Fichman’s “Right Stuff,” as discussed in section 3.5. This perception of “goodness” then mitigates an innovation’s chances of experiencing either *rejection* or *re-invention*.

However, as the research demonstrated, this perception of “goodness” was not the case with AMLPT, based not only on the results of the interviews and survey, but also from the author’s observations. AMLPT was subject to a variety of adoption attributes: *re-invention*, *re-structuring*, and *re-defining*, along with *discontinuance*, and even *rejection* of certain facets of AMLPT. Furthermore, contrary to the literature on diffusion of innovation, once the research was underway, the author’s initial pro-innovation bias gave way to one of neutrality. Fichman, Rogers, and Orlikowski all

argue that pro-innovation bias is endemic within innovation research; however, none of them ever empirically state that while the bias can be acknowledged, it cannot be overcome.

This supposed inability to overcome pro-innovation bias is counter to the author's experience, and thus forms the first minor contribution to theory: pro-innovation bias can be substantially neutralised, provided the researcher is cognisant, through a sound theoretical and methodological grounding, that the potential for pro-innovation bias does exist. The ability to negate this bias is important, given the observation by Rogers (2003) and more recently Phillips (2007), Igira (2008), and Koellinger (2008), that pro-innovation bias continues to represent an ongoing problem for diffusion scholars, particularly in the area of causality.

A second minor contribution addresses an omission in Rogers' behavioural categorisation of *change agents*. Rogers' identifies *change agents* as individuals who promote a particular innovation, rather than those individuals considered *potential adopters*. Rogers further states that the role of *change agent* is unique to diffusion of innovation in organisations. However, the research identified the existence of multiple *change agents* across several distinct *social systems*, rather than only within a given *social system*. In this regard, the primary *social system* was defined by the MLRO unit, as it constituted the principle research domain. Secondary *social systems* comprise the larger institution and regulatory regime. Within this context, of greater significance was the action of *change agents* as boundary spanners between *social systems*, rather than simply effecting change within a *social system*.

Boundary spanning *change agents* were essential in communicating the value of AMLPT's abilities to *heterophilous* organisations, rather than Rogers' individual-centric description of *heterophily*. Rogers includes *change agents* as another potential cause for bias, in that researchers may side with *change agents* because of their dynamic role in

the diffusion process. Rogers (1976; 2003) categorizes this shortcoming as *source bias*, and posits that this bias “is perhaps suggested by the words that we use to describe this field of research: ‘diffusion’ research might have been called something like ‘problem solving’, ‘innovation seeking’, or ‘evaluation of innovations’ had the audience originally been a stronger influencer on this research”.

However, while MLROs were more often than not the most visible *change agents* and boundary spanners within their organisations, individual members, such as analysts, support staff and trainers, also acted as *change agents* within their specific area of expertise. Interestingly, Rogers makes no accommodation for multiple *change agents* within the innovation process in organisations.

Moreover, he states that *change agents* usually possess some form of advanced education as a means of legitimising their influence. This was not the case among the cohort, as legitimacy was normally recognised through technical or other role-based competency. For instance, analysts, given their expertise with the profiling process, were both boundary spanners and *change agents*, as they served to highlight the inherent benefits of AMLPT to the compliance organisation, through the use of non-formalised external sources of profiling data, such as data from other financial institutions, or criminal cases sourced from the media. Due to the variety of demonstrated *change agency*, there was, in turn, an implied, informal hierarchy of AML process expertise, emanating outward from AMLPT, to the boundaries of the compliance *social system*. This *change agent* behaviour was repeated in varying forms throughout the cohort. Rogers’ fails to account for the fact that *change agency* is also situational, and not simply innovation-specific.

Furthermore, the research illustrated that *change agents* exhibit varying levels of embedded expertise, which implies a lack of categorical coherence and rigor in Rogers’ attributes of organisational innovation, when compared to those of individual innovation.

This lack of categorical rigor has also been articulated by other diffusion scholars, such as Swanson (1994), Rajagopal (2002), Tornatzky and Klein (1982), as well as Moore and Benbasat (1991). Subsequently, the third minor contribution also emerges from categorical ambiguity, in regards to Rogers' separation of individual innovation from that of organisational innovation, and the categorisation therein of *interactive innovation*.

In chapter 6, we argued that the findings exposed ambiguity in Rogers' categorisation of *interactive innovation*. More specifically, how *interactive innovation* pertains to the concept of *critical mass* within *diffusion networks* as means of defining communication among adopters in a system. However, the findings also demonstrate that interactivity among adopters is also a task and role-specific series of actions. Such actions, while indicative of adoption, are also indicative of productivity in those tasks and roles, rather than only of communicative action.

Furthermore, the findings demonstrate that interactive innovation is not only a function of the rate of an innovation's adoption within a single *social system*, but also among multiple *social systems*. Given this function, *interactive innovation* could also be considered as a means of indicating productivity within a social system, rather than simply as another form of communicative action among individuals and *social systems*. In other words, the more interactive the communication among adopters in a *social system*, the more productive they become through the adoption of an innovation. Interactivity, by definition, implies repeated use of an artefact or process.

Therefore, the more familiar an adopter becomes with an innovation, the more adopters realise a *relative advantage*, along with other perceived benefits in work practices, such as productivity. Among the cohort, productivity gains were indicated in three distinct areas of *interactive innovation*: SAR processing, training, and the use of multiple data sources. Furthermore, interactive innovation can also be categorised as *re-*

defining, principally within tasks supporting the use of multiple data sources, and as *re-structuring*, in the task of SAR processing and in training tasks and roles.

Productivity in SAR processing was indicated in two areas: the first was in the volume of SARs processed; the second, in the turn-around time of SARs, defined as when an initial SAR report is generated, to when it is forwarded to the FIU. When AMLPT was first adopted, early adopter analysts only recognised a 10% increase in SARs processed over the previous manual process, with no commensurate decrease in turn-around time. As the analysts interacted more with AMLPT, initially through *re-structuring* profiling attributes, as well as the technical parameters of the transaction monitoring process, productivity was indicated initially in the increased volume of SARs processed. Manual profiling, as well as early use of automated profiling, typically employed static data, sourced primarily from branch teller staff, that was then batch processed. With the introduction of multiple data sources, the profiling process itself became iterative and interactive, rather than simply re-using the same batch of branch SAR data. Moreover, as analysts continued to interact with AMLPT, they were able to not only *re-define* the profile itself, but also *re-structure* the SAR reporting process, reducing SAR turn-around time from an average of 15 to 20 working days to 10 working days.

Furthermore, the use of multiple data sources allowed analysts the ability to *re-structure* this data, by eliminating redundant or spurious data from the pool of profiling attributes. With this “cleaner” data, analysts were no longer required to make multiple data queries to extract useful profiling attributes; they could then focus on efficiently processing ever-larger volumes of data, which also enhanced productivity.

Increases in training productivity were indicated in several areas within cohort organisations. First, training was *re-structured* through the use of self-paced, computer-based training (CBT) augmented with real-world case studies, extracted from AMLPT

data. Second, as MLROs increased their interactivity with AMLPT, training resources were *re-structured*, using materials drawn from multiple data sources, actual SAR reporting data, and other real-world case study materials. From these materials, MLROs were able to build a rich catalogue of training resources for training not only current staff, but also newly hired employees. Productivity was indicated in the increase of self-managed training and certification, along with realising over-all improvements in role and skills proficiency. As a result, staff were able to gain professional accreditation more quickly, rather than waiting for formal in-house or external training, along with also increasing the MLRO unit's general productivity.

More importantly, the self-paced process also fostered additional interaction with AMLPT, through the use of hands-on case study examples. Another indicator of training productivity was realised through shortening the time a newly hired employee became productive within the organisation. Rather than using rote training materials or classroom settings, the case studies generated through *interactive innovation*, in the areas of profiling and analysis, proved more effective as learning tools than instructor-led training. Lastly, in several cohort organisations, seasoned employees were encouraged to use self-paced training to become cross-trained in other skills or roles, or to improve mentoring skills.

Therefore, the third and final minor contribution is the determination that *interactive innovation* can be used as an indicator of productivity within the *social system*. The use of *interactive innovation*, as a means to indicate productivity, is consistent within this dissertation, given the integrated use of organisational effectiveness attributes and those of innovation adoption as indicators of AMLPT effectiveness. Further support for use of interactive innovation, as an indicator of productivity, is also found in Rogers' work (2003). He states that a fourth criticism of diffusion theory also pertains to the monadic aspect of adopters, relative to the

consequences of adoption; specifically, the distribution of perceived socioeconomic benefits among individuals within the system. However, Rogers speaks only in terms of the consequences of an innovation's adoption, rather than any quantifiable or qualitative goal or indicator. Rather than a value or benefit-based consequence, we argue that the findings reveal that *interactive innovation*, within the *innovation adoption process*, may provide an indicator of ongoing organisational productivity, rather than highlighting differing rates (or speed – Rogers (2003) of an innovation's adoption within a *social system*. Rogers further states that such socioeconomic disparity can be found in any system under investigation, predominately in studies undertaken in developing nations.

We attribute Rogers' reluctance to use productivity as an indicator of adoption behaviour, to our observation that many of his early case studies focussed primarily on the social economic benefits of innovation, in either rural or deprived societies, rather than within technology-driven *social systems*. We argue that "disparity" is not a proper description of the result of an innovation's adoption within a *social system*; rather, productivity imparts a tangible indicator of an innovation's benefit or value among members of a *social system*, as derived from an innovation's adoption. Rogers categorises these disparities as "equality gaps", categorising such gaps as computational advantages, funding, and other structural mechanisms, as well as individual considerations such as training. However, he offers no means of indicating these gaps, hence the suggested inclusion of productivity as a qualitative indicator of *rate of adoption*, along with further qualifying "gap equality".

Moreover, what is clear from the use of DoI theory is that *rate of adoption*, although a key theoretical tenet cannot be used without empirical contextual understanding of the *social system*. Rogers' devotes much of his work to defining the constituent elements that contribute to an innovation's *rate of adoption*, but much less on the *social system* itself. We submit that they are crucially interdependent, rather than

independent considerations. Further to this observation, is the suggestion that Rogers should re-evaluate all the constituent elements within *rate of adoption*, specifically as it relates to *rate of adoption* in organisational innovation. Subsequently, the crux of the dissertation's significant theoretical contribution is drawn from this observation.

The significant contribution to theory is found in the inclusion of *Rate of Adoption*, defined as either *continuous* or *incremental*, as an independent variable within Rogers' model of *organisational innovativeness*. However, we do not propose the inclusion of incremental innovation as yet another type of innovation, as articulated by Gatignon, Tushman, et al. (2002) who define incremental innovations as "those that improve price/performance advances at a rate consistent with the technical trajectory". Rather, we propose the addition of *rate of adoption*, inclusive of *continuous* or *incremental innovation*, as an independent variable of *organisational innovativeness*, as illustrated in figure 7.2.1.

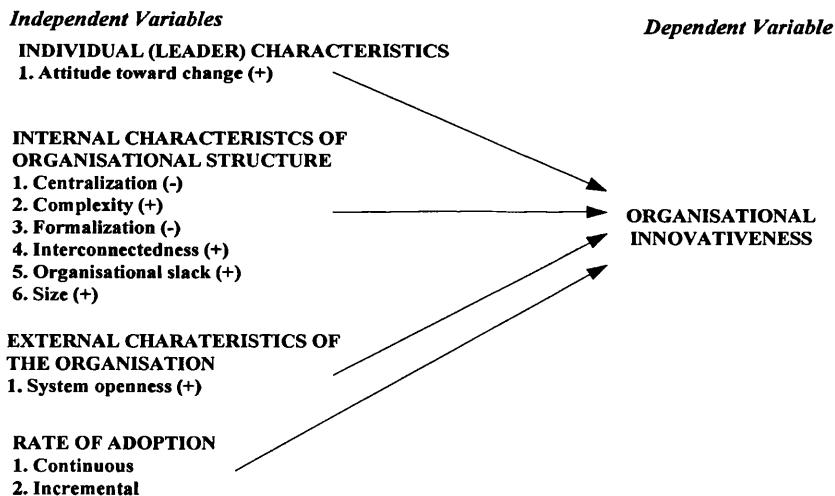


Figure 7.2.1 – Revised Independent Variables Related to Organisational Innovativeness, illustrating inclusion of Rate of Adoption as either Continuous or Incremental (From Rogers (2003))

We previously noted that Rogers makes no mention incremental *rates of adoption*; instead, he uses "stages" as metaphor for what is essentially a chronological progression. Furthermore, he implies that both individual and organisational innovation

processes are continuous. Rogers uses stages to identify thresholds or benchmarks of an innovation's adoption; however, while useful in this research for correlating innovation as a measure of organisational effectiveness, further analysis exposes a weakness in this assumption, specifically as it relates to *individual* innovation within an organisation. Within Rogers' model of the *innovation process within organisations*, he defines two distinct phases: phase I, *initiation*, and phase II, *implementation*. Within phase II, he includes the processes of *re-defining* and *re-structuring* an innovation, wherein the innovation is modified and *re-invented* to *fit* the organisation, and the organisational structures are altered to accommodate the innovation.

The research noted that both behaviours were widely evident among the cohort, but contrary to Rogers' assumption of continuity, these behaviours often resulted in discontinuity in the rate of adoption. Rogers accounts for discontinuity, calling it *discontinuance*, which he describes as an *individual's* decision to reject an innovation after it has been adopted. However, this is an incorrect categorisation for several reasons. First, once the *relative advantage* of profiling had been established, it was constantly *re-defined* and *re-structured*, given the internal and external stimuli employed to refine the element of suspicion – the alert – that initiates the profiling process. Moreover, the profiling process, while iterative relative to data analysis, always maintained a progressive and continuous adoption trajectory, inclusive of some AMLPT functions being discarded or rejected by both individuals *and* the organisation; however, the profiling process was still universally adopted and not rejected in its entirety. Rogers' description of discontinuance conflicts with the *incremental*, and thus, varying rates of adoption, demonstrated by cohort organisations, in their selective adoption of specific features and functions within AMLPT.

Second, profiling aside, no cohort organisation simultaneously deployed all the various technical capabilities within the AMLPT platform; rather, certain role-specific

functionality was trialled and adopted, thus creating the phenomenon of sub-unit *incremental innovation*, a phenomenon not acknowledged by Rogers. Sub-unit *incremental innovation* was in contrast to continuous, linear adoption at the higher, organisational level, and that of the adoption of automated profiling in general. For instance, some cohort MLRO organisations had made extensive use of data mining, incrementally introducing ever larger data sets into the analysis process across the organisation. This then resulted in greater demands on the existing technical infrastructure, in areas such as processing power and data storage. Subsequently, the MLRO then *re-defined* the minimal requirements necessary for transaction monitoring, in increments that would not overwhelm the technology infrastructure. The technical limitations were such that only a reduced set of AMLPT was in use at any one time, and *incrementally adopted* as the situation warranted.

<i>Significance</i>	<i>Description of Contribution</i>
Minor	<ul style="list-style-type: none"> • <i>Pro-innovation bias can be substantially neutralised, provided the researcher is cognisant, through sound theoretical, as well as methodologically grounding, that the potential for bias does exist.</i> • <i>Multiple change agents can exist across a social system, rather than only within a given social system; they also act as boundary spanners among social systems</i> • <i>Interactive innovation can be used as a indicator of productivity within the social system</i>
Major	<ul style="list-style-type: none"> • <i>Proposed inclusion of Rate of Adoption, as an independent variable within Rogers' model of organisational innovation, when defined as either continuous or incremental innovation</i> • <i>That innovation adoption is not only linear; it is also iterative and reflexive, and among the cohort, was only continuous within the adoption process relative to profiling.</i>

Table 7.2.2 – Summary of dissertation's contributions to theory

Lastly, this contribution also provides another avenue of analysis to address a significant problem with Rogers' linear models in general. The findings repeatedly demonstrated that innovation adoption is only linear in certain respects. It is more often

than not progressively iterative, at times reflexive, and among the cohort, was continuous only within the adoption process relative to AMLPT.

7.3 Contributions to Methodology

The study utilised an ensemble of qualitative data collection tools, combining primary and secondary data sources that, in turn, provide a comprehensive perspective of the phenomenon under study (Eisenhardt 1989). Furthermore, the author called on tools and methods such as various models of innovation, as articulated by Rogers (2003), Swanson (1994), and Kwon and Zmud (1987), as well as models and theories relating to the relationship between technology and organisations, primarily through the work of Orlikowski (1992), and Orlikowski and Baroudi (1991). Given the breadth of organisational effectiveness research, Campbell (1977) and Cameron (1981; 1986) were particularly helpful in defining a set of coherent effectiveness criteria from the vast literature on the subject. Lastly, the author examined the narrative accounts captured in the structured and unstructured interviews, using Potter's (1996) "talk and texts in interaction" to identify how various actors within the cohort interpreted effectiveness and innovation, as well as their perceptions of, and interactions with, the larger institutional and regulatory domains.

Given the inherent ambiguity and subjectivity evident within both the regulatory regime, and the phenomenon of money laundering itself, the utility of pluralist methods was significant in assisting the author in interpreting a variety of formal and informal situated actions (Suchman 1987). Such actions encompassed not only that within the innovation process, but also actions evident in daily work practices and other embedded norms, within not only the AMLPT technology artefact, but also evidenced within a variety of organisational contexts. The suitability of pluralist methods has by articulated by a number of eminent information systems scholars, such as Ciborra and Bra et al.

(2000e), Robey (1996), Walsham (1995; 2002), Mingers (2001; 2003), and Kraemer and Dutton (1991), to the extent that methods from multiple theories can be incorporated into a metaparadigm, wherein “the goal is a more rich, holistic, and contextualised purview” (Lewis and Grimes 1999).

The suitability of pluralist methods was further demonstrated in this dissertation’s breadth of findings. Without drawing on research methods and tools from the behavioural sciences disciplines of communications and organisational studies, it would not have been possible to recognise certain behaviours and stimuli that exposed the theoretical limitations within DoI theory identified in section 7.2. This has led to a re-appraisal of several elements in the theory; for instance, the use of productivity, rather than disparity, as a means of indicating the value of an innovation within a *social system*. Another is the revised model of organisational innovation that is inclusive of *rates of adoption*, as is establishing that innovation is not a strictly linear phenomenon. Thus, the use of not only pluralist methodologies, but also two distinct theoretical lenses, those of Rogers, and Campbell, provided a major methodological contribution of this thesis.

7.4 Limitations of the research

While the previous sections outlined the breadth of the dissertation’s contributions to research and practice, several limitations of the research should be acknowledged.

The empirical case considered in this dissertation concerned ascertaining the effectiveness of AMLPT in support of AML procedures, as required by MLROs and compliance officers in a banking context. It did not examine other AML compliance methods, such as the use of KYC and other due diligence procedures. Moreover, given the limited size of the subject group, it is not representative of other financial institutions, nor does the research assess comparative levels of AMLPT effectiveness among similar

organisations. Several of the issues raised in the research as to categorical ambiguity, in identifying adoptive behaviours in organisations, have also been identified in other innovation studies, notably by Blau (1970), Blau and McKinley (1979), Van de Ven (1986), and Moore and Benbasat (1991). Furthermore, by focussing only on compliance organisations, the MLRO unit specifically, other constituent elements in the compliance chain, such as teller staff, or other risk-mitigation organisations, such as fraud detection and identity protection, were not included. Subsequently, there could be concerns as to extrapolating the findings to other compliance organisations and financial institutions in general.

Many of the organisational and technology exigencies identified in deterring money laundering have also been identified in other studies of behavioural profiling and AMLPT use, notably those of Canhoto and Backhouse (2007; 2008), and Gill and Taylor (2003). The dissertation provided additional contextual material for scholars such as Gill and Taylor (2004), Reuter and Truman (2004; 2005), Harvey (2005; 2009), Harvey and Lau (2009), and Beare and Schneider (2007), whose work analyses the ambiguity in quantifying the extent of global money laundering. Furthermore, additional contextually relevant material may be of use in the work of Demetis and Angell (2006), Cary, Wen et al (2003) and Bedi (2004), whose research addresses the efficacy of risk-based anti-money laundering policies and procedures. The dissertation also drew on work from Donaghy (2002), whose research encompasses other obstacles to efficient regulation, such as the data privacy concerns among banks, relative to pervasive customer account monitoring.

Additionally, several of the issues directly related to AMLPT's limitations, primarily as a positivist solution to a systemic phenomenon of significant complexity, have been addressed by other researchers such as Angell and Demetis (2005), as well as Nardo (2006). Lastly, the research raised concerns as to the lack of regulatory

consistency in quantifying not only the scope of global money laundering, but also the cost-effectiveness of regime measures to mitigate the illicit movement of money, as reflected in chapter 2's historical context. A variety of both practitioner and academic studies have led to similar conclusions as those presented in this dissertation, and could legitimise claims that the research findings may be generalisable to quantifying the extent of money laundering in the United Kingdom's financial institutions.

7.5 Suggested Directions for Future Research

The final section of the dissertation considers the research's scope and trajectory, and how the results can be further developed for future research. Given the limited sample of organisations, the initial logical point of departure would be an enlargement of the scope of the study, to include other types of financial institutions of varying size.

The cohort institutions engaged in similar types of banking, as well as being party to the same comprehensive regulatory environment albeit with different types of customers; therefore, enlarging the sample size would include differing levels of innovativeness, along with cultural diversity, which could aid in identifying alternate approaches to innovation adoption in a banking context. Moreover, increasing the scope of the research, for instance, by incorporating divergent organisational and technical contexts would be of benefit. Given the inherent ambiguity of money laundering and profiling, identifying a variety of contexts that are inclusive of more definitive descriptions of formal and informal roles and norms, could mitigate some of the ambiguity in defining illicit behaviour or suspicious transactions.

A second research direction would extend the study to other types of banking, such as Islamic banking, and currency exchange operations, such as money service bureaux, bureaux de change, and informal value transfer systems, such as hawala. Given the relationship-centric nature of Islamic and hawala-type banking, it would be

extremely valuable to apply a similar study of behavioural profiling to these types of transactions, given the inherent systemic exclusivity of the transactional norms within both forms. Furthermore, the extensive presence of money service bureaux (MSBs) in the United Kingdom, as well as the diverse nature of the transactions involved therein, create their own unique set of profiling obstacles. MSBs engage in transactions such as pre-paid cash cards, money orders, and other types of “cashless” transactions, and thus pose significant problems in profiling specific types of behaviour. The first obstacle is the intermittent nature of the relationship between the MSB and its customers. The ability to profile is dependent on an ever-increasing pool of comparative attributes, based on the account history of a particular customer.

MSBs have few “regular” customers, so cataloguing historical profiling data becomes problematic; the majority of MSB users are atypical in their “account” behaviour, relative to that of customer account behaviour in high street banks. The second obstacle relates to the attributes of the transaction, in that the majority of such transactions fall below certain thresholds of regulatory scrutiny, so they have no linkages that can be correlated to an individual. Lastly, the cashless nature of the transaction, such as the purchase of a phone card that can then be topped-up through illicit means, eliminates linkages to not only the original purchaser, but also to the provenance of the cash used to purchase the card.

Lastly, given the pervasive regulatory influence behind the adoption of AMLPT, research into the regulatory culture of various national agencies, such as the FIU, and supra-national bodies, such as EU or FATF would provide additional context for future research. Moreover, the socio-political motivations of large national AML-CFT enforcement bodies such as FinCEN in the United States could provide insight into the motivations behind policy making or the supra-national enforcement of national money laundering laws. The research demonstrated that, among what Angell and Demetis

(2005) call the “three-level hierarchy”, there is a disparate view as to the objectives and scope of AML-CFT regulation. Therefore, a need exists to examine the subsequent effects of this disparate approach in deterring money laundering at the global level.

Bibliography

- (1991). BCCI - Behind Closed Doors. Financial Times. London, FT Group.
- (1993). The Money Laundering Regulations 1993. Banks and Banking. United Kingdom: 33.
- Abelson, H., G. J. Sussman, et al. (1999). Structure and Interpretation of Computer Programs. Cambridge, MIT Press.
- Aberdeen Group, I. (2002). Anti-Money Laundering Software: On Electronic Patrol. Boston, The Aberdeen Group, Inc.: 16.
- Abrahamson, E. (1996). "Management Fashion." Academy of Management Review 21(1): 254-285.
- Acharya, A., S. A. A. S. Bukhari, et al. (2009). "Making Money in the Mayhem: Funding Taliban Insurrection in the Tribal Areas of Pakistan." Studies in Conflict & Terrorism 32(2): 95 - 108.
- Agarwal, A. and J. D. Agarwal (2004). "Globalization and international capital flows." Finance India 19(1): 65-99.
- Agarwal, J. D. and A. Agarwal (2006). Money Laundering: New Forms of Crime and Victimization - A Paper presented at the National Workshop on New Forms of Crime and Victimization, with Reference to Money Laundering. National Workshop on New Forms of Crime and Victimization, with Reference to Money Laundering. University of Madras, India.
- Aid, I. N. (2007, January 25, 2007). "Irish Northern Aid Homepage." Retrieved July 31, 2009.
- Aiken, M. and J. Hage (1971). "The Organic Organisation and Innovation." Sociology 5: 63-82.
- Amann, D. M. (2000). "Spotting Money Launderers: A Better Way to Fight Organized Crime?" Syracuse Journal of International Law & Commerce 27(199): 199 - 231.
- Andersen, P. B., Ed. (2004). Anticipated Actions. Virtual, distributed and flexible organisations. Dordrecht, Kluwer Academic.
- Andronikou, V., A. Yannopoulos, et al. (2008). Biometric Profiling: Opportunities and Risks. Profiling the European Citizen: Cross-Disciplinary Perspectives. M. Hildebrandt and S. Gutwirth. New York, Springer Science & Business B.V.: 131-145.
- Angell, I. O. (2009). What is Computing For? The obsessive, compulsive, neurotic manager and the e-Ville of hype. A talk by Professor Ian O. Angell, London School of Economics. London, Self: 25.
- Angell, I. O. and D. Demetis (2007). "The risk-based approach to AML: representation, paradox, and the 3rd directive." Journal of Money Laundering Control 10(4): 412-428.

Angell, I. O. and D. S. Demetis (2005). "Systems Thinking about Anti-money Laundering: Considering the Greek Case." *Journal of Money Laundering Control* 8(3): 271-284.

Angell, I. O. and S. Smithson (1991). *Information Systems Management: Opportunities and Risks*. London, Macmillan Press.

Angle, H. L. and A. H. Van de Ven (2000). Suggestions for managing the innovation journey. *Research on the Management of Innovation: The Minnesota Studies*. H. L. Angle, A. H. V. d. Ven and M. S. Poole. New York, Oxford University Press.

Ashforth, B. E. and R. H. Humphrey (1997). "The Ubiquity and Potency of Labeling Organizations." *Organization Science* 8(1): 43-58.

Astley, G. W. (1985). "Administrative Science as a Socially Constructed Truth." *Administrative Sciences Quarterly* 30: 497-513.

Atkinson, P. and D. Silverman (1977). "Kunder's *Immortality*: The interview society and the invention of self." *Qualitative Inquiry* 3: 304-325.

Atwan, A. B. (2006). *The Secret History of al-Qa'ida*. London, Abacus.

Backhouse, J., Ed. (2005). *Structured account of approaches on interoperability*, FIDIS Work Package 4 Del. 4.2.

Backhouse, J. and G. Dhillon (2001). "Current Directions in IS security research: towards socio-organizational perspectives." *Information Systems Journal* 11: 127-153.

Badenhorst, K. and J. Eloff (1990). "Computer Security methodology: risk analysis and project definition." *Computers and Security* 9: 339-346.

Balderston, F. E. (1962). "Models of Multiple Branch Organization." *California Management Review* 4(3): 40-57.

Balogun, J. and G. Johnson (2004). "Organisational restructuring and middle manager sense making." *Academy of Management Journal* 47(4): 523-549.

Bamford, B. W. C. (2004). "The United Kingdom's "War Against Terrorism"." *Terrorism and Political Violence* 16(4): 737 - 756.

Bantekas, I. (2003). "The International Law of Terrorist Financing." *The American Journal of International Law* 97(2): 315-333.

Banville, C. and M. Landry (1989). "Can the Field of MIS be Disciplined?" *Communications of the ACM* 32: 48-60.

Barley, S. R. (1986). "Technology as an Occasion for Structuring: Evidence from Observations of CT Scanners and the Social Order of Radiology Departments." *Administrative Science Quarterly* 31(1): 78-108.

Bartol, C. R. (1996). "Police psychology: Then, now, and beyond." *Criminal Justice and Behavior* 23: 70-89.

Basel (2004). Basel II: international convergence of capital measurement and capital standards: a revised framework. Basel, Bank of International Settlement.

Baskerville, R. (1993). "Information systems security design methods: implications for information systems development." ACM Computing Survey 25: 375-414.

Baum, J. A. C. and J. V. Singh (1994). Evolutionary Dynamics of Organizations. New York, Oxford University Press.

Bayer, J. and N. Melone (1989). "A Critique of Diffusion Theory as a Managerial Framework for Understanding the Adoption of Software Engineering Innovations." Journal of Systems and Software 1990: 115-143.

BBA. (2001). "Banking Facts and Figures." Retrieved September 11, 2009, from <http://www.bba.org.uk/public/newsroom/35481/42896/4904?version=1>.

BBC. (2006, Friday, January 27, 2006). "FSA removes money laundering rule." Retrieved December 19, 2010, from <http://news.bbc.co.uk/1/hi/business/4654406.stm>.

Beare, M. E. and S. Schneider (2007). Money Laundering in Canada: chasing dirty and dangerous dollars. Toronto, University of Toronto Press.

Becker, J. and B. Niehaves (2007). "Epistemological perspectives on IS research: a framework for analysing and systematizing epistemological assumptions." Information Systems Journal 17(2): 197-214.

Becker, S. W. and R. L. Daft (1978). Innovation in Organizations. New York, Elsevier.

Becker, S. W. and T. L. Whisler (1967). "The Innovative Organization: A Selective View of Current Theory and Research." The Journal of Business 40(4): 462-469.

Bedi, R. (2004). Money Laundering Controls and Prevention. London, Price, Waterhouse, Coopers & ISI Publications Ltd.

Bell, J., Ed. (2005). Doing your research project. Buckingham, Open University Press.

Bell, R. E. (2002). "An Introductory Who's Who for Money Laundering Investigators." Journal of Money Laundering Control 5(4): 267-295.

Benbasat, I. (1984). An Analysis of Research Methodologies. The Information Systems Research Challenge. F. W. McFarlan. Boston, Harvard Business School Press: 47-85.

Bergen, P. L. (2001). Holy War, Inc. - Inside the Secret World of Osama bin Laden. London, Weidenfeld & Nicolson.

Bhaskar, R. (1994). Plato, Etc. London, Verso.

Birch, D. and N. McEvoy (1992). "Risk analysis for information systems." Journal of information technology 7: 43-53.

Bisantz, A. M. and J. J. Ockerman (2002). "Informing the evaluation and design of technology in intentional work environments through a focus on artefacts and implicit theories." International Journal of Human-Computer Studies 56(2): 247-265.

Blahunka, R. (2000). An Intelligible Approach to Enterprise Business Discovery and Information Deployment. DM Direct Newsletter.

Blau, J. R. and W. McKinley (1979). "Ideas, Complexity, and Innovation." Administrative Science Quarterly 24(2): 200-219.

Blau, P. M. (1970). "A Formal Theory of Differentiation in Organizations." American Sociological Review 35(2): 201-218.

Blum, J., M. Levi, et al. (1999). "Financial havens, Banking Secrecy and Money-Laundering." CJM - Criminal Justice Matters 00036(00001): 22-24.

Blunden, B. (2001). Money Launderers: How They Do It and How to Catch Them. New York, Management Paperbacks.

Bogard, W. (1996). The Simulation of Surveillance: hypercontrol in telematic societies. Cambridge, Cambridge University Press.

Bonner, D. (1992). "United Kingdom: The United Kingdom response to terrorism." Terrorism and Political Violence 4(4): 171 - 205.

Bosworth-Davies, R. (1993). "An Analysis of Compliance Officer: Attitudes Towards Insider Dealing." Crime, Law and Social Change 20: 339-357.

Bosworth-Davies, R. (2007). "Money Laundering - Chapter Four." Journal of Money Laundering Control 10(1): 66-90.

Bosworth-Davies, R. and T. Malloy (2001). Threats and Promises. Money Laundering Bulletin. London Informa Professional.

Bosworth-Davies, R. and G. Saltmarsh (1994). Money Laundering - A Practical Guide to the New Legislation. London, Chapman & Hall.

Boudreau, J. W. (2004). "Organizational Behavior, Strategy, Performance, and Design in Management Science." Management Science 50(11): 1463-1476.

Bowker, G. C. and S. L. Star (1999). Sorting things out: classification and its consequences. Cambridge, MIT Press.

Bradley, J. (2008). "Management based critical success factors in the implementation of Enterprise Resource Planning systems." International Journal of Accounting Information Systems 9(3): 175-200.

Brenneman, K. and R. DeLotto (2001). Vendors of Money Laundering Detection Tools Reviewed. Boston, The Gartner Group: 4.

Bridges, E., A. T. Coughlan, et al. (1991). "New technology adoption in an innovative marketplace: Micro- and macro-level decision making models." International Journal of Forecasting 7(3): 257-270.

Brodie, P. (2009). "Exchange Rates - Average vs Average Sterling Euro US Dollars Sterling" Retrieved September 11, 2009, from <http://www.docstoc.com/docs/3574956/EXCHANGE-RATES-Average-vs-Average-Sterling-Euro-US-Dollars-Sterling>.

Brownsword, R. (2008). Knowing Me, Knowing You - Profiling, Privacy and the Public Interest. Profiling the European Citizen: Cross-Disciplinary Perspectives. M. Hildebrandt and S. Gutwirth. New York, Springer Science & Business Media B.V.: 345-361.

Bruce, S. (1992). The Red Hand: Protestant Paramilitaries in Northern Ireland. Oxford, Oxford University Press.

Bruce, S. (2001). "Terrorism and Politics: The Case of Northern Ireland's Loyalist Paramilitaries." Terrorism and Political Violence 13(2): 27 - 48.

BSA (1970). "The Financial Recordkeeping and Reporting of Currency and Foreign Transactions Act of 1970" 31 U.S.C. 1051 et seq. .

Bunker, D., K. Kautz, et al. (2000). "An exploration of information systems adoption: tools and skills as cultural artefacts - the case of a management information system." Journal of information technology 23(2): 71-78.

Burke, J. (2007). al-Qaeda. London, Penguin.

Burns, T. and G. M. Stalker (1961). The Management of Innovation. London, Tavistock Publications.

Burrell, G. and G. Morgan (1979). Sociological Paradigms and Organizational Analysis. London, Heinemann.

Bush, V. (1945). Science, the endless frontier. A report to the President. Washington DC.

Butler, T. (1998). "Towards a hermeneutic method for interpretive research in information systems." Journal of Information Technology (Routledge, Ltd.) 13(4): 285.

Cameron, K. S. (1986). "Compatibility and Conflict in Conceptions of Organizational Effectiveness." Management Science 32(5): 539-553.

Cameron, K. S. (1986). "Effectiveness As Paradox: Consensus and Conflict in Conceptions of Organizational Effectiveness." Management Science 32(5): 539-553.

Cameron, K. S. (1986). "A Study of Organisational Effectiveness and its Predictors." Management Science 32(1): 34.

Cameron, K. S. and D. A. Whetten (1981). "Perceptions of Organizational Effectiveness Over Organizational Life Cycles." Administrative Science Quarterly 26(4): 525-544.

Campbell, J. P. (1977). On the Nature of Organisational Effectiveness. San Francisco, Jossey-Bass.

Canhoto, A. and J. Backhouse (2008). General Description of the Process of Behavioural Profiling. Profiling the European Citizen: Cross-Disciplinary Perspectives. M. Hildebrandt and S. Gutwirth. New York, Springer Science & Business Media: 47-63.

Canhoto, A. I. and J. Backhouse (2007). "Profiling under conditions of ambiguity--An application in the financial services industry." Journal of Retailing and Consumer Services 14(6): 408-419.

Card, S. K. (1983). The Psychology of Human-Computer Interaction. Hillsdale, Lawrence Erlbaum.

Carroll, J. (2007). How Peace Arrived in Northern Ireland. The Boston Globe. Boston, Globe Newspaper Co.

Carstensen, P. H. and C. Sorensen (1996). "From the Social to the Systematic: An analysis of mechanisms supporting coordination work in design." Journal of Computer Supported Work 5(4): 387-413.

Cary, C., H. J. Wen, et al. (2003). "Data mining: Consumer privacy, ethical policy, and systems development practices." Human Systems Management 22(4): 157-168.

Castells, M. (1989). The Informational City. Oxford, Blackwell.

Chaikin, D. and J. C. Sharman (2009). Corruption and Money Laundering. London, Palgrave-Macmillan.

Chen, W. and R. Hirschheim (2004). "A paradigmatic and methodological examination of information systems research from 1991 to 2001." Information Systems Journal 14(3): 197-235.

Choo, K.-K. R. (2008). "Politically Exposed Persons (PEPs): risks and mitigation." Journal of Money Laundering Control 11(4): 371-387.

Chua, W. F. (1986). "Radical Developments in Accounting Thought." The Accounting Review 61: 601-632.

Ciborra, C. U. (1992a). "From Thinking to Tinkering: The Grassroots of Strategic Information Systems." The Information Society: An International Journal 8(4): 283-291.

Ciborra, C. U. (1999c). Hospitality and IT. Informatics in the Next Millennium. F. Ljundberg. Lund, Studentlitteratur: 161-176.

Ciborra, C. U. (2001). In the Mood for Knowledge: A new study of improvisation. Social Study of Information Technology Workshop. The London School of Economics and Political Science: 15.

Ciborra, C. U. (2002). Information Complexities: challenging the wisdom of systems. Oxford, Oxford University Press.

Ciborra, C. U., K. Braa, et al. (2000e). From Control to Drift: the dynamics of corporate information infrastructures. Oxford, Oxford University Press.

Ciborra, C. U. and G. F. Lanzara (1994f). "Formative Contexts and Information Technology: Understanding The Dynamics of Innovation in Organizations." Accounting, Management, and Information Technology 4(2): 61-86.

Circuit, U. S. C. o. A. E. (1992). United States of America, Plaintiff-Appellee, v. Amjad Awan, Akbar A. Bilgrami, Sibte Hassan, Syed Aftab Hussain, Ian Howard, Defendants-Appellants. 966 F.2d 1415 36 Fed. R. Evid. Serv. 402. Docket No. 90-4114.

CJA (1993). "Criminal Justice Act 1993." 15.

Clark, P. and N. Staunton (1989). Innovation in technology and organisation. London, Routledge.

Clarke, R. and S. Lee (2008). "The PIRA, D-Company, and the Crime-Terror Nexus." Terrorism and Political Violence 20(3): 376 - 395.

Coleman, J. S. (1958-59). "Relational Analysis: The Study of Social Organisation with Survey Methods." Human Organization 17(Winter 1958 - 59): 28-36.

Collier, P., A. Hoeffler, et al. (1999). Flight Capital as Portfolio Risk - Policy Research Working Paper 2066. Policy Working Paper. Washington, DC, The World Bank: 30.

Control, O.-O. o. F. A. (2007). Impact Report: Economic Sanctions Against Columbian Drug Cartels. Washington DC, Dept. of the Treasury: 15-17.

Cook, P. E. and D. L. Hinman (1999). "Criminal Profiling: Science and Art." Journal of Contemporary Criminal Justice 15(3): 230-241.

Cooley, J. K. (2000). Unholy Wars: Afghanistan, America and International Terrorism. London, Pluto Press.

Cooper, K. and H. Deo (2006). "The Web of Deception Money Laundering and Transnational Crime: "A Double Edge Sword of Power & Illusion"." Journal of American Academy of Business, Cambridge 8(2): 35-43.

Corbetta, P. (2003). Social Research: theories, methods and techniques. London, Sage.

Corbin, J. (2003). The Base: al-Qeada and the Changing Face of Global Terror. London, Pocket Books.

Cornford, T. and S. Smithson (1996). Project Research in Information Systems: a student's guide. Basingstoke, Palgrave.

Cox, M. and T. Foster (1992). Their Darkest Day: The Tragedy of Pan Am 103 and Its Legacy of Hope. New York, Grove Press.

Creswell, J. (1998). Qualitative inquiry and research design: choosing among five traditions. London, Sage.

Creswell, J. (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks, Sage Publications

Crime, U. O. o. D. (2000). The United Nations Convention against Transnational Organized Crime and the Protocols Thereto. General Assembly Resolution 55/25. Vienna, United Nations: 92.

Cuellar, M.-F. (2003). "The Tenuous Relationship Between The Fight Against Money Laundering and The Disruption of Criminal Finance." The Journal of Criminal Law & Criminology 93(2 - 3): 311-465.

Culnan, M. J. (1986). "The Intellectual Development of Management Information Systems, 1972-1982: A Co-citation Analysis." Management Science 32: 156-172.

Culnan, M. J. (1987). "Mapping the Intellectual Structure of Management Information Systems, 1980-1985: A Co-citational analysis." MIS Quarterly 11: 341-353.

Culnan, M. J. and E. B. Swanson (1986). "Research in Management Information Systems, 1980-1984: Points of Work and Reference." MIS Quarterly 10: 341-353.

Currency, C. o. t. (2000). Bank Secrecy Act/Anti-Money Laundering. C. o. t. C.-A. o. N. Banks. Washington, DC, U.S. Government Printing Office.

Cyert, R. and J. March (1963). A Behavioural Theory of the Firm. Englewood Cliffs, Prentice-Hall.

Dale, R. (1992). "Reflections on the BCCI Affair: A United Kingdom Perspective." The International Lawyer 26(Winter): 949-961.

Damanpour, F., K. A. Szabat, et al. (1989). "The Relationship between types of innovation and organisational performance." Journal of Management Information Studies 26: 587-601.

Damanpour, F. and J. D. Wischnevsky (2006). "Research on innovation in organizations: Distinguishing innovation-generating from innovation-adopting organizations." Journal of Engineering and Technology Management 23(4): 269-291.

Damsgaard, J. and K. Lyytinen (1997). Hong Kong's EDI Bandwagon: derailed or on the right track? Facilitating Technology Transfer Through Partnership: Learning from Practice and Research. T. McMaster, E. Mumford, E. B. Swanson, B. Warboys and D. Wastell. London, Chapman & Hall: 39-63.

Davis, D. and W. C. Follette (2002). "Rethinking the Probative Value of Evidence: Base Rates, Intuitive Profiling, and the Postdiction of Behaviour." Law and Human Behavior 26(2): 133 - 155.

DeCanio, S. J., C. Dibble, et al. (2000). "The Importance of Organizational Structure For The Adoption of Innovations." Management Science 46(10): 1285.

DeLone, W. H. and E. R. McLean (1992). "Information Systems Success: The Quest for the Dependent Variable." Information Systems Research 3(1): 60-95.

DeLone, W. H. and E. R. McLean (2003). "The DeLone and McLean Model of Information Systems Success: A Ten-Year Update." *Journal of Management Information Systems* 19(4): 9-30.

DeLone, W. H., E. R. McLean, et al. (2005). "Success of information systems: measuring the effectiveness of information systems." *Blackwell Encyclopedic Dictionary of Management Information Systems*: 1-1.

Demetis, D. S. and I. O. Angell (2006). "AML-related technologies: a systemic risk." *Journal of Money Laundering Control* 9(2): 157-172.

Denison, D. R. and A. K. Mishra (1995). "Toward a Theory of Organizational Culture and Effectiveness." *Organization Science* 6(2): 204-223.

Denzin, N. K. (1983). Interpretive Interactionism. *Beyond Method: Strategies for Social Research*. G. Morgan. London, Sage: 129-147.

DeSanctis, G. and M. S. Poole (1994). "Capturing the complexity in advance technology use: Adaptive structuration theory." *Organisational Science* 5(2): 121-147.

DeVaus, D. A. (2002). *Surveys in Social Research*. London, Routledge.

Dilthey, W. (1976). *Selected Writings*. Cambridge, Cambridge University Press.

Donaghy, M. (2002). "Monetary privacy in the information economy." *International Sociology* 17(1): 113-133.

Douglas, J. and A. W. Burgess (1986). "Criminal Profiling: A viable investigative tool against violent crime." *FBI Law Enforcement Bulletin* 55(December): 9-13.

Dow, G. K. (1988). "Configurational and Coactivational Views of Organisational Structure." *Academy of Management Review* 13(I): 53-64.

Doyle, T. (2002). "Cleaning-Up Anti-Money Laundering Strategies: Current FATF Tactics Needlessly Violate International Law." *Houston Journal of International Law* 24(2): 279-313.

Duchesneau, T. D., S. E. Cohn, et al. (1979). *A Study of Innovation in Manufacturing, Determinants, Processes, and Methodological Issues*. Orono, The Social Science Research Institute, University of Maine.

Easterby-Smith, M., R. Thorpe, et al., Eds. (2002). *Management Research*. Sage Series in Management. London, Sage.

Edwards, P., I. Roberts, et al. (2002). "Increasing response rates to postal questionnaires: systematic review." *BMJ* 324(7347): 1183-.

EFF. (2001, October 27, 2003). "EFF Analysis Of The Provisions Of The USA PATRIOT Act." Retrieved November 2, 2001, from http://w2.eff.org/Privacy/Surveillance/Terrorism/20011031_eff_usa_patriot_analysis.php.

Ehrenfeld, R. (1994). Evil Money: The Inside Story of Money Laundering and Corruption in Government Bank and Business. New York, SP Books.

Eisenhardt, K. M. (1989). "Building Theories from Case Study Research." The Academy of Management Review 14(4): 532-550.

England, B. o. (2009). "Analysis of bank and building society deposits from and lending to UK residents: July 2009." Bank Of England Statistical Release Retrieved Spetember 11, 2009, from <http://www.bankofengland.co.uk/statistics/abl/2009/Jul/index.pdf>.

Ettlie, J. E., W. P. Bridges, et al. (1984). "Organization Strategy and Structural Differences for Radical Versus Incremental Innovation." Management Science 30(6): 682-695.

EU. (2005). "Directive 2005/60/EC of the European Parliament and of the Council of 26 October 2005 on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing ", from http://ec.europa.eu/internal_market/company/financial-crime/index_en.htm.

Evans, M. (2010). In the wrong hands human rights hurt. The Sunday Times. London, News Corp.: 25.

Eveland, J., M. Rogers, et al. (1977). The Innovative Process in Public Organizations. Ann Arbor, Univeristy Of Michigan, School of Journalism. **Mimeo Report**.

FATF-GAFI (1990). Annual Report 1990. Paris, Financial Action Task Force on Money Laundering: 35.

FATF-GAFI (2002). Guidance for Financial Institutions in Detecting Terrorist Financing. Paris, Financial Action Task Force: 16.

FATF-GAFI (2003). Annual Review of Non-Cooperative Countries or Territories. Paris, The Financial Action Task Force on Money Laundering: 34.

FATF-GAFI (2003). The Forty Recommendations. Paris, The Financial Action Task Force on Money Laundering: 22.

FATF-GAFI (2003-2004). Report on Money Laundering Typologies. Paris, Financial Action Task Force on Money Laundering: 33.

FATF-GAFI. (2009). "About the FATF." Retrieved March 15, 2009, from http://www.fatf-gafi.org/pages/0,3417,en_32250379_32236836_1_1_1_1_1,00.html.

FATF-GAFI. (2009). "Money Lanundering FAQ." Retrieved September 10, 2009, from http://www.fatf-gafi.org/document/29/0,3343,en_32250379_32235720_33659613_1_1_1_1,00.html#howmuchmoneyislaunderedperyear.

FATF-GAFI. (2009). "Money Laundering Trends and Techniques." Retrieved March 15, 2009, from http://www.fatf-gafi.org/findDocument/0,3354,en_32250379_32237295_1_1_1_1_1,00.html.

Fay, B. (1987). An Alternative View: Interpretive Social Science. Interpreting Politics. M. T. Gibbons. New York, New York University Press.

Fayyad, U., G. Piatetsky-Shapiro, et al. (1996). "The KDD Process for Extracting Useful Knowledge from Volumes of Data." Communications of the ACM 39(11): 27-34.

Fayyad, U. and R. Uthurusamy (1996). "Data Mining and Knowledge Discovery in Databases." Communications of the ACM 39(11): 24-26.

FBI. (2009). "History of the FBI: Rise of International Crime: 1980's - "Pizza Connection" case." Retrieved June 30, 2009, from <http://www.fbi.gov/libref/historic/history/rise.htm>.

Fenwick, H. (2002). "The Anti-Terrorism, Crime and Security Act 2001: A Proportionate Response to 11 September?" The Modern Law Review 65(5): 724-762.

Fichman, R. G. (2004). "Going Beyond the Dominant Paradigm for Information Technology Innovation Research: Emerging Concepts and Methods." Journal of the Association for Information Systems 5(8): 43.

FIDIS. (2009). "About FIDIS." Retrieved November 11, 2009, from <http://www.fidis.net/about/>.

FinCEN. (2002). "USA PATRIOT Act." Retrieved November 5, 2002, 2002, from <http://www.fincen.gov/patriotact.html>.

FinCEN and W. Smith (2003). Money Laundering Prevention - A Money Services Business Guide. FinCEN. Washington, DC, U.S. Department of the Treasury: 52.

Fink, A. (2003). How to ask survey questions. Thousand Oaks, Sage Publications Inc.

Fleming, M. H. (2005). UK Law Enforcement Agency Use and Management of Suspicious Activity Reports: Towards Determining the Value of the Regime. London, Jill Dando Institute of Crime Science, University College London: 94.

Fonesca, J. (2002). Complexity and Innovation in Organizations. London, Routledge.

French, M. L. and B. Martz (2008). "Business Process as Tacit Knowledge Equilibrium." Comparative Technology Transfer and Society 6(2): 88-102.

Fry, L. W. and J. W. Slocum Jr. (1984). "Technology, Structure, and Workgroup Effectiveness: A Test of a Contingency Model." Academy of Management Journal 27(2): 221-246.

FSA (2003). Reducing Money Laundering Risk - Know Your Customer and anti-money laundering monitoring. Discussion Paper. D. Shonfeld. London, The Financial Services Authority: 35.

FSA. (2005, March 3, 20021). "The Chancellor of the Exchequer announced the reform of financial services regulation in the UK and the creation of a new regulator on 20 May 1997." Retrieved August 6, 2009, from <http://www.fsa.gov.uk/Pages/About/Who/History/index.shtml>.

FSA (2008). Review of Firms' Implementation of a Risk-based approach to anti-money laundering (AML). London, Financial Services Authority.

Gable, G. G. (1994). "Integrating case study and survey research methods: an example in information systems." *Eur J Inf Syst* 3(2): 112-126.

Gadamar, H. G. (1975). *Truth and Method*. New York, The Continuing Publishing Company.

Gadamar, H. G. (1976). *Philosophical Hermeneutics*. Berkeley, University of California Press.

Galliers, R., J. A. Swan, et al. (2000). "A Knowledge-focused perspective on the diffusion and adoption of complex information technologies: the BPR example." *Information Systems Journal* 10: 281-259.

Garcia, M. L. (1997). "Overview of Emerging Threats to the United States." Retrieved December 18, 2010, from <http://enr.nmsu.edu/~etti/fall97/security/mlgarcia.html>.

Gatignon, H., M. L. Tushman, et al. (2002). "A Structural Approach to Assessing Innovation: Construct Development of Innovation Locus, Type, and Characteristics." *Management Science* 48(9): 1103-1122.

Gaviria, R. E. and D. Fisher (2009). *The Accountant's Story: inside the violent world of the Medellin cartel*. New York, Grand Central Publishing.

Gersh, J., B. Lewis, et al. (2006). "Supporting insight-based information exploration in intelligence analysis." *Commun. ACM* 49(4): 63-68.

Giddens, A. (1979). *Central Problems in Social Theory*. Basingstoke, Macmillan.

Giddens, A. (1984). *The Constitution of Society*. Cambridge, Polity.

Gill, M. and G. Taylor (2003). "Can Information Technology Help in the Search for Money Laundering? The Views of Financial Companies." *Crime Prevention and Community Safety* 5: 39-47.

Gill, M. and G. Taylor (2004). "Preventing Money Laundering or Obstructing Business? Financial Companies' Perspectives on "Know Your Customer" Procedures." *British Journal of Criminology - an International Review of Crime and Society* 00044(00004): 582-582.

Gilmore, W. (1995). International Initiatives. *Butterworths International Guide to Money Laundering Law and Practice*. R. Parlour. London, Tottel Publishing: 24.

Goh, C.-L., M. Tsukamoto, et al. (1996). "Knowledge Discovery in Deductive Databases with Large Deduction Results: The First Step." *IEEE Transactions on Knowledge and Data Engineering* 8(6): 952-974.

Goodman, P., R. S. Atkin, et al. (1983). On the Demise of Organisational Effectiveness Studies. *Organisational Effectiveness: A Comparison of Multiple Models*. K. S. Cameron and D. A. Whetten. New York, Academic Press: 163-183.

Goodwin, M. (2009). "Accurate Psycho-Geographical Profile of DC Sniper." October 1. Retrieved November 11, 2009, from <http://www.investigativepsych.com/snipergeoprofile.htm>.

Gouvin, E. J. (2003). "Bringing Out the Big Guns: The USA Patriot Act, Money Laundering, and the War on Terrorism." Baylor Law Review 55(3): 955-990.

Green, L. W. (1986). "The Theory of Participation: A Qualitative Analysis of Its Expression in National and International Health Policies." Advances in Health Education and Promotion 1(211-236).

Group, W. P. W. s. (1973-2009). "The Watergate Story." Retrieved February 8, 2009, from <http://www.washingtonpost.com/wp-srv/politics/special/watergate/index.html>.

Habermas, J. (1979). Communication and the Evolution of Society. London, Heinemann.

Habermas, J. (1984). The Theory of Communicative Action Vol. 1: Reason and the Rationalization of Society. London, Heinemann.

Habermas, J. (1987). The Theory of Communicative Action Vol. 2: Lifeworld and System: A Critique of Functionalist Reason. Oxford, Polity Press.

Habermas, J. (1993). On the pragmatic, the ethical, and the moral employments of practical reason. Justification and Application. J. Habermas. Cambridge, Polity Press.

Hage, J. (1980). Theories of Organization: Form, Process and Transformation. New York, Wiley.

Halperin, R. (2006). TFI Perspectives on RFID as an AMI enabling tool. RFID, Profiling, and AMI. M. Hildebrandt and M. Meints: 74-78.

Hamilton, S. and B. Ives (1982). "MIS Research Strategies." Information & Management 5: 339-347.

Harvey, J. (2005). "An Evaluation of Money Laundering Policies." Journal of Money Laundering Control 8(4): 339-345.

Harvey, J. (2009). "The Search for Crime Money - debunking the myth: Fact vs. Imagery." Journal of Money Laundering Control 12(2): 97-100.

Harvey, J. and S. Lau (2009). "Crime-money, reputation and reporting." Crime, Law and Social Change 52(1): 57-72.

Hausman, A. and J. R. Stock (2003). "Adoption and implementation of technological innovations within long-term relationships." Journal of Business Research 56(8): 681-686.

Heidegger, M. (1962). Being and Time. Oxford, Basil Blackwell.

Hemraj, M. B. (2005). "The Regulatory Failure: The Saga of BCCI." Journal of Money Laundering Control 8(4): 346-353.

Herridge, R. (2007). Prevention of Money Laundering/Combating Terrorist Financing. Guidance for the UK Financial Sector, Part I. London, The Joint Money Laundering Steering Group (JMLSG): 159.

Hildebrandt, M. (2006). "Profiling: From data to knowledge." Datenschutz und Datensicherheit - DuD 30(9): 548-552.

Hildebrandt, M. and J. Backhouse (2005). D7.2: Descriptive analysis and inventory of profiling practices - WP 7. M. Hildebrandt and J. Backhouse. Brussels, FIDIS: 117.

Hirschheim, R. and H. Klein (1989). "Four Paradigms of Information Systems Development." Communications of the ACM 32: 1199-1216.

Hirschheim, R. and M. Newman (1991). "Symbolism and information systems development: myth, metaphor and magic." Information Systems Research 2(1): 29-62.

Hirschheim, R. and S. Smithson (1986). A Critical Evaluation of Information Systems Evaluation. IFIP WB 8.2 Working Conference on Information Systems Assessment.

HMSO (1987). The Banking Act 1987. London, The Stationery Office Ltd.: 33-38.

Horgan, J. and M. Taylor (1997). "The Provisional Irish Republican Army: Command and Functional Structure." Terrorism and Political Violence 9(3): 1 - 32.

Horgan, J. and M. Taylor (1999). "Playing the "Green Card" - Financing the Provisional IRA: Part 1." Terrorism and Political Violence 11(2): 1 - 38.

Howell, J. M. and C. A. Higgins (1990). "Champions of Technological Innovation." Administrative Science Quarterly 35(2): 317-341.

Huff, S. and M. C. Munro (1985). "Information Technology Assessment & Adoption: a field study." MIS Quarterly(December): 327-339.

Husserl, E. (1970). Logical Investigations. London, Routledge and Kegan Paul.

Husserl, E. (1982). Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy. Boston, Kluwer.

Igira, F. T. (2008). "The situatedness of work practices and organizational culture: implications for information systems innovation uptake." Journal of information technology 23(2): 79-88.

Illich, I. (1973). Tools for Conviviality. New York, Harper and Row.

IMF (2001). Financial System Abuse, Financial Crime and Money Laundering - Background Paper. Background Paper. J. Boorman and S. Ingves. Washington, DC, International Monetary Fund: 41.

IMF (2003). Offshore Financial Centers - The Assessment Program: A Progress Report and the Future of the Program. IMF Progress Report. U. Baumgartner. Washington, DC, International Monetary Fund: 46.

Intelligencer, S. R. (2010). "Swiss authorities investigate Kulibayev money laundering allegations - report." Retrieved December 18, 2010, from <http://silkroadintelligencer.com/2010/12/06/swiss-authorities-investigate-kulibayev-money-laundering-allegations-report/>.

International, P. (2002) Caymans Outraged over FATF List. **Volume**, DOI:

Interpol. (2002). "The Hawala alternative remittance system and its role in money laundering." Retrieved November 5, 2002, 2002, from <http://www.interpol.int/Public/FinancialCrime/MoneyLaundering/hawala/default.asp>.

Jaakkola, H. (1996). Comparison and Analysis of Diffusion Models. Diffusion and Adoption of Information Technology. K. Kautz and J. Pries-Heje. London, Chapman & Hall: 36-45.

Jacobs, J. B. and L. P. Gouldin (1999). "Cosa Nostra: The Final Chapter?" Crime and Justice 25: 129-189.

Jennings, C. and L. Fena (2000). The Hundredth Window: protecting your privacy and security in the age of the Internet. New York, The Free Press.

Jeyaraj, A., J. W. Rottman, et al. (2006). "A review of the predictors, linkages, and biases in IT innovation adoption research." Journal of Information Technology (Palgrave Macmillan) 21(1): 1-23.

Johnson, J. (2008). "Is the Global Financial System AML/CFT Prepared?" Journal of Financial Crime 15(1): 7-21.

Judd, C. M., E. R. Smith, et al. (1991). Research methods in social relations. Orlando, Harcourt.

Kaplan, B. and D. Duchon (1988). "Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study." MIS Quarterly 12(4): 571-586.

Katkov, N. (2006). Evaluating the Vendors of Anti-Money Laundering Solutions 2006. Tokyo. **Net Economy profile**: 11.

Katz, M. L. and C. Shapiro (1986). "Technology Adoption in the Presence of Network Externalities." Journal of Political Economy 94: 822-41.

Keen, P. G. W. (1980). MIS Research: Reference Disciplines and a Cumulative Tradition. First International Conference on Information Systems, Philadelphia.

Keen, P. G. W. (1991). Shaping the future: business design through information systems. Boston, Harvard Business School Press.

Kennedy, P. (2003). "Watching the Clothes Go Round: Combating The Effects of Money Laundering on Economic Development and International Trade." Currents International Trade Law Journal(Summer 2003): 140-150.

Kentouris, C., S. Kite, et al. (2002). "UBS Selects Seachspace To Fight Money Laundering." Securities Industry News 14(13): 15.

Kerry, S. J. and S. H. Brown (1992). The BCCI Affair: A Report to the Committee on Foreign Relations United States Senate. Washington, DC, US Senate. **102d Congress 2d Session Senate Print 102-140**: 321.

Kimberly, J. R. and M. J. Evanisko (1981). "Organizational Innovation: The Influence of Individual, Organizational, and Contextual Factors on Hospital Adoption of Technological and Administrative Innovations." The Academy of Management Journal 24(4): 689-713.

Klein, H. and R. J. Welke (1982). Information Systems as a Scientific Discipline. Administrative Services Association Conference. University of Ottawa: 106-116.

Klein, H. K. and M. D. Myers (1999). "A Set of Principles for Conducting and Evaluating Interpretive Field Systems in Information Systems." MIS Quarterly 23(1): 67-94.

Kling, R. (1987). Defining the Boundaries of Computing across Complex Organisations. Critical Issues in Information Systems Research. R. Boland and R. Hirschheim. New York, Wiley.

Kling, R. and W. G. Dutton (1982). The computer package, dynamic complexity. Computers and Politics: High Technology in American Local Governments. J. Danziger, R. Kling, W. G. Dutton and K. L. Kraemer. New York, Columbia University Press: 22-50.

Kling, R. and W. Scacchi (1982). "The web of computing: Computer technology as social organisation." Advanced Computing 21: 1-90.

Koellinger, P. (2008). "The relationship between technology, innovation, and firm performance--Empirical evidence from e-business in Europe." Research Policy 37(8): 1317-1328.

Kollewe, J. (2005) Supervisory cheif defends Bank over BCCI collapse. The Independent Volume, 1 DOI:

Kozar, K. A. (1989). "Adopting Systems Development Methods: an exploratory study." Journal of Management Information Systems 5(4): 73-86.

KPMG (2004). Global Anti-Money Laundering Survey 2004. London, KPMG, LLC.

KPMG (2007). Global Anti-Money Laundering Survey 2007. London.

Kraemer, K. L. and W. H. Dutton (1991). Survey Research in the Study of Management Information Systems. Harvard Business School Research Colloquium. Cambridge, Harvard Business School Press: 69.

Kwon, T. H. and R. W. Zmud (1987). Unifying the Fragmented Models of Systems Implementation. Critical Issues in Information Systems Research. R. J. Bolland and R. A. Hirschheim. New York, John Wiley & Sons: 227-251.

Lander, S. (2006). Review of the Suspicious Activity Report Regime (The SARs Review). London, Serious and Organised Crime Agency.

Landry, M. and C. Banville (1992). "A Disciplined Methodological Pluralism for MIS Research." Accounting, Management and Information Technologies 2 (April-June 1992)(2): 77-97.

Langford, W. (2002). A Report to Congress in Accordance with § 356(c) of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT Act). Washington, DC, U.S. Dept. of the Treasury
The Board of Governors of the Federal Reserve System
The Securities and Exchange Commission.

Lascelles, D., R. Donkin, et al. (1991). BCCI, Behind Closed Doors: "This bank would bribe God" Part Two. Financial Times. London.

Lascelles, D., R. Donkin, et al. (1991). The Biggest Bank Fraud in History. Financial Times. London: I.

Latour, B. (1987). Science in Action. Cambridge, Harvard University Press.

Laudan, I. (1984). Science and Values: An Essay on the Aims of Science and Their Role in Scientific Debate. Berkeley, University of California Press.

Lavan, R. (2008). FSA fines manager in anti-money laundering failure. The Sunday Times. London, News Corp.

Lawless, M. W. and L. L. Price (1992). "An Agency Perspective on New Technology Champions" Organization Science 3(3): 342-355.

Lee, A. S. (1991). "Integrating Positivist and Interpretive Approaches to Organizational Research." Organization Science 2(4): 342-365.

Leifer, R. (1988). "Matching Computer-Based Information Systems with Organisational Structures." MIS Quarterly 12(1): 63-77.

Leonard-Barton, D. and I. Deschamps (1988). "Managerial influence in the implementation of new technology." Management Science 34: 1252-1265.

Lewin, A. Y. and J. W. Minton (1986). "Determining Organizational Effectiveness: Another Look, and an Agenda for Research." Management Science 32(5): 514-538.

Lewis, M. and A. Grimes (1999). "Metatriangulation: Building theory from multiple paradigms." Academy of Management Review 24(4): 672-690.

Lewisch, P. (2008). "Money Laundering Laws as Political Instrument: The Social Cost of Arbitrary Money Laundering Enforcement." European Journal of Law and Economics 26: 405-417.

Lhor, S. (1991). Agent Tells of Failures on B.C.C.I. New York Times. New York, The New York Times Company: 2.

Liebenau, J. and J. Backhouse (1990). Understanding Information: An Introduction. London, Macmillan.

- Lohr, S. (1991). Agent Tells of Failures on B. C. C. I. The New York Times. New York.
- Lohr, S. (1992). Agent Tells of Failures on B.C.C.I. New York Times. New York, The New York Times Co.: 1.
- Lords, H. o. (2009). Money Laundering and the financing of terrorism: Volume I: Report. London, House of Lords. I: 67.
- Lorsch, J. W. and J. J. Morse (1974). Organisations and Their Members: A Contingency Approach. New York, Harper & Row.
- Louridas, P. (1999). "Design as bricolage: anthropology meets design thinking." Design Studies 20(6): 517-535.
- Ltd., C. S. I. (2006). White Paper on Anti-Money Laundering. Bangalore, Cranes Software: 26.
- Lumpkin, J. (2006, January 11, 2006). "Maktab al-Khidamat." Retrieved August 10, 2009, from http://www.globalsecurity.org/security/profiles/maktab_al-khidamat.htm.
- Lyon, D., Ed. (2003). Surveillance as Social Sorting: Privacy, Risk and Digital Discrimination. London, Routledge.
- Lyytinen, K. (1987). "Different Perspectives on Information Systems: Problems and Solutions." Comput. Surveys 19(1): 5-46.
- Madsen, K. H. (1989). Breakthrough by Breakdown. Information Systems Development for Human Progress in Organisations. H. Klein and K. Kumar. Amsterdam, North-Holland.
- Mahler, A. and E. M. Rogers (1999). "The diffusion of interactive communication innovations and the critical mass: The adoption of." Telecommunications Policy 23(10/11): 719.
- Maitlis, S. (2005). "The social processes of organisational sensemaking." Academy of Management Journal 48(1): 21-49.
- Maitlis, S. and T. B. Lawrence (2003). "Orchestral manoeuvres in the dark: understanding failure in organisational strategising." Journal of Management Studies 40(1): 109-139.
- Makarenko, T. (2004). "The Crime-Terror Continuum: Tracing the Interplay between Transnational Organised Crime and Terrorism." Global Crime 6(1): 129-145.
- Manev, I. M. and W. B. Stevenson (2001). "Balancing Ties: Boundary Spanning and Influence in the Organization's Extended Network of Communication." Journal of Business Communication 38(2): 183-205.
- Manning, P. K. (1982). "Organisational Work: Structuration of Environments." British Journal of Sociology 33(I): 118-134.
- Markus, M. L. (1987). "Toward a 'Critical Mass' Theory of Interactive Media: Universal Access, Interdependence and Diffusion." Communications Research 14: 491-511.

Markus, M. L. and D. Robey (1988). "Information Technology and Organisational Change: Causal Structure in Theory and Research." Management Science 34(5): 583-598.

Markus, M. L. and D. Robey (1988). "Information Technology and Organizational Change: Causal Structure in Theory and Research." Management Science 34(5): 583-598.

Masciandaro, D., Ed. (2004). Global Financial Crime. Aldershot, Ashgate.

Masciandaro, D. (2005). Combating black money: international cooperation and the G8's role. New Perspectives on the G8. M. Fratianni, J. Kirton and A. Rugman. Aldershot, Ashgate: 169-82.

Masciandaro, D. (2006). "Offshore centres post 9/11: economics and politics." Journal of Money Laundering Control 9(4): 365-372.

Mathers, C. (2004). Crime School: money laundering: true crime meets the world of business and finance. Buffalo, Firefly Books.

McGuire, B. (2002). Money Laundering Detection: Preserving the Integrity of Financial Institutions. Needham, The Tower Group: 12.

McMenamin, M. (1996). "Bill & Ted's Irish misadventure - peace efforts in Northern Ireland by Pres. Clinton and Sen. Ted Kennedy." August-September 1996. Retrieved August 1, 2009, from http://findarticles.com/p/articles/mi_m1568/is_n4_v28/ai_18684654/

Melaugh, M. (2009, May 31, 2009). "Irish Northern Aid Committee (NORAID)." Retrieved July 31, 2009, from <http://cain.ulst.ac.uk/othelom/organ/iorgan.htm>.

Mercer, N. (2000). Words and Minds: how we use language to think together. London, Routledge.

Middleton, D. J. and M. Levi (2005). "The role of solicitors in facilitating 'Organized Crime': Situational crime opportunities and their regulation." Crime, Law and Social Change 42(2): 123-161.

Miles, R. E. and C. C. Snow (1978). Organisational Strategy, Structure, and Process. New York, McGraw-Gill.

Mingers, J. (2001). "Combining IS Research Methods: Towards a Pluralist Methodology." Information Systems Research 12(3): 240-259.

Mingers, J. (2001). "Embodying information systems: the contribution of phenomenology." Information and Organization 11(2): 103-128.

Mingers, J. (2003). "The paucity of multimethod research: a review of the information systems literature." Information Systems Journal 13: 233-249.

Mingers, J. C. and F. Stowell, Eds. (1997). Information systems: An emerging discipline? London, McGraw-Hill.

Mintzberg, H., D. Raisinghani, et al. (1976). "The Structure of 'Unstructured' Decision Processes." *Administrative Sciences Quarterly* 21: 246-275.

Moore, G. A. (2002). *Crossing the Chasm*. New York, Harper Business Publishing.

Moore, G. C. and I. Benbasat (1991). "Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation." *Information Systems Research* 2(3): 192-222.

Mullen, I. (2003). "Anti-Money Laundering Presentation to FSA Conference." Retrieved December 19, 2010, from <http://www.bba.org.uk/media/article/anti-money-laundering-presentation-to-fsa-conference/speeches/>.

Mumford, E., R. Hirschheim, et al. (1985). *Research Methods in Information Systems*. North-Holland.

Munro, M. C., S. L. Huff, et al. (1997). "Understanding and measuring user competence." *Information & Management* 33(1): 45-57.

Mustonen-Ollila, E. and K. Lyytinen (2003). "Why Organizations adopt information systems process innovations: a longitudinal study using Diffusion of Innovation Theory." *Information Systems Journal* 13: 275-297.

Mylonaki, E. (2002). "The Manipulation of Organised Crime by Terrorists: Legal and Factual Perspectives." *International Criminal Law Review* 2(2002): 213-235.

Naim, M. (2005). *Illicit: How Smugglers, Traffickers and Copycats are Hijacking the Global Economy*. London, Heinemann.

Napoleoni, L. (2005). *Terror incorporated: tracing the dollars behind the terror networks*. New York, Seven Stories Press.

Nardo, M. (2006). "Building synergies between theory and practice: Countering financial crime on a systemic approach." *Journal of Financial Crime* 13(3): 292-299.

Naylor, R. T. (1994). *Hot Money and the Politics of Debt*. New York, Black Rose Books.

Naylor, R. T. (1999). "Wash-out: A critique of follow-the-money methods in crime control policy." *Crime, Law and Social Change* 32(1): 1-58.

NCIS (2003). UK Threat Assessment 2003. London, National Criminal Investigative Service.

Nichols, L. T. (1997). "Social Problems as Landmark Narratives: Bank of Boston, Mass Media and "Money Laundering"." *Social Problems* 44(3): 324-341.

Nilakanta, S. and R. W. Scamell (1991). "The Effect of Information Sources and Communication Channels on the Diffusion of Innovation in a Data Base Development Environment." *Management Science*, INFORMS: Institute for Operations Research. 37: 1503-1506.

Nonaka, I. (1994). "A Dynamic Theory of Organizational Knowledge." Organization 2(1): 14-37.

Norkom (2009). Enterprise AML solution. Dublin, Norkom Software.

O'Connor, T. R. (2004). "History of Profiling." Retrieved August 5, 2004, 2004, from <http://faculty.ncwc.edu/toconnor/428/428lect01.htm>.

OED. (2004). "Oxford English Dictionary." Retrieved August 5, 2004, 2004, from <http://athens.oed.com/>.

Oehme, C. G. (2008). "Terrorists, Insurgents, and Criminals - Growing Nexus?" Studies in Conflict & Terrorism 31(1): 80 - 93.

Ogburn, W. F. and S. C. Gilfillan (1933). The influence of invention and discovery. Report of the President's Research Committee on Social Trends. New York, McGraw-Hill. **In Recent Social Trends in the United States**, vol. 1.

Olsen, S. (2002, November 10, 2002). "Patriot Act draws privacy concerns." Retrieved November 14, 2002, 2002, from <http://news.com.com/2102-1023-275026.html>.

Olshavsky, R. W. (1980). "Time and the Rate of Adoption of Innovations." Journal of Consumer Research 6(4): 425-428.

Oppenheim, A. N. (2002). Questionnaire design, interviewing and attitude measurement. London, Continuum International.

Orlikowski, W. J. (1991). "Integrated information environment or matrix of control? The contradictory implications of information technology." Accounting, Management and Information Technologies 1(1): 9-42.

Orlikowski, W. J. (1992). "The Duality of Technology: Rethinking the Concept of Technology in Organizations." Organizational Science 3(3): 398-427.

Orlikowski, W. J. (2000). "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organisations." Organisational Science 11(4): 404-428.

Orlikowski, W. J. and J. Baroudi (1991). "Studying information technology in organizations: research approaches and assumptions." Information Systems Research 2(1): 1-28.

Orlikowski, W. J. and C. S. Iacono (2001). "Research Commentary: Desperately Seeking the "IT: in IT Research - A Call to Theorising the IT Artifact." Information Systems Research 12(2): 121-134.

Orlikowski, W. J. and D. Robey (1991a). "Information Technology and the Structuring of Organizations." Information Systems Research 2(2): 143-169.

Osterfelt, S. (2001, 2003). "Business Intelligence." DM Direct, 2003, from www.dmdirect.com.

OTA (1995). Information Technologies for Control of Money Laundering. Washington, DC, U.S. Congress.

- Palast, G. (2002). The Best Democracy Money Can Buy. London, Pluto Press.
- Paoli, L. (2002). "The paradoxes of organized crime." Crime, Law and Social Change 37(1): 51-97.
- Parker, M. M., R. J. Benson, et al. (1988). Information Economics: Linking Business Performance to Information Technology. Englewood Cliffs, Prentice Hall.
- Parker, W. (1994-1995). "Black/Parallel Markets: When is a Money Exchanger a Money Launderer?" Dickinson Journal of International Law 423(Spring 1995): 423-439.
- Passas, N. (1993). "Structural sources of international crime: Policy lessons from the BCCI Affair." Crime, Law and Social Change 20(4): 293-309.
- Passas, N. (1996). "The Genesis of the BCCI Scandal." Journal of Law and Society 23(1): 57-72.
- Passas, N. (2003). Informal Value Transfer Systems, Terrorism, and Money Laundering. Washington, DC, National Institute of Justice: 137.
- Passas, N. (2006). "Fighting terror with error: the counter-productive regulation of informal value transfers." Crime, Law and Social Change 45(4): 315-336.
- Passas, N. and R. B. Groskin (2001). "Overseeing and Overlooking: The US Federal Authorities' Response to Money Laundering and Other Misconduct at BCCI." Crime Law and Social Change 35(2001): 141-175.
- Patton, M. Q. (1987). How to use qualitative methods in evaluation. Newbury Park, Sage Publications Inc.
- Patton, M. Q. (1990). Qualitative evaluation and research methods. Newbury Park, Sage Publications Inc.
- Peters, G. (2009). Seeds of Terror: how heroin is bankrolling the Taliban and al Qaeda. New York, St. Martin's Press.
- Petter, S., W. DeLone, et al. (2008). "Measuring information systems success: models, dimensions, measures, and interrelationships." European Journal of Information Systems 17(3): 236-263.
- Pettigrew, A. M. (1985). Contextualist Research: A Natural Way to Link Theory and Practice. Doing Research that is Useful for Theory and Practice. Lawler, M. Jr., Mohrman, Ledford and Cummings. San Francisco, Jossey-Bass: 222-248.
- Pfeffer, J. (1982). Organisations and Organisational Theory. Marshfield, Pitman.
- Phillips, F. (2007). "On S-curves and tipping points." Technological Forecasting and Social Change 74(6): 715-730.
- Piatetsky-Shapiro, G. and W. J. Frawley (1991). Knowledge Discovery in Databases. Cambridge, MA, AAAI/MIT Press.

Pierce, J. L. and A. L. Delbecq (1977). "Organization Structure, Individual Attitudes and Innovation." The Academy of Management Review 2(1): 27-37.

Plombeck, C. T. (1988). "Confidentiality & Disclosure: The Money Laundering Control Act of 1986 and Banking Secrecy." The International Lawyer 22(1): 69-98.

Policy, W. H. O. o. N. D. C. (2000). National Drug Control Strategy Annual Report 2000. Washington, DC, White House Office of National Drug Control Policy: 164.

Porter, M. E. (1980). Competitive Strategy. New York, The Free Press.

Potter, J. (1996). Representing reality: discourse, rhetoric and social construction. London, Sage.

Prabhakar, S., S. Pankanti, et al. (2003). "Biometric Recognition: Security and Privacy Concerns." IEEE Security and Privacy 1(2): 33-42.

Premkumar, G. and M. Potter (1995). "Adoption of Computer Aided Software Engineering (CASE) Technology: an innovation adoption perspective." The Data Base for Advances in Information Systems 26(2 & 3): 105-124.

Prescott, M. B. and S. A. Conger (1995). "Information technology innovations: a classification by IT locus of impact and research approach." SIGMIS Database 26(2-3): 20-41.

Pries-Heje, J. and R. Baskerville (2001). "A multiple-theory analysis of a diffusion of information technology case." Information Systems Journal 11(3): 181-212.

Qorchi, M. E., S. M. Maimbo, et al. (2003). Informal Funds Transfer Systems: An Analysis of the Informal Hawala System. Washington, DC, International Monetary Fund: 64.

Rajagopal, P. (2002). "An innovation-diffusion view of implementation of enterprise resource planning (ERP) systems and development of a research model." Information & Management 40: 87-114.

Ransford, M. (2002). "Personality Profiling won't crack serial sniper case." Retrieved November 11, 2009, from <http://www.bsu.edu/ws/article/0,1370,-1019-7342,00.html>.

Ransom, S., B. Hinings, et al. (1980). "The Structuring of Organisational Structures." Administrative Sciences Quarterly 25(1-17).

Rees, G. (2001). Cleaning up the Act. The Lawyer. London, Centaur Communications Ltd.: 37-41.

Reuter, P., Ed. (1983). Disorganized Crime: Illegal Markets and the Mafia. Cambridge (Mass.), The MIT Press.

Reuter, P. (2007). Are Estimates of the Volume of Money Laundering Either Useful or Feasible? - A Response to John Walker. Tackling Money Laundering. University of Utrecht, Utrecht, The Netherlands, Tjalling C. Koopmans Institute: 8.

Reuter, P. and E. M. Truman (2004). Chasing Dirty Money: the fight against money laundering. Washington, DC, Institute for International Economics.

Reuter, P. and E. M. Truman (2005). "Anti-Money Laundering Overkill?" International Economy 19(1): 56-60.

Rice, R. E. and E. M. Rogers (1980). "Reinvention in the Innovation Process." Science Communication 1(4): 499-514.

Richards, J. R. (1999). Transnational criminal organizations, cybercrime & money laundering: a handbook for law enforcement officers, auditors, and financial investigators. Boca Raton, CRC Press LLC.

Ricoeur, P. (1974). The Conflict of Interpretations: Essays in Hermeneutics. Evanston, Northwest University Press.

Ricoeur, P. (1976). Hermeneutics: Restoration of Meaning or Reduction of Illusion? Critical Sociology, Selected Readings. P. Connerton. Harmondsworth, Penguin Books.

Rider, B. (1999). "The Crusade Against Money Laundering - Time to Think!" European Journal of Law Reform 1(4): 501-525.

Riley, P. (1983). "A Structurationist Account of Political Culture." Administrative Sciences Quarterly 28: 347-414.

Rizkalla, A. (1998). "Money Laundering: the European Approach." Tulane European & Civil Law Forum 13(1998): 111-124.

Roberts, J. and R. Scapens (1985). "Accounting Systems and Systems of Accountability: Understanding Accounting Practices in Their Organisational Context." Accounting, Organisations and Society 10(4): 443-456.

Robey, D. (1996). "Research Commentary: Diversity in Information Systems Research: Threat, Promise and Responsibility." Information Systems Research 7(4): 400-408.

Robinson, J. (1998). The Laundrymen: Inside the World's Third Largest Business. London, Pocket Books.

Robinson, J. (2003). The Sink: How Banks, Lawyers and Accountants Finance Terrorism and Crime - And Why Governments Can't Stop Them. London, Robinson.

Robinson, J. (2004). The Sink: how banks, lawyers and accountants finance terrorism and crime - and why governments can't stop them. London, Robinson.

Rogers, E. M. (1962). Diffusion of Innovations. New York, The Free Press.

Rogers, E. M. (1976). "New Product Adoption and Diffusion." Journal of Consumer Research 2(4): 290-301.

Rogers, E. M. (1983). Diffusion of Innovations. New York, The Free Press.

Rogers, E. M. (1995). Diffusion of Innovations. New York, The Free Press.

Rogers, E. M. (2003). Diffusion of Innovations. New York, Free Press.

Rogers, E. M. and F. F. Shoemaker (1971). Communication of Innovations. New York, Free Press.

Rousseau, D. M. (1985). Issues of Level in Organisational Research: Multi-level and Cross-level Perspectives. Research in Organisational Behaviour. Greenwich, JAI Press: 1-37.

Rowan, R. (1992, 2000). "Pan Am 103: Why Did They Die?" April 27, 1992. Retrieved July 29, 2009, from <http://web.archive.org/web/20060213224301/www.time.com/time/europe/timetrails/lockerbie/lock920427.html>.

Ruthven, M. (2002). A Fury for God: the Islamist attack on America. New York, Granta.

Ryan, B. and N. C. Goss (1943). "The Diffusion of Hybrid Seed Corn in Two Iowa Communities." Rural Sociology 8: 15-24.

Sadik, J. (2008). "Technology adoption, convergence, and divergence." European Economic Review 52(2): 338-355.

Sandman, J. (2008). "Transaction Monitoring as the Last Line of AML Defense." Securities Industry News 20(26): 10-10.

Sauer, C. and C. Lau (1997). "Trying to adopt systems development methodologies; a case-based exploration of business users' interests." Information Systems Journal 7(4): 255-275.

Saunders, M. N. K., A. Thornhill, et al. (2007). Research Methods for Business Students. London, Prentice-Hall.

Schneider, F. (2005). "Shadow economies around the world: what do we really know?" European Journal of Political Economy 21(3): 598-642.

Schroeder, R. G. (1989). The Development of Innovation Ideas. Research on the Management of Innovation: The Minnesota Studies. A. H. Van de Ven, H. A. Angle and M. S. Poole. New York, Ballinger/Harper & Row.

Schumpeter, J. A. (1934). The Theory of Economic Development. Cambridge, Harvard University Press.

Schwartzau, W. (1994). Information Warfare: Chaos on the Information Highway. New York, Thunder's Mouth Press.

Siau, K. and Y. Wang (2007). "Cognitive evaluation of information modeling methods." Information and Software Technology 49(5): 455-474.

Silverman, D. (1993). Interpreting Qualitative Data: Strategies for analysing talk, text, and interaction. London, Sage

Slappendel, C. (1996). "Perspectives on Innovation in Organizations." Organizational Studies 17(1): 107-129.

Sloan, J. F. (2000). FinCEN Advisory: Transactions Involving the Cayman Islands. F. C. E. Network. Washington, DC, U.S. Dept. of the Treasury.

Smith, C. W. (1983). "A Case Study of Structuration: The Pure-Bred Beef Business." Journal for the Theory of Social Behaviour(13): 3-18.

SOCA (2006). Review of the Suspicious Activity Reports Regime. S. S. Lander. London, SOCA (Serious Organised Crime Agency: 56.

Sorensen, C. and T. Cornford (2003a). Situating Software. Information Systems as a Social Study. C. Avgerou, C. Ciborra, E. Whitley and J. Libenau. Oxford, Oxford University Press.

Spalek, B. (2001). "Regulation, White-Collar Crime and the Bank of Credit and Commerce International." The Howard Journal 40(2): 166-179.

Spence, J. W. and R. J. Tsai (1997). "On human cognition and the design of information systems." Information & Management 32(2): 65-73.

Spybey, T. (1984). "Traditional and Professional Frames of Meaning in Management." Sociology 18(4): 550-562.

Stamper, R., K. Liu, et al. (2000). "Understanding the roles of signs and norms in organizations - a semiotic approach to information systems design." Behaviour and Information Technology 19: 15-27.

Stana, R. M. (2006). "International Financial Crime: Treasury's Roles and Responsibilities Relating to Selected Provisions of the USA PATRIOT Act: GAO-06-483." GAO Reports: 1.

Star, S. L. (2002). "Got Infrastructure? How Standards, Categories and Other Aspects of Infrastructure Influence Communication." 1st. Retrieved 2002, 2002, from www.is.lse.ac.uk.

Steckler, A., R. M. Goodman, et al. (1992). "Measuring the Diffusion of Innovative Health Promotion Programs." American Journal of Health Promotion 6(3): 214-224.

Stewart, D. W. and M. A. Kamins (1993). Secondary research: information sources. Newbury Park, Sage.

Stokes, R. and A. Arora (2004). "The Duty to Report Under the Money Laundering Legislation within the United Kingdom." Journal of Business Law 332: 1-14.

Subramanian, A. and S. Nilakanta (1996). "Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance." Omega 24(6): 631-647.

Suchman, L. (1987). Plans and Situated Actions: The Problems of Human-Machine Communication. Cambridge, Cambridge University Press.

Suchman, L. A. (1993). Do Categories Have Politics? The language/action perspective reconsidered. Third Conference on Computer-Supported Cooperative Work - ECSCW '93, Milan, Italy, Kluwer Academic Publishers.

Swan, J. A., H. Scarbrough, et al. (1999). Knowledge Management—the next fad to forget people? . Seventh European Conference on Information Systems (ECIS) R. Galliers. Copenhagen.

Swanson, E. B. (1994). "Information Systems Innovation among Organizations." Management Science 40(9): 1069-1092.

Tashakkori, A. and C. Teddlie (1998). Mixed Methodology: Combining Qualitative and Quantitative Approaches. London, Sage Publications.

Telegraph, D. (2008, 8:35PM BST 12 Oct 2008). "UK freezes £4bn of Icelandic assets " Retrieved September 8, 2009, from <http://www.telegraph.co.uk/finance/businesslatestnews/3185190/UK-freezes-4bn-of-Icelandic-assets.html>.

Tetan, H. (1995). Offender Profiling. The Encyclopedia of Police Science. W. Bailey. New York, Garland.

Thompson, V. A. (1965). "Bureaucracy and Innovation." Administrative Sciences Quarterly 10: 1-20.

Tidd, J., J. Bessant, et al. (2001). Managing Innovation: Integrating Technological, Market and Organizational Change. Chichester, John Wiley & Sons.

Time (1979). Passing the Hat for the Provos. Time. New York, Time, Inc.

Tornatzky, L. G. and K. J. Klein (1982). "Innovation Characteristics and Innovation Adoption-Implementation: A Meta-analysis of findings." IEEE Transactions on Engineering Management EM-29(February 1982): 28-45.

Trauth, E. M. and L. M. Jessup (2000). "Understanding Computer-Mediated Discussions: Positivist and Interpretive Analyses of Group Support System Use." MIS Quarterly 24(1): 43-79.

Tucker, C. (2008). "Identifying Formal and Informal Influence in Technology Adoption with Network Externalities." Management Science 54(12): 2024-2038.

Tushman, M. L. (1977). "Special Boundary Roles in the Innovation Process." Administrative Science Quarterly 22(4): 587-605.

Tushman, M. L. and T. J. Scanlan (1981). "Boundary Spanning Individuals: Their Role in Information Transfer and their Antecedents." Academy of Management Journal 24(2): 289-305.

Tyre, M. J. and W. J. Orlikowski (1994). "Windows of Opportunity: Temporal Patterns of Technological Adaptation in Organizations." Organization Science 5(1): 98-118.

UN (1995). UN General Assembly Declaration on Measures to Eliminate International Terrorism. New York, United Nations: 6.

Unger, C. (2005). House of Bush, House of Saud: The secret relationship between the world's two most powerful dynasties. London, Gibson Square.

Utterback, J. M. (1996). Mastering the Dynamics of Innovation. Cambridge, Harvard University Press.

Van de Ven, A. H. (1983). "Review: In Search of Excellence." Administrative Science Quarterly 28(4): 621-624.

Van de Ven, A. H. (1986). "Central Problems in the Management of Innovation." Management Science 32(5): 590-607.

Van de Ven, A. H. and M. S. Poole (1990). "Methods for Studying Innovation Development in the Minnesota Innovation Research Program." Organization Science 1(3): 313-335.

Van de Ven, A. H. and E. M. Rogers (1988). "Innovations and Organizations: Critical Perspectives." Communications Research 15(5): 632-651.

Vavpotic, D. and M. Bajec (2009). "An approach for concurrent evaluation of technical and social aspects of software development methodologies." Information and Software Technology 51(2): 528-545.

Vlcek, W. (2008). "A Leviathan Rejuvenated: Surveillance, Money Laundering, and the War on Terror." International Journal of Politics Culture and Society 00020(00001): 21-41.

Vogel, D. R. and J. C. Wetherbe (1984). Profile of MIS Research: Methodology and Journal Preference. MISRC Working Paper. Minneapolis, University of Minnesota Graduate Business School.

Walker, C. (2000). "Briefing on the terrorism act 2000." Terrorism and Political Violence 12(2): 1 - 36.

Walker, J. (2007). Measuring Global Money Laundering. Tackling Money Laundering. University of Utrecht, Utrecht, The Netherlands, Tjalling C. Koopmans Institute: 4.

Walsh, S. T. and J. D. Linton (2000). "Infrastructure for Emergent Industries Based on Discontinuous Innovations." Engineering Management Journal 12(2): 23-31.

Walsham, G. (1993). Interpreting Information Systems in Organizations. Chichester, Wiley.

Walsham, G. (1995). "Interpretative Case Studies in IS Research: Nature and Method." European Journal of Information Systems 4(2): 74-81.

Walsham, G. (2002). Interpretive Case Studies in IS Research: Nature and Method. Qualitative Research in Information Systems. M. D. Meyerson and D. Avison. London, Sage: 101-113.

Walsham, G. (2006). "Doing interpretive research." European Journal of Information Systems 15(3): 320-330.

Wasel, J. (2009). "Web search on "profiling"." Retrieved August 10, 2009, from http://www.google.com/search?sourceid=navclient&ie=UTF-8&rlz=1T4GGGL_enUS340US341&q=profiling.

Waterhouse, P. (1991). Report on Sandstorm SA Under the Section 41 of the Banking Act 1987 (Draft). London, Price Waterhouse Chartered Accountants: 48.

Weber, M. (1958). The Protestant Ethic and The Spirit of Capitalism. New York, Scribner's.

Weber, R. (1984). Toward a Theory of Artefacts: A Paradigmatic Base for Information Systems Research. Working Paper. Australia, University of Queensland.

Weber, R. (2004). "The Rhetoric of positivism versus interpretivism: a personal view." MIS Quarterly 28(1): iii-xiii.

Weick, K. (1979). The Social Psychology of Organising. Reading, Addison-Wesley.

Weick, K. (1984). Theoretical Assumptions and Research Methodology Selection. The Information Systems Research Challenge. F. W. McFarlan. Boston, Harvard Business School Press.

Welling, S. N. (1989). "Smurfs, Money Laundering, and the Federal Criminal Law: The Crime of Structuring Transactions." Florida Law Review 41: 288-344.

Wessel, J. (2006). "The Financial Action Task Force: A Study in Balancing Sovereignty with Equality in Global Administrative Law." Widener Law Review 13(169): 169-198.

Whipp, R. and P. Clark (1986). Innovation and the auto industry: Product, process and work organization. London, Francis Pinter.

Willcock, J. (1993) Judge backs SFO on Imam charges: Former BCCI executive will face trial. The Independent Volume, 1 DOI:

Willmott, H. (1981). "The Structuring of Organisational Structures: A Note." Administrative Sciences Quarterly 26(470-474).

Wilson, A. J. (1995). The Congressional Friends of Ireland and the Anglo-Irish Agreement, 1981-1985. Irish American and the Ulster Conflict 1968-1995. Belfast, Blackstaff Press: 322.

Wilson, C. E. J. and K. B. Rattray (2007). "The Caribbean Financial Action Task Force: its mission, operations and future prospects." Journal of Financial Crime 14(3): 227-249.

Wolff, J. G. (2007). "Towards an intelligent database system founded on the SP theory of computing and cognition." Data & Knowledge Engineering 60(3): 596-624.

Wright, L. (2006). The Looming Tower: al-Qaeda's Road to 9/11. London, Allen-Lane.

Wu, J.-H. and Y.-M. Wang (2006). "Measuring KMS success: A respecification of the DeLone and McLean's model." Information & Management 43(6): 728-739.

Yang, K.-W. and S.-Y. Huh (2008). "Automatic expert identification using a text categorization technique in knowledge management systems." Expert systems with applications 34(2): 1445-1455.

Yin, R. K. (2003). Case study research: design and method. London, Sage.

Yuchtman, E. and S. E. Seashore (1967). "A Systems Resource Approach to Organisational Effectiveness." American Sociological Review 32: 891-903.

Zagaris, B. (2007). "Problems Applying Traditional Anti-money Laundering Procedures to Non-financial Transactions, "Parallel Banking Systems," and Islamic Financial Systems." Journal of Money Laundering Control 10(2): 157-169.

Zhang, M., J. J. Salerno, et al. (2003). Applying Data Mining in Investigating Money Laundering Crimes. Proceedings of the ninth ACM SIGKDD international conference on Knowledge discovery and data mining Washington D.C., ACM.

Zuboff, S. (1988). In the Age of the Smart Machine. New York, Basic Books.

Appendix

8.1 Examples of US CTR and SAR

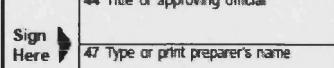
FinCEN Form 104 <small>(Formerly Form 4789) (Eff. December 2003)</small> Department of the Treasury FinCEN	Currency Transaction Report <small>► Previous editions will not be accepted after August 31, 2004. ► Please type or print. (Complete all parts that apply—See Instructions)</small>			 CMB No. 1506-0004
1 Check all box(es) that apply: <input type="checkbox"/> a Amends prior report <input type="checkbox"/> b <input type="checkbox"/> Multiple persons <input type="checkbox"/> c <input type="checkbox"/> Multiple transactions				
Part I Person(s) Involved in Transaction(s) Section A—Person(s) on Whose Behalf Transaction(s) Is Conducted				
2 Individual's last name or entity's name		3 First name	4 Middle initial	
5 Doing business as (DBA)		6 SSN or EIN		
7 Address (number, street, and apt. or suite no.)		8 Date of birth MM / DD / YYYY		
9 City	10 State	11 ZIP code	12 Country code (If not U.S.)	13 Occupation, profession, or business
14 If an individual, describe method used to verify identity: <input type="checkbox"/> a Driver's license/State I.D. <input type="checkbox"/> b <input type="checkbox"/> Passport <input type="checkbox"/> c <input type="checkbox"/> Alien registration <input type="checkbox"/> d Other _____ Issued by _____ f Number: _____				
Section B—Individual(s) Conducting Transaction(s) (if other than above). <small>If Section B is left blank or incomplete, check the box(es) below to indicate the reason(s)</small>				
<input type="checkbox"/> a Armed Car Service <input type="checkbox"/> b <input type="checkbox"/> Mail Deposit or Shipment <input type="checkbox"/> c <input type="checkbox"/> Night Deposit or Automated Teller Machine		<input type="checkbox"/> d <input type="checkbox"/> Multiple Transactions <input type="checkbox"/> e <input type="checkbox"/> Conducted On Own Behalf		
15 Individual's last name		16 First name	17 Middle initial	
18 Address (number, street, and apt. or suite no.)		19 SSN		
20 City	21 State	22 ZIP code	23 Country code (If not U.S.)	24 Date of birth MM / DD / YYYY
25 If an individual, describe method used to verify identity: <input type="checkbox"/> a Driver's license/State I.D. <input type="checkbox"/> b <input type="checkbox"/> Passport <input type="checkbox"/> c <input type="checkbox"/> Alien registration <input type="checkbox"/> d Other _____ Issued by _____ f Number: _____				
Part II Amount and Type of Transaction(s). Check all boxes that apply.				
26 Total cash in \$ _____ .00		27 Total cash out \$ _____ .00	28 Date of transaction MM / DD / YYYY	
26a Foreign cash in \$ _____ .00 <small>(See instructions, page 4)</small>		27a Foreign cash out \$ _____ .00 <small>(See instructions, page 4)</small>		
29 <input type="checkbox"/> Foreign Country _____		30 <input type="checkbox"/> Wire Transfer(s)	31 <input type="checkbox"/> Negotiable Instrument(s) Purchased	
32 <input type="checkbox"/> Negotiable Instrument(s) Cashed		33 <input type="checkbox"/> Currency Exchange(s)	34 <input type="checkbox"/> Deposit(s)/Withdrawal(s)	
35 <input type="checkbox"/> Account Number(s) Affected (If any): _____ _____ _____		36 <input type="checkbox"/> Other (Specify): _____ _____ _____		
Part III Financial Institution Where Transaction(s) Takes Place				
37 Name of financial institution			Enter Reg. No. of BSA Examiner's code number <small>(See instructions, page 4)</small>	
38 Address (number, street, and apt. or suite no.)			39 EIN or SSN	
40 City		41 State	42 ZIP code	43 Routing (MICR) number
Sign Here 		44 Title of approving official		45 Signature of approving official
				46 Date of signature MM / DD / YYYY
		47 Type or print preparer's name		48 Type or print name of person to contact
				49 Telephone number (()) - () ()
<small>► For Paperwork Reduction Act Notice, see page 4.</small> <small>Call No. 37563N</small> <small>FinCEN Form 104 (Formerly Form 4789) (Rev. 08-03)</small>				

Exhibit 8.1.1 - FinCEN Currency Transaction Report (CTR)

Suspicious Activity Report		1	
July 2003 Previous editions will not be accepted after December 31, 2003			
ALWAYS COMPLETE ENTIRE REPORT (see Instructions)			
1 Check box below only if correcting a prior report. <input type="checkbox"/> Corrects Prior Report (see Instruction #3 under "How to Make a Report")			
Part I Reporting Financial Institution Information			
2 Name of Financial Institution		3 EIN 	
4 Address of Financial Institution		5 Primary Federal Regulator a <input type="checkbox"/> Federal Reserve d <input type="checkbox"/> OCC b <input type="checkbox"/> FDIC e <input type="checkbox"/> OTS c <input type="checkbox"/> NCUA	
6 City	7 State	8 Zip Code -	
9 Address of Branch Office(s) where activity occurred		<input type="checkbox"/> Multiple Branches (Include information in narrative, Part V)	
10 City	11 State	12 Zip Code -	
14 Account number(s) affected, if any		13 If institution closed, date closed MM / DD / YYYY	
a _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	Closed? c _____ <input type="checkbox"/> Yes <input type="checkbox"/> No	
b _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	d _____ <input type="checkbox"/> Yes <input type="checkbox"/> No	
Part II Suspect Information <input type="checkbox"/> Suspect Information Unavailable			
15 Last Name or Name of Entity		16 First Name	17 Middle
18 Address		19 SSN, EIN or TIN 	
20 City	21 State	22 Zip Code -	23 Country (Enter 2 digit code)
24 Phone Number - Residence (Include area code) ()		25 Phone Number - Work (Include area code) ()	
26 Occupation/Type of Business		27 Date of Birth MM / DD / YYYY	28 Admission/Confession? a <input type="checkbox"/> Yes b <input type="checkbox"/> No
29 Forms of Identification for Suspect: a <input type="checkbox"/> Driver's License/State ID b <input type="checkbox"/> Passport c <input type="checkbox"/> Alien Registration d <input type="checkbox"/> Other _____ Number _____ Issuing Authority _____			
30 Relationship to Financial Institution: a <input type="checkbox"/> Accountant d <input type="checkbox"/> Attorney g <input type="checkbox"/> Customer j <input type="checkbox"/> Officer b <input type="checkbox"/> Agent e <input type="checkbox"/> Borrower h <input type="checkbox"/> Director k <input type="checkbox"/> Shareholder c <input type="checkbox"/> Appraiser f <input type="checkbox"/> Broker i <input type="checkbox"/> Employee l <input type="checkbox"/> Other _____			
31 Is the relationship an insider relationship? If Yes specify: c <input type="checkbox"/> Still employed at financial institution e <input type="checkbox"/> Terminated d <input type="checkbox"/> Suspended f <input type="checkbox"/> Resigned		32 Date of Suspension, Termination, Resignation MM / DD / YYYY	

IRS Cat. No. 22285L

Exhibit 8.1.2 – FinCEN Suspicious Activity Report (SAR)

8.2 UK Financial Services Authority SAR

Financial Services Authority

Suspicious Transaction Reporting Form Description of the transaction(s)

Please include details of the financial instrument(s), including the ISIN code of the instrument; the market(s) concerned; the original order's entry date/time, price and size; the times and sizes of the transaction(s); the type and characteristics of the order, etc

Reasons for suspecting that the transaction(s) might constitute insider dealing/market manipulation

Identities of persons carrying out transaction(s) Names, address, telephone number, date of birth, account number, client identification code used by the firm, etc

Identities of any other persons known to be involved in the transaction(s) Names, address, telephone number, location, date of birth, relation to person carrying out transaction; position held, role played, etc

Capacity in which the person performing the transaction(s) acts e.g. broker, underwriter, agent

Further information which may be of significance (please list any accompanying material you are supplying)

Details of the person making notification

Name of person, name of firm, position held within firm, contact details etc

Signed (Person making notification)

Dated (Date of notification)

8.3 BCCI Case Study

The inspiration of an Indian-born Pakistani banker, 50-year old Agha Hasan Abedi, BCCI was founded in 1972, and was originally capitalized at \$2.5 million. From day one, BCCI engaged in obfuscation and dissimulation. Records show that, when BCCI was registered in Luxembourg in 1972, an obscure solicitor from Bromley, Geoffrey Robert Edward Wallis, was its largest shareholder, holding 17,499 of the original 50,000 shares (Lascelles, Donkin et al. 1991). Abedi and BCCI were backed by a consortium that included the ruling head of Abu Dhabi, Sheikh Zayed Bin Sultan Al-Nahayan, the Bank of America, and members of the Saudi Royal family. Writing in *The BCCI Affair: A Report to the Committee on Foreign Relations United States Senate*, ("The Kerry Report"), the staff of Sens. Kerry and Brown identified 5 critical considerations to the creation of BCCI:

"Abedi needed five things to create BCCI. First, a bank secrecy and confidentiality haven, which he found first in Luxembourg, and then in Grand Caymans. Second, a source of capital, \$2.5 million, which Abedi ultimately obtained from Bank of America, supplemented by another \$500,000 from Sheikh Zayed of Abu Dhabi. Third, a source of initial assets, \$100 million, of which at least half were provided as deposits by Sheikh Zayed. Fourth, a group of like-minded Pakistanis to operate the bank. These were now widely available as a result of Bhutto's nationalization of their banks. Lastly, credibility in the international community, through a relationship with an established Western financial institution which would provide prestige to BCCI, but not interfere with its unique approach to banking. This too was provided by Bank of America during BCCI's formative years." (See testimony of Rahman, S. Hrg. 102-350, Pt. 1, pp. 489-491 of *Kerry BCCI report*; *Financial Times*, May 17, 1978, "The man who adds mysticism to banking," S. Hrg. 102-350, Pt. 3, pp. 303-304; "The mysteries behind Abedi's bank, *Euromoney*, July 1978)

The most critical of these five elements was the relationship between BCCI and Abu Dhabi, as the Kerry Report States:

"It is absolutely clear from BCCI documents that Abedi's relationship with the Sheikh of Abu Dhabi and the Al Nahayan family was the foundation of the establishment of the bank without which BCCI never could have come into existence. Throughout the first critical decade of BCCI's eighteen year existence, as much as 50% of BCCI's overall assets were from Abu Dhabi and the Al Nahayan family, who were earning about \$750 million a year in oil revenues in the early 1970's, an amount that rose to nearly \$10 billion a year by the end of the decade. Until the formation of a separate

affiliate, the Bank of Credit and Commerce Emirates (BCCE), BCCI functioned as the official bank for the Gulf emirates, and handled a substantial portion of Abu Dhabi's oil revenues. And yet from the beginning, there was an oddity about this central relationship: at no time while Abedi was in charge of BCCI did Abu Dhabi hold more than a small share of BCCI's recorded shares. Abu Dhabi appears not to have capitalized BCCI, but instead to have insisted on guaranteed rates of return for the use of its money" (Kerry and Brown 1992).

Despite Abedi's stated belief to abide by Islamic principles in all his BCCI endeavours, what emerges from the statement in the previous paragraph, is the fact that BCCI was founded on a "promise to pay," based on "Ponzi"-like rates of return, rather than having been properly capitalized. Indeed, by the end of the 1970s, BCCI was insolvent and did in fact resemble a "classic" Ponzi scheme, in that BCCI's managers were constantly engaged in moving money from one vehicle to another, hiding the bank's losses through a complex system of holding companies, "financial services" companies, and other paper entities. In fact, later investigations would determine that BCCI was never liquid over its entire existence (Passas 1993; Passas 1996; Passas and Groskin 2001; Spalek 2001; Hemraj 2005). This monumental "shell game" aside, BCCI, throughout its entire existence, served primarily as nothing more than a source for "no questions asked" loans with little or no collateral in the traditional sense, except for, in many instances, the borrower's notoriety, governmental affiliation, or ability to ensure BCCI's high profile as a guarantee. Abedi was star-struck and made it bank practice to collect marquee depositors, regardless of their credit worthiness or questionable affiliations.

Indeed, as the bank's situation became increasingly tenuous, the seedier its cash sources and account holders became, to the point where in some circles BCCI was laughingly referred to as the "Bank of Cocaine and Criminals International" (Kollewe 2005). Furthermore, adding to the bank's outsider status, BCCI had no real "headquarters," only branches, so there was no single national regulator responsible for its oversight. BCCI became the lender of choice to the Third World because of such lax fiduciary practices, and

as a result, the majority of BCCI's money laundering and criminally fraudulent activity occurred within this remit, as the following testimony by a BCCI official during the Kerry investigation describes:

“...there were consistent themes in BCCI's activities in the Third World, in terms of the kinds of services that government officials would be looking for from BCCI. First, to the extent the official controlled a source of government funds, the official typically wanted to be compensated in connection with his decision on where to place the funds. The solution to this problem was simple enough -- BCCI would pay a "commission" to the official involved. Second, to the extent the official controlled transactions involving government funds, the official might well want to be compensated on a fee basis, transaction by transaction. BCCI developed a number of techniques in response to this requirement, which typically involved one form or another of skimming the government funds that moved through the transaction, again with the revenues deposited in a safe place outside the official's country. Third, to the extent the official was in a position to generate substantial resources of his own through non-BCCI corruption, he often would want a safe and confidential place to hide his money. Again, BCCI would comply. In each of these cases, BCCI would make use of applicable techniques for hiding and laundering cash: manager's ledgers or numbered accounts; phony loans to hide (and legitimize) real, but unclean deposits; circuitous routing of funds through bank secrecy havens like the Grand Caymans and Panama, and so on”(Kerry and Brown 1992).

Over the life of BCCI, Abedi's efforts mostly focused on the Third World; however, BCCI was essentially of European origin, in that it was originally chartered in Luxembourg, given the principality's strict banking secrecy laws. Abedi understood that to establish BCCI as a viable entity among leading international banks, he would have to somehow establish himself in the United Kingdom. Leveraging his knowledge of, and extensive contacts within, the Asian communities amongst the UK's larger metropolitan areas, Abedi established a string of BCCI branches, and soon was doing a brisk retail trade. In fact, this affinity for the Asian community, specifically with his fellow Muslims, was an underlying tenant in the founding of BCCI. In an interview with the Financial Times, dated November 11, 1991, Abedi states that BCCI was a reflection of his credo as a “supra-national” Muslim and that the bank would serve as “the best bridge to help the world of Islam, and the best way to fight the evil influence of the Zionists” (FT1991; Ehrenfeld 1994).

Given this statement, later revelations of BCCI's involvement with the first wave of Arab liberation movements, such as the Palestinian Liberation Organisation (PLO), Abu Nadal's Black September, and Fatah, (as well as funding their later moves into state-sponsored terror operations), should come as no surprise; they are emblematic of the systemic, quasi-criminal culture that pervaded within BCCI. Western intelligence agencies were complicit also, as both the Central Intelligence Agency (CIA), and the United Kingdom's Secret Intelligence Service (SIS) used BCCI resources to fund covert operations throughout the world. For instance, Lt. Col Oliver North ran his "Contras - Arms for Hostages," (later to be known as "Iran-gate"), operation with money "borrowed" from BCCI. The CIA, working covertly in Afghanistan, was buying arms with BCCI laundered funds to fight the Russians, and then used BCCI's Pakistani connections to purchase mundane items such as mules and logistics bases to distribute and store those arms. BCCI was very much a reflection of the dealmaker, "no price too high" mentality of Abedi (Lascelles, Donkin et al. 1991; Passas 1993; Passas 1996).

As Abedi sought legitimacy from the British banking establishment, the Bank of England initially viewed Abedi's efforts with indifference, the occasional regulatory "hand slap" aside. Such remonstrations normally occurred when grumbling within the City demanded "something" be done regarding BCCI's cavalier attitude to banking. Abedi was nothing if not persistent. Following his successful efforts at entrenching BCCI on the high street, Abedi then re-registered BCCI in the Caymans, and re-located his senior management to London in 1974, where for the next 15 years, the bank's internal structure, consisting of a number of subsidiaries beneath a Luxembourg holding company, would remain relatively uniform until the bank's demise in 1991 (Dale 1992; Robinson 2004). BCCI existed for 19 years. In those 19 years, Abedi fooled the world into thinking BCCI was the best capitalized, most politically connected, and perhaps most ironically of all, the most ethical bank in existence. He often stated that BCCI's "success" lay in its Islamic-based founding principles

of charity, social responsibility and non-usurious lending when servicing his Arab clientele. BCCI's phenomenal growth, and Abedi's ability to influence policy from Whitehall to Washington DC, through his unending networking, allowed him to quickly establish the legitimacy that regulators in the United States and United Kingdom would not bestow.

While the Bank of England tolerated BCCI, granting token allowances such as according BCCI "licensed deposit taker" status, rather than formal recognition as a bank under the Banking Act of 1979, American authorities offered no such accommodations. Furthermore, the Bank of England would prove alarmingly complacent in auditing its relationship with BCCI, setting an unwelcome precedent that would result in reputational harm for not only the Bank of England, but the entire City of London's financial establishment (Kerry and Brown 1992; Lohr 1992; Ehrenfeld 1994; Naylor 1994; Robinson 2004). Despite Bank of American having been an early partner in the formation of BCCI, holding a 30% founding share, New York regulators turned-down BCCI's attempts to purchase a US bank in 1976 due to BCCI's lack of a "lead" regulator. Undeterred, Abedi used his Washington DC connections to hire former President Jimmy Carter's tarnished White House budget director, Burt Lance, and through furtive means, acquired the National Bank of Georgia. Abedi went on to purchase two more banks through the same covert methods, but eventually was exposed by a Securities and Exchange Commission (SEC) investigation. The subsequent uproar and threats of criminal sanctions by the SEC forced Abedi to assuage SEC concerns through sheer force of will and chicanery. Financial General - one of his earlier bank purchases - which by this time had bought National Bank of Georgia, would be renamed First American, and "fully independent from BCCI" (Lascelles, Donkin et al. 1991; Lascelles, Donkin et al. 1991; Robinson 2004). Abedi duped the SEC, and First American remained firmly in BCCI hands.

In keeping with his obsession with face and pedigree, Abedi obtained the services of Clark Clifford, a former Secretary of Defence and eminent Washington DC attorney, to head

First American as chairman. Robert Altman, Clifford's law partner, was named President. The establishment of First American was a milestone for BCCI, in that it went some way towards providing a semblance of the legitimacy Abedi had long sought since BCCI's inception, and more importantly, provided access to Washington's elite that would help in furthering BCCI's influence. Meanwhile, in 1985, the story in the United Kingdom was not as promising. BCCI was forced to disclose to Bank of England officials a \$1.3 billion dollar loss in its Treasury Division. A bank's treasury is where the bank trades large amounts of money and currencies, with some dealing being undertaken on behalf of clients and comprises, to some extent, the heart of a bank's operation. Treasuries also speculate on the rise and fall of currency prices using their own money (Lascelles, Donkin et al. 1991).

BCCI's treasury embarked on a decided different approach, in that it used its client's funds without their understanding and proved incredibly incompetent in the process. As the size of the losses became untenable, Syed Raziuddin Ali Akbar, the head of BCCI's treasury operations, created a means to manipulate evidence of their spectacularly poor efforts. Losses were diverted to a split accounting entity within the treasury, christened "Number Two," which was off the books. As City bankers in London began circulating rumours regarding BCCI's solvency, the scale of BCCI's treasury losses were communicated to the Institut Monetaire Luxembourgeois (IML), the Luxembourg banking regulator who then requested an audit of the treasury. Price Waterhouse, (at that time the auditors of BCCI's Caymans-based operations), began their own investigation in January of 1986. Cover-up techniques such as using options contracts to roll losses from one year to the next were discovered. Price Waterhouse, having acknowledged what they perceived as incompetence, forced a write-down of \$225 million dollars on BCCI's profits for 1984 and 1985, unaware of the massive losses hidden in Number Two.

While the treasury was legally a part of BCCI (Overseas) Ltd., headquartered in the Caymans, the bank's majority shareholders in Abu Dubai demanded the treasury be relocated

there to ensure more adequate oversight (Lascelles, Donkin et al. 1991; Lascelles, Donkin et al. 1991). In 1986, the Bank of England, having finally grasped the scale of malignancy at the heart of BCCI, finally took concrete action, forming a College of Regulators to oversee the bank's affairs and provide a conduit to the Bank of England as to BCCI's commercial behaviour (Dale 1992). Aside from BCCI and Abedi's trials in the United Kingdom, Abedi's success in the United States was short lived as well: 1988 would prove to be the year in which BCCI began a rapid descent in both financial and reputational terms, on both sides of the Atlantic.

Never having known to turn away a depositor, BCCI was, by this time, awash in drug money from the Medellin cartel, sourced primarily through its Panamanian subsidiary. In addition to cartel holdings, Manuel Noriega held significant deposits with BCCI, as did the heads of other drug intermediaries, gun running syndicates, and various other Latin American criminal enterprises. Drug and smuggling holdings were augmented by the operational funds of Middle Eastern terrorist groups, Russian arms smugglers, and any other Organisation with large sums of money that needed legitimisation.

1986 saw the US begin an extensive criminal investigation into BCCI's laundering of Columbian drug profits, under Operation C-Chase ("C" for cash). From C-Chase-generated intelligence, U.S. authorities were, by this time, intensely interested in BCCI's Tampa, Florida operations, which proved to be the proverbial "tip of the iceberg" relative to BCCI's criminality (Lhor 1991). BCCI's operations were laundering cocaine profits in Miami, Columbia, (BCCI had five branches in Medellin alone), Panama, and in the Bahamas, a paper entity that didn't exist except as a "ghost" conduit for reporting purposes. BCCI's various Caribbean branches serviced any and all forms of the drugs trade, the Jamaican, and Bermudan marijuana markets in particular. Branches in the United Arab Emirates laundered heroin profits from Pakistan, Iran and Afghanistan, and BCCI's Hong Kong branch serviced the Laos-Burma-Thailand "golden triangle" heroin trade. While lucrative at first appearance,

cash was merely being shuttled from branch to branch to cover rapidly mounting losses. At one point Abedi was forced to steal \$150 million from the staff pension fund to cover holes in the balance sheet.

In 1989, C-Chase's discoveries were now turning into indictments, and as a result of ancillary information developed from C-Chase, Senator John Kerry began hearings, initially into BCCI's relationship with Manuel Noriega. Kerry, as head of the Senate's Narcotics, Terrorism and International Operations sub-committee, (under the supervision of the Senate Foreign Relations committee), had a particularly broad remit. In several days of testimony, it became quite clear to one of Kerry's staffers, Jack Blum, that BCCI might in fact be the largest example of money laundering to date, and that C-Chase investigators needed to dig deeper to establish a better understanding of the larger institutional problem of BCCI. Despite the hundreds of leads in their possession, all pointing back to BCCI, the C-Chase investigators told Blum they already had too much on their hands and could be of no further assistance (Lohr 1992; Robinson 2004).

Undaunted, Blum presented his case to the IRS and Justice department, who, like the C-Chase team, were unreceptive. Finally, Blum approached Robert Morgenthau, the New York City District Attorney, who was very interested, so interested that he immediately assigned his assistant, John Moscow, to the case. First American, now First American Bankshares, (Abedi's flagship American operation), had offices in New York, so Morgenthau had no problems with jurisdiction. Blum began methodically building his case against Abedi, BCCI, First American, Clifford and Altman. When Blum established the extent of BCCI's operations in the United Kingdom, he took his information to the Bank of England and was immediately stymied. Around the same time as Blum's inquiries, the Bank of England, through the UK's secret services, had been made aware that Black September's head, Abu Nidal, had a relationship with BCCI; this relationship encompassed 42 accounts throughout the bank's London branches. Further disclosures soon followed: both the City of London

fraud squad and an un-named Middle Eastern accountant delivered reports documenting huge frauds within BCCI. 6 months later, in April of 1990, perhaps the most serious accusation to date surfaced, that BCCI had accumulated roughly \$600 million in unrecorded deposits; Bank of England principals later argued that this report, once verified, contained no evidence of systemic fraud (Dale 1992; Robinson 2004). At this juncture, BCCI as a bank and commercial entity had roughly 1 year left in its existence.

The final chapter of the BCCI saga contains a final irony. For all their regulatory bluster and despite the fact they grasped the extent of BCCI's criminality early-on, the outcome of American efforts were in some ways anti-climatic. On the positive side, the BCCI-Tampa/C-Chase investigation resulted in the largest US money laundering conviction to date, with the conviction of five senior BCCI managers, and a fine of \$14 million assessed against BCCI. On the negative side, Morgenthau's case, which looked to have such promise at the start, was a washout. Altman was acquitted on all counts, and Clifford's trial was postponed for health reasons and he later died without ever seeing a courtroom. Morgenthau was left with nothing for the \$20 million in trial costs and his reputation was tarnished for several years after the event, the result of charges of prosecutorial misconduct, excessive offers of immunity to BCCI witnesses and lastly, (to the chagrin of the UK's Serious Fraud Office (SFO)), an offer to fend off prosecution by the SFO of a key BCCI co-conspirator, Imam Imram.

Imram had served as the chief assistant to Aga Hasan Abedi and Swaleh Naqvi, BCCI's president. Imram was adamant that he had immunity from the SFO, even as he faced a pre-trial hearing at the Old Bailey on December 16, 1993. Such was the contentious nature of the relationship between the New York District Attorney's office and the SFO, that John Moscow was summoned to testify on behalf of Mr. Imram. As reported by The Independent on the 17th of December, 1993,

“...the case caused friction with the US investigators. Last month John Moscow, the New York assistant district attorney who is jointly leading the BCCI inquiry, spoke in court on behalf of Mr. Imam's application. Mr. Moscow said that had they known that the SFO would prosecute Mr. Imam, they would never have shared confidential Grand Jury evidence with the SFO. After the hearing Christopher Dickson, the SFO case controller for BCCI, admitted there had been a 'glitch' in the SFO's relationship with the US BCCI investigators over the prosecution of Mr. Imam” (Willcock 1993).

Conversely, despite a record of indifference, incompetence and sporadic action, it was the Bank of England that finally shut down BCCI. In December of 1990, a BCCI executive confirmed to Price Waterhouse the existence of the unrecorded deposits rumoured to exist back in April of that year. In the first week of January, Price Waterhouse informed the Bank of England of the unrecorded deposits, and Abu Dubai agreed to make good any shortfall that could arise as a result of the situation. Price Waterhouse further informed the Bank of England that a small percentage of “irregular” transactions may have been processed by BCCI's UK branches, and agreed to investigate further and report back its findings. On March 4th, 1991, the Bank of England commissioned Price Waterhouse to investigate BCCI under Section 41 of the Banking Act. Section 41 of the Act allows for independent examiners

“...if it appears to the Bank desirable to do so in the interests of depositors or potential depositors of an authorised institution the Bank may appoint one or more competent persons to investigate and report on: (a) the nature, conduct or state of the institution's business or any particular aspect of it; or (b) the ownership or control of the institution; and the Bank shall give written notice of any such appointment to the institution concerned” (HMSO 1987).

The Bank of England received Price Waterhouse's Section 41 report on June 24, 1991. The report, entitled the “Sandstorm Report,” after the use of “sandstorm” as a code word for BCCI, revealed “massive and widespread fraud” that went back a number of years. The fraud involved not only past but existing management as well, despite an earlier reorganisation taken by the Abu Dubai owners in October 1990. Further evidence of malfeasance was provided by 6,000 previously withheld files of Swaleh Naqvi, then BCCI's chief executive. This additional evidence was incorporated into Price Waterhouse's final draft Section 41 report, delivered on June 28th, 1991. Despite the report being in draft form, on

July 1st the Bank of England relayed its contents to Barbara Mills, the head of the Serious Fraud Office. On the 2nd of July, the College of Regulators met, and without informing Abu Dhabi began discussions as to how to wind up BCCI. A draft closure plan was delivered to the Governor of the Bank of England on July 4th, who then informed both the Prime Minister and the Chancellor of the Exchequer of the Bank of England's decision to close BCCI, which was then finalized on July 5th, the last day of BCCI's existence (Lascelles, Donkin et al. 1991; Waterhouse 1991; Dale 1992).

8.4 Legitimate and illegitimate Terrorist Fundraising in the UK – the PIRA and LTTE Case studies

The UK's legislative approach in the 1980's and early 1990's, reflected the general legal consensus that money laundering was primarily an adjunct crime to drug trafficking or other organised criminal conduct. However, incidents such as the bombing of Pan Am Flight 103 over Lockerbie, Scotland, on December 21st 1988, would highlight the ascendant threat of transnational terrorism. Terror attacks were no longer simply a localized response to a perceived injustice, but could now be the result of seemingly unrelated acts by nation-states against non-state actors or vice-versa. In the case of Lockerbie, Libyan agents had appeared to act at the behest of Iranian demands for a response to the accidental shooting-down of Iran Air Flight 655 by the USS Vincennes, in the Persian Gulf, on July 3rd of that year (Cox and Foster 1992; Rowan 1992).

The investigation into both the Lockerbie tragedy as well as the 1993 World Trade Centre bombing in New York City, (as well as other world-wide terror attacks during this timeframe), would expose flaws in the preconceived notions then in vogue as to the relationship between money laundering and terrorism. It was now clear that money laundering was no longer a benign component of criminal enterprise, but also a deliberate means of facilitating funding of terror operations and a means to hide ill-gotten gains. Perhaps no other relationship illustrates the dilemmas inherent in such a nexus quite as effectively as that of the Provisional IRA (PIRA) with its political wing, Sinn Fein.

8.4.1 - The Provisional Irish Republican Army

UK law had viewed terrorism, (and the use of money laundering in supporting terrorism), largely through the lens of its experiences in Northern Ireland. As David Bonner stated in 1992, "the principal terrorist threat which has shaped the United Kingdom response since 1968 has been terrorism connected with Northern Ireland" (Bonner 1992; Bamford

2004). Subsequently, legal instruments such as the Criminal Justice Act (CJA) and the Money Laundering Regulations (MLRs) make mention of terrorism, primarily in regards to Northern Ireland and by extension, to related acts of terrorism on the European mainland (Bosworth-Davies and Saltmarsh 1994; Walker 2000). The terrorist threat to the UK emanated from a variety of paramilitary groups in Northern Ireland, the majority of which were Republican in origin and who sought a united Ireland devoid of British governance. Loyalist representation fell to Organisations such as the Ulster Defence Association (UDA) and the Ulster Volunteer Force (UVF), with the UDA being by far the largest. Loyalist efforts at destabilizing Republican unification efforts were hampered by corruption and extortion for personal gain at the leadership level, and moreover, loyalist paramilitaries rarely displayed the operational competency of their Republican counterparts. While Republicans would resort to criminality in advancing their political and paramilitary aims, loyalist groups were further crippled by a reliance on criminality and violence for its own sake and lastly, lacked the sophisticated public relations capabilities Republicans would evolve over the course of the “The Troubles” (Bruce 1992; Bruce 2001).

Of the Republican groups, the Provisional Irish Republican Army (PIRA) were the most well-organised and effective, utilising a disciplined command structure, sophisticated operational methods, and a variety of fund raising means to further their operations. The PIRA’s “cell”-type unit structure was organised along military lines, with “active service units (ASUs)” as the primary structural element which varied in size, depending on operational requirements. Sympathetic “civilians” were used as an advanced warning system to warn of British Army patrols and to help cache weapons, as well as in gathering intelligence for ascertaining British Army intentions, and lastly, to foil the Army’s use of countermeasures against PIRA ambushes and bomb attacks. In addition to the operational cells, a complete command structure comprised a total of ten sections or departments, such as quartermaster, security, education, publicity and finance. For instance, the “Foreign

Operations” section was responsible for operations outside of the Irish Republic, primarily in England, as well as formulating alliances with other “liberation” movements (Horgan and Taylor 1999).

These exchanges of “operational expertise” included trading information on bomb making and weapons acquisition, as well as planning joint operations of both a criminal and “political” nature. For instance, state actors such as the Libyans, were enlisted to acquire weaponry above and beyond that of simple small arms such as machine guns, plastic explosives and rocket launchers. As relations among transnational terrorist groups solidified, these joint operations would also entail “outsourced” operations, such as those undertaken to train the guerrillas of *Fuerzas Armadas Revolucionarias de Colombia* (FARC) in bomb-making operations, during one such exchange in Columbia in 1999-2001 (Robinson 1998; Clarke and Lee 2008). Critical to the ongoing support of PIRA operations were the extensive activities of the PIRA Finance Department, which, since its inception in the late 1970s, was demonstrating increased sophistication in both the methods and sources used to create diverse funding channels in support of PIRA operations. These methods employed a variety of criminal means, such as armed robberies from banks, post offices, and building societies, as well as cigarette and fuel smuggling, fraud, extortion, and the marketing of counterfeit goods such as compact disks (CDs), video tapes, and designer clothing. The proceeds of this criminality were laundered through a variety of legitimate fronts such as removal companies, guest houses, and pubs. It was estimated, at the time of the first “cease-fire” agreement in 1994, that the PIRA was enjoying an annual income of IR£10 million. (Horgan and Taylor 1997)

While these funding streams could be interrupted through traditional law enforcement methods, interrupting the flow of funds to the PIRA, diverted from legitimate Sinn Fein fund raising in Ireland, and from US-based NORAILD, (Irish Northern Aid, Inc.), proved more problematic. The efficacy of NORAILD’s fund raising in the United States was particularly

galling to authorities in the United Kingdom and Northern Ireland, as they were powerless to stop what they saw as blatant support for terrorism. Furthermore, American support for Republicanism extended into congressional and presidential circles, particularly as advocated by Senator Ted Kennedy and later, President Bill Clinton. Such was Kennedy's support for Republicanism that in 1981, he created, along with then-Speaker of the House Thomas "Tip" O'Neill, the "Congressional Friends of Ireland" (Wilson 1995; Carroll 2007).

As Anglo-Irish peace efforts intensified in the mid-1990s, President Clinton appeared to go out of his way to appease the IRA and its political wing, Sinn Fein, to encourage their further participation in the talks that preceded the eventual "Good Friday" agreement, signed May 22nd, 1998. Gerry Adams, the leader of Sinn Fein, while publicly renouncing violence, was known to still be active in IRA command circles. Clinton's hypocrisy, in granting Adams a White House audience, as well as allowing him to attend several NORAILD and Sinn Fein fund raisers held in New York City in 1994, starkly contrasted with his condemnation of several high-profile terrorist attacks during his first term. This included several statements expressing "revulsion" at fundamentalist Islamic terror, (a result of the 1993 World Trade Centre bombings) along with his words denouncing domestic right-wing terrorism, (whose adherents were responsible for the 1995 Oklahoma City Federal Building bombing). Conversely, and perhaps more hypocritical, was both Clinton's and Kennedy's silence in condemning PIRA's bombing of Canary Wharf in London on February 9th, 1996, in the mistaken belief that it would "alienate" Adams and others from continued participation in the "peace process" (McMenamin 1996).

Such selective condemnation was not unique to President Clinton, and would be a hallmark of American law enforcement and public policy relative to Irish nationalism, particularly when applied to the fundraising efforts of PIRA and other Republican Organisations. While NORAILD's website stated that "Irish Northern Aid is an American based membership organisation that supports through peaceful means, the establishment of a

democratic 32-county Ireland,” (Aid 2007; Melaugh 2009), they were not alone in raising awareness of and money for “victims” of The Troubles. Collection jars for a variety of Republican support Organisations could be found in just about any place where Irish “expats” congregated in major American cities. (Time 1979) Moreover, this fundraising was not as altruistic as NORAILD and other organisations would have the authorities believe.

Investigations by American customs and law enforcement bodies, dating back to the early 1970s, would implicate members of NORAILD in gunrunning as well as drugs trafficking in support of PIRA. These investigations would, over time, severely hamper Republican fundraising and weapons procurement, resulting in the need to seek arms from Europe and the Middle East, and re-emphasize fundraising through criminal means. Moreover, further pressure on NORAILD and other fundraising sources would increase, a result of American outrage over PIRA’s complicity in the Hyde Park and Brighton conference bombings on the UK mainland, (in 1982 and 1984 respectively), to the point where NORAILD’s efforts in the United States would dwindle to insignificance. NORAILD’s problems aside, the peace process provided Sinn Fein, in furthering its aims, with legitimacy as well as increased exposure outside of Ireland. It would suffer none of the perception problems of NORAILD, and its fundraising efforts would remain undiminished, given its enhanced status as a political party.

Subsequently, Sinn Fein would continue as a conduit for PIRA funds through the remainder of the decade. The Sinn Fein-PIRA relationship would serve as a financing and organisational model for other transnational terror, liberation and nationalist movements. It was becoming increasingly clear, that, while authorities could identify and eradicate one arm of the funding hydra, (even if an arm was “legitimate”), it was becoming increasingly difficult to establish just how many funding arms a proscribed Organisation could reconstitute. Moreover, when allied with a political party, as in the case of Sinn Fein and

PIRA, a terror Organisation could claim it was simply a legitimate part of the political process, and therefore, protected by law.

8.4.2 - The Liberation Tigers of Tamil Elam (LTTE)

The United Kingdom, particularly in the late 1980s through the 1990s, would witness a variety of terrorist groups and “liberation movements” exploit this political “legitimacy,” through organisational changes in their structure and public face. These groups would take up residency, primarily in the major conurbations, and normally within areas of specific ethnic Diasporas. For instance, the Liberation Tigers of Tamil Elam (LTTE), a group fighting to establish a separate Tamil homeland on the island of Sri Lanka, were actively fundraising among the UK’s Tamil population. The UK was one of 44 countries that LTTE is known to maintain a presence and given the extent of the Tamil community in the UK, LTTE considers the UK one of its “top-level contributing countries” (TLCs). LTTE coordinates fundraising through the local Tamil Co-ordinating Committee or TCC. These committees are organised along the lines of the department structure used by the PIRA, with a political unit, a finance unit and procurement unit, among other functions.

The TCCs utilised, among other methods, a process akin to “tithing.” Tithing involved the surrender of a mandatory amount of one’s wages, benefits – any type of income, the percentage of which usually was between 2 – 10%. While couched in mantle of charity or community support, tithing in essence was simply a highly effective form of extortion, as many of those targeted for fundraising were in the United Kingdom illegally and hesitant to engage the authorities as to their victimization. Moreover, LTTE fundraisers were usually ex-fighters or relatives of high-ranking LTTE cadre and given their extensive reach and status, would exploit an illegal’s fear of reprisal in the homeland as a further means of coercion. Rather than risk a direct link to LTTE’s leadership, the Tamil Youth Organisation (TYO) was created as an enforcement, collections, and operational arm, and is active in 9 countries,

especially in the United Kingdom. The TYO ran Tamil gangs that would undertake a variety of criminal activity, including drugs dealing and credit card fraud, and served as a means to inject violence into the Tamil community. Fundraising methods would evolve into legitimate enterprises, such as charities and language schools, as well as illegitimate property investment and the sale of counterfeit goods, whose profits would then be laundered through the creation or acquisition of legitimate businesses, repeating the cycle. LTTE was not alone in capitalizing on its fellow nationals. Other major Organisations, such as the Basque separatist group ETA, and Kurdish Workers Party (PKK), (fighting to legitimize a Kurdish homeland astride the border regions of Iraq, Iran, and Turkey), would also exploit their respective UK immigrant communities in a similar fashion to that of LTTE.

8.5 Funding 9/11: Saudi largesse, charity, *hawala* and IVTS

In the early 1990s, emboldened by their victory in Afghanistan, Islamic militants now turned their ire on the West, particularly the United States, whose support of Israel and presence in Saudi Arabia were an affront to Islam. The consensus among fundamentalists was that America should be punished for her actions, and in such a way that the supremacy of Islam over America and her Western allies would be never in doubt. While the United States may have indeed been guilty of a variety of cultural and political transgressions, a great irony of the situation was that the United States had supported the Afghan *mujahidin* (holy warrior(s)) in forcing the Soviet Union out of Afghanistan, and would now face the “blow back” of their success in training the Afghans. In funding *jihad* in Afghanistan, the *muj* were able to call on a variety of sources for cash and arms, and more often than not, arms and cash that were provided through the “generosity” of the American “people” in the guise of the Central Intelligence Agency (CIA), funded by dollars held by BCCI’s Pakistani representatives. However, while the CIA’s billions funded the majority of *muj* hardware and logistics, the greatest provider of resources in hard cash and “Afghan Arab” fighters was Saudi Arabia, and to a lesser extent, Pakistan (Lumpkin 2006).

The Saudis poured millions of dollars into funding *jihad*, not only in Afghanistan, but in other parts of the Middle East and Southwest Asia. Using both overt and covert means, their objectives were primarily those of protecting the faithful and spreading their particular Wahhabist form of Islamic fundamentalism (Cooley 2000; Bergen 2001; Unger 2005; Atwan 2006; Wright 2006). In what would be the pattern for years to come, the Saudis used a combination of *zakat*, and, after the closure of BCCI, the resources of the Islamic Bank for Development (IBD). Ancillary to their support of *jihad*, the Saudis believed in a form of “religious colonization and economic solidarity” in support of spreading their Wahhabist beliefs, paid for by Saudi oil. While the vastness of Saudi oil wealth is well known, what is more surprising is the amount generated by the House of Saud’s *zakat* obligation of two

percent. Given that the Saudi royal family has some 6,000 members, with a combined wealth of \$600 billion, Saudi-sponsored causes can be assured a *zakat* of \$12 million a year. The money is funnelled through two banks, the *Dar al-Islami* (DMI), and the *Dallah al-Baraka* (DAB), which have extensive networks throughout Africa, Asia, and the Middle East. Both banks sponsor schools, cultural and economic programs, along with helping spread Islamic fundamentalism and its credo of *Sharia* or Islamic law, all within the expanding Saudi sphere of influence (Napoleoni 2005). This background of Saudi religious imperialism set the stage for Saudi underwriting of both the *muj* in Afghanistan in the 1980s and the growing global reach of militant Islam in the 1990s.

In Afghanistan, the instigator of this effort was the scion of a well-respected and extremely wealthy Saudi family, Osama Bin Laden, who was also courted by the Americans; much like his Saudi sponsors, the Americans were impressed by his efforts against the Soviets in Afghanistan. The defeat and subsequent exit of the Russians had seen infighting and consolidation among the various *muj* factions, with a group known as the *Taliban* (or “students” in Pashto) eventually achieving political and institutional supremacy. The Taliban espoused a severe form of Islam that, in practice, closely resembled Bin Laden’s Wahhabist faith. His substantial personal resources aside, Bin Laden was able to fund not only his work in Afghanistan, but also the beginnings of his own fundamentalist, anti-Western Organisation, *al-Qaeda* (literally *the base*) through a network of Islamic charities that served to launder vast amounts of dollars and sterling in support of his cause (Bergen 2001; Ruthven 2002; Corbin 2003; Atwan 2006; Wright 2006; Burke 2007). In furthering *al-Qaeda* operations, Bin Laden had invested over \$50 million in a subsidiary of DMI in Sudan, the *al-Shamil* Islamic Bank. With his Saudi connection to both DAB and DMI and its Sudanese subsidiary, the *Tadamon* Islamic Bank, (the second largest bank in Saudi Arabia), and lastly, the *Faisal* Islamic Bank, (headed by Saudi King al-Saud’s son, and whose board of directors included several of Bin Laden’s extended family), Bin Laden was able to fund his operatives

throughout the world (Napoleoni 2005). While Bin Laden enjoyed the use of Saudi banks and other Islamic funding channels, he had put the Saudis on notice that he would not tolerate their relations with the West, vehemently denouncing continued American presence in the Kingdom. In 1999, a joint US-Saudi intelligence operation had discovered a \$3 million payment to Bin Laden by five top Saudi business men.

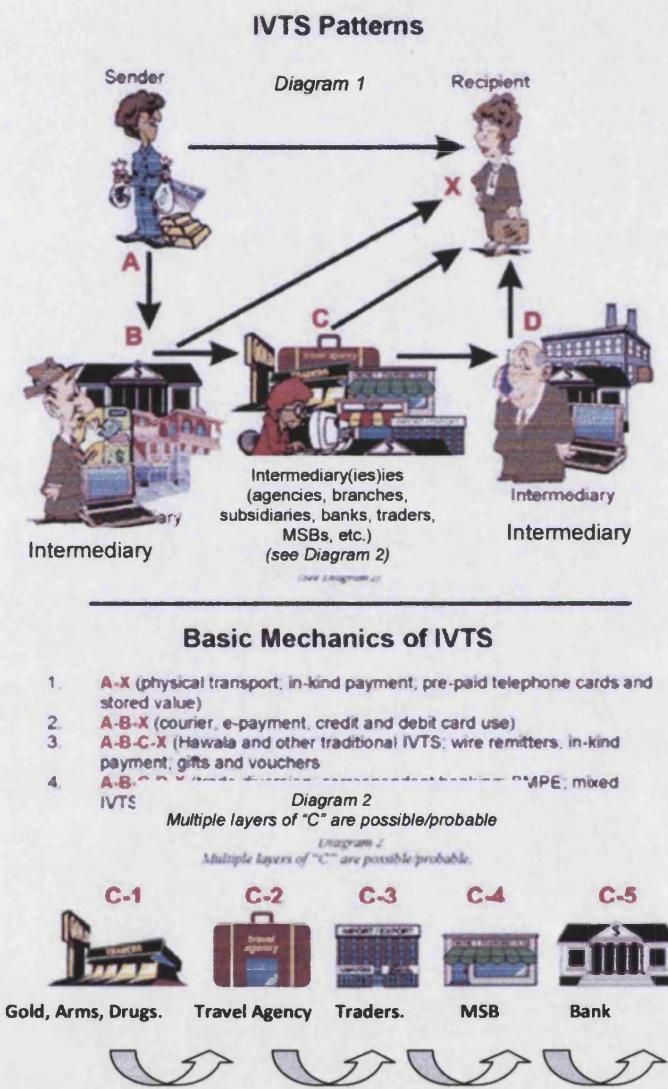


Figure 8.5.1 – Simplified Hawala – IVTS Flow (Passas 2003)

It was the US contention that the payment constituted “protection money” to prevent attacks against their interests in Saudi Arabia. While it was clear that some in Saudi society considered Bin Laden a threat, he would continue to enjoy the support, indeed the adoration

of the majority of Saudis. This would be reflected in the tacit support of the Kingdom's rulers, as well as the continued payment of *zakat* by business men and other strata of Saudi society in support of his organisation (Palast 2002; Napoleoni 2005). In distributing funds to his Organisation, Bin Laden used a variety of methods and conduits, such as Islamic financial institutions, numerous Islamic charities, and overt investment. A significant means of exchange among these resources was a cultural component of Islam, *hawala* banking. A *hawala* transaction or "informal value transfer" (system - IVTS) as it is now more commonly referred to, follows a simple pattern as illustrated in figure 8.5.1.

A simple *hawala* or IVT-like exchange comprises an originator, two trusted intermediaries and a recipient. For instance, should you desire to fund a bombing in Yemen, you would arrange a meeting with the local IVTS provider, who retains in Yemen, a percentage of the exchange differential between the official and the kerb price of your dollars or sterling. The provider then contacts, through the appropriate means, his/her counterpart, who then delivers your explosives. The accounts between the two IVT operators will be settled through compensatory payments (i.e. when someone from Yemen sends money to your country of residence or base of operations). Should there be an imbalance, for example one side incurs a greater expense than the other – for whatever reason – the difference is then remedied via bank draft, wire transfer, money order or hand-delivered currency. Settlement can also include legal or illegal trade of goods ranging from gold and precious stones to AK-47s, drugs, or trafficked humans (Passas 2003; Zagaris 2007).

While the above example represents a *hawala*-IVT transaction in a criminal context, *hawala*-IVT transactions provide a legitimate means of facilitating the flow of goods, capital and commerce throughout the world. Zagaris (2007), citing an "occasional paper" produced by the International Monetary Fund (IMF), provides a succinct summary of the benefits of *hawala*-IVT transactions (or informal funds transfer (IFT) in this case) in the developing world:

“In countries with limited financial capacity, IFT systems play a critical role. The initial growth of hawalas was primarily due to their facilitation of trade between distant regions at a time when conventional banking instruments were either weak or absent. Hawalas are characterized by speed, lower transactions costs, cultural convenience, versatility, and potential anonymity, contribute to their widespread legal and illegal use. (Qorchi, Maimbo et al. 2003) Executing hawala transfers between major international cities takes, on average, 6-12 hours. In general, transfers between countries where the recipient is located in a different time zone or where communications are less reliable require 24 hours. Because the system is based on trust, modern telecommunications systems are not a prerequisite. Historically, many transactions were done by word of mouth, and credit was based on personal note of hand, rather than on documents representing specific goods (Qorchi, Maimbo et al. 2003).

The direct cost of making funds transfers between major international centres averages approximately 2-5 percent, less than the costs of transfers through formal banking systems. The economy is due in part to hawala’s limited overheads and the virtual lack of regulation and taxation. Since, hawaladars can operate from their homes or little shops, or can be unobtrusively accommodated within existing businesses, they incur few, if any, additional operating costs. They often operate with little more than a table, phone, and fax machine, or, for the most sophisticated, an internet connection” (Qorchi, Maimbo et al. 2003)

The advantages the *hawala* system provides in secrecy, expediency, and local knowledge are self-evident, for an individual engaged in transnational terror operations such as Bin Laden. Given that billions of pounds are transferred this way every year, the challenges of following the money in such instances are daunting; for this reason alone, *hawala* and IVTS continue to be a preferred means of financing transnational terrorist operations, as well as laundering the profits earned exploiting the *crime-terror continuum* (Makarenko 2004; Oehme 2008). Bin Laden would employ Islamic financial resources, routed through an extensive *hawala* system to pursue an increasingly successful terror campaign against not only his Saudi “hosts,” but also the very heart of America’s financial and governing institutions. While a multitude of theories exist as to Bin Laden’s motivations for attacking the United States, it was his stated aim to re-create a modern version of the 15th century Islamic Caliphate that had, at one time, overseen the entirety of the modern Middle

East, and would be free of “infidel” Western influences; Wahhabist mores would govern the faithful, with *al-Qaeda*’s credos of *jihad* and *Sharia* the supreme manifestations of this aim.

From the early ‘90s up to the September 11, 2001 attacks, “freelance” Islamic terrorists, such as Ramzi Yousef, (who organised the first World Trade Centre bombing), and *al-Qaeda*, undertook increasingly bolder attacks against Western interests, including participation in the attack on US forces in Somalia (the “Blackhawk down” incident), the 1998 bombings of American embassies in Kenya and Tanzania, and the October 12, 2000 attack on the USS Cole in Yemen. *al-Qaeda*’s increasing capabilities, as well as its sophisticated funding and Organisational ability, would culminate in the catastrophic second attack on New York’s World Trade Centre, felling both towers, and killing close to 3,000 people on September 11, 2001. Utilising hijacked commercial airliners, 19 terrorists undertook a total of three separate attacks, and, by crashing the airliners *kamikaze*-like into their targets, caused severe damage to the Pentagon in Washington DC, as well as the complete destruction of the World Trade Centre; the third attack, said to have been targeting the Capitol building, was foiled by passengers, resulting in the plane crashing into a field in Shanksville, Pennsylvania with the loss of all aboard (Bergen 2001; Ruthven 2002; Corbin 2003; Atwan 2006; Wright 2006; Burke 2007).

8.6 The Brinks-Mat Case Study – Detection without Automation

Perhaps no case both illustrates the complexities of a sophisticated laundering operation and details AML techniques better than the Brinks-Mat gold bullion theft, which occurred on November 26, 1983. On that day 6,400 gold bars, with a market value of

£26,369,778 was taken from the Heathrow warehouse of Brinks-Mat, an armoured courier company. A month after the theft, 4 men were behind bars, yet the vast majority of the gold, along with two boxes of jewels that were also taken, had not been recovered. Mickey McAvoy, one of the four convicted of the theft, had two friends, Brian Perry and John Lloyd that he called on to handle the stolen gold. Kenneth Noye, an associate of Perry and Lloyd, was contacted to help dispose of it; Noye, already known to police at the time of Perry and Lloyd's request, was under investigation by HM Customs and Excise for gold smuggling and involvement in a tax fraud scheme. Noye mobilised several accomplices, among them a jeweller, John Palmer. John Palmer and an associate Garth Chappell owned a bullion dealership in Bristol called Scadlynn Ltd. It was alleged that Palmer had left the day-to-day operation of Scadlynn to Chappell, so that he could manage a small chain of jewellery stores in Bristol, Bath, and Cardiff. Noye, using his understanding of fraudster techniques garnered from his exposure to Customs and Excise inquiries, thought Palmer's Bristol operations would be an ideal conduit to launder the Brinks-Mat gold (Robinson 1998).

To prevent further identification of the gold, Noye knew that each bar had a unique serial number that must be removed. Palmer had his own smelter and agreed to melt the gold bars and recast them with a mixture of copper and silver coins so as to create the impression of scrap bullion. Upon completion of the smelting operation, the now-mixed bullion would be taken to the local branch of Her Majesty's Assay office. Each amalgamated ingot would be weighed, taxed, and "legitimised". Scadlynn was now able to distribute the bullion to commodity brokers and other precious metal dealers, who would then extract the pure gold for sale to the British jewellery trade.

Knowing he had to conceal his activities, Noye travelled to the Isle of Jersey in 1984, carrying with him £50,000 in £50 notes, intending to meet with officials of Charterhouse Japhet Bank, Bath St., St. Helier. He requested they purchase 11 one-kilo gold bars on his behalf, roughly 24 pounds with a cash value of £100,000, with the stipulation that the

accompanying certificates that authenticate both the quality of the gold and proof of ownership, did not display any serial numbers. His insistence on this point, along with threats to terminate the transaction should his wishes not be accommodated, raised doubts among the bank staff as to his legitimacy; this was despite the bank's repeated assurances that there would be no serial numbers on the certificates. Noye, now content with the banker's reassurances, returned to London, leaving the £50,000 as an initial deposit.

However, unbeknownst to Noye, the banker's doubts were sufficient for them to contact the police, who, upon Noye's return to Jersey to deposit the remaining £50,000, followed him, and reported his behaviour to authorities in the United Kingdom. Despite his initial mis-step, Noye had now "placed" the stolen gold into the legitimate market. It was no coincidence that the 11 bars that comprised Noye's Jersey transaction physically matched the configuration of the bars that comprised the purloined Brinks-Mat gold; the 11 bars weighed a little over 24 pounds and were easily transportable in a grip. This portability would expedite Noye's moving the remaining gold through Scadlynn, and should anyone question the transactions he now had certificates that legitimised the gold's provenance. Scadlynn would profit by charging the going rate for scrap plus the Value Added Tax (VAT) on the transaction; further benefits came through an arrangement whereby Scadlynn was allowed any additional undeclared VAT as profit.

Over a period of 5 months, Noye, Perry, and Lloyd made cash deposits and withdrawals from a Barclay's Bank branch in Bedminster, Bristol, totalling £10 Million, typically transporting the cash through a variety of unorthodox means (Bosworth-Davies and Saltmarsh 1994). Using a false passport in the name of "Sydney Harris", Noye made further deposits of his share of the cash in a branch of the Bank of Ireland in Croydon. He initiated a standing order that upon each deposit, the amount deposited would be immediately wired to the bank's Dublin branch. In addition to Noye's deposits at the Croydon branch, McAvoy's girlfriend, Kathy Meacock, and the roommate of John Lloyd, Jeannie Savage, whose husband

was then currently serving 22 years for armed robbery, made additional deposits on alternate days. These deposits were then wired to the Dublin branch as well. To this mix, Brian Perry introduced two additional individuals: Gordon Parry, and a solicitor, Michael Relton, a partner in a successful south London criminal law practice. Relton had unsuccessfully defended Parry several years prior on a drugs trafficking charge, resulting in a three-year tariff for Parry.

8.6.1 Placement – The gold is now in the system

Relton assisted Parry in depositing £793,500 of Scadlynn-generated cash in the Bank of Ireland's Balham branch in southwest London (see figure 2.8.2.1). These funds were in turn immediately wired to a branch of the bank in Douglas, Isle of Man. Parry drafted in a further accomplice, his wife's cousin heretofore un-named in any reference, and, using the Balham branch, deposited a further £500,000 to then be transferred to the Isle of Man account; in all, the combined effort to date of all the principals resulted in £1.5 Million in cash laundered through the Balham branch. To cover their “paper trail” further, Gordon Parry withdrew a portion of the Isle of Man cash, and deposited these funds in a new and separate account at the Bank of Ireland's Balham branch. Over a period of time, using small uneven amounts, he then withdrew those funds, and having created still another offshore account, deposited these funds accordingly (Bosworth-Davies and Saltmarsh 1994; Robinson 2004).

Meanwhile, Noye provided a steady feed of Brinks-Mat bullion into the Scadlynn furnace, the “scrap” providing a steady flow of cash to the enterprise's London accounts. As the volume of cash increased, so did the need for further means of disposal. Now it was time to begin the “layering” process, wherein the hard cash proceeds of the robbery would be circulated through a variety of means to further obfuscate its origins. Early August, 1984, found Parry, using a solicitor's introduction provided by Michael Relton, opening an account at the Zurich branch of the Hong Kong and Shanghai Bank, using a deposit of £840,435. A

timeline of several related events then unfolds: a week after Parry's deposit, an as yet unidentified man entered the Hong Kong and Shanghai bank's Bishopsgate headquarters in London, carrying a satchel containing £500,000, and gave instructions to forward it to the bank's Zurich branch.

8.6.2 Layering – The cash proceeds are now in circulation to hide their source

A further two weeks transpired, and over a three-day period, August 29th to the 31st, Perry, Parry, Relton, and a friend of Parry, a jeweller named John Elcombe, along with his wife, had all "coincidentally", as it would be later claimed in court, arrived in Zurich. Further to this "coincidence" was the fact that all five had opened accounts at the identical branch of the Hong Kong and Shanghai bank; with the money deposited over this three-day period and the Bishopsgate deposit by the mystery bag-man, the Zurich account holdings now totalled a little under £1 Million (see figure 2.8.2.2).

Further layering excursions continued. August 30th, a Thursday, found Perry and Parry in Vaduz, Lichtenstein, a short journey from Zurich, where they each opened a cash account with £45,000 at the Bank of Lichtenstein, and instead of using account numbers used names, Parry called his account "Glads" after his mother, and Perry called his "Como" after the singer and as a play on his own name. However, Parry was still not done. Travelling to Jersey, he purchased an "off the shelf" company called "Selective Estates". Off the shelf companies have the legal utility of being quick and easy for establishing a viable company, are usually paper-based, with no physical assets. They are used primarily as vehicles for tax avoidance or proof of non-domiciled headquarters for incorporation and usually found in a non-aligned or geographically-isolated location.

From Jersey, Parry travelled to Guernsey where he opened a business account at the Barclay's branch, using money transferred from the Isle of Man account. "Selective Estates" then wired the money from this deposit on to the Zurich Hong Kong and Shanghai account.

In keeping with his quirky account naming convention, Parry opened a new account at the Zurich branch, and called this account “Burton”, apparently as a tribute to the then recently deceased actor. In September, Parry’s jeweller friend, John Elcombe, deposited a further £650,000 into his personal Zurich account, an account for which Gordon Parry was a co-signatory. Later that day, Parry ventured to Lichtenstein where he deposited in his Bank of Lichtenstein account, what he thought was £400,000; yet when counted, it turned out to be £500,000. On the 24th of September, John Elcombe placed yet more cash into his personal account, this time in the amount of £435,000; he then topped-off this amount on December 4th with an additional £640,000.

Scadlynn’s smelting operation continued to generate a phenomenal amount of revenue to the extent that the firm’s local Barclay’s branch was forced to hire extra teller staff to handle the volume of Scadlynn’s transactions. Furthermore, what had up until now been simply a robbery and laundering operation was take a more sinister turn. Noye’s transgression early on had not gone un-noticed, and the Jersey police soon alerted Scotland Yard who then began a low-key watch on Noye’s activities. They soon noticed he kept the company of one Brian Reader, a wanted felon whose last whereabouts were thought to have been in Spain, and began an increased level of surveillance. Such was their alarm that rather than using normal personnel and procedures the authorities requested the help of C-11, the Metropolitan Police’s elite secret reconnaissance and close-target surveillance unit.

An operational plan was soon in place, and on the evening of Saturday, January 26, 1985, it was executed. That evening two C-11 officers, John Fordham and an unnamed colleague, penetrated the periphery of Kenneth Noye’s property. According to police records, sometime around 6:25 PM, one of the three Rottweiler dogs Noye deployed to secure his grounds happened upon Fordham. The other two dogs joined in the discovery, cornering Fordham and alerting Noye to Fordham’s presence. Reader may have accompanied Noye, but what was certain was that Noye was armed with a 4-inch knife. Fordham was later found

dead by police with 11 stab wounds, the majority in his back. Noye was immediately arrested; Reader was found a few miles away, and both were subsequently charged with Fordham's murder. Noye later pleaded self-defence, and Reader claimed he wasn't involved at all. What was to prove a bitter disappointment to the officers involved, both men were acquitted 10 months later at the Old Bailey. However, all was not lost, as a search of Noye's home found enough evidence – a small cache of bullion – to link him to the Brinks-Mat robbery. Both Reader and Noye were charged with conspiracy to handle stolen goods; three days later police also arrested Palmer and Chappell, and from there it was a matter of time before Scadlynn would be wound-up.

Oblivious to the events at Noye's home, John Elcombe and his wife left London for Zurich in Gordon Parry's Mercedes, with £710,000 concealed in the boot. Crossing into Germany at Aachen, they were stopped by a border guard who asked if they had any cash to declare. They stated they had £45,000, which represented their life savings, and that they were on their way to Switzerland, where they intended to make a deposit. His suspicions aroused, the guard decided to search their car, and discovered the £710,000. Elcombe and his wife then changed their story, claiming to be antique dealers with a business in Belgium, but this only caused more consternation among the guards and the two were detained. The money was then removed from the car, counted, and a note made of the serial numbers on the bills.

The border authorities then began a series of phone calls, first to their command in Wiesbaden, who after debating the issue, instigated a series of calls to the German branch of Interpol. German Interpol sent a telex to their British counterparts, inquiring if they were looking for either a John or Anne Elcombe? Was the Mercedes they were holding at the Aachen border station listed as stolen in the UK? What about the theft of a large sum of money? The British branch of Interpol passed the German inquiry on to their counterparts at Scotland Yard, whose answer to those three questions was "no" – which was then passed on to British Interpol, who then passed the answer on to German Interpol, who in turn forwarded

on the information to German Customs and Immigration, who eventually telephoned the guard at Aachen to inform him that his charges could be released, along with their cash. John and Ann Elcombe were assisted in loading the cash into their car, and then proceeded to drive on to Zurich. (Robinson 1998)

Later that evening, one of the Scotland Yard investigators had a revelation regarding the Mercedes that had been in question earlier in the day. He realized that the name of the registered owner, Gordon John Parry, was vaguely familiar. Upon further reflection, he realized that Parry's name was connected to the Brinks-Mat raid inquiry. Without further delay he contacted the Brinks-Mat investigators, who were staggered when he mentioned John Elcombe's name; however, by the time they were able to alert British Interpol, who then had to ask German Interpol to arrest the Elcombes, they were out of reach.

The events at Aachen had rattled the Elcombes, and they decided a more leisurely route to Zurich was in order. Taking roughly a week to transit Germany to Switzerland, they finally arrived in Zurich, where John undertook a series of transactions. First he deposited £100,000 in his own account. He then opened another account, depositing £608,000, which was then only identifiable by the number 720.3, rather than his original named account. The £2,000 difference between what they left the UK with and what they now deposited was attributed to "expenses," including an extravagant stay at a royal suite in the Dolder Grand Hotel in Zurich, a sop to take the edge off the events in Aachen. On the 4th of February, another unknown depositor placed £493,970 in Parry's "Glad" account. A week after the murder at Noye's, John Elcombe transferred £1.6 Million from his Hong Kong and Shanghai bank account into 720.3. Parry, having now closed his Bank of Lichtenstein ("Glads") account, deposited the money into 720.3; 720.3 now held some £2.6 Million.

Events in Lichtenstein were not over yet. Michael Relton was as busy as the rest of his accomplices, and having arrived in Lichtenstein on April 26th, promptly set about creating a "Red Cross" account. More formally referred to as a "foundation account," attorneys and tax

professionals use foundation accounts to control monies held by organisations rather than individuals; the idea being that more often than not, these accounts are held by charities, and the funds therein destined for good works, hence the “Red Cross” moniker. Moreover, as the administration is usually under the control of an attorney, there is the additional perception of propriety. Jeffrey Robinson further explains the benefits of such an account:

“However, while it’s customarily written into the foundation’s charter that a charity is to be named beneficiary, the beneficiary is not necessarily the beneficial owner of the account. No one is supposed to know who that is, not even the bank’s directors. The true identity of the beneficiary owner is protected by the double layer of bank secrecy and attorney-client privilege.” (Robinson 1998).

Using Moet, the name of his favourite champagne, Relton established the “Moet Foundation”, misspelt by the bank as “Moyet.” Together, Parry and Relton deposited £3,167,409.25 into the “Moyet” account. At this juncture, much like Noye, Parry made a seemingly innocuous mistake that was to have severe ramifications. Gordon Parry had decided to purchase some property – Gowles Barn Farm, close to Sevenoaks in Kent – which he paid for with a Credit Suisse draft drawn on his 720.3 account. The problem lay in the haste in which Relton and Parry had set-up Moet/Moyet; Parry hadn’t troubled himself with checking to ensure there were sufficient enough funds in 720.3 after the Moet/Moyet transfer to cover the £152,126 draft for Gowles Barn Farm.

As it turned out, 720.3 was indeed empty, but as the Bank of Lichtenstein’s managers knew where the money had gone, rather than refuse the draft, they simply transferred money back to 720.3 from Moet/Moyet to cover Parry’s draft. This simple transaction was soon to provide the authorities with the key that unlocked the complex set of transactions linking the secret foundation account, with the criminals at the heart of the Brinks-Mat robbery.

Only £5 Million in gold remained from the original bullion stolen some 15 months prior. Relton and Parry, sensing that the window of opportunity for further enrichment could soon close, decided some prudent planning for the future was in order. They embarked on a

series of property investments using their Jersey-registered “Selective Estates” entity as the umbrella for a subsidiary company called “Blackheath Limited”. They settled on a property in Cheltenham, and in purchasing the land, wove a complex series of transactions:

1. Relton transferred \$300,000 from Hong Kong and Shanghai Bank Zurich, to South East Bank, located in Sarasota, Florida, where he maintained an account.
2. From South East Bank, he sent \$200,000 to his personal account at Midland Bank, London.
3. He then sent £104,000 to The British Bank of the Middle East (a London subsidiary of Hong Kong and Shanghai Bank).
4. Hong Kong and Shanghai Bank then wired £103,700 to the solicitors acting for the sellers of the Cheltenham property.
5. Relton then borrowed £250,000 from The British Bank of the Middle East, using his Hong Kong and Shanghai Bank account as security.

Relton and Parry used the same laundering cycle again, this time including Jersey, Guernsey, and the Isle of Man in the cycle. An estimated £2.1 Million was laundered this way; the pair then swooped down on London’s Dockland’s real estate market, purchasing several wharf properties for £5.4 Million, using what appeared to be legitimate loans to finance the deals and obscure the true source of the money. At this point the proceeds of Brinks-Mat had been fully integrated and legitimized.

8.6.3 Integration is completely achieved

Noye’s subsequent arrest and the linkage of the evidence uncovered at his home with the Brinks-Mat robbery, led to the eventual unravelling of the laundering enterprise and the arrest of those involved. At the time Noye and Parry were taken into custody, the authorities had frozen accounts in four countries, the Channel Islands, the Isle of Man, and had discovered £1.5 Million hidden away in Noye’s Dublin account, and yet had somehow missed the £2.5 Million Jeannie Savage had hidden in Dublin. It had sat for 5 years, accruing interest, and when the authorities finally located it, the £2.5 Million had turned into £4.1

Million. Eventually the accounts of all those involved – Brian Perry, Gordon John Parry, The Elcombes, and a latecomer, John Lloyd – were seized, resulting in the recovery of close to £21 Million of the original £25 Million. Ironically, Mickey McAvoy, the man whose enlistment of Parry and Perry got the whole enterprise underway, ended-up with a lengthy prison sentence and not much else. Kenneth Noye, having been imprisoned in 1986, was granted early release in 1994, having served 8 years of a 14-year sentence for his Brinks-Mat participation. Noye returned to crime, having gained further notoriety for a road-rage murder on the M25 and subsequent flight to Spain. In 1998 he was returned to the UK to face trial for the M25 murder, was convicted and is now serving a life sentence. John and Ann Elcombe were the only members of the conspiracy to not serve any jail time (Bosworth-Davies and Saltmarsh 1994; Blunden 2001; Robinson 2003).

The Brinks-Mat affair illustrates many of the considerable obstacles that money launderers can employ to avoid detection, along with further detailing the omissions in legal processes and investigative methods that make the detection and cessation of money laundering a problematic undertaking. For instance, within the Bank of Ireland and Hong Kong & Shanghai bank, the lack of defined intra and inter-bank communication in regards to suspicious transactions, allowed Noye and his associates unfettered access to exploit the dispersed geographic isolation of their respective branches.

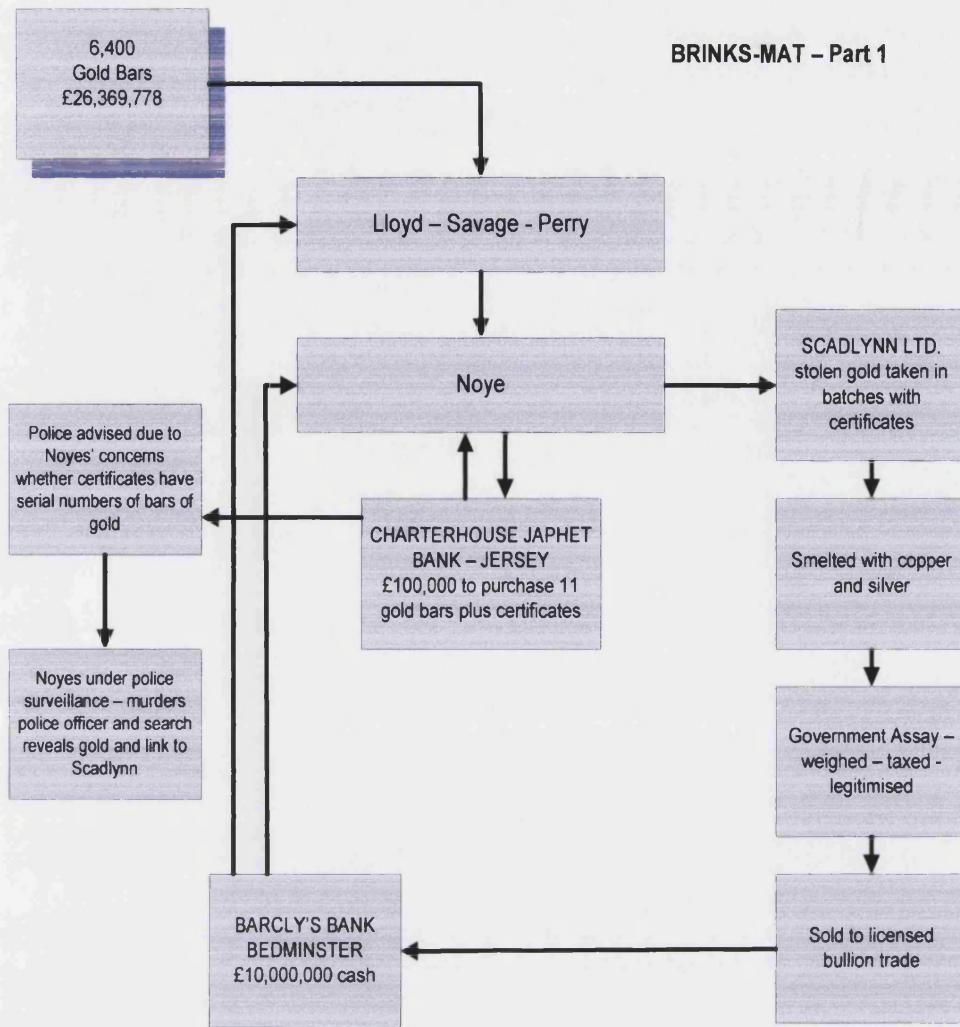


Figure 8.6.1 – Brinks-Mat Placement Stages - (Blunden 2001)

Furthermore, it was a suspicion, rather than any pre-defined anti-money laundering processes or procedures, that led to the staff at Charterhouse Japhet Bank on the Isle of Jersey to contact the authorities in regards to Noye's activities. Indeed, they were more concerned about the apparent gold certificate fraud than any perceived money laundering; the actual laundering of Noye's gold dealings doesn't occur until well after his initial Charterhouse Japhet deposits.

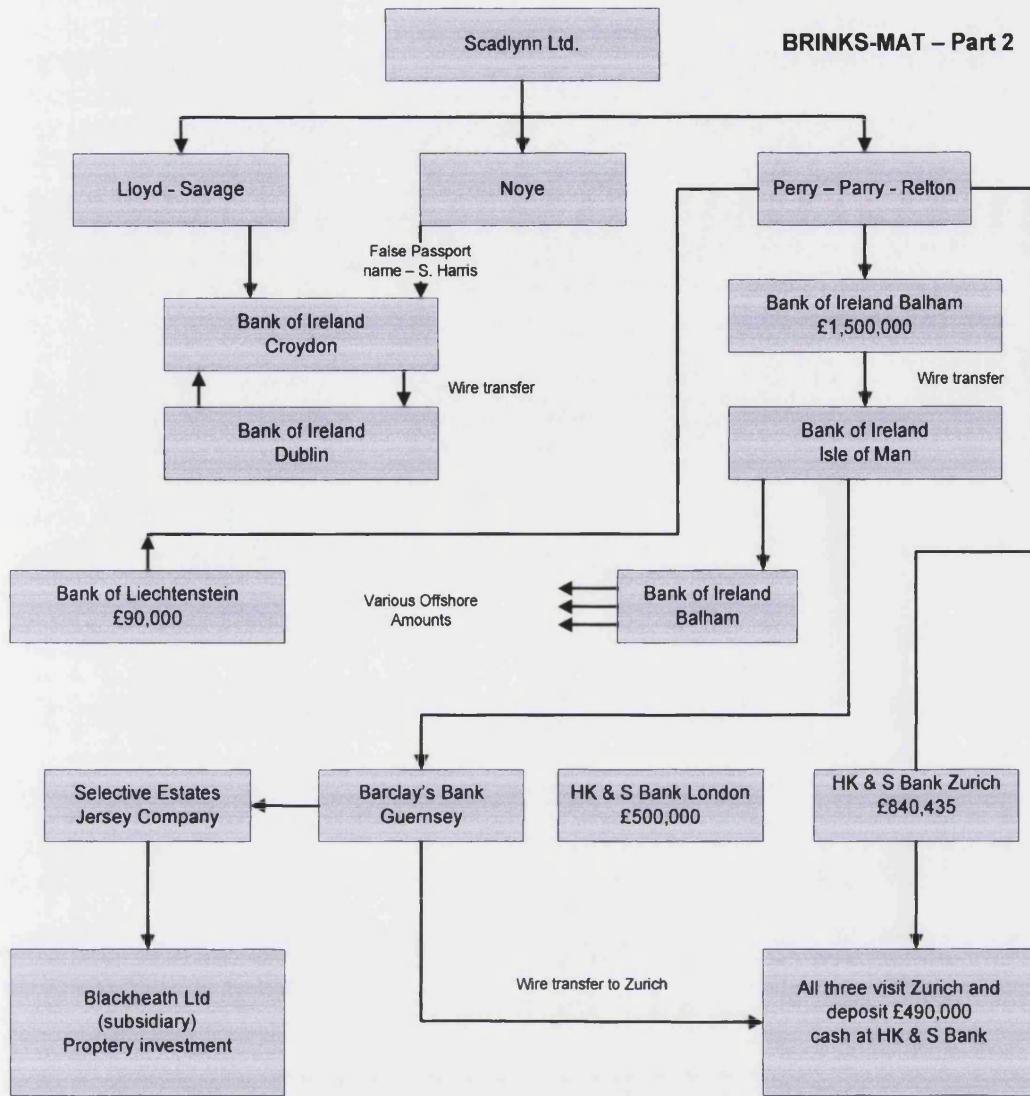


Figure 8.6.2 – Brinks-Mat Layering and Integration Stages (Blunden 2001)

A further consideration in assessing the whole affair was the fact that at the time of the robbery and subsequent laundering activity, circa 1983-85, most global jurisdictions did not view money “laundering” per se as a crime. While law enforcement was beginning to understand that money laundering was a separate crime from more traditional forms of fraud, and that large unaccounted for sums of money were regularly transiting borders throughout the world, creating a means to track - let alone convict - money launderers was proving difficult and time-consuming.