

The Legal Enforceability of Contracts made
by Electronic Agents under Islamic Law:

A Critical Analysis of the Effectiveness of Legal Reform
in Saudi Arabia

Walid Mohammed Almajid

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Abstract

The aim of this dissertation is to analyse whether contracts made by electronic agents¹ might be made enforceable under Islamic law. It discusses what constitutes an enforceable contract under Islamic law and whether this is applicable when a contract is made by an electronic agent. The enforceability of these contracts under Islamic law is especially important in the Kingdom of Saudi Arabia (KSA) where Islamic law constitutes the legal system. Ignoring the doctrine of Islamic law in relation to the enforceability of these contracts could, therefore, fundamentally affect the future viability of these contracts in the KSA.

The dissertation argues first that the principle of mutual consent under Islamic law is not satisfied in contracts made by electronic agents because there is no communication of an offer and acceptance by the contracting parties (users). Secondly, while electronic agents function like human agents, there are a number of doctrinal requirements under Islamic agency theory that prevent electronic agents from being agents proper. Thirdly, the term 'legal personality' is categorised in Islamic law under '*Dhimmah*', an ethical concept designed principally for human beings which cannot, therefore, be attributed to electronic agents.

This dissertation demonstrates that Islamic law creates conceptual obstacles which prevent contracts made by electronic agents being enforceable in the KSA. One implication of this will be a risk of negative impact on the development of these contracts in the KSA because they are contradictory to Islamic law. Islamic law must avoid narrow traditional interpretations of its legal concepts, because a lack of reform in this area will create difficulties and barriers against the enforceability of these contracts under Islamic law.

¹ An electronic agent could be a software linked to a hard drive and programmed by a person to correspond to his/her needs.

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CHAPTER 1: Introduction

1.1 General Introduction

Contracts made by electronic agents¹, termed “automated contracts”, today constitute one of the most fundamental challenges to the central doctrines of the law in general and of contract law in particular. The emergence of electronic agents that form contracts and complete all the stages of the contractual process autonomously without the involvement of their users has generated many doctrinal questions at a conceptual level, and has challenged the traditional rules of contract as they apply to the enforceability of automated contracts.²

For example, in common law, it is generally stated that the enforceability of any contract is based on a general principle known as “mutual consent”.³ The communication of an offer and the acceptance by two capable persons is the general test which demonstrates mutual consent between parties.⁴ When a contract is formed by the involvement of an electronic agent, questions arise over whether the individual (the user) on whose behalf the electronic agent is working has genuinely consented to the

¹ It must be noted here that it is not necessary to use strictly the term electronic agents. There are many other names that can be used to refer to the agent technology. For instance, “software agents”, “software robots”, “soft bots” etc. I choose to use the term of electronic agents because it is the common term used in the literature. See, Jennings, N & Wooldridge, M. (1995) *Intelligent Agents: Theory and Practice*, *Knowledge Engineering Review*, 10 (2), p. 56.

² Under German law, see Wetting, S & Zehender, E. (2003) *The Electronic Agent: A Legal Personality under German Law?*, *The Law and Electronic Agents*, Proceedings of the 2nd LEA Workshop, University of Edinburgh, UK. (online) Available at:

http://www.lea-online.net/publications/Paper_8_Wettig.pdf [Accessed March/30/2010]. Under the US and EU law, see Lerouge, F. (2000) *The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level*, *The John Marshall Journal of Computer and Information Law*, 18: 2, pp.403-433. Under Polish law, see, Jurewicz, A M. (2004) *Contracts Concluded by Electronic Agents – Comparative Analysis of American and Polish Legal Systems*, Berkeley Electronic Press. Contracts made by electronic agents were also discussed under Italian law. See the work of Sartor, G. (2002) *Agents in Cyperlaw*, In Proceedings of the workshop on the Law of Electronic Agents, LEA02. (online) Available at:

<http://www.lea-online.net/publications/Sartor.pdf> [Accessed March/30/2010].

³ Atiyah, (2006) *An Introduction to the Law of Contract*, 6th ed. Oxford: Oxford University Press, p. 22.

⁴ *Ibid.*

contract i.e. the user has made the necessary communication or acceptance of the offer.⁵ If the communication/acceptance of the offer in an automated contract is seen as actually being made by the electronic agent and not by the user, it may fail to satisfy the requirement of the principle of mutual consent, rendering automated contracts unenforceable.⁶ A further issue is the problem of how electronic agents can initially conclude contracts on behalf of others and ensure that the latter is bound when the electronic agents are neither natural persons nor legal entities. This raises the important question of the legal capacity of electronic agents when performing legal actions on behalf of others. As Balke and Torsten point out:

It becomes obvious that the use of software agents for the conclusion of contracts leads to considerable doctrinal discussions. How can software agents that have not been attributed judicial personhood initiate contractually binding contracts for their principals and a third party?⁷

The lack of legal capacity of electronic agents also raises questions about the relationship between the user and the electronic agent acting for the former's interest. The law of agency helps us to understand how electronic agents can become agents and their users can become principals.⁸ However, under the common law of agency, some of the requirements of agency, especially those relating to capacity, cannot be easily satisfied by electronic agents.⁹ Furthermore, in order to create an agency relationship between electronic agents and their users, the former needs to be granted authority by the latter.¹⁰ According to the common law of agency, this authority can be actual,

⁵ Dahiyat, E. A. (2007) Intelligent agents and contracts: Is a conceptual rethink imperative?, *Artificial Intelligence and Law*, 15 (4), pp.375-390.

⁶ Ibid. Also, see the article of Barrio, F. (2008) *Autonomous Robots and the Law*. (Online) Available at: <http://www.scl.org/com> [Accessed March/30/2010].

⁷ Balke, T. & Torsten, E. (2008) *The Conclusion of Contracts by Software Agents in the Eyes of the Law*, Proc. of 7th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS), p. 773.

⁸ Fisher, P. J. (1997) Computers as Agents: a proposed approach to revised U.C.C Article 2, *Indiana Journal Law*, 72(2), p. 557.

⁹ DeMott, D. (2006) *Agency Law in CyberSpace*, Duke Law School Working Paper Series Duke Law School Faculty Scholarship Series. (Online) Available at: <http://lsr.nellco.org/cgi/viewcontent.cgi?article=1041&context=duke/fs> [Accessed March/30/2010].

¹⁰ Reynolds, F M B. (2001) *Bowstead and Reynolds on Agency*. 17th ed. Sweet & Maxwell, [1-001].

apparent or ratificational.¹¹ Some of the requirements for each of these authorities appear too complex to be applied to electronic agents.¹² Because of these difficulties posed by the common law of agency, there is a question about whether electronic agents can be considered to have an extended legal personality.¹³ If they are, they will be deemed capable of agency with the ability to enter into contracts, acquire rights and duties on behalf of others.¹⁴ However, there are numerous doctrinal concepts of legal personality relating to the concepts of intention and consciousness which are essential attributes of legal persons, and whether they can be applied to electronic agents.¹⁵ Other concepts of legal personalities, such as assets, also constitute a critical challenge to electronic agents.¹⁶

These background and contextual issues, and questions and experiences of common law regarding the enforceability of automated contracts reveal a problem concerning these new methods for creating contractual obligations via electronic agents. After examining the issues surrounding the enforcement of contracts in common law the dissertation shifts its focus to Islamic law examining the enforcement of contracts under Islamic law. To my knowledge, there here has been no analysis of the implications of these changes in trading technologies for the substance of Islamic law. There seems to be a lack of knowledge and understanding from the position of Islamic law which has not identified, investigated or confronted this problem yet. So, the aim of this

¹¹ Ibid.

¹² Balke T. & Torsten E. (2008) *The Conclusion of Contracts by Software Agents in the Eyes of the Law*, Proc. of 7th Int. Conf. on Autonomous Agents and Multiagent Systems(AAMAS), p. 774.

¹³ Steffen,W. & Eberhard,Z. (2004) *A Legal Analysis of Human and Electronic Agents, Artificial Intelligence and Law*, 12 (1) , pp. 111–135

¹⁴ Chopra, S.& White,L. (2004) *Artificial Agents-Personhood in Law and Philosophy*, In *Proceedings of the 16th European Conference on Artificial Intelligence*,(Online) Available at: <http://www.sci.brooklyn.cuny.edu/~schopra/agentlawsub.pdf> [Accessed 5/March /2008].

¹⁵ Sartor, G. (2009) *Cognitive automata and the law: electronic contracting and the intentionality of software agents*, *Artificial Intelligence and Law*, 17 (4), pp. 253-290

¹⁶ Andrade, F; Novais, P; Machado, J. & Neves, J. (2007) *Intelligent Contracting: Software Agents, Corporate Bodies And Virtual Organizations*, *IFIP International Federation for Information Processing*, 243, pp. 217-224. Also for the same authors, see, Andrade, F; Novais, P; Machado, J. & Neves, J. (2010) *Software agents and virtual organisations: consent and trust*, *International Journal of Services and Operations Management*, 6 (3), pp. 352 –361.

dissertation is to evaluate critically the relevance of existing Islamic conceptions of contract formation when applied to the formation of contracts made by electronic agents.

This discussion will be made in light of the sources available to Islamic law such as the Qur'an (divine book), *Sunnah* (traditions of the Prophet of Islam), and secondary sources such as human reasoning which is known in Arabic as (*ijtihad*). The concept of *ijtihad* is related to the public interest or *al- maslaha al-mursalh*, as it is called in Arabic. The interests of the public under Islamic law are mainly connected to the relationships between humans, *mu'amalat*. When making *ijtihad*, Muslim jurists should look for the best possible public solution, taking into consideration the interests of the public and using this as a basis to prohibit or permit something. The underlying consideration of the public interest under Islamic law is that since rules and cases covered in orthodox Islamic law are finite and the changing demands (social and economic) of the public are beyond measure, the *mu'amalat* part of the Islamic law also needs to be mutable. Thus *al- maslaha al-mursalh* or public interest is a significant theme of this dissertation and will be used to facilitate the discussion of contemporary transactions such as the enforceability of automated contracts within an Islamic framework.

1.2 The Significance of the Dissertation

The significance of this dissertation is fourfold. First, due to opposing views about Islamic law, carrying out research on the feasibility of enforcing automated contracts under Orthodox Islamic law has become important. On the one hand, Muslim scholars have repeatedly claimed that Islamic law exists under an umbrella of flexibility in which

the rules are valid for each time and place.¹⁷ For instance, Albna claims that: "Islamic law has the flexibility to co-exist at all times and places, and this proves its validity".¹⁸ On the other hand, such writers such as Siddiqui have expressed doubt about the flexibility of Islamic law to accommodate contemporary transactions: "Today, Muslim scholarship is re-examining Muslim history and traditions, looking in depth at how far its flexibility will permit a change within Islamic tradition".¹⁹

These contrasting perceptions stem from the unique way Islamic law came into existence, developing across very different historical epochs. During the emergence of Islam as a religion, the laws were subject to change according to the needs of people. The first change was presided over by the Prophet Mohammed, albeit authorised only through his companions. After this, the ability to change Islamic law was restricted to his followers alone. During the ninth and tenth centuries, the option of amending the Islamic laws was repudiated. It was thought that all matters of law had already been settled in the Qu'ran. It was therefore decided that all future activities should be limited to the interpretation of classical jurists. Obeid claims that "this is the difficult task which faces the legal practitioners of the Islamic world and also the economic operators of the Western world in their commercial relations with Muslim countries".²⁰ Karl also holds that in a country such as Saudi Arabia where Islam is the source of law, there is no distinction between legal and religious rules.²¹ According to Karl, this can lead to

¹⁷ This rule is a fundamental principle under Islamic law. Commenting on this statement, El-Gamal states: "With sufficient flexibility in the definition of what constitutes Islam, this statement would be rendered tautological. With sufficient rigidity, it would be rendered patently false. Champions of this slogan span the entire spectrum of degrees of flexibility...". See, El-Gamal M. (2002) *The Economics of 21st Century Islamic Jurisprudence, Proceedings of the Fourth Harvard University Forum on Islamic Finance*. Cambridge: Center for Middle Eastern Studies Harvard University. (Online) Available at: <http://www.ruf.rice.edu/~elgamal/files/jurists.pdf>, [Accessed 29/March/2010].

¹⁸ Albna, G. (2008) *Ala'slam Cualh Lkl Zman Wmkan, Tanweer*, 136. (Online) Available at: <http://www.kwtanweer.com/articles/readarticle.php?articleID=1910>, [Accessed 1/Sept/2009].

¹⁹ Siddiqui, A. (1997) Ethics in Islam: key concepts and contemporary challenges, *Journal of Moral Education*, 26(4), p. 23.

²⁰ Obeid, N. (1998) Origins of the Sanctity of Contracts in Islamic Law, *Arab Law Quarterly*, 13 (3), p. 260.

²¹ Karl, J. (1992) Islamic Law in Saudi Arabia: What Foreign Attorneys Should Know, George Washington, *Journal of International Law and Economics*, 25(131), p. 136.

misunderstandings about and conflicts within Saudi law because the right to interpret and amend laws according to contemporary values and needs is restricted.²² Karl makes this observation:

Secular principles are very much the fundamental aspect to individuals' thinking today, therefore those legal systems that depend on religious laws, as the case in Saudi Arabia, can appear irrational and inflexible. This is because laws made by God are not subject to any sort of alteration or change. By contrast, civil or common law is devised by human being and it can therefore be changed or altered over time in an efficient way.²³

The significance of my thesis derives from the persistent claim that because Islamic law dates from the sixth century, it is incapable of dealing with modern transactions and therefore should be disregarded. Given the views and assumptions expressed by the traditional construction of Islamic legal texts, it is essential that Islamic law can embrace the challenges of dynamic technological change which fundamentally affect the economic health of a country.

Second, the fact that Saudi Arabia strictly adheres to Islamic law means that the acceptability of any new transactions (such as automated contracts) must be conceptualised within an Islamic framework. This is particularly important in Saudi Arabia where Islam is constitutionally the official religion and the source of all laws. Article 1 of the Saudi Arabian constitution states: "The Kingdom of Saudi Arabia is a sovereign Arab Islamic state with Islam as its religion; God's Book and the Sunnah of His Prophet, God's prayers and peace be upon him, are its constitution".²⁴

Article 1 suggests that all transactions must be compatible with the values of Islam. The way that Islamic law responds to automated contracts will have an important effect

²² Ibid

²³ Ibid. 134. This is generally true. Unlike jurists under Islamic law, jurists under both common and civil legal systems have the ability to question the value of laws which cannot protect the rights and needs of individuals.

²⁴ The Saudi Arabian's constitution, art. 1. The basic Saudi Arabian's Constitution. (Online) Available at: http://www.oefre.unibe.ch/law/icl/sa00000_.html. [Accessed 23/March/2010].

on the future development of this method of contracting in Saudi Arabia. By bridging these gaps in the doctrine of Islamic law in relation to the enforceability of automated contracts, the public's confidence will be assured about the future viability of automated contracts. Fasli states:

The doubts of the potential users have to be allayed. In order for this vision to materialize, one fundamental issue that needs to be addressed is that of trust. Users need to be assured that any legal issues relating to agents trading electronically are covered to an extent as they are in traditional trading practices.²⁵

Third, research on automated contracts and their application in Islamic law is much-needed due to the lack of existing scholarship on or legal analysis of this emerging problem and how an effective legal response should be made. Thus the objective of this thesis is original; it is an initial point of reference within the subject and its findings would be the first of its nature in the literature. Moreover, this study will be of general benefit to the subject of legal studies in Saudi Arabia and, more specifically, to an understanding of the enforceability of automated contracts.

Also of significance is that the findings from the perspective of Islamic law are useful to consumers, online traders, and legislative authorities whether they are in Saudi Arabia or beyond. Within Saudi Arabia, the study focuses with particular interest on the government committee attempting to develop the Electronic Transactions Regulation (ETR) 2007.²⁶ The study can also suggest recommendations to government bodies that might be of use to them.²⁷ From another perspective, the study benefits many individuals including but not limited to: Internet users in Saudi Arabia who regularly use automated methods in order to generate their purchases; Saudi law-makers,

Fasli, M. (2007) On agent technology for e-commerce: trust, security and legal issues, *Knowledge Engineering Review*, 22 (1), pp. 3–35.

²⁶ Hereinafter ETR 2007 [SA]. This legislation is discussed in more detail in Chapter 6 of the thesis.

²⁷ A good example here is the Saudi Capital Market Authority that uses automated computer programs in their transactions. They are looking to adopt appropriate regulation for this technology. This is according to an invitation to me from the Saudi Capital Market Authority in Dec-15-2009 to present a seminar on the legal challenges associated with using this technology in business.

especially in the Council of Ministries and the Consultative Council; relevant government authorities and departments responsible for promoting electronic commerce in the country; judges who may have to rule on future disputes over whether automated contracts should be enforced in Saudi courts; the Saudi private sector which may be planning to target their customers via electronic agents; academics, lawyers and researchers.

Globally, the outcome of this dissertation might be of particular interest to international bodies, mainly the Model Law of the United Nations Commission on International Trade Law (UNCITRAL). Not only does this international body aim to develop trade relations between countries and facilitate the world trade relationship between international communities,²⁸ it will also help with the understanding of the perspective of Islamic law on online trading via the use of electronic agents. In addition, the United Nations views the harmonization between different legal systems to be a crucial aspect in overcoming impediments for online commerce and making it globally effective. With this in mind, it is easy to understand the importance of this study with regard to an international harmonization of legislation for electronic commerce. As automated contracts are relatively unaccounted for on the Internet, be it internationally or locally, harmonization between international legislations can create understanding and agreement between various parties in different countries which ultimately will serve the greater success of electronic commerce worldwide.²⁹ Harmonization between

²⁸ Mills, K. (2005) Effective Formation of Contracts by Electronic Means Do We Need a Uniform Regulatory Regime? *Paper presented at World Summit on Information Technology in Tunis*, p. 4. (Online) Available at:

<http://www.arbitralwomen.org/files/publication/2307092552667.pdf>, [Accessed 20/March/2010].

²⁹ See the work of Xiping Lv, Delin Hou where the authors highlight the lack of legislation in this region of China and point out some legal regulations relevant to electronic agents in the UN, US and Canada. They make some suggestions concerning e-commerce legislation in China. See, Xiping L. & Delin H. (2008) On the Legal Status of Electronic Agent in International Trade, *Management of e-Commerce and e-Government. International Conference*, International Conference on Management of e-Commerce and e-Government. pp. 189-191.

international legislations generally creates common solutions to problems arising from similar facts in different countries.³⁰

1.3 The Methodology of the Dissertation

The methodology used in examining the enforceability of automated contracts from the position of Islamic law is a literature review which includes information collected from various sources such as libraries, codes, reports, books, articles, legislation and bill reports. The dissertation identifies the literature concerning common law in order to list and discuss workable and effective approaches to the enforceability of automated contracts. This review serves three main purposes.

Firstly, since the beginning of 1990s, the enforceability of automated contracts has been debated under common law, particularly in the United States (US) and United Kingdom (UK).³¹ There is a wealth of research on this issue and many scholars who hail from countries that operate a common law system have written about these kinds of contracts. All of the studies investigate the enforcement of automated contracts and suggest practical means of legalizing them. Since there is an absence of studies looking at the enforceability of automated contracts from the perspective of Islamic law, an analysis of the literature on common law has provided the backbone to this dissertation.

The second purpose of reviewing common law is the similarities between common law and Islamic law. The former system comprises judges presiding over court cases while the latter system is centred upon the opinions and views of classical Muslim

³⁰ Mills argues that although many of questions regarding contracts made by electronic agents are being addressed by the various lawmakers in their own way all over the world today, it seems obviously important that because of the borderless nature of these contracts, to be a single universal framework on an international scale within which all legal systems will eventually operate. Mills, K. *op. cit.*, p. 14.

³¹ See for the example the article of Wein, L. (1992) The Responsibility of Intelligent Artificial: Toward an Automation Jurisprudence, *Harvard Journal Law and Technology*, 6 (103), pp. 103-154.

jurists.³² In this regard, common law and Islamic law are very different to many of the existing legal systems in the world today.³³

Thirdly, the review of common law is pertinent because it is adhered to by countries such as the US and UK, which make up two of the largest trading blocs in the world. These two countries are the best markets to test electronic commerce because they comprise the largest proportion of electronic commerce transactions in the world. It is important in this thesis to highlight the positive proposals presented by the policymakers, legislators and scholars in these countries vis a vis the topic of automated contracts' enforceability. In particular, Saudi Arabia has considerable trade relations with the US and UK which reaches, according to the latest statistics revealed by the Saudi Ministry of Trade, around SR. 137,698 Million and SR. 17,298 Million respectively in the year 2005. For example, KSA exported SR.104,746 Millions to the US and imported SR.32,952 Millions; while KSA exported SR.6,855 Million to the UK and imported SR.10,443 Millions.³⁴

The common law debates on the enforceability of automated contracts shapes the discussion of this issue from the position of Islamic law, specifically by asking the following questions: would contracts made by electronic agents be enforceable based on the Islamic principle of mutual consent? Can electronic agents be classed as agents under Islamic law, thus allowing agency principles to be employed for automated contract enforcement? Is legal personality necessary for agents under Islamic agency

³² See El-Gamal, M. (2003) *Interest and the Paradox of Contemporary Islamic Law and Finance*, *Fordham International Law Review*, 27 (1), p. 130. Also, Rosen argues that the emphasis on precedent and reasoning by juristic analogy under Islamic law gave rise to a body of transactions law that is very similar to contemporary common law traditions. Rosen made this observation: "In the course of studying Islamic law in its everyday practice I have been increasingly struck with its similarities to the common law form..." Rosen, L. (2000) *The Justice of Islam*. Oxford: Oxford University Press, p. 39.

³³ In civil law jurisdictions, laws are made by legislatures i.e. judicial precedent is given relatively less weight. That is to say, courts are not supposed to create laws but do play a role in interpreting obscure statutes. In addition, legal experts have an important function in the change of law.

³⁴ Trade statistics between the Kingdom of Saudi Arabia and United States of American and the United Kingdom in the year 2005, Ministry of Trade Statics, issued in 2009.

principles? Can electronic agents then be extended independent legal personality under Islamic law?

These questions are investigated in light of the two major doctrines within Islam: *Snh* and *Shiite*. The *Snh* doctrine is subdivided into Shafi, Hanbali, Maliki and Hanafi. Because Saudi Arabia is of the *Snh* school, the researcher examined only the traditional manuscripts and texts of this particular doctrine which features four schools to match the opinion of the public majority, called in Arabic *Aljmhwr*. That is to say, the opinions of *Shiite* doctrine are excluded from the dissertation. The method of data analysis used will examine the legal concepts of Islamic law i.e. mutual consent, agency theory, and legal personality. I will identify the rules and principles of each of these legal concepts and scrutinize whether they are applied and followed when a contract is carried out by an electronic agent. I will discuss the application of these rules and principles in automated contracts, their challenges, and most importantly how those challenges can be confronted under Islamic law. In addition, information has also been collected from what is known under Islamic legal system as “Fatwa” or Reasoning.³⁵

1.4 The Structure of the Dissertation

Aside from the introduction and conclusion, the dissertation is organised into six chapters. Chapters 2, 3 and 4 review the legal literature about the enforceability of automated contracts. The aim of these chapters is to identify theoretical approaches related to automated contract enforceability. Chapters 5, 6 and 7 examine the enforceability of automated contracts under Islamic law.

In brief, the aim of Chapter 2 is to explore the concept of ‘automated contracts’ and identify the method used to constitute these contracts. The chapter explores the

³⁵ A sample of the fatwa (in Arabic and translation of its full text follows) is reproduced in the Appendix III.

development of electronic agent technology and main features that enable it to conclude contracts autonomously and without human beings' intervention. In Chapter 3, the aim is to discuss whether automated contracts can be enforceable based on the principle of mutual consent. This principle and whether it is applicable in these types of contracts is examined. Chapter 4 assesses whether automated contracts can be enforceable based on the principles of agency theory. The aim here is to explore agency principles and examine whether they can allow electronic agents to bind their users. This chapter will also establish whether or not legal personality can be extended to electronic agents.

Having discussed the approaches to the enforceability of automated contracts under common law, I will then develop the discussion further by examining how Islamic law conceptualises these technological developments. Chapter 5 explores the peculiarities of Islamic law in order to determine what sources can be used to facilitate the discussion of the enforceability of automated contracts under Islamic law. In chapter 6, the aim is to explain the principle of mutual consent as an essential condition for contract formation under Islamic law. It presents Muslims' views on how this condition can be achieved and how contracting parties should be consenting to enter into contract. The issue of whether or not this condition is satisfied in automated contracts is then investigated. The objective of Chapter 7 is to examine whether automated contracts can be enforceable based on Islamic agency law. It presents a discussion on the definition of agency under Islamic law, the conditions required for being an agent, and necessary requirements to establish agency agreement. The question of whether electronic agents meet these requirements and have an agency relationship to bind their users is then answered. The discussion here will also examine the flexibility of Islamic law in attributing and recognizing the independent legal personality of electronic agents. Finally, chapter 8 re-examines and summarises the implications of the thesis in light of the research

questions, draws some final conclusions and highlights limitations and implications of the research.

CHAPTER 2: An Explanation of the Characteristics of an Automated Contract

2.1 Introduction

This chapter discusses automated contracts which, in the commercial transactions world, are still at early stage of development. This chapter also defines automated contracts by identifying their formation and how they are generated and concluded online. However, I intend to focus more upon the characteristics of such contracts rather than on technical descriptions of the electronic agents involved. The technology used is analysed in order to distinguish between those electronic agents who work ‘automatically’ and those who work autonomously. The advanced agents’ manner of their operation as well as the concept of autonomy are both explored below.

The aim of the chapter is to establish a basic understanding of automated contracts before this study goes on to examine the approaches that determine enforceability of such contracts. Several authors have written: “Many of the legal implications of electronic agents’ actions (e.g., gathering information, negotiating terms, performing transactions) are not well understood”.¹ The overall objective is to address the following point made by McLuhan: “One cannot begin to regulate online contracts without understanding the impact of technology as a complex background force to such contracts”.²

2.2 Electronic Agent Technology

In this modern era of electronic technological development, it is inevitable that business activities move to an online environment for the purpose of enhancing efficiency, quality, cost-effectiveness as well as minimizing time-consumption. Today,

¹ Brazier F., Oskamp, A; Corien, P; Schellekens, M. & Wijngaards, N. (2004) *Law-Abiding and Integrity on the Internet: A Case for Agents, Artificial Intelligence and Law*, 12(1-2), p. 7.

² McLuhan, M. (1992) *Gutenberg Galaxy*. Toronto: University of Toronto Press, pp. 23-31.

both the private and public sectors of industrialized and developing countries are aware of the importance of handling business transactions online. Many international companies have already moved over to the electronic environment due to their need to increase their presence in various markets across the world, including the KSA.

At the early stage of electronic commerce, companies and businesses used computer programs which acted according to pre-determined instructions, without any ability to alter such instructions or generate additional types. The UNCITRAL Model Law defines these types of computer software as "a system for generating, sending, receiving, storing or otherwise processing data messages".³ These kinds of computer software are basic, lack any degree of mobility, intelligence, or autonomy and do not make independent decisions. They only perform pre-programmed tasks according to previous programming. They lack control over the contractual terms and details such as prices, means of payment, and the quantity and quality of the goods. One example of this is vending machines and electronic data interchange systems (EDI). EDI is used to communicate business transactions between the conventional computer systems belonging to different entities according to a standard format specified within a trading partner (interchange) agreement signed by such entities prior to the commencement of trading.⁴ With EDI, a computer can be automatically programmed to pass on data, transmit a purchase order when the inventory slides below a certain level, or to agree to any order that meets pre-determined criteria. However, EDI lacks the ability to act differently to programmers or the ability to divulge instructions.

The progressive evolution of computer software has shifted from simply receiving orders and sending automated confirmations to a more autonomous state. They are far

³ Model Law on Electronic Commerce of the United Nations Commission on International Trade Law, article 2 (f).

⁴ The UNCITRAL defines EDI as "the computer-to-computer transmission of data in standardized format". See Report of the Working Group on Electronic Data Interchange (EDI) on the Work of Its Twenty fifth Session, [11993] 24 UNCITRAL Y. B. at 193, U.N. Doc. A/CN. 9/373.

more advanced than the first generation of computer software which worked strictly automatically and purely according to instructions. The highly-developed computer software of today is known as "electronic agents". Russell and Norvig define the term "electronic agents" as "anything that can be viewed as perceiving its environment through its sensors and acting upon that environment through effectors".⁵ Janca asserts that this definition is fairly broad⁶ and suggests his own: "software that knows how to do things you could probably do yourself if you had time".⁷ Jennings and Wooldridge argue that this definition is too simple and unhelpful.⁸

Jurewicz highlights that in the actual analysis, it is difficult to provide a universally accepted definition of electronic agents.⁹ This is because the term electronic agent refers to an "interdisciplinary area" in which different scientific fields of research such as artificial intelligence, information and communication systems, social science, computer science, and law all use electronic agent with a different emphasis.¹⁰ That is to say, electronic agents are developed into several forms and used for many purposes. Therefore, the definition of "electronic agent" should depend on the function an electronic agent demonstrates on the internet.

For instance, a model known as Consumer Buying Behaviour (CBB), devised by members of the Software Agents Group at MIT Media Laboratory, has shown that there are many electronic agents which could work on only one transaction.¹¹ The CBB contains six phases as follows: (a) identifying the needs of a user for merely gathering

⁵ Russell, S. & Norvig, P. (2002) *Artificial Intelligence: A modern approach*. Prentice Hall. p. 35.

⁶ Janca, P. (1995) *Pragmatic Application of Information Agents*, BIS Strategic Decisions, Norwell, U. S., p. 33.

⁷ Ibid.

⁸ Jennings, N. & Wooldridge, M. (1998) *Applications of Intelligent Agents*, Heidelberg, Germany, p. 4. (Online) Available at: <http://jasss.soc.surrey.ac.uk/2/3/sichman.html> [Accessed 07/Feb/2008].

⁹ Jurewicz, A M. (2004) *Contracts Concluded by Electronic Agents – Comparative Analysis of American and Polish Legal Systems*, Berkeley Electronic Press, p. 4.

¹⁰ Ibid.

¹¹ Guttman, R. H.; Moukas, A.G & Maes, P. (1998) Agent mediated Electronic Commerce, A Survey, *Knowledge Engineering Review*, 13(3), p. 2.

information; (b) product brokering i.e. selecting a product that meets the needs of the user; (c) merchant brokering which is designed to select a supplier of the selected product; (d) negotiation stage in which electronic agents negotiate the terms of the transaction; (e) purchase and delivery and finally; (f) service and evaluation where electronic agents evaluate the satisfaction of the overall purchase and decision-making.¹² With reference to these six phases, electronic agents can be classified into two sub-sections; search and decision electronic agents.¹³ On the one hand, search agents receive instructions such as words, subject matter or other similar items from users. Through response, these electronic agents produce a certain type of information. Feliul refers to such electronic agents as “navigation tools”.¹⁴ This name is apt because search agents are necessary only for locating websites in order to provide commercial information such as who is selling what, and who is offering the cheapest product.¹⁵ Their main duty is to gather information and they do not work outside the user's environment.¹⁶ According to Stuurman and Wijnands, such agents are frequently used in online commerce and their capacity to locate a number of websites and collect detailed information in a short time has increased consumer transactions.¹⁷

¹² Ibid.

¹³ See such classification in the work of Feliul, S. (2001) *Intelligent Agents and Consumer Protection, International Journal of Law and IT*, 9(14), p.240. Nwana, S & Ndumu, T. (1998) *A Brief Introduction to Software Agent Technology*, in *Agent Technology, Foundations, Applications and Markets*. (Berlin Heidelberg: Springer Verlag) Chapter 2.

¹⁴ Feliul, S. (2001) *Intelligent Agents and Consumer Protection, International Journal of Law and IT*, 9(14), p. 240.

¹⁵ Search agents are types of agents which are usually owned by the distributors or independent agents owned by independent companies ("Fido the Shopping Doggie, <http://www.Shopfido.com> or "Bargain-Finder" d'Andersen Consulting, <http://bf.csstar.ac.com/bf>). A great number of electronic agents exist for the operators or for the vendors. A lot of web sites are proposing independent information search agents which are selecting the information on sites opened to them. The "Galleries Lafayette" can propose a virtual clothing advisor in which someone can enter a picture of her, size, hair and skin color...The advisor is creating the person a new dressing style, it also gives her make-up and hair style advises.

¹⁶ An example here is Personnalogic which is an independent agent on the web which gives advises on all sort of products: animals, travels, cars...It gives products a rate depending on answers & questions style. If the user already know the product that fits with his/her needs, Personnalogic can establish attributes comparison matrix between different brands.

¹⁷ Stuurman and Wijnands refer this type of electronic agents as passive agents. According to these authors, passive agents are those programs which interact within the user's own environment in order to organize data on the user's computer, gather and process information and email or filtering news lists for the user. See Stuurman, K. & Wijnands, H. (2001) *Intelligent Agents: A Curse or a Blessing? A Survey of*

On the other hand, decision agents do more than just facilitating users with specific information, they are also active in negotiating and concluding contracts.¹⁸ These electronic agents can complete and finalize transactions without the full and direct intervention of human beings. They have the ability to navigate websites in many parts of the world, looking for products and services to either make purchases or sales. They have the capability to interact with unknown and even unseen business partners. They may perform business transactions with other website servers and take the relevant decisions about forming contracts without having to come back to their users.

One example of an electronic agent's operations is "MarketSpace" which has been developed by the Swedish Institute of Computer Science.¹⁹ It consists of an infrastructure information model that describes users' interests and an interaction model. It also defines basic vocabularies for searching, negotiating and settling deals. Several examples of interests are "buy things cheaper than \$1", "buy pizza within an hour", "sell these books", etc. The interaction model uses a small set of messages such as: Ask, Tell, Negotiate, Offer, Accept and Decide.²⁰

Another group of such electronic agents that has been developed to automate online shopping transactions is known as Kasbah. This prototype has been developed by the MIT Media Lab. This system is described as an "online, multi-agent classified ad system". It is simply an agent marketplace for buying and selling goods. When a user wants to buy goods, s/he creates an agent, gives it some directions, and then sends it off into a centralized agent marketplace. The objective of the electronic agent is to procure

the Legal Aspects of the Application of Intelligent Software Agents, *Computer Law and Security Report*, 17(2),p. 92.

¹⁸ Because this type of electronic agents have the capacity to conclude transactions, Stuurman and Wijnands find that they should be referred as transaction agents. See Stuurman, K. & Wijnands, H. (2001) Intelligent Agents: A Curse or a Blessing? A Survey of the Legal Aspects of the Application of Intelligent Software Agents, *Computer Law and Security Report*, 17(2), p. 92.

¹⁹ For more information see, Eriksson, J; Finne, N. & Janson, S. (1999) *SICS MarketSpace- an agent-based market infrastructure*, in Proceedings of the 1998 Workshop on Agent-Mediated Electronic Trading Springer, Heidelberg.

²⁰ Ibid.

a deal which meets the constraints established by the user, such as the highest or lowest acceptable price and the date by which the deal must be completed. Once the electronic agent has interacted with someone and concluded a transaction in accordance with the user's constraints, the agent notifies the user that a deal has been struck.²¹ Upon notification, the agent ceases to negotiate and automatically asks the system to be removed from the list of 'active agents'.²² It is then the user's responsibility to execute the deal by arranging delivery and payment.²³

Artificial intelligence scientists such as Russell and Norvig predict that electronic agents of the future will be able to negotiate and conclude transactions more independently with less instruction from their users.²⁴ Kerr writes:

[A]gents will no doubt be employed to assist human interaction through the various stages of a transaction, from product and merchant brokering through to negotiation, sale, distribution and payment. It is not unreasonable to predict that in time, agent technology will become sufficiently sophisticated to perform many if not all of these sorts of tasks without human oversight or intervention.²⁵

Similarly, Balke and Torsten argue that it is not unreasonable to predict that in the future, electronic agents will operate as the initiators of electronic transactions assisting human interaction through all stages of the transaction process.²⁶ Electronic agents will be having the ability to roam in less controlled environments, within remote servers in

²¹ For more information, see Chavez & Maes (1996) *Kasbah: an agent marketplace for buying and selling goods*, Processing of the First International Conference on the Practical Application of Intelligent Agents and Multi- Agent Technology London.

²² Ibid.

²³ More examples can be given under this category of electronic agents is in a situation when a company wishes to increase its market share. The company programs an electronic agent to purchase any products of less than \$2 per unit in any part of the world market. Based on these given instructions, the electronic agent navigates aggressively on various websites searching for products that meet the specified instructions and data. Through this navigation, the electronic agent finds a company which announces that it is selling two million shares on the website. The electronic agent which is acting on behalf of the company purchases these two million shares at the rate of \$1.75 per share autonomously without the knowledge of the company. I give this example only to demonstrate how these electronic agents can operate online.

²⁴ Russell, S. & Norvig, P. (2002) *Artificial Intelligence: A modern approach*. Prentice Hall. p. 35.

²⁵ Kerr, I. (2000) *The Legality of Software-Mediated Transactions*, Proceedings of IASTED International Conference: Law and Technology, IASTED /ACTA Press. p. 90.

²⁶ Balke T. & Torsten E. (2008) The Conclusion of Contracts by Software Agents in the Eyes of the Law, Proc. of 7th Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS), p. 774.

which a human user will never find himself in.²⁷ In addition to that, human users will not be able to forecast what these electronic agents do or know vis a vis whether a contract has been completed and to whom it is addressed.²⁸ The user will have no substantial influence over the agent's choices, and s/he might not even be aware that any transactions or communications are taking place. These decisions taken by the electronic agents might be to purchase or sell assets and they may start negotiating the price of the produce or the services within a short time.²⁹ Electronic agents will also employ electronic payment mechanisms to effectively circumvent the need for users to execute agreements that have been pre-arranged, for instance, the purchase of flights, hotel bookings and theatre tickets. Such purchases will be carried out based on the user's travel schedule available in his/her electronic diary. An email will then be automatically sent to the electronic diary confirming that the purchase has been made. The electronic agent might also obtain information about the user's travel itinerary from his/her telephone calls which the agent can gain access through a computer program.³⁰

These types of advanced generation agent technologies can even propose a bid at an auction. This does however need some form of assessment and judgment as to the most favourable price to be bid. Electronic auction systems these days are programmed to be compatible with intelligent agent systems. An example of this is the worldwide e-Bay system. Yahoo.com also allows a bidding agent to place bids on the operator's behalf at the lowest possible increments. The electronic agents in these instances can negotiate and finalize other elements of the contract such as the time of delivery, quantity and

²⁷ This proves clearly the advanced capacity of this computer software.

²⁸ Mass, P. (2000) *Agents that Reduce Work and Information Overload Communication*. Quoted by Kerr, I. (2000) *The Legality of Software-Mediated Transactions*, Proceedings of IASTED International Conference: Law and Technology, p. 88.

²⁹ Consider also the function of electronic agents called electronic liquidity finders' (ELFs) in the area of electronic stock trading. Such agents are used extensively to find counterparties to a stock trade, and to negotiate and perform the trade on the user's behalf.

³⁰ Russell, S. & Norvig, P. (2002) *Artificial Intelligence: A modern approach*. Prentice Hall. p. 35.

method of payment to the other partner.³¹ These tasks can be conducted autonomously without full control of the person employing them.³²

Contracts generated by these advanced electronic agents are generally referred to as "automated contracts" and because they are formed autonomously by electronic agents without the involvement of the users. Therefore, the next section attempts to identify the nature of these electronic agents and the technical background that enables them to acquire the capacity to complete all the stages of the transaction process independently with less instruction from their users.

2.3 The Nature of Electronic Agents

Scientists in the field of artificial intelligence argue that electronic agents have the capacity to complete all the stages of a transaction independently because of the distinctive features they possess. Those distinctive features are: autonomy, social ability, reactivity, and pro-activeness.³³ Electronic agents possess the pro-activeness feature which means that they do not simply act in response to their environment, rather they are able to exhibit goal-directed behaviour by taking the initiative. They also enjoy what is called 'social ability' which refers to interaction with other agents (and possibly humans) via some kind of agent-communication language. Reactivity in this instance means the way in which electronic agents perceive their environment (which may be the physical world, a user via a graphical user interface, other agents, the internet, or perhaps all of these combined) and respond in a timely fashion to changes that occur in

³¹ For example, the MIT group has developed Tete-a-Tete (T@T) a program that enables electronic agents to negotiate not only price, but several other terms of a transaction, including warranties, shipping, service, returns, and payment options. For more information, see <http://ecommerce.media.mit.edu/tete-a-tete/>.

³² Later in this chapter, I'll qualify the term 'autonomously' and comment on the controversy that comes with using the term 'autonomously'.

³³ Jennings, N & Wooldridge, M. (1998) *Applications of Intelligent Agents*. Germany: Heidelberg, pp. 56-70. General view about the book (Online) Available at: <http://jasss.soc.surrey.ac.uk/2/3/sichman.html> [Accessed 07/Feb/2008].

it. Reactivity is based on what is called (UNIX) daemons.³⁴ Finally, electronic agents are autonomous which means that they have the ability to interact without the direct intervention of humans or others, and have some kind of control over their actions and internal state.³⁵

Weitzenboeck discusses certain features common to all electronic agents that she terms "weak features": autonomy, social ability, reactivity, and pro-activeness.³⁶ She names them as such to distinguish them from the more advanced features or "strong features" so-called because they allow electronic agents to function online autonomously. These strong features include mobility, benevolence, veracity, rationality, and collaboration.³⁷ The mobility of electronic agents affords them the ability to move freely around an electronic network. The veracity feature prevents electronic agents from communicating false information knowingly or creating conflicting goals. The rationality feature is defined as the ability to achieve goals, at least insofar as its beliefs permit. The advanced feature of collaboration stops electronic agents from accepting instructions unthinkingly. Instead they are obliged to take into account that their users might make mistakes such as giving an order that contains conflicting goals. In the same vein, the electronic agent should not unthinkingly omit important information and/or provide ambiguous information. For instance, an electronic agent can verify details by asking questions of their users or by applying a built-up user model to solve problems. In addition, the collaboration feature allows electronic agents to refuse to execute certain tasks if its result would be an unacceptably

³⁴ Daemons are system processes that continuously monitor system resources and activities, and become active only when certain conditions are met. For more information on the UNIX system, see Hermans, B. (1997) *Intelligent Software Agents on the Internet, An Inventory of Currently Offered Functionality in the Information Society and a Prediction of Near Future Developments*, *Peer-Reviewed Journal on the Internet*.

³⁵ Jennings, N & Wooldridge, M. (1998) *Applications of Intelligent Agents*. Germany: Heidelberg, pp. 56-70. General view about the book (Online) Available at: <http://jasss.soc.surrey.ac.uk/2/3/sichman.html> [Accessed 07/Feb/2008].

³⁶ Weitzenboeck, E. (2001) *Electronic Agents and Formation of Contracts*, *International Journal of Law and Information Technology*, 9 (3), p. 4.

³⁷ *Ibid.*

high load on the network sources or the possibility of damage caused to their users.³⁸

Other artificial intelligence scientists, mainly Shoham and Bates, argue that electronic agents are able to enjoy such capacity online because they possess features and concepts such as emotion, knowledge, belief, intention and obligation which are more commonly applied to humans.³⁹

There is a problematic issue in what artificial intelligence scientists consider as the features underpinning the operations of electronic agents. It is however evident that electronic agents do not work automatically and merely upon instruction; this is obvious enough throughout the literature studied which demonstrates how the work of electronic agents is always described as having a flexible autonomous capability. The literature frequently describes the autonomous functioning of electronic agents that does not require direct intervention or control from any human beings nor full forecasting of their behaviour.⁴⁰ Unfortunately, very few authors attempt to clarify to what extent autonomy is applied to the work of electronic agents.⁴¹

For example, Friedman and Nissenbaum (who have published a number of articles on the autonomy of electronic agents)⁴² argue that in a relationship between a user and his/her electronic agent, the user takes on the electronic agent to perform work that s/he would like, or needs to have done and, for whatever reasons, chooses not to do him/herself.⁴³ Perhaps the work is unexciting, complicated, risky, or time-consuming. The electronic agent then acts for and on behalf of the user. The role of an electronic

³⁸ For more information on these advanced features, see N & Wooldridge, M. (1998) *Applications of Intelligent Agents*, Heidelberg, Germany, pp. 56-70. General view about the book (Online) Available at: <http://jasss.soc.surrey.ac.uk/2/3/sichman.html> [Accessed 07/Feb/2008].

³⁹ See Shoham, Y. (1993) Agent-oriented programming, *Artificial Intelligence*, 60(1), pp. 51-92.
Bates, J. (1994) The Role of emotion in believable agents, *Communications of the ACM*, 37(7), pp. 122-125. I will clarify these particular concepts in chapter 4 and look whether electronic agents can legally be attributed these concepts where attempts in there are to grant electronic agents legal personality.

⁴⁰ See our discussion of electronic agents in the previous section of this chapter.

⁴¹ The views of these authors will be presented shortly in this section.

⁴² These articles are discussed in this section.

⁴³ In Chapter 4 of the thesis, we will see that this type of work that electronic agents do for their users is very similar to the work human agents do for their principals.

agent in such cases undermines the user's autonomy in favour of the electronic agent. To put it simply, when the autonomy of the user is undermined, the autonomy of the electronic agent is extended.⁴⁴ During the contractual process it is unlikely, if not impossible, to negotiate with an electronic agent i.e. during the contractual process communication with the electronic agents is disconnected. That is why, as stated above, artificial intelligence scientists consider that users in automated contracts cannot always forecast the behaviour of their electronic agents and do not know all the instructions and information that his/her electronic agent is privy to. Sartor states:

The user lacks the ability to precisely forecast all contexts in which the agent is going to operate; the ability to forecast what computing operations the agent's software will perform in all those contexts; and the ability to forecast what data and what instruction will form the agent at the time in which it will operate.⁴⁵

According to Sartor, the impossibility of forecasting the operations of electronic agents by users implies that electronic agents can deviate from their expected behaviour.

He states that:

[W]e need to assume that the user has a complete knowledge of all instructions included in the agent, and has simulated the functioning of these instructions in all possible environment [or]circumstances... it is difficult to assume that the user wanted what has been declared by the agents or knew every piece of information that played a role in the agent's operation.⁴⁶

Friedman and Nissenbaum present the example of an electronic agent named "CyberDog" to demonstrate the possibility of electronic agents acting differently from their users' wishes.⁴⁷ They mention that CyberDog can be programmed by a user to

⁴⁴ Friedman, B., & Nissenbaum, H. (1997) *Software agents and user autonomy*, Proceedings of the First International Conference on Autonomous Agents New York, NY: Association for Computing Machinery Press, pp. 466-469.

⁴⁵ Sartor, G. (2002) *Intentional concepts and the legal discipline of software agents*, in: *Open Agent Societies: Normative Specifications in Multi-Agent Systems*. London: Wiley. (Online) Available at: <http://www.cirsfid.unibo.it/~sartor/GSCirsfidOnlineMaterials/GSONLinePublications/GSPUB2002agentsWiley.pdf> [Accessed 15/March/2010].

⁴⁶ Ibid. This result is very important when examining the principle of mutual consent in Chapter 3 and whether automated contracts can be deemed consensual contracts.

⁴⁷ Friedman, B., & Nissenbaum, H. (1996) *User autonomy: Who should control what and when?* Conference companion of the conference on Human Factors in Computing Systems, CHI 96, New York:

"trash all mail from a particular individual and s/he can also add except when the headline is "Urgent"". ⁴⁸ According to Friedman and Nissenbaum, the user in this example loses the communication with his/her electronic agent as the agent is programmed to trash those emails coming from that particular individual. Consequently, the user loses control of his/her electronic agent and cannot therefore identify how the electronic agent would perform the task. Sometimes the headlines can take different forms of expressions such as "Important", "Help", or some other word requiring an urgent response. The electronic agent would be unable to identify these and this is not what the user would want. ⁴⁹

This result is very important for the assumptions underpinning this dissertation. That this type of electronic agent can act differently to their users' behaviours proves that they are not tools. It is true that deviant tool behaviour can normally be ascribed to personal mistakes i.e. the owners of these tools still, generally speaking, have control over them. Maes points out that even if the user wanted to discipline their electronic agent to make them more accurate in representing their intention and improving performance, such a path is too difficult to take. She writes that:

[T]he approach requires too much insight, understanding and effort from the end-user, since the user has to recognize the opportunity for employing an agent, take the initiative to create an agent, endow the agent with explicit knowledge (specifying this knowledge in an abstract language), and maintain the agent's rules over time (as work habits or interests change). ⁵⁰

Association for Computing Machinery, p. 433. This example is not given in the context of contract formation but it can still explain the extent of autonomy that electronic agents may enjoy in their operations.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Maes, P. (1994) Agents that reduce work and information overload, *Communications of the ACM*, 37(7) p. 32.

Norman argues that the user's attempt to take excessive control over the operations of the electronic agent will restrict the agent's movement and therefore obstruct the advantages of using them altogether in business.⁵¹

2.4 Conclusion

This chapter has described the features of electronic agents that are important when considering and analysing the conclusion of automated contracts. It also highlighted the way in which automated contracts are presented and constituted via computer software. However, this computer software is not simple; it operates strictly according to users' instructions but does not require the users' direct involvement. This developed computer software are known as electronic agents and have the autonomous ability to conclude contracts and complete all the contractual communications on behalf of the users.

The electronic agent discussed in the chapters below refers to a definition of "electronic agent" outlined above. Given that the advanced computer software mentioned is a new way of concluding contracts, it is important to examine how the law should/would enforce contracts formed by such software. In the following two chapters, we discuss scenarios and approaches adopted under common law regarding the enforceability of automated contracts in order to improve the debate vis a vis Islamic law.

It should be noted that the term 'operator' is used rather than 'user' in order to denote the entity on whose behalf the electronic agents are operating. Firstly, the reason for this is that the word 'user' may give a wrong impression to the customer or to the person interacting with the electronic agent. Secondly, some authors have referred to electronic agents as 'agents' on the grounds that the term 'electronic agent' may interchange with

⁵¹ Norman, D. A. (1994) How might people interact with agents, *Communications of the ACM*, 37(7) p. 68-71.

‘agent’ in the context of agency law.⁵² To clarify this, the term ‘agent’ is used in this thesis to refer only to a category of computer software. The term ‘agent’ used in this thesis has nothing to do with agency principles, unless the context indicates otherwise.

⁵² Middlebrook, T & Muller, J. (2000) Thoughts on bots: the emerging law of electronic agents, *Business Lawyer*, 56(1), p. 342.

CHAPTER 3: The Enforceability of Automated Contracts and Principle of Mutual Consent

3.1 Introduction

This chapter discusses the first approach to explaining the enforceability of automated contracts. This approach claims that automated contracts should be enforceable because they originate from the legal entity where the electronic agent is operating. In such cases, electronic agents are assumed to be merely passive devices in the contractual process and the extension of human interaction. Therefore, any transaction or action concluded by these devices will usually be traced back to those who operate them (operators).

The aim of this chapter is to establish if this approach is legally sufficient and compatible to render automated contracts binding. The beginning of this chapter is devoted to a discussion of the legal framework of this approach. The discussion investigates whether automated contracts are consensual, as this is a fundamental condition for an enforceable contract under common law. It can be assumed the operators of electronic agents have sufficiently manifested their assent on forming these kinds of contracts. The specific analysis here is of an objective theory under common law about the concept of mutual consent. At the end of the chapter, general comments will be provided on whether the concept of mutual consent under common law is satisfied and if automated contracts are enforceable based on this approach.

3.2 The Legal Framework of the Electronic Agent as Tool Approach

As will be demonstrated shortly, most legislatures in the world today conceptualize electronic agents as communication tools and as merely extensions of the operators' interaction. Transactions generated by these electronic agents are therefore attributed to the operators. All the actions of the electronic agents are attributed to the agent's

operator, whether or not they are intended, predicted or mistaken. On this basis, contracts entered into by an electronic agent will always bind the operator. The ‘electronic agent as tool’ approach predominates in proposed legislative attempts to deal with electronic contracting. For example, under the UNCITRAL Model Law, there is no mention of electronic agents.¹ When called to comment on Electronic Commerce, the international Chamber of Commerce asserted that it does not seem appropriate to regulate in specific terms, the automatic making of contracts.² Therefore, the UNICTRAL Model Law on Electronic Commerce, subsection 2(b), states that acts generated by computers are attributed to the operators of these computers: "[T]he data messages that are generated automatically by computers without human intervention should be regarded as “originating” from the legal entity on behalf of which the computer is operated"³

The originator of a data message is defined in subsection 2(c) as the “person by whom, or on whose behalf, the data message purports to have been sent or generated prior to storage...”. In the comments on subsection 2, the drafters explain:

The notion of “person” must be understood as referring both to natural persons and legal entities ... data messages that are generated by computers without direct human intervention therefore fall into the scope of subsection 2(c).

¹ The UNCITRAL Model Law is indicated here because the legislative movement of many countries today, including common law counties, has been influenced by the work of the United Nations Commission on International Trade Law. The Model Law was formulated by the United Nations Commission on International Trade Law (UNCITRAL) to facilitate the development of uniform legislation to be adopted by member states. It was undertaken partly in response to the fact that many countries have inadequate or outdated legislation governing electronic commerce in general and electronic contract in particular. See, United Nations Commission on International Trade Law Model Law on Electronic Commerce (1996) (hereinafter UNCITRAL Model Law on Electronic Commerce). (Online) Available at: www.un.org/documents/ga/res/51/a51r162.htm [Accessed 04/Feb/2008].

² International Chamber of Commerce, report on draft UNCITRAL Convention on Electronic Contracting, ad hoc ICC expert group, December 5, 2001, par. 3.3. I cannot clarify the reasons why it does not seem appropriate to regulate automated contracts in specific terms.

³ See article 13, paragraph 2, of the UNICTRAL Model Law on Electronic Commerce subsection 1996, 2(b).

In a similar way, in the UK, there is no statute available that clarifies the term “electronic agents”.⁴ Regulatory initiatives in this regard are in fact very limited. Likewise, the Electronic Commerce Directive of the European Union does not make provision for electronic agents.⁵ According to the notes contained in the proposal of the Electronic Commerce Directive, Member States should refrain from preventing a contract being made by an electronic agent.⁶ The final version makes no reference to electronic agents in the main text or in the recital.⁷ Several authors argue that the exclusion of the definition for electronic agents is due to EU regulations which address e-contracts, generally, under those contracts made by the exclusive use of some form of “distance communications” without specification to contracts concluded by electronic agents.⁸ Cross has located a failure to refer directly to electronic agents, which effectively means failure to realize that the use of electronic agent in the contractual process could create major obstacles to the creation of contracts.⁹ Those major obstacles may sometimes be anticipated by the legislators but are not considered, as yet, sufficiently important to warrant legislation treatment.¹⁰ According to Todd, in the eyes of this legislation, electronic agents have not yet become a common feature of electronic commerce.¹¹ Therefore, the approach of this legislation is similar to the UNICTRAL

⁴ This includes the Consumer Protection (Distance Selling) Regulations 2000 which incorporates Directive 97/7/EC, the Electronic Commerce (EC Directive) Regulations 2002 which incorporates Directive 2000/31/EC. None of the two regulations has clear reference regarding electronic agents. These two regulations are available at: <http://www.opsi.gov.uk/si/si2000/20002334.htm>. In terms of the Electronic Signatures Regulations 2002, it discusses mainly electronic signatures which is available at: <http://www.opsi.gov.uk/SI/si2002/20020318.htm> [Accessed 06/Feb/2008] and <http://www.opsi.gov.uk/si/si2002/20022013.htm> [Accessed 06/Feb/2008].

⁵ Poggi, C. T. (2000) Electronic Commerce Legislation: An Analysis of European and American Approaches to contract formation, *Virginia Journal of International Law*, 41(Fall) p. 727.

⁶ COM, (1998), p. 586 final (Online) Available at: www.europa.eu.int/scadplus/leg/en/lvb/124202.htm [Accessed 15/June/ 2009].

⁷ Kierkegaard, S. M. (2007) E-Contract Formation: U.S. and EU Perspectives, *Shidler Journal of Law, Communication & Technology*, 3(12), p. 11.

⁸ Kafeza, E. Chan, F. W. & Kafeza, I. (2006) *Legal Issues on Web Contracting*, International Conference on Software Engineering IASTED, Innsbruck, Austria, p. 8.

⁹ Cross. S. (2003) Agency, Contract and Intelligent Software Agents, *International Review of Law Computer and Technology*, 17(2), p. 185.

¹⁰ Ibid.

¹¹ See, Todd, P. (2005) *E-Commerce Law*. London: Cavendish. p. 195.

Model Law on Electronic Commerce subsection 2(b) in which automated contracts would be taken as originating from the operators of these computers.

By comparison, the Uniform Electronic Transactions Act (UETA)¹² defines electronic agents as: "[A] computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, without review or action by individual"¹³ The UETA identifies in this passage what an electronic agent is and explains clearly what shape an electronic agent's performance will take i.e. the ability of an electronic agent to perform actions independently without the involvement of a human being:

[A]n electronic agent is a machine. As the term "electronic agent" has come to be recognized, it is limited to a tool function ... an electronic agent, such as a computer program or other automated means employed by a person, is a tool of that person. As a general rule, the employer of a tool is responsible for the results obtained by the use of that tool since the tool has no independent volition of its own.¹⁴

¹² The text of the UETA is Available at: www.nccusl.org/Update/uniformact_factsheets/uniformacts-fs-ueta.asp [Accessed 20/March/2010].

¹³ The UETA S. 102(27). See appendix I S. 102 (27). The Electronic Signatures in Global and National Commerce Act (E-Sign) S. 106(5) adds "...without review or action by an individual at the time of the action or response". See appendix I S. 106(5). The Uniform Computer Transactions Act (UCITA) follows the UETA language in defining electronic agent, but at the same time clarifies that an electronic agent performs "on the person's behalf". The text of the UCITA is available at:

<http://www.law.upenn.edu/bll/archives/ulc/ucita/ucita200.htm> [Accessed 20/March/2010]. The UETA was the first act in the US that defined electronic agent in this way in the world of the internet. This makes legislation in the US the most obvious in so far as clear reference to the term of electronic agent. American lawmaking bodies have recognized the issue of electronic agents and their ability to make contracts since the late 1990s. See, the National Conference of Commissioners on Uniform State Laws (NCCUSL) Available at:

<http://www.nccusl.org/Update/DesktopDefault.aspx?tabindex=0&tabid=11> [Accessed 20/March/2010]. The NCCUSL is a non-profit unincorporated association, comprised of state commissions on uniform laws from each state, the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands. It was founded in 1892. Commissioners are appointed in a manner determined by each state or territory, review and evaluate the law of states to "determine which areas of law should be uniform." Over 250 uniform acts have been proposed by NCCUSL. Many have been adopted by most states nationwide, the most notable of which is the Uniform Commercial Code.

¹⁴ See the UETA. S. 2 cmt. 5. In one section, the comment advises that should autonomous electronic agents be developed that can learn through experience, modify instructions, and devise new instructions-- "courts may construe the definition of electronic agent accordingly, in order to recognize such new capabilities." See appendix I S. 2 cmt. 5. This means, at some point in future artificial intelligence developments offer autonomous agents instead of automatic, the courts then may construe the definition of electronic agents accordingly. This, as I see it, is a clear confess that the provisions of this legislation is not sufficient to apply to the advanced electronic agents and its approach that treats electronic agents as tools cannot be upheld. This is to say there might be good reason to treat them as agents for example, rather than as mere instruments. However, as Kerr puts it, the UETA failed to predict the future and to tell courts how to response the situation when electronic agents are developed more autonomously. Kerr, I.

S. 2 (212) of the Uniform Commercial Code (UCC) specifically validates any action performed by an electronic agent by stating: "An electronic record or electronic signature is attributable to a person if it was the act of the person or the person's electronic agent or the person is otherwise legally bound by the act"¹⁵

The legal analysis of the use of electronic agents in contract formation under these provisions focuses on human operators as legal entities acting on behalf of these electronic agents. It adopts "a legal fiction"¹⁶ in that anything issued from an electronic agent is issued by the natural or legal persons who use them, such a person using a paper medium. That is to say, the policy-maker's conception of electronic agents is that they have no doctrinal significance and are merely instruments of communication.¹⁷

Cross comments that:

The reason that legislatures tend to treat electronic agents as natural or passive devices is because it is not controversial or difficult in either theory or application. It currently appears so common-sense to say anything emanating from the electronic agent is, in fact, to be construed as emanating from the legally capable party using the agent.¹⁸

Allen and Widdison argue that this approach comprises several important advantages. First, there is no need to change the existing rules of contracting since the automated contract would still be formed between two recognized legal persons i.e. between the operators themselves. Secondly, the individuals who deal with the

(2000) *The Legality of Software-Mediated Transactions*, Proceedings of IASTED International Conference: Law and Technology, IASTED /ACTA Press. p. 93.

¹⁵ See appendix I S. 212. This is despite the fact that the Uniform Commercial Code (UCC) in (UCC) § 2-103(1) (g) admits similar to that found under the UETA S. 2(6), that electronic agent have the capacity to initiate an action or respond to electronic records or performances without review or action by individual i.e. independently from their operators. See appendix I S 2-103.

¹⁶ In the next section when I discuss the validity of this approach, I will explain why this adoption is a "legal fiction".

¹⁷ Mills argues that "...[t]ransactions... do not change in any material way simply because the contract is formed electronically. What has changed, and will continue to evolve, are primarily the means by which the parties, will communicate in establishing those contracts. Mills, K. (2005) Effective Formation of Contracts by Electronic Means Do We Need a Uniform Regulatory Regime? *Paper presented at World Summit on Information Technology in Tunis*, p. 2. (Online) Available at: <http://www.arbitralwomen.org/files/publication/2307092552667.pdf>, [Accessed 20/March/2010].

¹⁸ See Cross, S. (2003) Agency, Contract and Intelligent Software Agents, *International Review of Law Computer &Technology*, 17(2), p. 180.

operator's electronic agent would not bear the risk of error made by the electronic agent as its actions are attributed to their operators. Thirdly, as all electronic agents' actions are attributed to the operators, the latter would be very keen to ensure that their electronic agents are properly operated and policed to avert any mistakes or errors.¹⁹ By comparison, one can argue that this approach would be seen to be unfair and commercially unreasonable if the operator of the electronic agents is attributed to a vast range of unexpected communications. Electronic agents might then conclude a contract that excludes all warranties and sells an inferior product. That operators do not control the operations of the electronic agents is unfair; such an attribution regime (holding the operator liable for every action made by the electronic agent) is more appropriate in relation to the use of cars or machines which are meant to be directly controlled by their owners. Electronic agents, by comparison, work autonomously and therefore cannot be controlled.

However, with this approach, transactions generated by electronic agents are enforceable because they are considered to originate from the operators. In the next section I will examine whether the principle of mutual consent is satisfied in these contracts i.e. the operators have mutual consent to form these transactions, because this is an essential condition for and of an enforceable contract under common law. However, it is first of all crucial to discuss the conditions underpinning mutual consent and to understand where the law stands on the concept of common law.

3.3 The Principle of Mutual Consent

Under Common law, the concept of an enforceable contract requires the mutual consent of contracting parties. An offer and an acceptance between the contracting

¹⁹ Allen, T. & Widdison, R. (1996) Can Computers make contracts?. *Harvard Journal &Technology*, 9(1), p. 47.

parties is the general test in proving mutual consent. This is the principle for ‘simple’ contracts under common law, which is typically the most common type of any contractual relationship. In *Tinn v. Hoffman*, it was ruled that communication of an offer and an acceptance is necessary under common law. The court held that identical cross-offers do not create a contract. Although there is a meeting of minds on both parties in a cross-offers case, a contract requires an offer by one party, which is communicated to the other party and is followed by an acceptance of that offer by the other party, which must also be communicated to the party making the offer.²⁰

According to this conception, mutual consent under common law is made possible by the formation of a binding contract requiring apparent communication between an offer and an acceptance even if such communication does not represent or reflect the real intent or the inner psychological state of the party's mind. In *Deutsche Genossenschaftsbank v. Burnhope*, the House of Lords stated:

[I]t is true the objective of the construction [of contract] is to give effect to the intention of the parties. But our law of construction is based on an objective theory. The methodology is not to probe the real intention of the parties but to ascertain the contextual meaning of the relevant contractual language. Intention is determined by reference to expressed rather than actual intention.²¹

Common law then does not require contracting parties to have knowledge of the completed contract. It requires more than some subjective indication between such parties. A contractual obligation may be formed, and parties might be obliged even if there was no intention to make such contract or to be bound by its terms. In *Hart v. Mills*, Judge Hand states: "A contract has, strictly speaking, nothing to do with the personal or individual intent of the parties. A contract is an obligation attached by the

²⁰ *Tinn v. Hoffman*, [1873] 29 L.T. 271.

²¹ *Deutsche Genossenschaftsbank v. Burnhope* [1996] 1 Lloyd's Rep. 113, 122.

mere force of law to certain acts of the parties usually words, which ordinary accompany and represent a known intent".²²

Furthermore, in the case of *Storer v. Manchester City Council*, Lord Denning states:

In contracts you do not look into the actual intent in man's mind. You look at what he said and did. A contract is formed when there is, to all outward appearances, a contract. A man cannot get out of a contract by saying: 'I did not intend to contract' if by his words he has done so. His intention is to be found only in the outward expression.²³

In order to determine whether there is a contract, the task will be as Lord Eldon asserts: "Not to see that both contracting parties really meant the same thing, but only that both have their assent to the proposition which, be what it may, *de facto* arises out of the terms of their correspondence".²⁴

This point is important to bear in mind for the following section when discussing the enforceability of automated contracts. Since these contracts are concluded by electronic agents and not by the operators themselves, there is an argument here that the operator has no intention in these contracts. Under common law, a party is obliged to fulfil what he does/says because he has made others believe that the words/actions performed were intended by him. The objective test of evidence for an outward expression of a person is determined by evaluating how a reasonable man in the shoes of the other contracting party would have interpreted the contractual statements made by the first party, to see if they amounted either to a firm offer or an acceptance. What is relevant is whether a reasonable man would believe that assent to the contract was being manifested by the first party. Atiyah writes: "...The truth is a party is bound not so much because of what he intends but because of what he does ... for the good reason that other parties are

²² *Hart v. Mills* [1846] 15. M. and W. p. 85.

²³ *Storer v. Manchester City Council* [1974] 3 All ER 824.

²⁴ See *Kennedy v. Lee* [1817] 3 Mer p. 441.

likely to rely upon what he does in ways which are reasonable and even necessary by the standards of our society".²⁵

Turley explains that this trend of mutual consent has some merit. He argues that in any formation of a contract, the law relies on a clear communication between parties as intentions can appear ambiguous and therefore require some degree of evidence. This evidence may include a communication of an offer and an acceptance; the absence of which would, from the business's point of view, raise the question of whether the party meant or intended the contract.²⁶ Turley states:

An individual could escape their obligations merely by stating that they had no intention of being bound by any agreement. The courts thus require some outward objective evidence of the existence of an agreement. Any subjective element is subordinate to the objective one and is, to a large degree, of no consequence except where it corresponds with the intentions of the parties as ascertained by objective means.²⁷

In Civil law by comparison, the approach of mutual consent is different where the emphasis is on assent of a party as a subjective mental fact. According to this approach, in order to establish whether or not there was a valid contract, judges must look at the actual or subjective intentions of the parties to verify whether each party really intended to be bound by the contract. This means that subjectivists clearly consider a party's inner will as the determinant, and not its declared will.²⁸ It is the actual intention of the party that is essential, not their external behaviour such as the apparent communication of an offer and an acceptance. This implies that the communication of an offer and an acceptance will have no value except in its conformity to the party's inner will and intentions. In order to ensure that this conformity was really achieved, it is necessary to

²⁵ Atiyah, (2006) *An Introduction to the Law of Contract*, 6th ed. Oxford: Oxford University Press, p. 22.

²⁶ Turley, I. (2001) *Principles of Commercial Law*, 2th ed. Routledge-Cavendish. p. 50.

²⁷ Ibid.

²⁸ Farnsworth, A. (1999) *Contracts*. 3th ed, Aspen Law & Business. p. 116.

consider whether the party subjectively intended to be bound by the contract.²⁹ Questions always arise here on how to prove the party's actual intention.³⁰

However, common law is quite clear that mutual consent between parties is satisfied with an apparent communication of an offer and an acceptance between the parties. This, as has been noted, is a condition for any contract to be enforceable. As the aim of this thesis is to discuss the enforceability of automated contracts, it is important therefore in the following section to discuss this condition and whether it is met in these types of contracts. In other words, can we ascertain an apparent communication of an offer and an acceptance between parties in automated contracts?

3.3.1 Application of the Principal of Mutual Consent to Automated Contracts

There are arguments in the literature over whether mutual consent under common law is achievable in automated contracts i.e. operators of electronic agents giving consent to form these contracts. Allen and Widdison argue that the operators of electronic agents in automated contracts do not consent. According to the authors, there is still the question of whether there is an offer and subsequent acceptance of that offer when the operators of electronic agents do not know about the communication of contracting.³¹ As the operator is unaware of the fact that his electronic agent has made a transaction with the other party, Savirimuthu argues that it does not make sense to state that the operator has given his acceptance, or that mutual consent has been reached between two legal persons.³² Rahim suggests that the correct analysis in order to achieve the requirement of offer and acceptance between two legal persons is if the

²⁹ Owsia, P. (1994) *Formation of contract: a comparative study under English, French, Islamic, and Iranian law*. Heidelberg: Springer. p. 35.

³⁰ Ibid.

³¹ Allen, T. & Widdison, R. (1996) Can Computers make contracts?, *Harvard Journal & Technology*, 9(1), p. 47.

³² Savirimuthu, J. (2005) Online Contract Formation: Taking Technological Infrastructure Seriously, *University of Ottawa Law & Technology Journal*, 2(1), p. 105.

automated transactions were merely mediated by the electronic agents.³³ However, according to Rahim, this requirement is not achievable since automated transactions that are initiated by electronic agents are autonomous and in a manner unknown and unpredicted by the operators.³⁴ In the same vein, several authors argue that it would be equally less realistic to classify those communications made by electronic agents on behalf of the operators, as communications of the latter if they were unknown by the operators.³⁵ Lodder and Voulon also suggest that if automated contracts are concluded without the actual knowledge of the operators, one cannot claim that there was an offer and an acceptance between contracting parties.³⁶ According to the arguments raised above, inasmuch as the offer and acceptance are communicated by the electronic agents and not by the operators so the operators have no actual knowledge that their electronic agents are making this communication, we cannot then have the condition of mutual consent satisfied between the operators.

However, on the other hand, in the relationship between employers and their employees, the party is deemed to have consented to a contract made by his employee even though the former may not himself have made the contact communication. Under common law, employers are bound for their employees' autonomous acts (vicariously liable) even if they have neither immediately influenced nor participated in the wrongful behaviour that occasioned the loss e.g. a person employed in his company is a dangerous person or the employer is devoutly questioned for injuries caused on third

³³ Abdel Rahim, E. (2006) Intelligent Agents and Intentionality: Should We Begin to Think Outside the Box? , *Computer Law and Security Report*, 22(6), pp. 472-480.

³⁴ As explained in Chapter 2, these electronic agents do not only mediate communications, but also create and complete communications autonomously based on their own experiences. Therefore, it is difficult to claim that the contractual process was made by human operators.

³⁵ Kafeza, I. Kafeza, E. & Chiu, D.K.W, (2005) Legal Issues in Agents for Electronic Contracting, proceedings of the 38th Hawaii International Conference on System Sciences , pp. 7-8, (Online) Available at: <http://csdl2.computer.org/comp/proceedings/hicss/2005/2268/05/22680134a.pdf> [Accessed 20/March/2010].

³⁶ See, Lodder, A.R. & Voulon. M. (2000) Intelligent agents and the information requirements of the Directives on distance selling and e-commerce, *International Review of Law, Computers & Technology*, 16(3) p. 282. (Online) Available at: <http://csdl2.computer.org/comp/proceedings/hicss/2005/2268/05/22680134a.pdf> [Accessed 23/March/2010].

parties by such persons.³⁷ Under a legal doctrine referred to as “the respondent superior doctrine” (*Latin for “let the superior answer”*)³⁸, an employer is legally accountable for the actions of his employee on the ground that the crucial defining feature of the employer’s duty is its personal and non-delegable nature. Lord Macmillan described it thus in the leading case *Wilsons and Coal Co Ltd v English*:

It remains the owner’s obligation, and the agent whom the owner appoints to perform it on the owner’s behalf. The owner remains responsible for the negligence of the person whom he has appointed to perform his obligation for him, and cannot escape liability by merely proving that he has appointed a competent agent. If the owner’s duty has not been performed, no matter how competent the agent selected by the owner to perform it for him, the owner is responsible.³⁹

This rule, however, is only applied if the employee is acting within the course and scope of employment. That is to say, the employee’s actions will be attributed to the employer based only on when the act occurred during the term of employment. As can be seen, although the employee may perform the contract formation using his own initiative, Common law held the employer liable for this contract. This model, as I see it, is comparable to contracts carried out by electronic agents because of the lack of knowledge the employer has over the contracting process made by his employee. However, unlike electronic agents, ultimately the employee is a legal person acting as an agent on behalf of the employer in the course of the employment. Electronic agents,

³⁷ The owner of an automobile can be held vicariously liable for negligence committed by a person to whom the car has been loaned if the driver is using the car primarily for the purpose of performing a task for the owner. For instance, suppose that the company’s employee is driving from London to Manchester in order to attend a meeting at 2 o’clock. The employee hit a pedestrian while he was driving frantically to beat the deadline. The company will probably be legally liable for the pedestrian’s injuries. The reader observes that the purpose of this rule is fair. The company is liable for the costs of doing business and this would be regardless of this was of employee carelessness or misconduct. As will be discussed in chapter 4, the principle of *respondent superior doctrine* is most commonly applied in employer-employee relationships but it is applied in the agency relationships between agents and principals with some differences.

³⁸ The respondent superior doctrine, Latin for “let the superior answer” is a legal doctrine which states that an employer is responsible for employee actions performed within the course of the employment. The action against the employer is based upon the theory of vicarious liability, by which one party can be held liable for the acts of another. See Oxford Dictionary of Law (2003, 5th ed.).

³⁹ *Wilsons and Coal Co Ltd v English* [1938] AC 57 at 75.

by comparison, until now lack this legal capacity and so the comparison is imperfect and incomplete.⁴⁰

However, the model presented by Katz and others may appear more convincing. Katz uses to the analogy of the relationship between masters and slaves in Ancient Rome to illustrate that the condition of mutual consent should be satisfied in a contract carried out by an electronic agent.⁴¹ Slaves in the Ancient Rome played an important role in the development of Trade and Commerce by acting on behalf of their masters in running their business. They were acting as estate managers, bankers, merchants, shopkeepers and so on. In this time of antiquity, slaves were regarded as "things" with no rights or real duties in law, similar to the current legal status of electronic agents. Nonetheless, Romans still allowed these slaves to conduct business on behalf of their masters. According to Katz, the model of slavery in the Roman era could be suggested as a model for transactions formed by contemporary electronic agents. That is to say, the masters are not aware of the formation of contracts made on their behalf i.e. the communication of the offer and acceptance, as nobody states that actions made by slaves are not enforceable because they do not satisfy the concept of mutual consent under common law.⁴² Barrio also suggests that since slaves are allowed to form contracts on their masters' behalf without the intervention of their masters in the process of the contract communication, this should prove to be a good mechanism to apply to contracts made by electronic agents.⁴³ The mechanics are the same when operators limit their electronic agents with certain instructions and send them off to act on their behalf. Masters also limit the capacity of their slaves but encourage them to act on their behalf

⁴⁰ In the following chapter, I will examine whether electronic agents can be granted agency under common law.

⁴¹ Katz, A. (2009) Intelligent agents and Internet Commerce in Ancient Rome, *Computers & Law*, 20 (1), pp. 35–38.

⁴² Ibid.

⁴³ Barrio, F.(2008) *Autonomous Robots and the Law* 2008, (Online) Available at: <http://www.scl.org/com>, [Accessed04/March/2009].

and do their business within the limitations drawn by the masters.⁴⁴ Whilst slaves are able to make decisions on behalf of their masters in order to facilitate and increase the business transactions, the same can be applied to electronic agents as they have the capability to increase and expand the efficiency of the market to benefit of operators.⁴⁵

3.3.1.1 The Objective Approach to Identifying Mutual Consent

As explained above, the way that common law mutual consent operates within Common law is subject to an objective test in which the parties do not (subjectively) intend the contract.⁴⁶ That is to say, an operator does not need to have actual knowledge of the completed transaction by his/her electronic agent. If an offer meets with an acceptance, neither party is allowed to say that they did not know the exact content of that contract or that they were unaware of the time when it was made. As Hedley states, “their agreement was of a slip of the pen or of the mouse”.⁴⁷ If party A mistakenly believes party B made a certain declaration which B did not make, or A believes B had a certain intention which B did not have, this can sometimes produce the same effect as if B had made that declaration or that intention. As ruled in the case of *the Leonidas D* [1985], Goff LJ, Lord Brightman asserted that if party O so acts that his conduct, objectively considered, constitutes an offer, and party A, believing that the conduct of O represents his actual intention, accepts O’s offer, then a contract will come into existence, and on those facts it will make no difference if O did not actually intend to make an offer, or if he misunderstood A’s acceptance, so that O’s state of mind is, in such circumstances, irrelevant.⁴⁸ In the case of *Thomton v Shoe Lane Parking*, Lord Denning was in doubt about whether the offer was made by the proprietor of the

⁴⁴ Ibid.

⁴⁵ The use of electronic agents in making contractual obligations can reduce costs. In addition, more complex contracts which were difficult before to be formed by humans, now became possible by the use of electronic agents.

⁴⁶ See section 2.3. Principle of Mutual Consent.

⁴⁷ Hedley, S. (2006) *The Law of Electronic Commerce and the Internet in UK and Ireland*. London: Cavendish Publishing Limited. p. 247.

⁴⁸ *Leonidas D* [1985] 1 WLR 925

machine when he holds it out as being ready to receive the customer's money. Lord Denning's analysis of the contractual process in this case was that the activities of the machine are deemed to be those of the proprietor and they are bound by their apparent 'intention to be bound' to the actions of that machine.⁴⁹

Therefore, operators in automated contracts should be legally bound, not because they wanted the contractual contents, but because they chose from the beginning to delegate the formation of the contracts to their electronic agents. To conclude the contract will not require the unexpressed intent towards a single contractual point or a specific transaction, but rather the apparent intention of the operators to appoint electronic agents. Courts under common law should not be interested in the psychological or inner state of the operator's mind but in the outward significance of the contractual statements made by their electronic agents. As Kerr states, the objective approach of mutual consent is applicable by holding on to the idea that by initiating an electronic agent to finalize a transaction on behalf of an operator, the operator is deemed to have consented to the concluded transaction and therefore will be bound by it.⁵⁰ In this regard, Lerouge states that

We can assume that the operator has assented by conduct when using electronic agent. By using electronic agents to enter into contracts, it presumes the operator's assent to the contract even though he may subjectively intent otherwise.⁵¹

In the case of *State Farm Mutual Automobile Insurance Co. v. Bock horst*⁵², a motorist allowed his automobile insurance policy to expire. When he ran over and killed a pedestrian, he sent a cheque requesting the company to renew his policy retroactively. Due to the company's computer failing to deduce that the motorist was visibly

⁴⁹ *Thornton v Shoe Lane Parking* [1971] 1 All ER 686.

⁵⁰ Kerr, I. R. (1999) *Providing for Autonomous Electronic Devices in the Uniform Electronic Commerce Act*, in Proceedings of the Uniform Law Conference of Canada. p. 192.

⁵¹ Lerouge, J.F. (2000) The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level, *The John Marshall Journal of Computer and Information Law*, 18(2), p. 403.

⁵² *State Farm Mutual Automobile Insurance Co. v. Bock horst* 453 F.2d 533 (10th Cir. 1972).

attempting to obtain coverage for an accident that had already happened, the motorist was able to pass the renewal request and the claim at the same time. The computer entered the details of the renewal request which later sent a notice to the motorist confirming that the policy had been renewed. *State Farm* claimed that the reinstatement of Bockhorst's policy resulted from the flawed processes of a computer as the actions of the computer were not intentionally based. *State Farm* also argued that the reinstated policy was accomplished without having knowledge of Bockhorst's accident. Furthermore, the company argued that it was the unavoidable result of the inexorable processes of a computer rather than the intentional relinquishment of a known right that enabled the reinstatement of the policy.⁵³ The court nonetheless decided the contract was valid even though the person on whose account the contract was made did not know about it. Deciding in favour of Bockhorst, the judge ruled:

[H]olding a company responsible for the actions of its computer does not exhibit distaste for modern business practices as [the insurance company] asserts. A computer operates only in accordance with the information and directions supplied by its human programmers. If the computer does not think like a man, it is man's fault. The reinstatement of Bockhorst's policy was the direct result of the errors and oversights of [the insurance company]'s human agents and employees. The fact that the actual processing of the policy was carried out by an unimaginative mechanical device can have no effect on the company's responsibilities for those errors and oversights...⁵⁴

According to the concept of mutual consent under common law, whether operators of electronic agents know about the formation of contracts and their terms or not should not prevent us from stating that the operators are inextricably bound to the actions of the electronic agents and that the activities of the electronic agents are deemed to be the operator's as well.⁵⁵ People usually conclude their contracts without reading them and yet those contracts are still binding upon them. In the case of *L'Estrange v. Graucob*, the

⁵³ *State Farm Mut. Auto. Ins. Co. v. Bockhorst*, 453 F.2d 533 (10th Cir.1972), (Online) Available at: [http://herecomesthejudge.com/unsort/State_Farm_Mut._Auto._Ins._Co._v._Bockhorst,_453_F.2d_533_\(10th_Cir.1972\).html](http://herecomesthejudge.com/unsort/State_Farm_Mut._Auto._Ins._Co._v._Bockhorst,_453_F.2d_533_(10th_Cir.1972).html) [Accessed 27/Feb/2008].

⁵⁴ *State Farm Mut. Auto. Ins. Co. v. Bockhorst*, 453 F.2d 533, 536-537 (10th Cir. 1972).

⁵⁵ *Thornton v Shoe Lane Parking* [1971] 1 All ER 686.

court ruled that a person who signs a contract without reading it is normally bound by its terms, except if he has been lied to. Scrutton LJ states: "It was immaterial that L'Estrange had not read the clause. The fact that she signed it meant that she was bound by it. She is deemed to have read and agreed to the terms of the contract".⁵⁶

In the financial marketplace, for example, where electronic agents are programmed to buy and sell stock, if we ask for the operator's knowledge of the contract communication, the electronic agents will not be able to sell what they have just acquired before communicating the previous purchase to their operator. Obviously, this process would cause difficulties and hampers effective on-line trading.⁵⁷ The general principle under common law is that whoever operates a device that has the ability to create both trust and reliance in the minds of others, commits himself to be legally bound by any generated consequences, even though he may subjectively intend otherwise.⁵⁸ That is to say, whoever assents to the means also assents to the consequences. As Lerouge states: "The electronic agent is programmed by the operator and therefore, since he created this way of communicating, he should be held responsible...if a party creates a situation in which an electronic agent is to act on his behalf, then a party is bound by the actions of the agents".⁵⁹ Allen and Widdison also write: "The operator chose electronic agent to act on his behalf, therefore, it should not be denied his liability. This is according to a "legal fiction" that the intention and the

⁵⁶ *L'Estrange v. Graucob* [1934] 2 KB 394 at 403.

⁵⁷ Sartor, G. (2002) *Agents in Cyberlaw*, In Proceedings of the workshop on the Law of Electronic Agents, LEA02, (Online) Available at: <http://www.lea-online.net/publications/Sartor.pdf> [Accessed 15/March/2010].

⁵⁸ Atiyah, (2006) *An Introduction to the Law of Contract*, 6th ed. Oxford: Oxford University Press. p. 47.

⁵⁹ Lerouge, J.F. (2000) The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level, *The John Marshall Journal of Computer and Information Law*, 18(2). p. 27.

whole risk of transactions should be put on the person best to control them- those who program and control the computer".⁶⁰

Accordingly, people should be deemed to be expressing their consent when using an electronic agent for the purposes of contract formation. The communication of the electronic agent will be inferred to be the communication of the (human) operator of the electronic agent. The only communication of an offer or an acceptance that is relevant (where a contract is formed in which at least one party is using an electronic agent) is that of the person using the electronic agent, and not of the electronic agent itself. That is to say, the communication of the offer or acceptance is made between those who operate these automated programs.

3.3.1.1.1 Some Problems with the Objective Approach

Certain critics argue that the objective approach as described in the previous section⁶¹ suggests that a party is obliged to what he does/say as he made others believe that he intended the words/actions performed. A contracting party will only be able to escape the contract if he can prove that the other party knew or reasonably ought to have known of the mistake, malfunction, or error, and that it is unreasonable under any circumstance for the counterparty to believe that they would assent to the contract.⁶² The objective test of evidence of an outward expression of a person is determined by looking at how a reasonable man in the shoes of the other contracting party would have interpreted the contractual statements made by the first party, to see if they amounted

⁶⁰ Allen, T. & Widdison, R. (1996) Can Computers make contracts? *Harvard Journal & Technology*, 9(1), p. 46.

⁶¹ See Section 2.3. Principle of Mutual Consent.

⁶² Reed, C. (2004) *Internet Law: Text and Materials*, 7th ed. Cambridge: Cambridge University Press. p. 210. This should defeat the argument of Weitzenboeck that: "within the existing of common law, situations are imaginable, where one of the contracting parties wants to get out of a contract concluded by a software agent. To do so, it then has the chance to either argue that the software agent failed, was defective or acted improperly and consequently a mistake or an unfair unconscionability". See Weitzenboeck E. M. (2004) Good faith and fair dealing in contracts formed and performed by electronic agents, *Artificial Intelligence and Law*, 12(1), pp. 83–110.

either to a firm offer or an acceptance. As Atiyah explains, what is relevant is whether a reasonable man would believe that assent to the contract was being manifested by the first party.⁶³ It is not sufficiently convincing that there is an apparent communication of contract formation between the operators in automated contracts. Such communication does not in fact exist. What is actually apparent and known is that the communication of the contract formation of automated contracts was made by electronic agents and not by the operators. According to Cross, these electronic agents are not the first generation of computer software which functions automatically and only according to the operator's determinations.⁶⁴ In the advanced generations of computer software such as these electronic agents, the function of the whole contract formation communication and its stages are fulfilled autonomously (as explained in the previous chapter) by these electronic agents. This makes electronic agents different from fax machines, telephones, or any alternative medium by which a contract is concluded. As Sommer puts it, it is not a plausible argument to characterize electronic agents in a similar fashion to these passive devices.⁶⁵ This is because electronic agents participate in the contract formation process as well. The telephone conveys the voice of one contracting party to another. A fax conveys the handwritten or typed communication sought to be exchanged. If there is distortion in the signal or the connection is severed, the contracting parties can rectify this accordingly by re-sending the fax message. Ultimately, the contracting parties remain in control of the contractual process⁶⁶

To satisfy the condition of mutual consent and therefore bind operators to their automated contracts, we cannot rely solely on the fiction of an engagement of an offer and its acceptance between operators. Such nonexistent communication cannot be the

⁶³ Atiyah, P.S. (2006) *An Introduction to the Law of Contract*. 6th ed. Oxford: Oxford University Press. p. 22.

⁶⁴ Cross, S. (2003) Agency, Contract and Intelligent Software Agents, *International Review of Law Computer and Technology*, 17(2), p. 180.

⁶⁵ Sommer, J. (2000) Against Cyberlaw, *Berkeley Technology Law Journal*, 15(3), p. 1145.

⁶⁶ Cross, S. *op. cit.*, p. 180.

sole reason constituting the operators' mutual consent. According to Savirimuthu, the communication of an offer and acceptance must underscore what is generally referred to as "the voluntary aspect of contract".⁶⁷ As Kerr puts it, the traditional understanding of what makes a contract binding under common law is the underlying idea that parties to a contract have each exercised freewill: each person has freely chosen to enter into the contract.⁶⁸ When an electronic agent makes an acceptance autonomously without their operator's knowledge or even expectation, the operator has not exercised freewill because the operator is unaware of the completion of the contract and did not choose to send the communication of acceptance.⁶⁹

In addition, Allen and Widdison argue that the application of such rule to automated contracts could provide judges with "a fuzzy margin of manoeuvre".⁷⁰ They suggest that it will be very difficult for the judges in automated contracts to distinguish the reasonable from the unreasonable and in deciding on a case-by-case basis whether or not a person can reasonably believe that the operator of the electronic agent has manifested assent to the contract. The judgment here will be made according to various principles, aspects and criteria; discretion therefore will differ from judge to judge and vary from time to time and even from one place to another.⁷¹ To illustrate this, Howarth suggests that⁷² there are different types of objectivity. First, there is *promisor objectivity* in which the court tries to decide what the reasonable promisor would have intended. Second, there is *promisee objectivity* where the focus is on what the reasonable person to whom the promise is made would know what was intended. Third, there is what is called detached objectivity which evaluates the consent of a party through the eyes of an

⁶⁷ Savirimuthu, J. (2005) Online Contract Formation: Taking Technological Infrastructure Seriously, *University of Ottawa Law & Technology Journal*, 2(1), p. 105.

⁶⁸ Kerr, I. (2001) Ensuring the Success of Contract Formation in Agent-Mediated Electronic Commerce, *Electronic Commerce Research Journal*, 1(4), p. 190.

⁶⁹ Ibid.

⁷⁰ See Allen, T. & Widdison, R. (1996) Can Computers make contracts? *Harvard Journal & Technology*, 9(1), p. 47

⁷¹ Ibid.

⁷² Howarth, W. (1984) The Meaning of Objectivity in Contract, *Law Quarterly Review*, 100, p. 265.

independent third party.⁷³ In *Smith v Hughes* (1871), where the dispute centred on the type of commodity (oats) the parties had agreed a contract about, the test was made as to whether the party who wished to deny the contract acted in a way that a reasonable man would believe the party was assenting to the terms proposed by the other party: in other words promisee objectivity.⁷⁴

Furthermore, in *State Farm Mutual Automobile Insurance Co. v. Bockhorst*, Rahim argues that judges in such a case could reach different conclusions about similar facts and situations.⁷⁵ For example, the court, as seen previously,⁷⁶ has decided that the contract was valid even though the person on whose account the contract was made did not know about it. Another judge could decide differently and rule that it is unreasonable for the motorist to believe that the insurance company would consent to make a contract with someone who was clearly attempting to obtain coverage for an accident that had already happened. This mistake was or should have been very obvious to the motorist.⁷⁷

A further example, which could explain the difficult task faced by judges in distinguishing the reasonable from the unreasonable, is online pricing. In online pricing, it is not clear how judges should decide between what a reasonable price for goods is and what is not. Online prices are not stable over time and people cannot be made fully aware of all these updated changes i.e. a person might believe that very low prices are sometimes offered online for promotional reasons; therefore a web store might find it difficult to argue that such prices are unreasonable for customers. On 21 September 1999, Argos advertised the sale of televisions on its website for only £2.99. Customers

⁷³ Ibid.

⁷⁴ *Smith v Hughes* [1871] LR 6 QB 597.

⁷⁵ Abdel Rahim, E. (2006) Intelligent Agents and Intentionality: Should We Begin to Think Outside the Box? *Computer Law and Security Report*, 22(6) pp. 472-480.

⁷⁶ See 2.3.1. 1 Objective Approach in Identifying Mutual Consent.

⁷⁷ Abdel Rahim, E. *op. cit.* pp. 472-480.

started placing orders over to take advantage of this excellent offer. However, Argos refused to deliver the televisions on the grounds that they had been incorrectly priced by mistake. Argos claimed that the correct price was £299 not £2.99.⁷⁸ Likewise, even though it is stated that the operator in an automated transaction has conducted himself in such a way that a reasonable man would believe the transaction was assented by the operator, one can still challenge this as an unreasonable belief due to the fact that operators do not participate in the contractual process generated by the electronic agents and the operators have no knowledge of the transaction being made.⁷⁹

Thus the courts may not be consistent about which type of objectivity is used and can change between one and the other. Hedley argues that in applying the objective test to automated contracts there will usually be room for argument about whether or not the act of an electronic agent is reasonable.⁸⁰ This method of contracting can thus create uncertainty within online business and lack of public confidence.

3.4. Conclusion

This chapter discussed whether or not the principle of mutual consent is satisfied in automated contracts in order that these contracts become enforceable. Common law is clear about whether the test of a party's assent is objective and whether parties need to be aware of the transaction or to have knowledge of it. As such, mutual consent between parties is usually satisfied with an apparent communication of an offer and an acceptance between the parties. We also explored the issue of apparent communication

⁷⁸ Available at:

http://www.golds.co.uk/articles/articles_ec_conditions_online_business.htm. [Accessed 22/Sep/2008].

⁷⁹ Kerr, I. (1999) Spirits in the Material World: Intelligent Agent as Intermediaries in Electronic Commerce, *Dalhousie Law Journal*, 22(2), p. 214. Today, I hardly believe one would come and state that s/he is unaware that the operator does not know about the transaction completed by his/her electronic agent. However, exceptions always arise.

⁸⁰ Hedley, S. (2006) *The Law of Electronic Commerce and the Internet in UK and Ireland*. London: Cavendish Publishing Limited. p. 247.

of an offer and an acceptance between parties in automated contracts. Two opposing views featuring their own weaknesses can be thus identified.

On the one hand, there are opinions that find automated contracts are consensual because there is an apparent communication of an offer and an acceptance between operators of electronic agents. According to this opinion, the fact that both the communication of the offer and its acceptance was achieved by electronic agents means that the operators may not be aware or do not have knowledge of it does not free them from being bound. It was clear under common law that the operators will be bound because by using electronic agents online they make others to believe that this is their own contract communication.

On the other hand, there are convincing arguments that negate the consent of operators in automated contracts and suggest that the objective approach of mutual consent is inapplicable. This is because the application of the objective approach requires the earnest belief of a reasonable person that the offer and acceptance of the contract had been manifested by the contracting party. "Apparent intention" that can be relied upon by the other party is what makes the objective approach applicable. For the other party it becomes difficult to argue that a reasonable person would conclude that the communication of the offer and acceptance in automated contracts was apparently made by the operators as what is really apparent is that such communication was made by electronic agents. The objective approach is resistant to being adapted to contracts made by electronic agents because those who conduct such business cannot reasonable believe that the contract communication was made by the operators. The law is clear on the fact that a transaction made by an electronic agent is autonomous and the offer and acceptance is made without the operator's knowledge. It cannot be argued that some people may have limited knowledge of these facts as the use of electronic agents in

forming contracts is more generalised today. That is to say, the public cannot deny their knowledge that automated contracts are formed by electronic agents autonomously and without the operators' awareness or direct intervention.

In conclusion it would seem that the way electronic agents work online has not been taken into consideration when operators determine whether automated contracts have been communicated. The autonomous characteristic of electronic agents has had no influence on the operators' decision, affecting the way they look at the enforceability of contracts formed by them. The next chapter takes into consideration the fact that the computer software used to form automated contracts, is not of the first generation which operates automatically and solely according to the operator's determinations. These electronic agents utilize advanced generations of computer software that works autonomously and without any intervention of the operators. Hence, an alternative approach must be recognised, one that characterizes electronic agents as agents with rights to act on behalf of their operators. This approach requires the employment of agency law to enforce contracts concluded by electronic agents.

CHAPTER 4: The Enforceability of Automated Contracts and Agency Theory

4.1 Introduction

This chapter presents an alternative approach to explaining the enforceability of automated contracts. This approach suggests that electronic agents behave on the internet just as human agents do and contracts made by electronic agents therefore should be enforced according to agency principles. I will assess the validity of this approach, specifically evaluating whether it is legally sufficient to enforce the binding nature of automated contracts.

The chapter starts by discussing the legal framework of this approach. It presents a discussion on how the operations of electronic agents can be viewed as the same as human agents' operations. Secondly, it discusses the common law principles of agency and whether electronic agents can be granted agency. It proceeds by analysing what authority electronic agents have to bind their operators. Is it actual, apparent, or ratification authority? Each of these categories is subject to an investigation to examine its applicability to electronic agents. In line with the approach of treating electronic agents the same as human agents, the chapter examines whether electronic agents can be considered to have an extended legal personality. Finally, the chapter assesses whether agency principles can be used to enforce automated contracts under common law.

4.2 How Electronic Agents Use Agency Principles

This approach suggests that an electronic agent as agent acting on behalf of his/her operator. According to this approach, agency principles are perfectly embodied by the role in which electronic agents play by conducting transactions online and completing all the transaction processes autonomously on behalf of their operators. This in contrast

to the previous approach which conceptualizes electronic agents as communication tools by establishing that the contract communications in automated contracts are made by the operators of electronic agents. This outlook establishes that electronic agents are not merely used as mediums or passive devices but rather as agents who have been given instructions, sent off online to make transactions on behalf of their operators and completed all stages of the transaction process independently of their operators. This is the same function human agents normally perform; they operate based upon predetermined instructions and enjoy the ability to perform transactions in favour of their principals without the latter's direct intervention. Fischer makes this observation:

When computers are given the capacity to communicate with each other based upon pre-programmed instructions, and when they possess the physical capability to execute agreements on shipments of goods without any human awareness or input into the agreements beyond the original programming of the computer's instructions, these computers serve the same function as similarly instructed human agents of a party....¹

The Uniform Computer Information Transactions Act (UCITA)², S.107 (d) states: "A person that uses an electronic agent that it has selected for making an authentication, performance, or agreement, including manifestation of assent, is bound by the operations of the electronic agent...".³ The Official Comment considers that: "The term 'selects' does not imply a choice from among alternative agents but rather a conscious decision to use a particular agent. The concept stated here embodies principles like those in agency law...".⁴

It is clear then that the Official Comments of the UCITA consider agency principles to be embodied in the role that electronic agents play on the Internet. In such a situation,

¹ Fisher, P, J. (1997) Computers as Agents: a proposed approach to revised U.C.C Article 2, *Indiana Journal Law*, 72(2), p. 557.

² Hereinafter UCITA 1999 [USA]: the UCITA is Available at: <http://www.law.upenn.edu/bll/archives/ulc/ucita/ucita200.ht> [Accessed 15/March/2010].

³ S.107 (d).

⁴ The UCITA, S. 107 (d), cmt. 23. See appendix I.

an operator selects an electronic agent and gives the latter the power to bind him.⁵ Furthermore, S. 212 (a) of the UCITA 1999 [USA] states: "An electronic authentication, display, message, record, or performance is attributed to a person if it was the act of that person or its electronic agent, or if the person is bound by it under agency or other law..."⁶

The Official Comment on this section explains this kind of attribution as "might involve reliance on agency law principles."⁷ Middlebrook and Muller⁸ give eBay online auction as an example to prove the functional similarity between electronic and human agents. The authors explain that in a classical auction, if a buyer is unable to go and bid for himself, he asks a friend to go (as an agent) to bid on his behalf. Normally, he will also tell the friend his maximum bid amount. According to Middlebrook and Muller, the same scenario happens in eBay auctions. For instance, a buyer enters his or her maximum bid in the bidding system together with their user ID and password number. The system will then act as a proxy bidder in the buyer's absence and will try to keep the bid within the maximum amount nominated by the buyer.⁹ That is to say, the proxy bidding system is in fact the buyer's friend (the agent).¹⁰

⁵ §107 cmt. 5. Although the Official Comment of the UETA asserts that there is a functional similarity between electronic and human agents, nevertheless they assert that electronic agents do not depend on agency law. See the UCITA, S. 107 (d), cmt. 23. See appendix I. This position is described by several legal authors as very complex. According to Kerr for example, the drafters did not point out clearly why and on what basis electronic agents do not depend on agency law. In Kerr's words, "by referring to the law of agency without articulating it, the provision of S. 213 (a) confuses rather than clarifies the issue". This chapter attempts to answer whether or not electronic agents can be granted agency and discusses what barriers exist against this application.

⁶ S. 212 (a)

⁷ The UCITA, S. 213 (a), cmt. 2. See appendix I. These references to agency principles are the major addition in this legislation. For this reason, the Act has been described as the most insightful and innovative legislation in the existing corpus of e-commerce legislation today. See, Kerr, I. (2001) Ensuring the Success of Contract Formation in Agent-Mediated Electronic Commerce, *Electronic Commerce Research Journal*, 1(1)-(2), p. 45. It should be noted here that the UCITA 1999 [USA], as it has been seen, has not referred through its provisions to the existence of agency principles in transactions made by automated contracts, even in its most related provisions to electronic agents. Rather, it is the Official Comment which make reference to agency principles. Nevertheless, the drafters have not clarified how agency principles would be applied to automated contracts.

⁸ Middlebrook, S. T & Muller, J. (2000) Thoughts on bots: the emerging law of electronic agents, *The Business Lawyer*, 56(1), p. 354.

⁹ It appears exactly as follows: "Our bidding system operates as proxy bid system. This means that a bidder can submit a maximum bid amount and our system will act as a proxy bidder in their absence,

Consequently, insomuch as electronic agents act like human agents on the Internet, they should therefore be treated as nothing less than that. Fischer states:

When a human actor uses a computer in the same manner as medium to send a message to another human actor, the computer functions in the same way that a fax machine or posted letter does. However, when a principal uses a computer in the same manner that it uses a human agent, then the law should treat the computer in the same manner that it treats the human agent.¹¹

In the next section, I will discuss whether agency principles of common law accept such treatment i.e. electronic agents being treated as such. Before that, it is important to first explain these principles.

4.3 The Common Law Principles of Agency

In order to be competent to act as an agent under common law, the agent need not be a person possessing full contractual capacity.¹² A cogent example is infants who, although they are considered to be incompetent, however, under the common law of agency, they can act as agents. A minor may act as an agent to bind a principal although

executing their bid for them and trying to keep the bid price as low as possible. This way a bidder does not have to be at the auction every minute". See www.ebay.com. One should bear in mind that eBay has consented to act as a bidder not only for a particular user, but rather to all individuals bidding on eBay site.

¹⁰ Middlebrook & Muller, *op. cit.*, pp. 357-358. See also the example given by Sylvie and Wodka which proves the functional similarity between electronic and human agents. *The authors provide that:* Jenn wants to go to a wedding but she has nothing to wear. Jenn is hesitating to go shopping outside because she knows that shopping represents a big time investment. Jenn turns on her computer and asks her electronic agent to buy some trousers and an elegant vest. Jenn also tells her electronic agent not to exceed \$300. After quick search, the electronic agent provides Jenn with 10 models which could correspond to her previous purchases and desires. Jenn chooses her favorite one. The electronic agent buys the item from the store Y using Jenn's credit card details which are already stored in electronic agent's memory. In that short example, the electronic agent "MINI-ME" has performed all the stages of Jenn's transaction instead of her. Jenn's attitude toward the contractual process has been totally induced by the electronic agent. Sylvie, R & Wodka, D. (2003) *Electronic agents on the Internet: A New Way to Satisfy the Consumer*, *12th international conference on Research in the Distributive*, Paris, France, pp.2-3. (Online) Available at: http://halshs.archives-ouvertes.fr/docs/00/14/30/40/PDF/E_satisfaction.pdf [Accessed 30/March/2010].

¹¹ *Ibid.*

¹² Beale, H. (2008) *Chitty on Contracts*. 30th ed .Sweet & Maxwell, pp. 31-083. By comparison, Islamic law requires full contractual capacity in order to for agents to pass the competence test. The theory behind this is that a person who lacks capacity to bind himself to a transaction should not be allowed the capacity to bind others. Chapter 7 of this thesis will provide more discussion on Islamic agency theory.

the minor would lack capacity to bind him or herself to the same transaction.¹³ Under common law, if the principal consents to the agent to act on his/her behalf and the agent accordingly agrees to act on behalf of the principal, an agency relationship is established. According to Bowstead:

Agency is the fiduciary relationship which exists between two persons, one of whom expressly or impliedly consents that the other should act on his behalf so as to affect his relations with third parties, and the other of whom similarly consents so to act or so acts. The one on whose behalf the act or acts are to be done is called the principal. The one who is to act is called the agent. Any person other than the principal and the agent may be referred to as the third party.¹⁴

In light of this definition, the concept of agency relationship under common law is a consensual relationship in which it is clear that no special formality is required; only the requirement by an agent and a principal to consent to their association with each other. When the agent consents to act on behalf of the principal, the agent then under common law obtains what is so-called *actual authority* to bind the principal.¹⁵ That does not necessarily mean that an agency relationship under common law can only be established by a manifestation of consent between the principal and the agent (*express authority*).

The consent of the principal, which is regarded as the basic justification for the agent's power to affect his principal's legal relations, may be implied from his conduct or from his position towards the agent, and vice versa.¹⁶ This means that the agent's actions can also sufficiently constitute his/her implied consent to enter into an agency relationship.¹⁷ In such circumstances, the agent is deemed to have what is called *implied authority* in order to bind the principal. An agency relationship can be established if the principal does not manifest assent to the agent but the agent reasonably believes, in accordance with the principal's manifestations to the agent, that the principal wishes

¹³ Anderson, T. R. (1991) *Agents' Legal Responsibility*. Natl Underwriter Co, p. 33.

¹⁴ Reynolds, F M B. (2001) *Bowstead and Reynolds on Agency*. 17th ed. Sweet & Maxwell, [1-001].

¹⁵ Anderson, *op. cit.*, p. 32.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

him/her to act and the agent acts accordingly. In the case of *Pole v. Leask*, Lord Cranworth states:

As to the constitution by principal of another to act as his agent, no one can become the agent of any person except by the will of that other person. (this can) simply by placing another in a situation in which, according to ordinary rules of law, or perhaps it would be more correct to say according to the ordinary usages of mankind, that other is understood to represent and act for the person who has so placed him...¹⁸

So, the existence of the agency relationship is generally based in contract with its emphasis being upon contractual notions between the principals and the agents. In *Yasuda Fire & Marine Insurance v Orion Marine Insurance*, Colman J held that: "an agency relationship is almost invariably founded upon a contract between principal and agent. Agency is essentially a creature of contract".¹⁹ However, as it is explained in common law texts, agency relationships are not always created in this contractual format i.e. an agent and principal consent to their association with each other. Reynolds writes: "The agreement between the principal and the agent does not have to be contractual. There may be no consideration or intention to create contractual relations..."²⁰

For example, an agency relationship can be established when a third party assumes that the agent has a representative authority to bind the principal when in fact the agent has not. This is referred under common law as *apparent or (ostensible) authority*, in which the agent has only an apparent authority to bind the principal.²¹ The difference between this type of authority and the implied authority is clear. In the case of the implied authority, there is an agreement between the agent and the principal but this agreement is implicit. In the case of the apparent authority by comparison, there is no agreement between the agent and the principal at all. All that happens is that the

¹⁸ *Pole v. Leask* [1860] 54 ER 481.

¹⁹ *Yasuda Fire & Marine Insurance v Orion Marine Insurance* [1995] QB 174.

²⁰ Reynolds, F M B. (2001) *Bowstead and Reynolds on Agency*. 17th ed. Sweet & Maxwell, [1-001].

²¹ *Ibid* [1-006].

principal acted in a manner that led others to believe that the agent has an authority to act on the principal's behalf. The law of agency holds the principal liable to the acts of the agent because of this fake representation.

Furthermore, the agent can still bind the principal even though there was no prior consent between the principal and the agent. This falls under what is called *ratification authority*. This type of agency can be established under common law by the principal's ratification of a prior act performed by the agent. The agent has no prior authority to make the transaction on behalf the principal, however, the principal then chooses to adopt that transaction by ratifying it.²² It is clear that the agent under ratification authority simply acts gratuitously. Common law also recognizes agency when the agent, faced with an emergency in which the principal's property or interests are in jeopardy, acts on the principal's behalf in order to protect the principal's property or interests. In *White v Troups Transport* (1976), an agency of necessity was created when the police were unable to contact the principal and engaged a third party to free the principal's lorry after it had become jammed under a bridge on a busy thoroughfare in a large town.²³

There are a number of different types of authorities that can be given by agents to principals which will be discussed below. Furthermore this thesis will ascertain whether or not any of these authorities can be adapted to electronic agents for the work they do on behalf of their operators. A specific focus will be placed on electronic agents and whether or not they possess actual, apparent, or ratification authority to bind their operators. That is to say, the notion of agency by operation of law is not included in this discussion because it is clear that this type of agency is an exception, created as a solution to very specific circumstances. The discussion therefore will tackle these

²² Ibid [1-0012].

²³ *White v Troups Transport* [1976] Co., 427 U.S. 273, 280.

questions: can electronic agents be agents, and if the answer is yes, what type of authority would they have from their operators? Would it be actual, apparent, or ratification authority?

4.3.1 Application the Principles of Agency to Automated Contracts

As discussed in the previous discussion, the common law principles of agency do not require agents to have contractual capacity in order to be competent to act as agents. Anderson argues that the common law allows infants to act as agents although they are considered to be incompetent, on the grounds that they understand the nature of the act being performed and are able to perform principals' instructions. The author states: "they [infants] have the capacity of understanding and wanting required by the nature of the transaction to be effected".²⁴ Having said that Kerr argues that there is a possible analogy here to electronic agents.²⁵ The electronic agents, like infants, lack contractual capacity. Nevertheless, they can be regarded as agents on the same grounds that electronic agents have a minimum capacity to perform agency acts and have a greater capacity to foresee all the consequences of its action than any infant.²⁶

However, Weitzenboeck finds that there is still a difficulty impeding the consideration of electronic agents as agents when they have no legal personality.²⁷ According to her, infants are ultimately human beings. Although infants do not have contractual capacity, they [infants] are still legal persons. By contrast, electronic agents do not have contractual capacity and this not only results in an incapacity as if they are minors, but also means that there is no judicial life for them.²⁸ Bellia explains this

²⁴ Anderson, T. R. (1991) *Agents' Legal Responsibility*. Natl Underwriter Co. p. 52.

²⁵ Kerr, I. (1999) Spirits in the Material World: Intelligent Agent as Intermediaries in Electronic Commerce, *Dalhousie Law Journal*, 22(2), p. 240.

²⁶ Ibid.

²⁷ Weitzenboeck, E. (2001) Electronic Agents and Formation of Contracts, *international Journal of Law and Information Technology*, 9(3), p. 12.

²⁸ Ibid.

perfectly: "Common law allows an infant to act as an agent, such an agent is a person nonetheless ... A person with limited capacity, such as a minor, may be an agent, but a person with no capacity whatever may not"²⁹

In the same vein, DeMott argues that because electronic agents are not persons, they can neither act as a principal nor as an agent.³⁰ The Official Comment of the UETA explains that "[t]he legal relationship between the person and the electronic agent is not equivalent to common law agency since the 'agent' is not a human."³¹ As will be explained in the following section, the lack of personality of electronic agents can prevent them from establishing an agency relationship with their operators and gain what has been explained previously as 'actual authority', to bind their operators.

4.3.1.1 Electronic Agents and Actual Authority

Actual authority is granted to the agent when s/he forms a consensual relationship with the principle. An agent, of course, does not need to manifest assent (express consent) to their principal. However, he or she must consent to an association with the principal and this can be implied by the agent's actions (implied authority).³² The question now is how an electronic agent would consent to the agency relationship when they lack personality? Certainly, the requirement of agents' consent cannot easily be satisfied in a straightforward way by electronic agents. Electronic agents are not persons and therefore do not have the legal capacity to give consent. Fischer states: "electronic agents cannot consent and to claim they can do so it is just clumsy trend".³³ In other words, electronic agents' actions cannot be proof of an implied consent to accept an

²⁹ Bellia, A. (2001) Contracting with Electronic Agents, *Emory Law Journal*, 50, p. 1062.

³⁰ See DeMott, A. D. (2006) Agency Law in CyberSpace, *Duke Law School Working Paper Series Duke Law School Faculty Scholarship Series*, (Online) Available at: <http://lsr.nellco.org/cgi/viewcontent.cgi?article=1041&context=duke/fs>, 3. [Accessed 15/March/2010].

³¹ §102 cmt. 23. See appendix I.

³² See our discussion in 4.3. Principles of Agency Law.

³³ Fisher, P. J. (1997) Computers as Agents: a proposed approach to revised U.C.C Article 2, *Indiana Journal Law*, 72(2), p. 557.

agency relationship. Under the implied authority, a person can be an agent if s/he did not communicate their consent, although they acted in accordance with the principal's manifestations wishing him/her to act.³⁴ In return, because the electronic agent is not a legal person, they cannot be agents by merely acting in response to the introducing, installing and using by the operator.

Fischer argues that the law for now can accept the use of a presumption or a legal fiction of electronic agents' consent; "at least until it can be said that electronic agents can give consent or current electronic agents are developed significantly enough to warrant saying that they can consent".³⁵ According to Fischer, the law would need to assume electronic agents have "implied consent" just for the purpose of creating agency relationships. That is to say, once the electronic agent starts acting on the operator's behalf, they would be deemed to have consented to the agency relationship.³⁶ Kerr argues that the law should not be bothered with the requirement of consent and whether the electronic agent can consent.³⁷ According to him, the consent of agents is required under agency law because the agent may not only gain legal rights but also may assume legal duties.³⁸ To justify the agent's legal obligations assumed to an agency relationship, s/he therefore is not committed to it until they give their consent. The electronic agent in return, is not supposed to gain any legal right or assume any duty so its consent should not be an issue preventing the application of agency to electronic agents.³⁹

³⁴ See our discussion in 4.3. Principles of Agency Law.

³⁵ Fisher, P, J. *op.cit*, p. 557.

³⁶ *Ibid*.

³⁷ Kerr, I. R. (1999) *Providing for Autonomous Electronic Devices in the Uniform Electronic Commerce Act*, in Proceedings of the Uniform Law Conference of Canada, p. 55.

³⁸ For instance, an agent has a duty, within the scope of the agency relationship, to act reasonably and try to refrain from conduct that is likely to damage the principal's enterprise. In addition, an agent has a duty to take action only within the scope of the agent's actual authority. An agent has a duty to comply with all lawful instructions received from the principal and persons designated by the principal concerning the agent's actions on behalf of the principal. For more details on duties of agents, see Stone, R. (1996) *The Law of Agency*. London: Cavendish Publishing Limited, pp. 76-86.

³⁹ Kerr, I. R. *op. cit*, p. 55.

However, according to the common law notion of agency, agents are supposed to be involved in a number of disputes.⁴⁰ For example, in the case of *Rutter v Linton* (1934), the court ruled that it is a presumption that the agent is personally liable since the contract involved an unidentified principal. A third party will be less inclined to contract with an unidentified principal without the agent assuming personal liability as well.⁴¹ In *Watteau v. Fenwick & Co.* [1893], H owned a hotel. He sold it to the defendants who retained him as manager. The licence continued to be held in his name, which remained over the door of the business. The plaintiffs supplied cigars to H, to whom alone they gave credit, believing him to be the owner. They had never heard of the defendants, who had forbidden H to buy cigars on credit. Upon learning that the defendants were the owners of the hotel, the plaintiffs sued them both (the defendants and H) for the amount outstanding. The county court judge gave judgment in favour of the plaintiffs and his decision was upheld by the Divisional Court.⁴² A common further liability that an agent may face under common agency law is when the agent is held liable for their wrongdoings. For example if an agent exceeds the principal's mandates, they may enter into a dispute with the principal. The agent is usually given certain instructions in which he or she must act accordingly. In case the agent does not act according to these mandates (i.e. their actions exceed the authority), the principal will not be held liable for such actions. Rather, it is the agent who will, in such cases, be held liable.⁴³ This is a fundamental principle under the common law notion of agency; an agent must strictly comply with his/her principal's instructions.⁴⁴

An electronic agent can easily be involved in similar disputes. For example, if an electronic agent at the time of contracting with a third party does not disclose to him the

⁴⁰ Cross, S. (2003) Agency, Contract and Intelligent Software Agents, *International Review of Law Computer and Technology*, 17(2), pp. 178-179.

⁴¹ *Rutter v Linton* [1935] 35 NSW SR on 32.

⁴² *Watteau v. Fenwick & Co.* [1893] 1 QB 346

⁴³ Beale, H. (2008) *Chitty on Contracts*. 30th ed . Sweet & Maxwell, pp. 31-101.

⁴⁴ Stone, R. (1996) *The Law of Agency*. London: Cavendish Publishing Limited, p. 80.

identity of whom the electronic agent is contracting for his behalf. As discussed above vis a vis the law of common agency, the electronic agent should be held liable by the third party even though its actions were authorized by the operator. Furthermore, an electronic agent can exceed their operator's mandates.⁴⁵ It is common practice that electronic agents are not always perfect in their performance. As Wein points out, operators quite often programme or design their electronic agents to perform in a manner that is not negligent. However it is the decision-making and behaviour of the electronic agent which is considered to be negligent.⁴⁶ There are cases of passive errors which occur on the internet as a result of electronic agents. Sartor presents an example to demonstrate how the electronic agent can make errors: an electronic agent is operating an antique shop and sells pieces of old jewellery according to their weight, age, and the material they are made from. Jewellery item number 25 has been mistakenly classified as being a silver ring with a gold coating when in fact it is a gold ring. The electronic agent then offers to sell Item 25 for £20 which is an appropriate price for a silver ring. A person sees the offer and accepts it without any hesitation.⁴⁷ Assuming the electronic agent is the agent here, according to agency principles, the electronic agent may be held liable for such errors. That is to say, electronic agents may be held liable for selling Item 25 at the appropriate price for silver. Bellia finds the electronic agent may also face disputes when given a specific task and they have to delegate part of it for some reasons to other electronic agents. For example, an electronic agent at some stage of the contractual process may ask another electronic

⁴⁵ Electronic agents can easily exceed instructions. See our example above when Argos advertised the sale of televisions on its website for only £2.99 and customers started to place orders over the internet to take advantage of the great offer. Thereafter, Argos refused to deliver the televisions to the customers on the grounds that they had been incorrectly priced by mistake. Argos claimed that the correct price is £299 not £2.99. See (Online) Available at:

http://www.golds.co.uk/articles/articles_ec_conditions_online_business.htm [Accessed 22/Sep/2008].

⁴⁶ Wein, L. (1992) *The Responsibility of Intelligent Artificial: Toward an Automation Jurisprudence*, *Harvard Journal Law and Technology*, 6(103), p. 103.

⁴⁷ Sartor, G. (2002) *Agents in Cyberlaw*, In *Proceedings of the workshop on the Law of Electronic Agents*, LEA02,(Online) Available at:

<http://www.lea-online.net/publications/Sartor.pdf>, [Accessed 15/March/2010].

agent to complete a payment process or ask the other electronic agent to issue a receipt to the buyer.⁴⁸ According to the common law notion of agency, the first electronic agent is to be held liable to the principal (operator) if the sub-agent failed to perform the tasks or performed them in an unsatisfactory manner⁴⁹, such as the sub-agent did not complete the payment or the receipt was not issued to the buyer.

Fischer suggests that agents under law are held liable because they are human beings.⁵⁰ This rule of agency was designed because agents at that time were all human. However, these same laws should not apply towards electronic agents. When treating electronic agents as such, the rules of agency law should be directed towards the agents' function rather than their human aspect. This means that the theory of agency is applicable to the electronic agent only in a limited manner; the aspect of agency that holds the agent liable is not applicable to the electronic agent. Fischer states:

Assuming that the only parts of agency are relevant to the question of computer agents, are the parts relating to the functions an agent serves for its principal, one must conclude that the part of the capacity concept relating to the liability of the agent is irrelevant.⁵¹

Lerouge argues that by not holding electronic agents liable for their wrongdoings, the operators (the principals) are denied their rights that were set out under agency law to protect them from those acts made beyond their authority.⁵² However, the applicability of agency law to electronic agents is a little suspect. The application of agency law to electronic agents as explained above requires the allotment of two important principles of agency law: the consent of agents and the rule that would hold them liable. Lerouge argues that these exceptions to the application of agency law results in agents coming to

⁴⁸ Bellia, A. (2001) Contracting with Electronic Agents, *Emory Law Journal*, 50, p. 1054.

⁴⁹ Beale, H. (2008) *Chitty on Contracts*. 30th ed. Sweet & Maxwell, [31-083].

⁵⁰ Fisher, P, J. (1997) Computers as Agents: a proposed approach to revised U.C.C Article 2, *Indiana Journal of Law*, 72(2), p. 557.

⁵¹ Ibid.

⁵² Lerouge, J.F. (2000) The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level, *The John Marshall Journal of Computer and Information Law*, 18(2), p. 409.

be attributed as uninterested.⁵³ In Bellia's words, the way in which agency principles are applied to electronic agents works thus: “dribs and drabs of agency law... and this would not achieve its purpose”.⁵⁴ Balke and Torsten conclude that the application of the law of agency to electronic agents, although attractive, cannot be used for electronic agents due to a number of exceptions to its principles being required.⁵⁵ These authors indicate that electronic agents must conform to all the relevant principles and rules set out for agents under agency law.⁵⁶

4.3.1.2 Electronic Agents and Apparent Authority

In contrast to the argument above, Reed argues that electronic agents do not have to consent because they only possess apparent authority to bind operators.⁵⁷ According to common agency principles, a person does not need to consent to the principal in order to be an apparent agent. In the *Rama Corporation Ltd v Proved Tin and General Investment Ltd* (1952), the court established that for an agency to be created by apparent authority, it was necessary for there to be: a representation by the principal or someone actually authorized by the principal on the existence of the agency; a reliance on that representation by the third party; and an alteration by the third party on their position as a result of this reliance.⁵⁸ Thus, in order for a person to be an apparent agent, no agreement is required between the agent and the principal as apparent authority does not result directly from the principal's instructions, but “is derived from the circumstances of a situation.”⁵⁹ It refers to a representation by a principal to a third party. The principal

⁵³ Ibid.

⁵⁴ Bellia, A. (2001) Contracting with Electronic Agents, *Emory Law Journal*, 50, p. 1072.

⁵⁵ Balke T. & Torsten E. (2008) *The Conclusion of Contracts by Software Agents in the Eyes of the Law*, Proc. of 7th Int. Conf. on Autonomous Agents and Multiagent Systems(AAMAS), 778.

⁵⁶ I personally do not agree with this. In my opinion, the inability of electronic agents to be held liable for their acts does not deny the fact that they act as agents and the law should take this into account.

⁵⁷ Reed, C. (2004) *Internet Law: Text and Materials*. Cambridge: Cambridge University Press, p. 210.

⁵⁸ *Rama Corporation Ltd v Proved Tin and General Investment Ltd* [1952] 2 QB 147.

⁵⁹ Anderson, T. R. (1991) *Agents' Legal Responsibility*. Natl Underwriter Co, p. 33

represents to the third party that the agent has authority to act on the principle's behalf where, in fact, no authority was given to the agent.⁶⁰

Thus in order for agents to enjoy apparent authority and bind the principals, there should be reliance by a third party on a representation made by the principal. That is to say, the third party should believe the agent has authority to act on behalf of the principal and this belief must be traceable to the principal's manifestations. The third party's reasonable perceptions are used to decide whether the circumstances of the situation fairly denote the authority of the agent. This means that not every related action falls under apparent authority, and the standard of reasonableness is used to decide whether the agent has acted within their authority.⁶¹ According to the principal's behaviour in the circumstances, if the third party reasonably believes that the agent has the authority to act on behalf of the principal, the principal will be bound by the agent's actions. A principal is bound to those acts made by unauthorised agents because they have made the third party believe that the agent was acting with authority. Here, the third party is considered as an innocent party that should be protected by law.⁶²

In the case of *Hoddeson v. Koos Bros.*, the furniture store was held liable under apparent authority even though the actor was not an agent or had any relationship with the store.⁶³ Hoddeson had entered the furniture store knowing exactly what type of furniture she wanted to purchase. A man in a suit had introduced himself to Hoddeson and asked if he could help her. Upon telling him what she wanted, the man had shown Hoddeson a furniture arrangement. Hoddeson told the man that she liked the furniture and wanted to purchase it. She handed the man a check and was told that it would be

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Anderson argues that the law must often, for the protection of third persons, proceed upon the appearance of authority created by the alleged principal. Anderson, T. R. (1991) *Agents' Legal Responsibility*. Natl Underwriter Co, p. 58

⁶³ *Hoddeson v. Koos Bros.*, 47 N.J. Super. 224 (N.J.1957).

delivered to her in about a month. After waiting beyond this period, Hoddeson contacted the furniture store. She learned, to her surprise, that there was no record of her transaction and that the name of the man who had sold her the furniture was unknown to the store manager.⁶⁴ The court "[b]roadly stated" that businesses owed a duty of care to "protect the customer from loss occasioned by the deceptions of an apparent salesman."⁶⁵

On the one hand, Bellia argues that the electronic agent has an apparent authority to bind the operator because when using the electronic agent on the Internet, the operator creates an appearance to the public that the electronic agent acts on his or her behalf as their agent.⁶⁶ The operator would suggest that once the contract is concluded by the electronic agent, the contract would then be directly concluded by him. Bellia states: "When a human actor uses a robot to conduct transactions, he seems to give the clear impression to the other party that the robot is his agent."⁶⁷

However, on the other hand, the attribution of electronic agents as having apparent authority to bind the operators has been criticised on the grounds that such authority cannot be applied in a straightforward way. The application of apparent authority requires reasonable belief from the third party that the agent has the authority to bind the principal. That means, if the third party had knowledge of the agent's lack of authority, the agent then is not considered to be an apparent agent from the point of view of the third party. This seems logical as the third party should not, in principle, make a transaction when s/he knows that the agent has no authority. If the third party deliberately dealt with that agent, according to common law, the principal will not be liable for that deal. Anderson states:

⁶⁴ Ibid, 228.

⁶⁵ Ibid, 233.

⁶⁶ Bellia, A. (2001) Contracting with Electronic Agents, *Emory Law Journal*, 50, p. 1062.

⁶⁷ Ibid.

The principal cannot be liable for legal effects that he or she has never done or agreed to them only if they showed an apparent impression that these legal effects are authorized by them and a third party has without negligence, relied on the reality of this authorisation.⁶⁸

Lerouge argues accordingly that those who conduct their business with electronic agents can have no reasonable belief about the existence of an agency. This is because they are aware of the fact that they are communicating with mere computer software which does not have the capacity to act as an agent.⁶⁹ This argument is convincing to many because it bears similarities with situations in which an individual uses an unwise agent to conduct transactions and gives a clear impression to the other party that this unwise person is his agent. My perspective under this scenario is that there is no apparent agency that the other party can reasonably rely upon. One cannot argue that the other party has reasonable belief about the existence of an agency because that party knows for sure that who they are dealing with is unsound of mind and cannot therefore establish an agency relationship. Of course some people may have limited knowledge and would believe that when interacting with Amazon.com, for example, Mr. Tom or one of his employees is typing on his keyboard at the other side of the telephone wire.⁷⁰ However, such an argument cannot hold up, as the use of electronic agents in forming contracts is more generalised now.⁷¹ That is to say, the public will not/cannot deny their knowledge of the identity of the contracting party in automated contracts. Accordingly, electronic agents cannot have apparent authority to bind operators.

Having rebuffed the view that electronic agents are apparent agents online, the next section of this thesis will examine whether electronic agents can be agents possessing

⁶⁸ Anderson, T. R. (1991) *Agents' Legal Responsibility*, Natl Underwriter Co, p. 50.

⁶⁹ Lerouge, J.F. (2000) The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level, *The John Marshall Journal of Computer and Information Law*, 18(2), p. 414.

⁷⁰ Sartor, G. (2002) *Intentional concepts and the legal discipline of software agents*, in: *Open Agent Societies: Normative Specifications in Multi-Agent Systems*. London: Wiley.(Online) Available at: <http://www.cirsfid.unibo.it/~sartor/GSCirsfidOnlineMaterials/GSONLinePublications/GSPUB2002agentsWiley.pdf> [Accessed 20/March/2010].

⁷¹ Lerouge, J.F. *op.cit.*, p. 414.

ratification authority allowing them to enforce transactions concluded by electronic agents.

4.3.1.3 Electronic Agents and Ratification Authority

As explained at the beginning of this chapter, even though the agent does not possess any power, an agency relationship can still exist and the agent can create or affect any legal rights and duties of the principal. In the case of *Wilson v Tumman* (1843), the court ruled that the principal may adopt a transaction made by an unauthorised agent by ratifying it. Tindal CJ argues:

[T]hat an act done by a person, not assuming to act for himself, but for such other person, without any precedent authority whatsoever, becomes the act of the principal if subsequently ratified by him, is the known and well established principle of law.⁷²

Under the doctrine of ratification authority, the agent himself is not granted authority to bind the principal. Therefore, at the time of contracting, the agent is in fact acting without authority. That means, through the ratification method, that the agent is considered to be acting gratuitously. Nevertheless, a person may ratify a contract made on his behalf by an unauthorized agent, and if he does so, he is in the same position as if he had been a party to the contract. The transactions made on behalf of the principal would not be applicable for ratification unless at the time of the contract the agent shows the third party that he is acting on behalf of the principal.⁷³

When the agent concludes the contract in this way, it will either bring negative or positive consequences for the principal as authorised agents do not always produce harm to their principals. When the agent acts without authority, the result of such acts can still be beneficial or more advantageous to the principal. In this instance, the principal would prefer to accept the contract, entered in excess of his agent's authority.

⁷² *Wilson v Tumman* (1843), 6 Man. & G. 236, 242; 134 E.R. 879.

⁷³ Beale, H. (2008) *Chitty on Contracts*. 30th ed., Sweet & Maxwell. pp. 31-027.

The principal might ignore the fact that the agent has breached his duty to act within the limits of authority and afterwards confirm the contract in order to protect the principal's relationship with the other party, his business reputation etc. However, the opposite effect can also happen. For example, the action concluded by the unauthorized agent could bring a negative impact or produce actual damage to the principal. In such cases, the principal may not ratify this action.

The same thing can happen if ratification authority is adapted to automated contracts. The operator will accept the contract concluded by the electronic agent if the contract is beneficial and advantageous, otherwise, s/he will escape from it. To be sure, this will affect the stability of electronic commerce and make those who conduct their business with the electronic agents become uncertain of whether the operators will ratify their transactions. Because of these consequences, authors in the literature show no interest towards adapting ratification authority to contracts entered into by electronic agents. This proposal is proven to be ineffective in its practice and not only does it fail to solve problems, it actually increases the complexity of the situation. There have been no studies made of this proposal as opposed to other proposals which suggest that agency relationships can be created by electronic agents through actual or apparent authority from their operators.

As is illustrated below, some authors argue that in order to apply agency law properly to electronic agents and therefore make automated contracts enforceable through agency principles, legal personality should first be attributed to these electronic agents. If electronic agents possess rights similar to those given to a human person or a legal entity, they can be agents with the ability to enter into contracts, acquire rights and duties on behalf of others and carry out liability that would result from their actions. With this proposal, people would feel confident interacting with electronic agents and

be protected from any suffering or loss that may occur as a result of an electronic agent's actions. Similar to legal actions against corporate bodies today, if the action of a body causes damages, claimants can sue the body itself rather than its members.⁷⁴ The attribution of legal personality to electronic agents would also achieve the same, enabling people to sue the electronic agents directly.

4.3.2 Electronic Agents and Legal Personality⁷⁵

4.3.2.1 The Concept of Legal Personality

Legal personality is viewed as a purely legal concept in which no extra-legal factors of any kind can be considered when conferring or withdrawing it.⁷⁶ This means that legal personality is simply a legal capacity for rights and duties, and an engagement in legal relations that the policymaker grants to fulfil certain functions.⁷⁷ Several authors have defined legal personality as "[Having] neither biological social or normal idea of a person and it is to be completely distinguished from those philosophical conceptions of the person which emphasise the importance of a person"⁷⁸

Kelsen concludes that legal personality is no more than the demonstration of the rights and duties one has, or the entirety of these rights and duties.⁷⁹ To ascertain if certain beings comply to the above definitions of legal personality, it is not essential to establish whether these beings are commensurate with the concept of a person in the

⁷⁴ Pettet, B. (2005) *Company Law*. 2nd ed. London: Pearson, p. 280.

⁷⁵ A large of this section's content has already been published on proceedings of the 2007 Annual BILETA Conference, Hertfordshire, 16-17 April, (online) Available at: <http://www.bileta.ac.uk/Document%20Library/1/Electronic%20Agents%20and%20Legal%20Law%20Review/31/March/2010>. See appendix IV.

⁷⁶ Naffine, N. (2003) who are law's persons? From Cheshire Cats to Responsible Subjects, *Modern Law Review*, 66(3), pp.350-351.

⁷⁷ Davies, M. & Naffine, N. (2001) *Are persons property? Legal debates about property and personality*. Ashgate and Dartmouth, p. 52.

⁷⁸ *Ibid*, p.3 51

⁷⁹ Kelsen, H. (1970) *The Pure Theory of Law*, Berkley: University of California Press, pp. 172-173.

philosophical sense of the word. If beings do fulfil this criterion of a “person” then they can be said to have subjective rights.⁸⁰

Courts define “legal personality” in the same way and treat it as a purely legal matter without taking into account any other factors.⁸¹ In the US, some courts consider slaves as non-legal persons, as they fail to meet the concept of legal personality defined above. Their humanity has been considered unrelated to the issue in question.⁸² In the state of Kentucky, in *Jarman v Patterson*, the Court of Appeals said:

Slaves, although they are human beings, are by our laws placed on the same footing with living property of the brute creation. However, deeply it may be regretted, and whether it be political or impolitic, a slave by our code, is not treated as a person, but (negation), a thing, as he stood in the civil code of the Roman Empire.⁸³

Consequently, being human is not a condition for being recognised as a legal person. There are numerous non-human entities which have been recognized as having legal personality including modern business corporations, ships and temples. Each one of these entities has individual reasons for being recognised by law. For instance, some modern business corporations (as limited corporations) are given legal personality because it helps distinguish business assets from personal assets, which then limits the liability of business owners.⁸⁴ The term ‘limited’ here refers to the liability of the

⁸⁰ Michoud, La Notion. De Personnalite Moral (1899) 11 Revue Du Droit Public, 1, p. 8. Cited by Dewey, J. (1926) The Historic Background of Corporate Legal Personality, *Yale Law Journal*, 35(6), pp. 655–673.

⁸¹ Seeing legal personality as a purely legal concept is considered by Adrian Whitefield to be one of the common law basic principles to which courts must conform. See Whitefield, A. (1997). *Commentary: A Decision that strengthens the Law Too Far*, BMJ 314 (Online) Available at: <http://www.bmj.com/cgi/content/extract/314/7088/1185>. [Accessed 15/ July/ 2009]

⁸² Consider English law before the middle of the 19th century: a married woman was not accorded a separate legal personality from that of her husband. In Roman law, the paterfamilias or free head of the family was the subject of legal rights and obligations on behalf of his household; his wife and children were only indirectly the subject of legal rights and his slaves were not legal persons at all. In United States law slaves were considered non-persons as well. Chopra, S. & White, L. (2004) *Artificial Agents - Personhood in Law and Philosophy*, in Proceedings of the 16th European Conference on Artificial Intelligence. (Online) Available at: <http://www.sci.brooklyn.cuny.edu/~schopra/agentlawsub.pdf> [Accessed 16/ Feb/ 2008].

⁸³ *Jarman v Patterson*, (1828) 23 KY. (7 T.B. Mon.) 644, 645.

⁸⁴ Any person or entity said to be possessing legal personality must own assets in order to ensure that they can fulfill their financial obligations and liabilities. The term “asset” is used to refer to all the funds that

company members, not the liability of the company as a separate entity. A limited company has unlimited liability to pay all its debts and can be forced to pay them until it runs out of money. However, if the company cannot pay its debts, its members have limited liability to contribute further money to pay off these debts; they cannot be required to pay more than the limit on their liability.⁸⁵ That is to say, in the case of the breaching authority, creditors can sue the corporation, and because the owners have no liability, the company members are not responsible for its debts.⁸⁶ By doing so, individuals are encouraged to carry out their business without threats to their personal assets.

Therefore, the concept of legal personality in this sense is secular.⁸⁷ Legal personality is used here as a mere device to make it possible for policymakers to either grant the existence of or withdraw from a particular entity. Legal personality is subject to the policymaker's decision and not to any extra legal considerations such as the essential qualities of the entity concerned. The court in the case of *Byrn v New York City Health & Hospitals Corp* held that:

What is legal person is for the law, including, of course, the Constitution, to say, which simply means that upon according legal personality to a thing the law affords in the rights and privileges of legal person...the process is, indeed, circular because it is definitional. Whether the law should accord legal personality is a policy question which in most instances devolves on the Legislature, subject of course to the Constitution as it has been "legal" rendered...the point is that it is a policy determination whether legal personality should attach and not a question of biological or "natural correspondence."⁸⁸

If granting legal personality does not depend on any extra legal considerations can electronic agents be granted legal personality?

are available. The main purpose of assets are to fund the creditors of a company as a last resort. Pettet, B. (2005) *Company Law*. 2th ed. London: Pearson, p. 280 note 28.

⁸⁵ Ibid.

⁸⁶ Davies, P. (2002) *Introduction to Company Law*. New York: Oxford University Press, p. 36.

⁸⁷ Chapter 7 will discuss the views of Islamic law on legal personality which are quite different to this.

⁸⁸ Per Breitel J for the Court. (1972) 286 N.E. 2d 887-889.

4.3.2.2 Application of the Concept of Legal Personality to Electronic Agents

In attributing legal personality to electronic agents, a problem arises. Unlike electronic agents, other legal entities function only through human beings. Legal entities such as corporate bodies are associated with human owners or representatives who can potentially display their actions. However, on the other hand, electronic agents function according to their own autonomy.⁸⁹ Therefore, legal personality as it is ascribed to electronic agents is similar to that conferred to human beings. Legal personality, in this sense, is closer to moral agency.

4.3.2.2.1 The Concept of Moral Agency

Moral agency is seen generally as being composed of components such as cognition, autonomy, intention, free will etc. Taylor defines the moral agent as "A being who encompasses purposes, who can be said to go after, and sometimes attain goals".⁹⁰ Likewise, a person for Moore is: "a rational being, a being who acts for intelligible ends in light of rational beliefs."⁹¹ For Locke, "a person stands for ... a thinking intelligent being that has reason and reflection and can consider itself as itself the same thinking thing in different times and places".⁹² To be a person according to this definition one has to have "intelligence and the capacities for thought, reason, reflection and self awareness".⁹³

Frankfurt argues that the concept of will can distinguish persons from non-persons.⁹⁴ Desires that motivate one to act or refrain from acting can be classified into first and second order desires. First order desires are those that motivate one to do or abstain

⁸⁹ See my discussion on the autonomy of electronic agent in section 2.3 Electronic Agent Technology.

⁹⁰ Taylor, C. (1985) *The Person, in The Category of the Person: Anthropology, Philosophy, History*, New York: Cambridge University Press, p. 258.

⁹¹ Moore, M. (1984) *Law and Psychiatry: Rethinking the Relationship*, New York: Cambridge University Press, p. 66.

⁹² Locke, J. (1995) *An Essay Concerning Human Understanding*, New York: Prometheus Books, p. 211.

⁹³ Warren, (2000) *Moral Status: Obligations to Persons and other Living Things*, Oxford: Oxford University Press, p. 95.

⁹⁴ Frankfurt, H. G. (1971) Freedom of the Will and the Concept of a Person, *The Journal of Philosophy*, 68(1), pp. 5-20.

from doing a particular act. Second order desires are those to have one particular desire as that which motivates will or would motivate someone to perform an act. While possessing desires and an ability to choose between them is essential in human beings, it is however insufficient in Frankfurt's possessive concept of will. In order to be a person one must be able to form second order desires, that is to be able to evaluate different first order desires and choose one or more of them to be the motive for performing or abstaining from an act and to become someone's will.⁹⁵

The evaluation of different desires and the choice that follows requires one to be rational too. Thus the rationality can be identified as an element of moral agency. In Frankfurt's possessive words,

[I]t is only in virtue of his rational capacities that a person is capable of becoming critically aware of his own will and of forming volitions of the second order. This structure of a person's will presupposes, accordingly, that he is being a rational being.⁹⁶

The autonomy element is also essential in Frankfurt's theory which he describes as "the freedom of will".⁹⁷ He differentiates between two types of freedom: that of action and that of will. While the former pertains to first order desires and means the freedom to perform whatever actions one wishes, the latter relates to second order desire volitions and refers to the agent's freedom to will what s/he wants to. In Frankfurt's theories, this distinction makes it possible to classify persons from non-persons. That is to say, non-persons have freedom of action in common with persons because they can be shown to have the ability to act one way instead of another, but only the latter (persons) have the ability to freely form second order desires.⁹⁸

⁹⁵ Ibid.

⁹⁶ Ibid, pp. 11-12.

⁹⁷ Ibid, p .1

⁹⁸ Ibid, pp .14-17. I will shortly defense this statement.

These writings illustrate how human beings are conferred legal personality because they have the capability to freely make moral judgments. This involves evaluating the different choices available and selecting, out of free will, one or more of them to implement. Penrose argues that the capacity to act consciously is the valid test for moral entitlement to legal personality.⁹⁹ Allen and Widdison also argue that legal personality is based on moral entitlement which refers to having certain characteristics such as self-consciousness.¹⁰⁰ That is to say, any entity that possesses self-consciousness is entitled to be morally recognized as a legal person.

4.3.2.2 Moral Agency and Electronic Agents

The philosophical debate in this section is essentially about whether electronic agents can act autonomously of their operators and thus be recognised as moral agents. Kerr makes this observation: "It is not [at] all certain that e-agents can achieve self-consciousness, even if the e-agents are described as intelligent or as acting autonomously, it is nowhere near the point where these devices can make conscious, moral decisions of their own"¹⁰¹

In the same vein, Penrose holds that "the validity of this argument is clearly debatable: it is not at all certain flint computers can achieve self consciousness."¹⁰² According to Searle, self-consciousness is linked to humanity: those possessing the genetic material of Homo sapiens and electronic agents therefore lack this critical element.¹⁰³ Searle states:

⁹⁹ See Penrose, R. (1989) *The Emperor's New Mind: Concerning Computers, Minds and the Laws of Physics*. Oxford: Oxford University Press, p. 45.

¹⁰⁰ Allen, T. & Widdison, R. (1996) Can Computers make contracts? *Harvard Journal & Technology*, 9(1), p. 42.

¹⁰¹ Kerr, I. R. (1999) Providing for Autonomous Electronic Devices in the Uniform Electronic Commerce Act, in *Proceedings of the Uniform Law Conference of Canada*, p. 192.

¹⁰² Penrose, R. (1989) *The Emperor's New Mind: Concerning Computers, Minds and the Laws of Physics*. Oxford: Oxford University Press, p. 45.

¹⁰³ John Searle is a renowned philosopher of the mind and cognitive scientist. He is well known for his development of a thought experiment called the "Chinese room" argument which tries to prove that

[I]ntentionality as the property of mental states - non-physical processes - comes only from the soul, and not from any material process. Therefore, even if a computer program contains an extremely detailed and complex system of rules, this is not sufficient to say that the computer is able to exercise discretion or make judgments about what is fit and what is not.¹⁰⁴

According to Searle's argument, a computer system may manipulate symbols, but it could not really know the meaning of such symbols. It is only the human operator who can provide an interpretation of them since the computer program lacks the ability to process meaning. The computer just reacts to the shape of a symbol and by so doing it is merely imitating without understanding. According to Searle, one can interpret a cognitive state of electronic agents as "nothing more than an imaginary dream that only exists in the mind of the observer".¹⁰⁵ Similarly, Finnis also finds that self-consciousness is usually interpreted as a unique element of human conduct, rather than a practical phenomenon that exists wherever there is a plan, proposal, or systematic pattern of responses to the environment such as reasoning, trying, doing, or refraining from doing something.¹⁰⁶

Animal rights proponents are critics of the notion that moral agency and its attributes are human-specific. For them, the exclusion of animals from the class of persons is unjustified since animals meet all morally relevant criteria such as language and purposeful communication, intelligence, creativity, tool-using, autonomy,¹⁰⁷ and self conciseness¹⁰⁸. Animal rights proponents assert that:

human thought is not simply computation, and that a computational process in itself cannot understand intellectual events and processes. Searle, J. (1980) Minds, brains, and programs, *Behavioral and Brain Sciences*, Cambridge: Cambridge University Press, p. 40.

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

¹⁰⁶ Finnis, J. (1995) *Intention in Tort Law, Philosophical Foundations of Tort Law*. Oxford: Clarendon Press, p. 229. In this vein, see also the work of Sartor, G. (2009) Cognitive automata and the law: electronic contracting and the intentionality of software agents. *Artificial Intelligence and Law*, 17(4), pp. 253-290.

¹⁰⁷ Pluhar, E. B. (1995) *Beyond Prejudice: the Moral Significance of Human and Nonhuman Animals*, Durham: Duke University Press, pp. 46-47.

¹⁰⁸ Beauchamp, T. L. (1999) The Failure of Theories of Personhood, *Kennedy Institute of Ethics Journal*, 9(4), pp. 309-324, 313.

Capacities will not succeed in distinguishing humans from other animals. Animals also care passionately for their young: animals also exhibit desires and preferences. Features of moral relevance-rationality, independence, and love are not exhibited uniquely by human beings. Therefore, there can be no solid moral distinction between humans and other animals.¹⁰⁹

Furthermore, animal rights proponents hold that attributes such as autonomy and self conciseness are evolutionary abilities that exist in different degrees, and so are prevalent in some animals at lower degrees.¹¹⁰ Pluhar argues against the belief that these attributes are human-specific thus:

Is it really clear ... that the capacity for moral agency has no moral precedent in any other species? Certain other capacities are required for moral agency, including the capacity for emotion, memory, and goal-directed behaviour ... [T]here is ample evidence for the presence of these capacities, if to a limited degree, in some nonhumans ... Not surprisingly, then, evidence has been gathered that indicates that nonhumans are capable of what we call "moral" or "virtuous" behaviour.¹¹¹

The admission that some animals can, to a lesser degree, have the capacity for making autonomous decisions can be found in Frankfurt's concept of free will:

Human beings are not alone in having desires and motives, or in making choices. They share these things with the members of certain other species, some of whom even appear to engage in deliberation and to make decisions based upon prior thoughts. It seems to be particularly characteristics of humans, however, that they are able to form... "second-order desires."¹¹²

¹⁰⁹ Cohen, (1986) The case for the Use of Animals in Biomedical Research, *New England Journal of Medicine*, 315(14), p. 867

¹¹⁰ Pluhar, E. B. *op.cit.* pp. 4-57.

¹¹¹ *Ibid*, p. 55.

¹¹² To reply to this argument, Cohen asserts that: "what makes humans special and distinguishable from other animals is not the ability to communicate or to reason, or dependence on one another or care for the young, or the exhibition of preferences, or any such behavior that marks the critical divide. Animals do exhibit such attributes but that does not make them member of the community of moral agent nevertheless remains impossible for them. Actors subject to moral judgment must be capable of grasping the generality of an ethical premise in a particular syllogism. Humans act immorally often enough, but only they - never wolves or monkeys - can discern, by applying some moral rule to the facts of a case, that a given act ought or ought not to be performed. The moral restraints imposed by humans on themselves are thus highly abstract and are often in conflict with the self interest of the agent. Communal behavior among animals, even when most intelligent and most endearing, does not approach autonomous morality in this fundamental sense". Cohen, (1986) The Case for the Use of Animals in Biomedical Research, *New England Journal of Medicine*, 315(14), p. 867.

In addition, the argument that self conciseness and autonomy are human-specific traits can threaten the status of marginal humans. If such an argument is followed to its logical conclusion, such marginal humans will be deprived of legal personality due to the lack of these attributes. Animal rights proponents argue that if moral criteria are elements unique to humans then legal personality must be denied to humans lacking moral criteria such as infants, those with brain damage, and the insane. As Linzey argues: "If we accord moral rights on the basis of rationality, what of the status of newly born children "low grade" mental patients, "intellectual cabbages" and so on? Logically, accepting this criterion, they must have no diminished, moral rights"¹¹³

The proponents argue that if the criteria for granting marginal humans legal personality are therefore lower, all animals that share the new, less-restrictive criteria should also be granted legal personality. As Singer states:

[H]uman beings are not equal; and if we seek some characteristics that all of human possess, then this characteristic must be a kind of lowest common denominator, pitched so low that no human being lacks it. The catch is that any such characteristic that is possessed by all human beings will not be possessed only by human beings.¹¹⁴

The responses to these arguments for marginal humans are various. Some of them such as Moore retain their original claims and accept the deprivation of legal personality from marginal humans. According to Moore:

[V]ery crazy human beings are not enough like us in one of our essential attributes, rationality, to be considered persons to whom moral and legal norms are addressed. Crazy people are "excused" from responsibility for the hard they cause for the same reason that young children, animals stones, and perhaps corporations are excused: None of them has the *status* of being a person, the only kind of entity obliged by moral and legal norms.¹¹⁵

¹¹³ Linzey, A. (2006) *Animal Rights: A Christian Assessment*, London. SCM Press, p. 24. As cited by Tanner, (2006) Marginal Humans, the Argument from Kinds and the Similarity Argument, *Series Philosophy, Sociology and Psychology (FACTA)*, 5(1), p. 51.

¹¹⁴ Singer, P. (2002) *Animal Liberation*. 3rd ed. New York: HarperCollins Publishers, p. 237.

¹¹⁵ Moore, M. (1984) *Law and Psychiatry: Rethinking the Relationship*, New York: Cambridge University Press, p. 65.

However, others choose to respond differently. For example, Rawls argues that being a moral person requires rationality and a sense with of consequences and justice. However, since many humans lack either one or both of these capacities, these do not have to be perfect and equally shared by all persons. They are degree-admitted and one need only to possess to a certain degree in order to acquire legal personality.¹¹⁶ That is to say, with regard to infants and children, it is enough that they have, instead of the capacities required, the mere capacity for developing them:

[T]he minimal requirements defining moral personality refer to a capacity and to the realization of it. A being that has this capacity, whether or not it yet developed, is to receive the full protection of the principle of justice. Since infants and children are thought to have basic rights (normally exercised on their behalf by parents and guardians), this interpretation of the requisite conditions seems necessary to match our considered judgements.¹¹⁷

If these arguments are followed to their conclusion, because electronic agents are not humans they cannot therefore be treated as conscious entities. In opposition to this view, Resnick argues that electronic agents should not be denied intentionality or any of these other morally relevant criteria merely because they are not in possession of a brain.¹¹⁸ Solum also points out that a: “computer should not be disqualified from legal personality on the ground that its self-consciousness does not emerge from biological processes”.¹¹⁹ In addition, as Johnson argues, hitherto there are no well-confirmed theories of underlying processes of consciousness which can be used to make firm judgments that consciousness is lacking in a particular case. Johnson states:

There is no clear notion of this intangible concept (conscious) and so we cannot confirm that an agent behaves as if it is conscious when it is not

¹¹⁶ Rawls, J. (1971) *A Theory of Justice*, Cambridge, Mass: Harvard University Press, pp. 508, 510.

¹¹⁷ Ibid. p. 509.

¹¹⁸ Resnick, P. (1994) *Intentionality is Phlogiston, Thinking Computer & Virtual Persons*. E. Dietrich, Academic Press, p. 44.

¹¹⁹ Solum, L.B. (1992) Legal Personhood for Artificial Intelligences, *North Carolina Law Review*, 70(1231), p. 1260.

really conscious, and there is no decisive evidence that this concept is by itself *sui generis*.¹²⁰

That is to say, if behaviour by electronic agents is similar to the processes of the human mind, then this is a good reason to treat these electronic agents as moral agents and therefore grant them legal personality.¹²¹ Wein states: "It seems unlikely that any machine will be deemed worthy of being considered a legal person possessed of inherent rights unless it is far more 'person-like' and 'intelligent'"¹²²

Law, as Chopra and White argue, should not focus on the internal architecture of electronic agents, but rather on whether electronic agents have potentially engaged in the right kinds of behaviour.¹²³ If electronic agents are able to reason about their past, modify their own behaviour, and plan their future, a reasonable conclusion must be that they are capable of demonstrating a separate intention.¹²⁴ Electronic agents exhibit high intelligence in their performance and some extraordinary features that may be seen as possessing a much greater capacity than any other human being including minors who have already been accorded legal personality by legal systems.¹²⁵

4.3.2.2.3 Assets and Electronic Agents

Another dilemma associated with the proposal to grant electronic agents legal personality is the lack of assets that enable them to fulfil their financial obligations and

¹²⁰ Johnson, L. (1993) *The Computer and the Mind, 2nd Ed*, London: Fontana Press, p. 353.

¹²¹ Solum, *op.cit.* .p. 1261.

¹²² Wein, L. (1992) The Responsibility of Intelligent Artificial: Toward an Automation Jurisprudence, *Harvard Journal Law and Technology*, 6(103), p. 116.

¹²³ Chopra, S. & White, L. (2004) *Artificial Agents - Personhood in Law and Philosophy*, In Proceedings of the 16th European Conference on Artificial Intelligence. (Online) Available at: <http://www.sci.brooklyn.cuny.edu/~schopra/agentlawsub.pdf> [Accessed 12/Feb/2008].

¹²⁴ Wetting, S & Zehender, E. (2003) *The Electronic Agent: A Legal Personality under German Law? The Law and Electronic Agents*, Proceedings of the 2nd LEA Workshop, University of Edinburgh, UK, 24th June 2003, (Online) Available at: http://www.lea-online.net/publications/Paper_8_Wettig.pdf [Accessed 09/Sep /2008].

¹²⁵ See the work of Barfield when he concluded his paper by outlining that the possible scenario that could represent the legal status of electronic agents in the future is the associated rights of legal personhood. Barfield W. (2005) Issues of law for software agents within virtual environments, *Presence: Teleoperators and Virtual Environments*, 14(6), pp. 741–748.

liabilities. Any person or entity with legal personality must possess assets in order to ensure that they can fulfil their financial obligations and liabilities. Legal personality is associated with accountability. The exercise of the capacity for moral agency is associated with being morally accountable. The intimate connection between accountability and moral agency is evident insofar as accountability has been associated with personality and understood as a moral agency-based concept throughout history. When one voluntarily and consciously decides to perform or refrain from performing a particular act while other options are equally possible, s/he should be accountable for his or her choices.¹²⁶ Locke proceeds to say that a person "is a forensic term appropriating actions and their merit and so belongs only to intelligent agents capable of a law".¹²⁷ As such, to be a person, one has to have the capacity for evaluating acts and choosing from them. As a result, individuals can be held accountable and so be credited or blamed for their actions.¹²⁸ For electronic agents to be held accountable for their actions, they must have assets so that if they are sued and held liable their assets would directly be affected and sometimes liquidated.¹²⁹ The dilemma with electronic agents is that they do not currently have assets.

Sartor suggests that a banking deposit could function as an asset for electronic agents;¹³⁰ a minimum amount of "capital" should be established by operators, similar to how owners behave towards their commercial corporations. This fund would represent a warranty for those who contract with electronic agents, which would need to be secured

¹²⁶ Naffine, N. (2003) who are law's persons? From Cheshire Cats to Responsible Subjects, *Modern Law Review*, 66(3), p. 362.

¹²⁷ Locke, J. (1995) *An Essay concerning Human Understanding*, New York: Prometheus Books, p. 220.

¹²⁸ Warren, (2000) *Moral Status: Obligations to Persons and other Living Things*, Oxford: Oxford University Press, p. 95.

¹²⁹ Pettet, B. (2005) *Company Law*. 2nd ed. London: Pearson, p. 280 note 28.

¹³⁰ Sartor, G. (2002) *Intentional concepts and the legal discipline of software agents*, in: *Open Agent Societies: Normative Specifications in Multi-Agent Systems*. London: Wiley, p. 45. (Online) Available at: <http://www.cirsfid.unibo.it/~sartor/GSCirsfidOnlineMaterials/GSONlinePublications/GSPUB2002agentsWiley.pdf> [Accessed 20/March/2010].

when finalising a contract.¹³¹ The problem with this proposal is that, since the funds deposited in the bank will be limited to a certain amount, electronic agents have to then ensure that they will not act beyond that amount. It might not be possible to guarantee this. It is expected that acting beyond the funds deposited would probably happen and so problems will arise concerning who would be held liable for those excesses. Furthermore, damages incurred by electronic agents could take several forms such as the breaching of privacy or the sustaining of damages against other computers through viruses. Additionally, because the funds deposited in the bank will be limited to a certain amount, compensation for all those who might suffer from the electronic agent's errors may not be practical.

As an alternative method for electronic agents to fulfil their financial obligations and liabilities, some authors suggest they purchase insurance. Insurance policies could serve as a better alternative solution to the issue of assets for electronic agents.¹³² Thus an insurance policy should be purchased by the operators, similar to those purchased for organizations and companies. That is to say, the insurance policy bought by the operator would serve as a guarantee for the acts of the electronic agent; a security for those who interact with the electronic agent that will satisfy whatever financial obligation or liability caused by the electronic agent.

Although potentially useful, the proposal to insure electronic agents generates certain application problems. For example, according to insurance principles, insurance companies must know before compensating for damages the proximate cause from all possible causes which will be held ultimately responsible.¹³³ This principle of insurance

¹³¹ Ibid.

¹³² See for example; Solum, L.B. (1992) Legal Personhood for Artificial Intelligences, *North Carolina Law Review*, 70(1231), p. 1231.

¹³³ Fischer, E. (2006) *Principles of Insurance Law*, 3th ed. Matthew Bender, p. 79.

contracts is known as *causation analysis*.¹³⁴ The application of the principle of causation analysis can be very difficult if the electronic agent is the insured party. To demonstrate this, consider an electronic agent sending a message to a computer system. This message then initiates a process leading the addressed system to crash due to a fault of that system. Suppose that message was a necessary condition for the crash to happen (without the message the crash would not have occurred).¹³⁵ According to the principle of *causation analysis*, before the insurance company could compensate, they would need to identify the real cause of the crash. The company would have to decide, out of the many possible factors, what exactly had caused the crash. For example, did the message really cause the crash? Or was some defective procedure of the addressee system the real cause, with the message only providing the occasion for the internal fault to occur?¹³⁶ One could also argue that other electronic agents may be involved in causing the crash. As can be seen, the insurance company will find it extremely hard to specify the proximate cause of the damage and cannot guarantee that the insured electronic agent involved is the potential cause of the crash. In the environment where electronic agents operate, it is practically hard to identify the source of the agent or its code that caused the damage. Due to the fact that it is hard to determine proximate cause, insurance companies may consider this to be the fundamental reason why they should not insure electronic agents.

Karnow therefore suggests that insurance companies should not depend on the principle of proximate cause. The author calls this unique insurance company the

¹³⁴ Ibid.

¹³⁵ Sartor, G. (2002) *Intentional concepts and the legal discipline of software agents*, in: *Open Agent Societies: Normative Specifications in Multi-Agent Systems*, editor J.Pitt, Wiley, Londonpp. p. 18. (Online) Available at: <http://www.cirsfid.unibo.it/~sartor/GSCirsfidOnlineMaterials/GSONlinePublications/GSPUB2002agentsWiley.pdf> [Accessed 20/March /2010].

¹³⁶ Ibid

'Turning Registry'.¹³⁷ The only factor needed for the Turning Registry to be able to compensate is the mere presence of the electronic agent in the disaster which occurred. There is no need to investigate what, who, when or why.¹³⁸ Following this analysis, the Turning Registry, then, is not a traditional insurance company. If the *causation analysis* is not taken into account, insurance companies would need to compensate even though the insured electronic agent was innocent and unrelated to the damage. Questions arise on the practicality of this approach for insurance companies.

Furthermore, it is not possible to confer legal personality on electronic agents when they do not have an identification. Allen and Widdison question where the location of electronic agents would be. Is it in the hardware, the software, or both?¹³⁹ According to some authors, the proposal to adopt the Turning Registry can help to establish a location for electronic agents.¹⁴⁰ Operators could be issued a certificate after having their electronic agent insured under the Turning Registry. Such certificates should, amongst other details, identify the name and address of the insured electronic agents. Since the location of electronic agents is a merely procedural matter, it is always possible to rely on some type of registration. Electronic agents can, for instance, stand behind some sort of a registry system similar to that applied to corporate bodies. Electronic agents would then be registered and recognised by the legal system, much like companies registered today.¹⁴¹ Therefore, identification and location of electronic agents do not appear challengeable problems that cannot be resolved.

¹³⁷ Karnow, C. E. A. (1996) Liability for distributed artificial intelligences. *Berkeley Technology and Law Journal*, 11(1), p. 167.

¹³⁸ Ibid.

¹³⁹ Allen, T. & Widdison, R. (1996) Can Computers make contracts? *Harvard Journal & Technology*, 9 (1), p. 42.

¹⁴⁰ Andrade, F; Novais, P; Machado, J & Neves, J. (2007) Intelligent Contracting: Software Agents, Corporate Bodies And Virtual Organizations, *IFIP International Federation for Information Processing*. 243(2), pp. 217-224.

¹⁴¹ Similar to this is the discussion by Wettig and Zehender who proposed the concept of an electronic person (i.e., agents with limited liability), enrolment of agents into an agent register, and agent liability funds as means to serve the needs of all contracting parties. See, Steffen W. & Eberhard Z. (2004). 'A Legal Analysis of Human and Electronic Agents', *Artificial Intelligence and Law*, 12 (1), pp. 1-2.

4.4 Conclusion

The above discussion illustrates that the proposal to treat electronic agents as agents under agency law cannot be easily adopted. Not only does the proposal challenge the traditional concepts of agency principles under common law, it also demands too many exceptions. For example, although under common law agents need consent to gain actual authority to bind principals, it has been suggested that this requirement can be allotted according to different requirements, chief amongst them being that the law would need to assume electronic agents have "implied consent" or the electronic agent cannot gain any legal right or assume a duty and therefore to the need to consent. Furthermore, it has been suggested that electronic agents should not be liable for any actions performed beyond their authority, against the principle of agency law.

Furthermore, an agency relationship created via apparent authority requires the third party to trust that the contracting party is an agent acting with authority of representation as given by the principal.¹⁴² The proposal though suggests electronic agents can be apparent agents even though third parties have no reasonable belief about the authority of the electronic agents.¹⁴³ This is because contracts made with an electronic agent involve communicating with computer software that lacks the legal capacity to form an agency relationship.

The same thing can be said about the notion of attributing ratification authority to transactions made by an electronic agent. Under the doctrine of ratification authority, the principal is given the right to refuse any transactions which may seem negative or unbeneficial to him. However, if they are given such a right, online businesses and electronic commerce will be plagued with massive instability as operators will wonder

¹⁴² Rama Corporation Ltd v Proved Tin and General Investment Ltd [1952] 2 QB 147.

¹⁴³ Lerouge, J.F. (2000) The Use of Electronic Agents Questioned under Contractual Law: Suggested Solutions on a European and American level, *The John Marshall Journal of Computer and Information Law*, 18(2), p. 414.

if each transaction made by electronic agents will be ratified later by the operators. It is therefore necessary to exclude the operators from this right and require them to accept all actions made by the electronic agent, regardless of whether they are beneficial or unbeneficial to them. It would seem that making exceptions to agency principles in order to accept electronic agents as such is misguided. On the one hand, the proposal calls for electronic agents to be agents, nevertheless, on the other hand it does not apply the relevant agency principles.

The suggestion of conferring electronic agents with legal personality eases the application of agency principles on electronic agents as they will be able to enter into contracts, acquire rights and duties on behalf of others and carry out liability that would result from their actions. However, there are two challenges regarding this proposal. First, the kind of legal personality suggested to electronic agents is similar to that conferred on human beings and not non-human beings. Legal personality, in this sense, is closer to the moral agency of components such as consciousness, free will, rationality etc which are seen as constituting a valid test for moral entitlement to legal personality. There are challenges to recognising these concepts in relation to electronic agents because such concepts are linked to the biological or mental characteristics of human beings. Secondly, electronic agents are unlike other legal persons, as they do not have any assets in order to fulfil their financial obligations and liabilities. Proposals suggested in this instance are insufficient on many levels. The minimum amount of “capital” established by operators will be limited to an amount where there is no guarantee that the electronic agents will act within this amount. It is expected that the electronic agent will act beyond the funds deposited and so the question is who will be held liable for those excesses. Even though the model to provide insurance can serve as an asset for the electronic agents, there are observations on the principle of *causation analysis* which identifies "the proximate cause" that will be held ultimately responsible

from all the possible causes. The insurance company will find it extremely hard to specify the proximate cause of the damage and cannot guarantee that the insured electronic agent involved is the potential cause of the crash. In the environment where electronic agents operate, it is practically hard to identify the source of the agent or its code that caused the damage. Due to the fact that proximate cause is difficult to be determined, insurance companies may consider this as the fundamental reason why they should not insure electronic agents.

However, despite the fact that there are a number of doctrinal requirements prevent electronic agents from being agents, what makes this proposal interesting is the attempt to appreciate the role of electronic agents in the contractual process by suggesting that we treat them as agents and legal persons. I feel this treatment towards electronic agents is not as negative as the previous approach as it does not treat electronic agents as communication tools. The supporters of this approach understand that electronic agents are not merely passive devices but they play a key role in the contractual process and any automated contract cannot take place without the aid of these electronic agents.

In the following chapters, these Islamic legal concepts will be examined to determine whether automated contracts can be enforced within any such concepts. It is important to introduce the concept of Islamic law, its origin and resources to preface this analysis. This is the aim of the next chapter.

Chapter 5: The Concept of Islamic Law

5.1 Introduction

The aim of this chapter is to provide an introduction to the basic principles underpinning Islamic law. Since Islamic law forms the subject of the analysis and assessment of this thesis, understanding the essential elements of this legal system is crucial. This chapter starts by discussing Islamic law's legal framework in order to explore the sources that can be used to facilitate the discussion of the enforceability of automated contracts. Taking into account the fact that Islamic law is unlike other such frameworks and is seen as trans-religious law, this chapter discusses the availability of other sources such as human reasoning, in case modern positions/approaches appear inevitable to the enforceability of automated contracts.

5.2 The Legal Framework of Islamic Law

Islamic law is referred to as *Shari'a*.¹ The term *Shari'a* literally means “the way” or “Pathway”.² This meaning is apparent in its technical definition as it is said to concretely describe the way of life as ordained by God, to guide His worshippers in their life of obedience. Some writers express this as "the high way of good life".³ It is closely connected to the status of vicegerency of human beings. A vicegerent is a person appointed by God (*Allah*) to act as an administrative deputy vis a vis carrying out the requirements of Islamic law. Islamic law exists to guide human beings to fulfil their vicegerency through living in accordance with the divine will in all aspects of life.⁴

¹ Coulson, N. (1964) *History of Islamic Law*. Edinburgh: Edinburgh University Press, pp. 59-60

² Ibid.

³ FitzGerald, V. (1931) *An Abridgement According to Its Various Schools*. Oxford: Oxford University Press, p. 158.

⁴ According to Pipes, this is similar to Jewish law. For Jews, living in accordance with the Halakha is the primary means of reaffirming God's covenant with Abraham. For Muslims, fulfilling the Shari'a permits them to live as Muhammad and his companions did. For both, the letter of the law counts as much as its

Therefore, *Shari'a* is divided into four categories:⁵ Firstly *A'qtgadat* which is a set of rules that regulate, for example, the belief in God (*Allah*), His prophet, His scriptures, and the Day of Judgement. Scholars consider this particular category as not subjected to any sort of amendment. Secondly, *Ak'lag* is a set of rules that regulate moral values. Thirdly, *Ebadat* is a set of rules that regulate the relationship between the creator (God) and the created (people). The fourth category is *Moamlat*, a set of rules that regulate people's civil transactions.⁶

We can see that *Shari'a* encompasses the entire duty of man. It regulates all affairs of human being, principally human beings' daily social life: religion, ethics, lifestyle and the entire legal system. Critics suggest *Shari'a* is a comprehensive path for living that each individual Muslim should pursue.⁷ It covers, for instance, issues such as ritual purity, prayer, fasting and even when a wedding invitation may be properly refused. *Shari'a* has been described as trans-religious, moral, and legal system. Religion remains to be the basis upon which the whole system is built. This can be seen through the subject matter and the aim of the Shari'a law. As such, devotions occupy an essential part of Shari'a's basic doctrine and even legal sanctions are typically associated with religious penalties.⁸

spirit. See, Pipes, D. (2005) *The Jewish-Muslim Connection: Traditional Ways of Life*. (Online) Available at: danielPipes.org [Accessed 22/Feb/2010].

⁵ Obeid, N. (1996) *The law of Business Contracts in the Arab Middle East*. London: Kluwer Law International, p. 133.

⁶ Ibid.

⁷ Coulson, N. (1964) *History of Islamic Law*. Edinburgh: Edinburgh University Press, pp. 59-60.

⁸ Rahman, F. (1968) *Islam*. New York: Doubleday, p. 315. This is very similar to traditional societies such as Greek and Roman societies where religion determines every aspect of life such as laws, ethical, etc. Law in these traditional societies was purely of religious nature. For example, in the code of Hammurabi (Hammurabi king of babylonia in the 18th century B.C. A famous code of laws is attributed to him), there are 282 preserved laws that resemble Islamic law in that the rules in the code cover economic life, morality, ethics all in one. Pipes argues that this is not surprising as the code of Hammurabi was an important forerunner of the laws of Islam and Roman law also played a great role in the shaping of Islamic law as was played in developing Jewish law. According to him, both Islamic and Jewish law are vast codes which touch on such diverse matters as family relations, social behavior, personal habits, and political attitudes. From cradle to grave, morning to night, few acts of an observant Jew or Muslim escape the demands of the law. The Halakha and Shari'a both tell how to wash, what to eat, where to pray. See, Pipes, D. (2005) *The Jewish-Muslim Connection: Traditional Ways of Life*. (Online) Available at: danielPipes.org [Accessed 22/Feb/2010]. Of course, most Muslim scholars reject the derivation of Islamic law from Roman law or other laws of traditional societies. For example, As-Sawi states that: "Saying that

Thus, the concept of Islamic law, which is vital to understanding the analytical basis of this thesis, shows that Islamic law in the conventional meaning is actually not a law. Many writers have rightly pointed out that it is quite misleading to describe Islamic law as a set of rules enforced by the sanctions of a state.⁹ The sources of Islamic law are purely religious. There are on the one hand the Qur'an (divine book) and *Sunnah* (traditions of the Prophet of Islam), and on the other hand, secondary sources to help us interpret the meaning of these two sources. The relationship between these sources, and the weight of each, is subjected to the Roots of the Science of Law, or *Usual al-fiqh*. The aim of this Science is to define the rules and methodology by "practical ruling of divine sources are extracted from their detailed evidence", that is, how they can removed from the roots to detailed determinations.¹⁰ Each one of these sources will be discussed in the following pages.

5.2.1 Sources of Islamic Law

5.2.1.1 Qur'an

Muslims regard the Qur'an as the divine revelation from God, through the Angel Gabriel, to his last Prophet Mohammed.¹¹ It is the most authoritative source and the first to be consulted when any determination is sought. Qur'an is not a created law that contains codes, nor a scientific study divided into several chapters. The majority of the legal principles discussed in the Qur'an are general in nature. For example, with regard to

Islamic law was derived from Roman law is an accusation unprecedented in the odiousness and impertinence of those whose insolence has overcome them ... Many jurists and scholars of Islamic law emerged from among them, especially since the Muslims knew that it was prohibited for them to rely upon the likes of these man-made legal systems when they had with them the Book of Allah and the Sunnah of His Messenger...". To view the As-Sawi's discussion on this issue, the reader can view; As-Sawi, G. Living Shari'ah, *IslamOnline*. Available at: http://www.islamonline.net/servlet/Satellite?pagename=IslamOnline-English-Ask_Scholar%2FFatwaE%2FFatwaEAskTheScholar&cid=1242759220804 [Accessed 16/Nov/2009].

⁹ Rahman, F. (1968) *Islam*. New York: Doubleday, p. 315 and Pipes, D. (2005) *The Jewish-Muslim Connection: Traditional Ways of Life*. (Online) Available at: danielPipes.org [Accessed 22/Feb/2010]. Pipes states: "law" is not an entirely appropriate term to describe Islamic law, for they contain many precepts outside the jurisdiction of law as understood in the West.

¹⁰ Zahraa, M. (2003) Unique Islamic Law Methodology and the Validity of Modern Legal and Social science Research Methods for Islamic research, *Arab Law Quarterly*, 18(3), p. 230.

¹¹ Hinchcliffe, D. (2005) *Introduction to Islamic Law*. London: University of London, p. 15

contract and legal obligations, the Quran states: “*Aufu bi al-Uqud*” (*Qur'an* 5: 1). This verse means “O you who believe fulfil (all) your obligations”.¹² The Qur’an also states: “O you who believe, do not devour your property among yourselves falsely, except that it be trading by your mutual consent, and do not kill yourselves. Surely Allah is Merciful to you”. (*Qur'an* 4:29).

Such verses are the fundamental principles that govern the sanctity of all contracts, private, public, civil or commercial. The Qur’an considers usury (*Riba*) forbidden:¹³

O you who believe fear Allah and give up what remains of your demand for usury if you are indeed believers ... But if you are repent, you shall have your capital sums: deal not unjustly, and you shall not be dealt with unjustly (*Qur'an* 1:29).

As can be seen, no specific details are given in this verse as to what is usury, types of usury and so on. The same can be argued about the first two verses. The Qur’an did not express which contracts and obligations should be fulfilled and which should not. The Qur’an’s injunctions then are too general in nature. *Sunnah*, which is the tradition of the Prophet of Islam, is the source which helps provide more details for such matters.

5.2.1.2 Sunnah

The *Sunnah* contains words, actions and speech undertaken by the Prophet of Islam (Mohammed).¹⁴ Muslims understand that Mohammed’s speech and behavioural conduct is a point of reference as he represents the example of a human being living in

¹² The Holy Qur’an, (Yusuf Ali translation), American Trust Publication, 1977, Surah 5, Al-Ma’ida. It Available at: http://www.harunyahya.com/Quran_translation/Quran_translation_index.php [Accessed 01/Feb/2008].

¹³ *Riba* is usually translated in English as (usury) (Interest). *Riba* in Islamic law is defined in a broader sense. It is defined as "An unlawful gain derived from the quantitative inequality of the counter values in any transaction purporting to affect the exchange of two or more species which belong to the same genus and are governed by the same legal cause. Deferred completion of the exchange of such species, or even of species which belong to different genera but are governed by the same cillah (legal cause), is also *riba*, whether or not the deferment is accompanied by an increase in any one of the exchanged counter values." See Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, p. 67.

¹⁴ Alalwani, T. (1990) *Source Methodology in Islamic jurisprudence: Methodology for Research and Knowledge*, English Edition by Yusuf Talal DeLorenzo A. S. Al Shaikh-Ali, The International Institute of Islamic Thought Herndon, Virginia USA. (Online) Available at: http://www.usc.edu/dept/MSA/law/alalwani_usulalfiqh/ [Accessed 03/April/2009].

accordance with the Qur'an. Therefore, he provides a model through which it can be understood how verses stated in the Qur'an must be implemented.¹⁵ The *Sunnah* can simply clarify details of what is stated generally in the Qur'an, making it specific and particular. In other words, when the Qur'an's verses do not express an issue, the *Sunnah* becomes an essential source to interpret the issue more clearly and elaborately.¹⁶ For instance, when the Qur'an, as stated in the previous page, prohibits usury or interest, the *Sunnah* explains in details what forms of it that is prohibited. The Prophet Mohammad states that:

Gold is to be paid for with gold, both being of equal weight and of same quantities; silver is to be paid for with silver, both being of equal weight and of same quantities. If anyone gives more or asks for more of it, it is then usury.¹⁷

These traditions or known statements of the Prophet Mohammad were recorded after his death in the volumes known in Arabic literature as *Hadeeth*.¹⁸ However, not every statement is present; it is the tradition of the Prophet, shall be recorded in the volumes of *Hadeeth*. Muslim jurists developed a sophisticated science of tradition to verify whether or not a statement can and indeed be traced back to the Prophet.¹⁹

Additionally, not all the statements recorded in the *Hadeeth* are conclusive in narration or denotation. Muslim scholars argue that statements of the Prophet Mohammad can be inconclusive. That is to say, not every statement recorded in the *Hadeeth* is definite in narration and denotation. Being definite in the denotation means

¹⁵ Rahman, F.(1968) *Islam*. New York: Doubleday, pp. 50-51.

¹⁶ This does not mean that the *Sunnah* is not an independent source. It can be contained issues which are not stated in the Qur'an. The Qur'an says "He will enjoin on them that which is the right and forbid them that which is wrong. He will make lawful for them all good things and prohibit for them only the foul: and he will relieve them of their burden and the fetters that they used to wear" (Qur'an 7:175).

¹⁷ This *Hadeeth* is reported by Muslim, number (699).

¹⁸ Hinchcliffe, D. (2005) *Introduction to Islamic Law*. London: University of London, p. 15.

¹⁹ This sophisticated science of tradition which verifies whether or not a statement can be traced back to the Prophet is known in Arabia as the science of *Jarh wa Ta'deel*. The authenticity of the *Hadeeth* and the sciences surrounding it determine whether a *Hadeeth* is authentic or otherwise. It is well known that there is nothing for the people except what has been written (of that science). See in Arabic, Saad. K. (2007) *Mbahth Fi al Jarh wa Ta'deel*, Dar Albshayer Al-islamiah, Riyadh.

that the statement concerned is clear and has only one possible meaning.²⁰ Thus, statements can be inconclusive in either narration or denotation or both; that opens the door for a number of interpretations and meanings. In this case, recourse to reason out the most plausible meaning is inevitable. It should be noted that this was not the only justification for individual reasoning is necessary under Islamic law. It is also required vis a vis the interpretation of the Qur'an as textual evidence. The Qur'an states: "He it is who has sent down to thee the Book: In it are verses basic or fundamental (of established meaning); they are the foundation of the Book: others are allegorical." (*Qur'an* 7:2). This verse establishes that the Qur'an can also include verses which are not necessarily conclusive in narration or denotation. That is to say, some of the Qur'an's textual evidence needs to be subjected to the interpretation of human beings in order for its most precise meaning to be yielded. In addition, because judgements in the divine sources are by nature finite, the death of the Prophet of Islam created a gap in Islamic legislation on issues that are not directly contemplated in the sources of the Qur'an and the *Sunnah*. So, the need for individual reasoning becomes necessary to fill in this important gap. In the next few pages, the role of human intelligence or reason will be discussed along with how it should be exercised under Islamic law.

5.2.1.3 Human Reasoning

Human reasoning is applied under Islamic law through a process of inquiry called *fiqh*, which can be translated into English as jurisprudence. *Fiqh* is developed through jurists' structured efforts to understand and apply principles and rules laid down in the divine sources (the Qur'an and the *Sunnah*). In other words, *fiqh* extracts and formulates detailed rulings stated in divine sources. This process is subjected to a highly formulated stipulations or methods outlined in the Science of the Principles of Islamic

²⁰ Najjar, A. (1999) *The vicegency of Man, between Revelation and Reason: A critique of the Dialectic of the Text Reason, and reality*, International Institute of Islamic Thought (IIIT), pp. 54-58.

Jurisprudence²¹ or the Roots of Law,²² *Usual al-figh* as it is called in Arabic.²³ One of these stipulations is that since *figh* is a highly formulated science, it demands special requirements of those practising it and so it is not open to everybody. Only those who are experts in the Qur'an and Sunnah can practice reasoning and this reasoning is called (*Ijtihad*) in Arabic. In Islamic law, *Ijtihad* plays a significant role. According to *Usual al-figh*, Muslims jurists are required to follow any of the two methods when making an *Ijtihad* such as interpreting a statement from the primary texts.

First, Muslim jurists can rely on consensus (*Ijma*), which is defined as “an agreement of a group (*Jama'ah*) on a certain question by action or by abandonment”.²⁴ The authority of consensus is based on the *Sunnah* of Prophet Mohammad when he stated that: “my people do not meet upon error”. It should be noted here that consensus cannot be perceived as a separate law. It has to be based on evidence derived from either the Qur'an or *Sunnah*. In other words, the consensus cannot be built in a vacuum, it must grow out of a legitimate interpretation of the primary sources.²⁵ Second, Muslim jurists can rely on *Analogy* in the process of making the *Ijtihad* which is known in Arabic as (*Qiyas*). Unlike the consensus method, analogy is based only on a judgment of a man. It is defined as “establishing the applicability of a ruling in one case to another case on the grounds of their similarity, with respect to the attribute upon which the ruling is based”.²⁶ In other words, it is an individual reasoning (*Ijtihad*), a method of facing new situations and problems in light of the general principles of the Qur'an and *Sunnah*. For example,

²¹ Zahraa, M. (2003) Unique Islamic Law Methodology and the Validity of Modern Legal and Social science Research Methods for Islamic research, *Arab Law Quarterly*, 18(3), p. 216.

²² Rahman, F. (1968) *Islam*. New York: Doubleday, p. 75.

²³ Zahraa, M. *op.cit.*, p. 216.

²⁴ Asherman, J. (1982) Doing Business in Saudi Arabia: The Contemporary Application of Islamic Law, *the International Lawyer*, 16, p. 321.

²⁵ The practical value of the consensus became in the course of time very limited since it is impossible to obtain consensus on particular issue by asking all Islamic scholars in all Islamic communities. Specifically, there is no single organization that represents all Islamic scholars. Alalwani, *op. cit.* pp. 22-30.

²⁶ Karl, D. (1992) Islamic Law in Saudi Arabia: What Foreign Attorneys Should Know? *The George Washington Journal of International Law and Economics*, 25(131), pp. 66-79.

wine, unlike whisky, is explicitly forbidden in the Qur'an, so the prohibition of the former can be extended to the latter, as the motivating cause of prohibition is that it causes intoxication. This source plays an important role under Islamic law. The idea of analogy came from the fact that although the judgements in the limited number of divine text were by nature finite, the general principles behind it however could and should be applied in other contexts. Mu'adh ibn Jabal states that when the Prophet Mohammed sent him to Yemen, he asked:

What will you do if a matter is referred to you for judgement?" Mu'adh said: "I will judge according to the Book of Allah." The Prophet asked: "what if you find no solution in the Book of Allah?" Mu'adh said: "Then I will judge by the Sunnah of the Prophet." The Prophet asked: "And what if you do not find it in the Sunnah of the Prophet?" Mu'adh said: "Then I will make Ijtihad to formulate my own judgement." The Prophet patted Mu'adh's chest and said "Praise be to Allah who has guided the messenger of His Prophet to that which pleases Him and His Prophet."²⁷

This Ijtihad is further explained in the advice of Umar, the second president (*Khalifa*) after the Prophet Mohammad, given to Abu Musa when he appointed him a judge: "Judgement is to be passed on the basis of express Qur'anic imperatives or established Sunnah practices." Then he added:

Make sure that you understand clearly every case that is brought to you for which there is no applicable text of the Qur'an or the Sunnah. Yours, then, is a role of comparison and analogy, so as to distinguish similarities -in order to reach a judgement that seems nearest to justice and best in the sight of Allah.²⁸

Umar also said to a judge:

Use your brains about those matters that perplex you, to which neither law or practice seems to apply".²⁹ Prophet Mohammed himself encouraged his companions (*Sahabah*) to make Ijtihad by saying: "When a judge makes Ijtihad and reaches a correct conclusion, he receives a double reward; and if his conclusion is incorrect, he still receives a reward."³⁰

²⁷ Abn kthyr, (2005) *Albdayh walnhayh*. Riyadh: Dar Alshwaf, 5, p. 255 (In Arabic).

²⁸ Ibid, Vol 7, p. 185

²⁹ Altbry, (2003) *Jama' Albyan fy ffsyr Algran*. Beirut: Dar Alktb Ala'lmya, p. 381 (In Arabic).

³⁰ Abn kthyr . *op,cit.*, p. 185.

5.2.1.3.1. Islamic Schools

Such individual reasoning undertaken by *Ijma* and *Qiyas* creates what is called today “Islamic schools of thought”. Different areas of the Islamic world use different reasoning and consequently there are different schools of thought. This is understandable due to the distances between different areas, cultures and customs of the Islamic world. Two main doctrines under Islamic law emerged from this divergent centres of learning, *Snh* and *Shiite*.³¹ The *Snh* doctrine includes four main (*Snh*) schools of thoughts: *Hanafi*, *Maliki*, *Shafi'i* and *Hanbali* school.³² As stated in the introduction, *Snh* is the official adopted doctrine in the KSA. Muslims believe that the knowledge derived from these schools is not as reliable as the conclusive statements derived from divine sources (the *Qur'an* and the *Sunnah*). Statements derived directly from divine sources should be given priority over those that stem from reason. Abu Bakr al Siddiq, the second president (*Khalifa*) after Prophet Mohammad, said: "As far as the Prophet is concerned, his opinion was always correct because Allah (*God*) always guided him. In our case, however, we opine and we conjecture." In the same vein, Al-Faruqi states:

The discoveries and conclusions [through reason] are not contain. They are always subject to trial and error, to further experimentation, further analysis and to correction by deeper insight. But, all this notwithstanding, the search is possible and reason cannot despair of re-examining and correcting its own precious findings without failing into scepticism and cynicism.³³

³¹ The Shiite school officially exists only in Iran. The legal background for Shiite school is completely different to that of the Sunni school.

³² The *Hanbali* School is found mainly in KSA, Syria, and Palestine. The other *Snh* schools exist in different permutations across the Islamic world. For example, the *Maliki's* school's influence can be found mostly in Western Africa and the Eastern Arabian coasts. The *Hanafi* school exists in the Afghanistan, Turkey, and South Asia. Eastern Africa and South Arabia are influenced by the *Shafi* school. Daura, B.(1968) A Brief Account of the Development of the Four Sunni Schools of Law, and Some Recent Development, *Journal of Islamic and Comparative Law*, 2(9), p. 3.

³³ Al-Faruqi, (1982) *Al Tawahid: Its Implications for thought and Life*, International Institute of Islamic Thought (IIIT), p.6. The *Ijtihad* of many of Prophet's companions was so accurate that in many cases the revelations of the *Qur'an* confirmed it, and the Prophet supported it. Obviously, their close association with the Prophet had afforded them a keen sense of the aims of the All-wise Lawgiver, of the basic purposes behind the *Qur'anic* legislation, and of the meanings of the texts; opportunities which those who came after them did not directly enjoy.

The consequence then from the above discussion is that Islamic law is not necessarily a divine source as is frequently stated so. Many writers use the term Islamic law to refer to the totality of rulings extracted from the Qur'an or *Sunnah*,³⁴ whereas in reality, such rules were developed under *fiqh* (jurisdiction) and not necessarily from the divine sources. The difference between *fiqh* and divine sources under Islamic law is that, while the former is the revelation embodied in the Qur'an and the *Sunnah*, the latter is the human reason based on that revelation for the purpose of extracting and formulating detailed rulings. In other words, divine sources are the way principles are revealed by God to His worshippers, while *fiqh* is the worshippers' structured efforts to understand and apply it in their daily lives. God is the subject of divine sources while man is the subject of *fiqh*. That is to say, there are two uses of the concept of Islamic law. Firstly, the use of Islamic law refers to the way ordained by God and communicated to humans through His prophet. The other use of Islamic law refers to *fiqh*, which is the process by which rulings recorded in the Qur'an and *Sunnah* can be extracted and formulated. Therefore, Islamic law in here means the sum total of the rulings grasped through individual reasoning. In this thesis, the term Islamic law is used in a wider sense i.e. as the sum total of rulings extracted from revelation, primary sources or through human-reason-based instruments, secondary sources (*fiqh*).

Nevertheless, one can still argue that the difference between the two meanings of Islamic law is largely formal. As seen above, rulings grasped by human reason via *fiqh* procedures must be based directly or indirectly on the divine sources i.e., the Qur'an and the *Sunnah*. Not only does this allow it to be Islamically recognized, it also acknowledges that Islamic law focuses on the role of human reason within divine sources. Therefore, it makes no real difference to term their sum total divine or *fiqh*

³⁴ Zahraa, M. (2003) Unique Islamic Law Methodology and the Validity of Modern Legal and Social Science Research Methods for Islamic Research, *Arab Law Quarterly*, 18(3), p. 217. In which Islamic law is defined as "the body of norms, principles, rules and rulings that are extracted from the primary Islamic sources (the Qur'an and Sunnah)".

statements so long as this meaning is borne in mind. These rulings, therefore, can always be attributed to divine sources. It is a requirement that in order to be Islamically recognized, *fiqh* or individual reasoning has to be based on evidence derived from either the Qur'an or *Sunnah* or grow out of legitimate interpretation of these primary sources. The practice of individual reasoning is dependent on divine sources, Qur'an and *Sunnah*. It is still an expander of determinations outlined originally in these two divine sources. That is to say, Islamic law focuses on the role of human reason within divine sources i.e. in understanding and applying the information from these sources. As such, it makes no real difference to term their sum total divine or *fiqh* statements as long as this meaning is born in mind.

5.2.1.3.2. Role of Reason beyond Divine Statements

The above argument that human reason operates only within divine sources leads to an important question about the role of reason beyond divine statements. Here, the question that arises in regard to human reasoning is, How does one determine a new issue under Islamic law when the divine sources are silent? When discussing the enforceability of automated contracts an issue may arise in which there are no divine statements concerning the issue in question. For example, extending legal personality to electronic agents under Islamic law is an issue that has not been narrated in the divine sources or discussed before by Muslim jurists. In such a case, human reasoning cannot seek evidence from the Qur'an or *Sunnah* in order to arrive to a legitimate interpretation of the divine sources. As Albna puts it: "Undoubtly, attempts to determine new issues from the point of Islamic law is sometimes difficult [because] there is no statement, either in the Qur'an or *Snh*³⁵, which can be taken as a starting point".³⁶

³⁵ The word *Snh* used in this article is the same word *Sunnah* used throughout the thesis. There is no difference between them only that the last word is more used in the literature than the word *Snh*.

³⁶ Albna, G. (2008) Ala'slam cualh lkl zaman wmkam. *Tanweer*. (Online) Available at:

The issue of the role of human reasoning when the divine sources are silent, has been hotly debated among Muslim scholars. On the one hand, there are those strict scholars who suggest that the ability of making new laws was repudiated.³⁷ That is to say, all matters of law have already been settled in the book of the Qur'an and *Sunnah*. This understanding suggests that every aspect of life has been directly or indirectly narrated in these divine sources. This perspective is grounded on a verse recorded in the Qur'an which states that: "This day, I have perfected your religion for you, completed My Favour upon you, and have chosen for you Islam as your religion".³⁸ It was therefore decided that all future activities of reasoning should be limited to what has been revealed by the divine, tracing and discovering them.³⁹ The role of human reasoning should work only to expand determinations outlined originally in the Qur'an or *Sunnah*. That is to say, no obligation can be adopted except through these primary sources.

However, it must be said that the majority of modern Muslim scholars hold the opposite point of view to the one outlined above. That is, issues can be scrutinized by human reason even if no reference can be found in revelation. Alshatbi states: "[human reasoning] cannot cease except at the end of the world when man's subjection to the Law will cease."⁴⁰ Abd al-Jabbar and Abu Husayn al-Basri have "deemed [human reasoning] to be an indispensable ingredient in law." Abn Tymyih argues that jurists must use human reasoning "even if this meant getting rid of much of the [jurisprudence] that had developed over the centuries."⁴¹

<http://www.kwtanweer.com/articles/readarticle.php?articleID=1910>, pp. 136. [Accessed 1/Sept/2009].

³⁷ This was mentioned in the work of Nyazee, I. (1994) *Theories of Islamic Law: The Methodology of Ijtihad*. Malaysia: A S Noordeen, pp. 46-47.

³⁸ The Holy Qur'an, (Yusuf Ali translation), American Trust Publication, 1977, Surat Al-Mā'idah (5:3). (Online) Available at:

http://www.harunyahya.com/Quran_translation/Quran_translation_index.php [Accessed 01/Feb/2008].

³⁹ Nyazee, I. (1994) *Theories of Islamic Law: The Methodology of Ijtihad*. Malaysia: A S Noordeen, pp. 46-47.

⁴⁰ Alshatbi, (1998) *Almoafkat*. 2th ed. Cairo: Dar Al-marifah, p. 327 (In Arabic).

⁴¹ Abn Algym, (1993) *Elam Almoqeen*. 3th ed Beirut: Dar Alketab Alelmiah, p. 111 (In Arabic).

When reasoning is reached, there is an obligation to act upon this reasoning even if the revelation is absent. Then laws can be grasped and formulated regardless of any revelation statement having been found.⁴² Under Islamic law, such reasoning is called *Fatwa*.⁴³ When making human reasoning on novel issues, principles such as *istihsan* or Islamic equity, *al- maslaha al-mursalh* or public interest, and *urf* or custom are suggested for use.⁴⁴ According to this perspective, principles such as: “*changing rules according to the changing of times circumstances and places*”, “*damage should be eliminated*”, and “*unlawfulness is permitted if necessary*” should be taken into consideration when reasoning as they all serve the spirit of Islam.⁴⁵

As already argued in the introduction, *al- maslaha al-mursalh* can be a useful device for exploring the enforceability of automated contracts under Islamic law. Alkardawi argues that public interest can be defined as: “[E]verything that can benefit people here and hereafter. This could be seen in their daily lives and whether it is individual, public, about current or future interest”.⁴⁶ According to Alkardawi, public interest is established by Muslim jurists simply to protect the object of Islam and the object of Islam is to protect human being’s believe, soul, brain, properties, security, rights etc.⁴⁷ According to Alqrafi, this principle i.e. public interest is free of any limitations and can be relied upon by Muslim jurists when facing new issue(s), particularly “when there is no precise

⁴² Ibid, p. 44.

⁴³ A sample of an official *fatwā* (in Arabic and translation of its full text follows) is reproduced in the Appendix II. El-Gamal explains some concerns regarding the method of *Fatwa* under Islamic law. He claims that “the current context of an Islamic law, which evolves through *fatāwa* instead of formal codification, is particularly problematic for the desired coherence of opinions. It is the nature of a *fatawa* that it is given for a specific time and specific set of circumstances, and therefore a collection of *fatāwa* is highly unlikely to exhibit any degree of internal consistency and coherence”. See, El-Gamal, M. (2003) Interest and the Paradox of Contemporary Islamic Law and Finance, *Fordham International Law Review*, 27(1), p. 130.

⁴⁴ Zahraa, M. (2003) Unique Islamic Law Methodology and the Validity of Modern Legal and Social science Research Methods for Islamic research, *Arab Law Quarterly*, 18(3), pp. 238-244.

⁴⁵ Coulson, N. (1964) *History of Islamic Law*. Edinburgh: Edinburgh University Press, pp. 59-60.

⁴⁶ Hassun hamed Hassan, theory of interest in Islamic jurisprudence.

⁴⁷ Alkardawi argues that there is no disagreement among Muslim scholars on the acceptance of the public interest under Islamic law. The school of Maliki and Hanbali, specifically Ibn Taymiyyah and Abn alqaim are the most scholars who accepted the use of public interest. See, Alkardawi, Y. (2000), *Alsyasah Alshra'iah fi dhou'a nsous Alshria'ah wmkasdha*, Cairo: Alresalah, p. 200.

evidence in the divine statements on the issue in question either to approve or decline it”.⁴⁸

Public interest has been used by several Muslim reformers in recent centuries. The concept is better known to Islamic modernists. Among them, Alshatbi is especially recognized for using the concept of *al-maslaha al-mursalah* as the basis for reconciling modern trade with the traditional code of Islamic law. He focuses on the motives behind Islamic Law. Firstly, regarding questions related to God, *eba'dat*, he claims that humans should look to the Qur'an or the *Sunnah* for answers, however regarding relationships between humans, *mu'amalat*, humans should look for the best public solution. Given that societies change, Alshatbi asserts that the *mu'amalat* part of the Islamic Law also needs to change.⁴⁹

It would seem that the most useful perspective is that which endorses the notion of reason being used to determine issues separately without any textual reference to either the Qur'an or the *Sunnah* and that is based on the principle of “public interest”. As Al-Faruqi succinctly points out:

To know the divine will, man was given revelation, a direct and immediate disclosure of what God wants him to realize on earth...Equally, man is endowed with senses, reasons and understanding, intuition, all the perfection necessary to enable him to discover the divine will unaided. For that will is embodied not only in casual nature, but equally in human feelings and religions. Whereas the former half takes another exercise of the discipline called natural science to discover it, the second half takes the exercise of the moral sense and the discipline of ethics.⁵⁰

⁴⁸ Algrafi, (1998) *Alfrwg*. Vol. 3 Beirut: Dar Alktb Ala'lmyh, p. 150.

⁴⁹ I have already clarified the meaning of *eba'dat* and *mu'amalat* in previous sections. See page 89 of this chapter.

⁵⁰ Al-Faruqi, (1982) *Al Tawahid: Its Implications for thought and Life*, International Institute of Islamic Thought (IIIT), p. 6.

According to Usmani, the acceptance of human reasoning beyond divine statements to achieve the public interest would ensure the applicability of the statement that "Islam is for all times and places". Usmani states:

...[W]hen we claim that Islam has a satisfactory solution for every problem emerging in any situation in all times to come, we do not mean that the Holy Quran and Sunnah of the Holy Prophet or the rulings of Islamic scholars provide a specific answer to each and every minute detail of our socioeconomic life. What we mean is that the Holy Quran and the Holy Sunnah of the Prophet have laid down the broad principles in the light of which the scholars of every time have deduced specific answers to the new situations arising in their age. Therefore, in order to reach a definite answer about a new situation the scholars of Shariah...have to analyze every question in light of the principles laid down by the Holy Quran and Sunnah.⁵¹

However, Muslim jurists generally agree that the decision about whether or not there is a public interest in a certain issue requires certain conditions that need to be satisfied first. Alqrafi for example, argues that the decision about the application of the public interest cannot be left merely to any individual. According to him, the decision maker should be aware of "Islamic ethics, his mind and attitude should be familiar to what would invalidate the morals of Islamic law".⁵² Abn Bdran also argues that "there is no doubt that Muslim jurists should take into consideration the public interest when making new decisions however, this must be with careful and deep thoughts".⁵³ According to Althnqiti, the public interest is a matter that needs to be considered carefully by Muslim jurists in case it conflicts with other equal or upper interests of Islam, and does not lead to damages (*mafsadh*).⁵⁴ Abuhamed Alqazali, argues that some public interests would be regarded as weird and therefore could have no grounds to be accepted in Islam. Alqazali states:

⁵¹ Usmani, M-T. (1998) *An Introduction to Islamic Finance*. Karachi: Idaratul Ma`arif. p. 237. In addition, Al-Sahfi said: "... [E]verything which was revealed for the Muslims contains either a binding command, or a legal proof upon which future rulings can be based to uphold Truth and Justice. Thus, if revelation gave us a direct ruling [regarding the matter at hand], Muslims must follow that ruling; and if revelation did not make a ruling on this specific matter, then a proof for the just and true ruling must be sought". Al-Sahfi, M. (1939, reprinted n.d.) *Al-Risalah*. Beirut: Al-Maktaba Al-'Ilmiyyah (verified by Ahmad M. Shaker).

⁵² Alqrafi, (1998) *Alfrwg*. Vol. 3 Beirut: Dar Alktb Ala'lmyh, p. 155.

⁵³ Cited by Alotibi, S. (2007) *Alestljal bi Almaslaha Almursalh Wz'wabth*. (Online) Available at: <http://almoslim.net/node/83553>, [Accessed 22/June/2010].

⁵⁴ Althnqiti, M. (1988) *Rehlt Alhj ela Byt Allah Alhram*. 1th ed. Jeddah: Dar Alshrgw, p. 181. (In Arabic).

Public interest is to bring benefits and remove damages in light of Islamic rules. That means, this principle is not free to any benefit. People may think certain interest should be taken in however, in the Islam's thoughts this interest may not. That is to say, even if public found something of interest to them, this does not make it directly a valid interest under Islamic law. The principle of public interest under Islamic law is only established to protect the objects of Islam. When a public interest is in conflict to Islam, this does not make it really an interest. It is just desires and lust of human beings.⁵⁵

Using this argument i.e., the application of the public interest under Islamic law, as a point of departure, it can be argued that there is close similarity between Islamic law and other modern legal systems. This is because, on the one hand, a Muslim judge/jurist is restricted by Divine Ordinary: the Qur'an and *Sunnah*. On the other hand, a judge/jurist under most present legal systems is restricted by law codes. The consideration of the public interest under Islamic law should be similarly familiar to Western law. A given legal question under the western law can be decided based on public interest or custom if there is no available solution in the primary sources. Islamic law accordingly, has much in common with the modern legal framework employed throughout the West. Both of these legal systems are allowed to operate according to public interest or custom if there is no available solution in the primary sources. In the absence of knowledge located in revelation, reasoning and the interest of public should yield the required guidance. This idea is crucial to the present study as it shows the possibility of relying on human reasoning to discuss a topic such as enforceability of contracts made by electronic agents, where no divine statements concerning this novel issue exists. This thesis will also benefit from arguments and ideas found in common law literature.

⁵⁵ Alqazali, A. (1999) *Shfa' Alkh'lyl fy Byan Alshbh Walmkh'yl Wmsalk Altalyl*. Baghdad: Mtbat Alershad, p. 188.

5.2.1.3.2.1 Position of Saudi Law

Saudi policy-makers adopt this modern prospective on human reasoning mentioned above, believing that the rules and cases covered in the Qur'an and *Sunnah* are finite⁵⁶ and the changing demands (social and economic) of Saudi society are beyond measure. Therefore, Saudi policy-makers have had to admit that to fulfil such demands, the door for regulatory sources (positive (*wadi*) law) will be opened. Regulatory or “*nezamih*” sources as Saudi policy-makers refer them,⁵⁷ are regulations which are promulgated by the Saudi Council of Ministries using Royal Decrees.⁵⁸ Royal Decrees play an important part in developing the Saudi legal system. They have the ability to fill in any legal gaps caused by the lack of statements recorded either in the Qur'an, *Sunnah*, or those efforts of the Muslim jurists (*fiqh*). The Electronic Transaction Regulation (ETR) 2007 [SA] is one example of those Royal Decrees issued by the Saudi Council of Ministries.⁵⁹ Further examples can be seen in Royal Decree for the Regulation of Companies⁶⁰, Royal Decree for the Regulation of Commercial Agencies⁶¹, Implementation Rules for Commercial Agencies Regulations,⁶² and the Royal Decree for the Regulation of Commercial Court.⁶³ Although the Royal Decrees in the KSA takes religious sources into consideration, the religious source still has the final word on these Royal Decrees. Article 67 of the Saudi Arabian's Constitution points out that: “The regulatory authority lays down regulations

⁵⁶ This should be understandable as the Islamic law was designed to deal with a semi-feudal society that had not yet reached the industrialized age.

⁵⁷ It is interesting to note that any law adopted by the Saudi Council of Ministries is usually referred to as regulation (*nezam*) rather than law. The reason for this is that in Muslim theory, the only one who is authorized to make laws is God. God is the only legislator on the earth and lawmakers would be referred as regulators. It should be aware of the fact that the difference here is largely formal i.e., it has no influence whatsoever with regard to application.

⁵⁸ The Council of Ministers was established in 1953. Only in September 1993 was the Council given responsibility for drafting and overseeing the implementation of internal, external, financial, economic, educational and defence policies, and general affairs of state. The Council meets weekly, currently on Mondays, and is presided over by the King or his deputy.

⁵⁹ The Saudi Electronic Transactions Regulation, 2007 will be subject to investigation in the following chapter.

⁶⁰ No, M\6 of 1965 (as amended).

⁶¹ No, M\11 of 1962 (as amended).

⁶² No, 1897 of 1981.

⁶³ No, M\32 of 1930.

and motions to meet the interests of the state or remove what is bad in its affairs, in accordance with the Islamic *Shari'a*".⁶⁴

Realizing that the Saudi legal system contains religious sources (the Quran and *Sunnah*) on the one hand, and positive (*wadi*) law embodied in royal decrees on the other, Marar describes the Saudi legal system as a dual system (i.e. "a system within a system").⁶⁵ Vogel, explains this Saudi duality thus:

In most Islamic states...the legal system is bifurcated: one part is based in man-made, positive (*wadi*) law; the other part is Islamic law...Saudi Arabia also a dual legal system...the Islamic component if the legal system is fundamental and dominant. The positive law, on the other hand, is subordinate, constitutionally and in scope.⁶⁶

The result of such duality provides a continuous contradiction in the KSA. There have been some commercial issues that have been denied the right to be regulated by royal decrees because of an apparent contradiction with statement(s) in the divine sources. For instance, as interest rates (*Riba*) are forbidden according to the Qur'an and *Sunnah*,⁶⁷ Saudi Arabia remains the only country in the world which has not adopted regulations governing interest rates in commercial matters. Interest rates cannot be articulated in the country even though Saudi policy-makers may realise that there are commercial benefits associated with it. The consequence then must be that any country like the KSA, where Islamic law is the primary source of power and the essential ingredient of its legal system, the power to interpret and amend laws according to contemporary values and needs is more restricted, as compared to secular laws. The ability to create laws under the KSA legal system is constrained under the umbrella of Islam as a religion with various restrictions. Comparatively, most secular legal systems create laws based on a set of

⁶⁴ The Saudi Arabian constitution, art, 67.

⁶⁵ Marar, A. (2006) The Duality of the Saudi Legal System and its Implications on Securitizations, *Arab Law Quarterly*. 20(4), p. 389.

⁶⁶ Vogel, F. (1997) *Islamic Governance in the gulf: A framework for Analysis, Comparison, and Prediction, The Persian Gulf at the Millennium: Essays in Politics, Economy, Security, and Religion*. Gary Sick ct. al cds. Macmillan Press Ltd, p. 249.

⁶⁷ Interestingly enough, disputes arising in Saudi Arabia between banks and their clients are settled out of court by a special committee.

principles and rules. It is easy therefore to argue that legal systems that depend on Islamic law can appear irrational and inflexible in this modern era. In contrast, under secular or positive legal systems, laws are devised by human being and are subject only to the interest of the public. That is to say, ideas and approaches will only remain acceptable in the KSA so long as those adopted ideas do not contradict or conflict with the principles and morals of Islam.

5.4 Conclusion

The previous discussion has presented research in support of an evaluation of the concept of Islamic law. Islamic law's stand on any issue must be determined via consultation with the divine sources of the Qur'an and *Sunnah*. Therefore, revelation is the only source in Islamic law. The role of reason within Islamic law also depends on revelation. Both consensus and analogy must be traced back to statements narrated in revelation. However, such efforts will not be as reliable as the conclusive statements derived from divine sources (the Qur'an and the *Sunnah*). Statements derived directly from divine sources should be given priority over those that stem from reason. When the divine sources are silent, human reasoning is accepted for use, however it is conditional as to not contradict with principles and morals of Islam. Human reasoning in this instance is not binding which means that other Muslim jurists/scholars can agree/disagree and create different human reasoning.

After determining the main issues to be examined and the basis for doing so, I will begin discussing the enforceability of automated contracts under Islamic law. In the next two chapters (6 and 7), ideas and hypotheses concerning the enforceability of contracts made by electronic agents will be examined in light of divine sources together with the Islamic *fiqh* to determine which idea/approach is more reliable. When no divine statement on an issue exists, reliance will be more on human reasoning based on the

interest of public. This is as I explained above, conditional on will not contradict with the spirit of Islamic law, or any of its general principles. Though Saudi law may have a position in regards to the use of these electronic agents in concluding contracts, any attempt to present different positions/approaches discussed in the coming chapters may create a motivation for change.

CHAPTER 6: The Enforceability of Automated Contracts and Islamic Principle of Mutual Consent

6.1 Introduction

This chapter explores the enforceability of automated contracts under Islamic law by establishing that mutual consent is the main condition for these types of contract. Contracting parties must mutually consent in order to make their contract binding. The aim in this chapter is to discover whether this condition of mutual consent is satisfactory and compatible in automated contracts so that these contracts can become binding under Islamic law. Thus, it is important first to discuss the Islamic concept of mutual consent.

6.2 Principle of Mutual Consent under Islamic Law

Analysis of the traditional Islamic texts reveals that Muslim jurists did not create general theories for contracts. Rather, they made very specific rules and individualized treatment for each contract. That is to say, there is no theory of contract to be found as existing in other legal systems.¹ It follows that Islamic law, like Roman law, is a law of contracts rather than a law of contract.² Muslim jurists adopt a classical method for discussing contracts and that is not to distinguish between civil and commercial transactions. Each contract has been classified into classes of nominated contracts with their own distinctive rules.³ In order to qualify as such, it must fit in one of those recognised contracts. Contract of sale is regarded as the model for all types of contracts.

¹ Alzarqa claims that it would make the rules of contract under Islamic law more understandable if they were developed in the same way as some Western legal systems. See, Alzarqa, (2004) *Al-Fqh al-Aslamiyy Thwbbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslamiyy*. Damascus: Dar Alqalem, p. 23 (In Arabic). Similarly under common law, before Powell's first treatise on contract law, there was no theory of contract law. After Powell's Essay upon the Law of Contracts and Agreements, common law authors began to systematise the doctrine of contracts in the Anglo-American world. See, Hermida, J.(2004) Convergence of Civil Law and common Law Contracts in the Space Field, *Hong Kong Law Journal*, 34 (2), p. 339.

² Coulson, N.J. (1984) *Commercial Law in the Gulf States: The Islamic Legal Tradition*. London: Graham and Trotman, p. 17.

³ Contracts are discussed in Islamic texts using terms used at the time of emerging the Islamic law.

To form a contract of sale under Islamic law, there is no particular formality in the process of formation. There is no registration for example, that contracting parties must follow in order to make their contract valid.⁴ Mutual consent which is translated into Arabic as "*Altraz'y*" is the main pillar for contract formation.⁵ To form a valid contract under Islamic law, there must be mutual consent reached between contracting parties. The Qur'an states: "O you who believe eat not up your property among yourselves in vanities; but let there be amongst you traffic and trade by mutual good will".⁶ Also, the Prophet Mohammed is reported to have said: "The sale is complete when the two involved depart with mutual consent".⁷

6.2.1 The Definition of the Concept of Mutual Consent

The position of Islamic law on mutual consent is evident in which contracting parties must have an intention (*nyh*) to make their contracting binding. That is to say, in order for a contract to constitute its legal affects, the contract must be intended to indicate the party's satisfaction to enter into contract. Al-Shatbya states:

Legal effects can be constituted only upon an intended act. However, an action made without the party's intention, according to the appropriate evidence, it is not the purpose of the Islamic law to give such action legal effects...⁸

This intention must under Islamic law be manifested objectively before capable persons through an offer (*ayjab*) or subsequent acceptance (*gbwl*) of that offer. According to Muslim jurists, because intention is an internal matter, Islamic law is of the opinion that a person's intention has no legal recognition unless it is manifested objectively. That can be achieved by the existence of an offer (*ayjab*) and a subsequent

⁴ Al-Zarqa, (2004) *Al-Fqh al-Aslami fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslami*. Damascus: Dar Alqalem, p. 421 (In Arabic).

⁵ Hamid, M. E. (1977) Mutual Assent in the Formation of Contracts in Islamic Law. *Journal of Islamic and Comparative Law*, 7(41), p. 42.

⁶ Yusuf Ali, the Holy Qur'an (Qur'an 6: 29) Surah 3, Al-Nessa'.

⁷ This Hadeeth is narrated by Al-Bukhari no (2893).

⁸ Al-Shatbya, (1998) *Almoafkat*, 2th ed Beirut: Dar Alkotop Alelmiah, p. 327 (In Arabic).

acceptance (*gbwl*) of that offer.⁹ Muslim jurists consider the rule of offer and acceptance as the only way to convey the subjective intention of contracting parties. In a similar fashion to common law, legal rules in Islamic law are affective only to what is shown and expressed by a party rather than what the party may sense or imply.¹⁰ As Alsnhwry puts it:

What a party may sense is a psychological matter and an intangible mental fact; it cannot therefore be perceived or known by others. Before the party manifests his intention objectively, it will remain known only to the party himself.¹¹

It is evident that Islamic law emphasises on an objective manifestation of assent, and not on assent as a subjective mental fact.¹² Those who have not communicated their willingness to enter into contract cannot be claimed to have consented. The communication of the contracting parties must be approved by law in order to form a contract. Islamic law only approves communication that is expressed by persons with the capacity to complete contracts. The term ‘legal capacity’ refers to the minimum mental capacity required by Islamic law for a party to be bound upon entering into the contractual relation. Those who have not reached adulthood like minors for example, cannot make an offer or an acceptance and in the event this occurs, such a communication has no legal influence in the eyes of the Islamic law.¹³ Islamic law recognizes three classes of persons who are generally not considered to have sufficient

⁹ The offer and its acceptance is the general test under Islamic law for proving that there was intention from the contracting parties to enter into the contract. An offer is a communication by one party (the offeror) addressed to the other party (the offeree) and expressing the offeror’s willingness to enter into a contract with the offeree on certain terms. Acceptance is the communication by the offeree of his/her willingness to enter into a contract with the offeror on the terms contained in the offer. Without an offer and subsequent acceptance of that offer, there can be no contract. See, Alalayli, B. (2005) *Alnt'ryh Alamh llogwd fy Alfgh Ala'slamy*. Riyadh: Dar Alshwaf, p. 191(In Arabic).

¹⁰ See section 3.3. Principle of Mutual Consent.

¹¹ Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Beirut: Dar a'eya' Altrath Alarby, p. 81(In Arabic).

¹² The theory that emphasises on assent as a subjective mental fact exists in civil law countries. Under this theory, to establish whether or not there was a valid contract, judges will look to the actual or subjective intentions of the parties and verify whether such parties really intended to be bound by the contract. Farnsworth, A. *Contracts*, 3rd Ed, Aspen Law & Business, 1999, 116. This means that subjectivists clearly consider a party's inner will as the determinant, not the declared will.

¹³ Alzarqa, (2004) *Al-Fqh al-Aslamy fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslamy*. Damascus: Dar Alqalem, p. 421 (In Arabic).

capacity to be bound by their communication of an offer and an acceptance: those who are not of age, those with mental illness, and those who have declared bankruptcy. All of these persons are not entitled to assume contractual relations.¹⁴

6.2.2 Application the Principal of Mutual Consent to Automated Contracts

This position of Islamic law on mutual consent cannot easily be adapted to transactions made by electronic agents. One important consideration is that we cannot simply state that in these automated contracts there is an offer and an acceptance made by legal persons. In other words, the offer or the acceptance being communicated autonomously by the electronic agents should raise the question as to whether communication made by electronic agents can be attributed to the operators' assent and intent. S. 12 of the ETR 2007 [SA]¹⁵ provide that:

The electronic record is considered to be issued by the originator if it is sent by him or by another person on his behalf or sent by an automated system programmed by the originator to automatically act on behalf of the originator...¹⁶

This passage asserts that any contract formed by the use of an electronic agent is legally correct and binding under Saudi law and the absence of any intervention by a human being in the contractual process would not affect its legal evidence.¹⁷ It also

¹⁴ Ibid.

¹⁵ A royal directive was issued on 14 the February 1999 for the establishment of a Standing Committee on electronic commerce. The committee contained agents of the Ministry of Commerce, financial and national economy, Communications and Information Technology Commission, the King Abdul-Aziz City for Science and Technology (KACST), Saudi Arabian Monetary Agency (SAMA), and consultant group of business men. See, Saudi Ministry of Commerce. (Online) Available at: <http://www.commerce.gov.sa/ecommm/book.asp> [Accessed 04/Feb/2008] (In Arabic). The main function of the committee was to draft a comprehensive electronic commerce law. The regulation which is cited as Electronic Transactions Regulation, was drafted in 2004 and issued by the Saudi Council of Ministries on 27th of March, 2007. Issued by the Royal Decree No. M/18 dated 8.3.1428 AH (2007 AD), the Resolution of the Council of Ministers No. 80 dated 7.3.1428 AH (2007 AD) and the circular of the Minister of Justice No. 13/T/3098 dated 11.4.1428 AH (2007 AD). This is the first, and as yet only, attempt at legal regulation regarding electronic agents available in Saudi Arabia. The text of the ETR 2007 [SA] (Online) Available at: <http://www.moj.gov.sa/adl/ENG/attach/27.pdf> [Accessed 04/Feb/2008].

¹⁶ S. 12. See appendix I.

¹⁷ In here, the Saudi Electronic Transactions Regulation, 2007 applies similar principles to those adopted internationally for the use of electronic agents in contract formation. It affirms clearly that a person using an electronic agent for making a contract is legally bound by it. However, what is interesting under the Saudi regulation is that when a contract is formed between an automated computer and a natural person,

declares that when a contract is concluded by an electronic agent it is treated as if it was issued by the operator of the electronic agent. The assumption Saudi policy makes is that automated programs work automatically rather than autonomously. Electronic agents therefore are regarded as mere tools used by individuals to transmit their contractual relations. However, in automated contracts, when an offer or an acceptance is sent by an electronic agent, this communication is autonomous in which the operator has no knowledge about it. Therefore, such communication concluded by electronic agents is not intended by the operators. If electronic agents make actions which their operators have no knowledge about them, then it is fair to state that such actions are unintended by the operators and therefore the Islamic concept of mutual consent may not be satisfied/achieved.¹⁸

It is true, as explained above,¹⁹ that the objective theory of mutual consent under Islamic law is clear, in which case Islamic law would not be concerned with whether or not actions made by electronic agents are intended by the operators. Judges under Islamic law would only be concerned with an objective communication of an offer and an acceptance.²⁰ That is to say, if an offer is objectively communicated by a party, the party will be obliged upon it, regardless of any claims the party may make such as that s/he did not intend his/her communication.²¹ However, as Alalayli puts it, Islamic law

the natural person will not be bound by this contract unless he was aware that he was contracting with the automated computer. S. 11 (2) of the Saudi Electronic Transactions Regulation states that: "It is allowed for a contract to be created between an automated computer system and a natural person, only if the natural person knows or should have known the fact that he is contracting with automated system performing the task of forming and executing the contract." See appendix I. The problem with this approach is that Saudi judges would find it difficult to decide/prove whether or not the contracting party was aware that he was contracting with an automated system.

¹⁸As pointed out in Chapter 2, this thesis assumes that electronic agents here are completely autonomous and independent of the operator. The examples of electronic agents here do not only function within set/programmed parameters or do not have much space for autonomous initiative. The viewpoint of this thesis is mostly based on hypothetical examples of completely autonomous electronic agents. See this discussion in section 2.2 Electronic Agent Technology which describes the nature of this developed electronic agents.

¹⁹ See section 6.2.1 Defining the Concept of Mutual Consent

²⁰ Alalayli, B. (2005) *Alnt'ryh Alamh llogwd fy Alfgh Ala'slamy*. Riyadh: Dar Alshwaf, p. 191(In Arabic).

²¹Ibid.

cannot ignore doubts about the intentionality of the actions made.²² In automated contracts, the communication of an offer or an acceptance made by electronic agents was designed by the electronic agents and not by the operators. Therefore, it is fair to have such doubts, attributing such communication to the intention of the operators. Speaking on the concept of intention under Islamic law, Abn Algym makes this observation:

We cannot rely on what appears outside the world when it is clear that what has appeared was not intended by the contracting party. The demonstration of evidence by Islamic rules shows that such manifestation cannot result in any legal effects and the intention of a person when forming a contract must not be ignored.²³

Abn a'z'wh states that "it is against the spirit of Islamic law to ignore what a person wants when forming a contract".²⁴ Abn Algym also argues:

The law of Islam disregards those utterances and actions which people have not intended. Islamic law adopts that the main objective in contracts is a party's intention and not his formula.²⁵

Muslim scholars have varying opinions regarding a situation where what has appeared was not intended by the contracting party. Under the Hanafi school for example, consent is defined as: "a choice of a person (*Akh'tyar*) so that the effects of the choice will be represented on the appearance of the person".²⁶ Following this definition, Hanafi jurists argue that the principle of mutual consent contains two important elements: choice and assent. First, the element of choice indicates an apparent manifestation to enter into a contract. Second, the element of assent refers to the acceptance of the contract implications i.e. the person is satisfied by the affects of the contract concluded.²⁷ According to the Hanafis, in order for a contract to be formed, a party needs only to make

²² Ibid.

²³ Abn Algym, (1993) *Elam Almoqeen*. 3th ed Beirut: Dar Alketab Alelmiah, p. 34 (In Arabic).

²⁴ Abn a'z'wh, p. 156. Cited by Alalayli, B. (2005) *Alnt'ryh Alamh llogwd fy Alfgh Ala'slamy*. Riyadh: Dar Alshwaf, p. 191(In Arabic).

²⁵ Abn Algym, (1993) *Elam Almoqeen*. 3th ed Beirut: Dar Alketab Alelmiah, p. 111 (In Arabic).

²⁶ Abu zhrh, M. (1999) *Almlkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 322 (In Arabic).

²⁷ Ibid.

a choice and needs not be satisfied about his/her choice.²⁸ That is to say, Hanafi jurists differentiate between the element of choice and the element of assent. Assent of a party is not a condition for the acceptance to constitute legal results. Under the *Hanafi* School, it is sufficient that the party has made his choice.²⁹ According to the Hanafis, this point of view is evident in the *Hadeeth* of the Prophet Mohammed. Prophet Mohammed even accepts one's joking act or the Arabic, *hazl*; even though such acts were meant only as joke and unintended by the person. The Prophet Mohammed states: "There are three matters in which seriousness is serious and joking is serious: marriage, divorce and taking back (one's wife)".³⁰ Hanafis argues that the Prophet Mohammed in this statement does not differentiate between a serious act and a joking act. The latter will be deemed serious and legal effects will be registered even though the person committing the act neither assented nor intended them.³¹ That is to say, the mere act of the party alone can create the necessary legal affects as the assent of a party is not seen as a condition under Islamic law. Following this perspective of the Hanafis vis a vis mutual consent, an act of a joking person, a drunk for example, or an act committed by a person under duress, can still be legally formed. Hanafis is only concerned with the choice of act, however he does not take into consideration the fact that these acts may not have been intended or assented.³² Thus automated contracts will be enforceable even if the operator did not assent or intend them.

By contrast, the majority of Muslim jurists (*Aljmhwr*) adopt an opposite position in which a choice of a party cannot constitute its legal effects unless the choice was assented by the party. That is to say, the majority of Muslim jurists unlike the Hanafi

²⁸ Ibid.

²⁹ Alsrkh'sy,(1993) *Acuwl Alsrkh'sy*. Beirut: Dar Alketab Alelmiah, p. 187 (In Arabic).

³⁰ This Hadeeth was narrated by Abu Dawood (2194), al-Tirmidhi (1184), Ibn Maajah (2039); classed as saheeh by al-Haafiz Ibn Hajar in al-Talkhees al-Habeer (3/424) and al-Albaani in Saheeh Sunan al-Tirmidhi (944).

³¹ Alsrkh'sy,(1993) *Acuwl Alsrkh'sy*. Beirut: Dar Alketab Alelmiah, p. 187 (In Arabic).

³² Ibid.

School, they do not differentiate between the elements of choice and assent; to them, both of these elements depend on each other. This means that a choice of a party cannot alone establish its legal affects except knowing that this choice is what the party wanted.³³ According to the majority of Muslim jurists, any choice of a party needs to represent the party's assent in order to make legal effect. As Al-Shatby states:

Certainly an intended act will constitute its legal affects under Islamic law. However, to assume an act made with no intention such as the act of mad or sleep person, such act cannot constitute its legal affect. Any chosen act of a person needs an intention of that person otherwise the act cannot be enforced under Islamic law.³⁴

Following the view of the majority of Muslim jurists on mutual consent, the act of a joking person, a drunk, or an act made by a person under duress, is not valid. This is because such acts are not intended and therefore have no reason to be legally considered. Al-Sywyty states: "the meaning of choice is to intend the act and to like its legal affects. The choice of a person should not be a result of duress of any kind whatsoever".³⁵ As Ahmed bin Hanble points out: "An act made under duress lacks any meaning of choice".³⁶ Al-Htab also states: "A person under duress is unable to stop doing what s/he has been forced to do. Therefore, the person cannot be obliged to that act as s/he has not chosen it and therefore has not assented it".³⁷

The arguments of Muslim jurists on mutual consent are important to the present discussion. This is because the Hanafi School considers the apparent act of a party to enter into contract is sufficient to form the contract. The act will form the contract even though the act was not assented or intended by the party. The underlying point under Hanafi school is that contracts do not depend on the intention of a party or *Nyh/Gcud*, as is called in Arabic. Instead, contracts depend more on what is shown by the party.

³³ Abu zhrh, M. (1999) *Almlkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 322 (In Arabic).

³⁴ Al-Shatby, (1998) *Almoafkat*. 2th ed. Cairo: Dar Al-marifah, p. 327 (In Arabic).

³⁵ Al-Sywyty, Ftawa Alsywyty, Mkhtwte Al'azhr no,131, 143.

³⁶ *Shrh Alkwkb Almnyr*, 509 cited by Abu Zahra, M. (1999) *Almlkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 322 (In Arabic).

³⁷ Almgrby, (2003) *MwAhb Aljlyl*. 4th ed. Beirut: Dar a'alm Alktb, p. 245 (In Arabic).

However, the Muslim jurists argue the issue differently. If the apparent act of the party is not assented or intended, the act cannot form the contract. Ala'z bn a'bdalislam states: "Contract is all about intention of the party".³⁸ That is to say, the act of the party to enter into a contract should indicate the assent of that person to create the contract and its legal implications. So, by communicating acceptance, legal affects will take place as a result of the party's satisfaction entering into the contract. As Algrh dag'y states:

An act of a party to enter into contract should represent the intention of the party that is the contract is based on his full satisfaction. Contract should be based on what a party really wants and verbs are only a way of expression.³⁹

In some Hanafis texts, some jurists indicate the importance of the intention of a party in contracts. For example, scholar Al-Mrg'ny, states: "Intention is an objective in contracts".⁴⁰ In the same vein, Abn njym states: "the objective in contracts is for the intention of the party and not for his words and phrases".⁴¹ Al-Grh dg'y argues that these statements by Hanafi jurists do not point to the importance of intention of the party in contracts. Instead, they point to the importance of figuring out the meaning of the utterances (*Alfat*) stated by the party(s).⁴² This means, that one should not look at the appearance of the utterances only, but to interpret those utterances in order to find out what the party really means.⁴³ Therefore, the Hanafis rely on utterances and the correct interpretation of those utterances. It does not go on to find out whether these utterances are assented or intended.

The evidence would suggest that the Hanafis seem to have gone too far with the independency on the appearance of a party by admitting acts are not intended or assented.

³⁸ Cited by Alzarqa, (2004) *Al-Fqh al-Aslamy fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslamy*. Damascus: Dar Alqalem, p. 421 (In Arabic).

³⁹ Al-Grh dg'y, M. (2002) *Mbd'a Alrz'a fy Ala'gwd: Drash Mgarnh fy Alfgh Ala'slamy walgAnwn Almdny*. Beirut: Dar AlbshAy'r AIA'slmye, p. 45 (In Arabic).

⁴⁰ Alhnfy, A. (2003) *Fth Algdyr shrh Alhdayh*. 5th ed. Beirut: Dar Alktb Ala'lmyt, pp. 75(In Arabic).

⁴¹ Abn njym, (1980) *Al-ashbah walnt'ay'r*. Beirut: Dar Alktb Ala'lmyt, p. 207(In Arabic).

⁴² Al-Grh dg'y, M. (2002) *Mbd'a Alrz'a fy Ala'gwd: Drash Mgarnh fy Alfgh Ala'slamy walgAnwn Almdny*. Beirut: Dar AlbshAy'r AIA'slmye, p. 45 (In Arabic).

⁴³ Ibid.

This perspective could be seen as being positive as it respects people's appearances. More importantly, it protects the public against this appearance as the public sometimes may not necessarily be aware of the contracting party's intention. Hanafis jurists argue that the issue is different depending on whether a person is committing financial or non-financial acts.⁴⁴ According to jurists, while it is a condition for a party(s) to show his choice in all legal acts whether financial or non-financial, the assent of the party and the satisfaction of the act becomes a condition only for financial matters and does not extend to non-financial matters. That is to say, for acts such as divorce and marriage, Hanafis do not ask for proof of intent or assent. It is sufficient that the person showed his/her choice to make the act of the divorce or marriage happen. Furthermore, this perspective is evident in the *Hadeeth* mentioned above, in which the Prophet Mohammed states that divorce, marriage, and taking back one's wife do not need the intention of the person to constitute legal affects. The Prophet Mohammed in this *Hadeeth* is very specific on these three matters and it does not appear that the rule applies outside of these matters i.e. to all matters.⁴⁵ The Qur'an clearly indicates that the assent of parties is essential to financial and trade acts. It states: "O you who believe eat not up your property among yourselves in vanities; but let there be amongst you traffic and trade by mutual good will".⁴⁶ According to the Hanafis, this verse is evidence that consent is a condition only in trade and does not extend to non-financial acts such as divorce or marriage. This means that trade contracts require both a choice to be made and assent on this choice.

However, Hanafi jurists argue that a contract can still be formed if not made deliberately, however, such a contract remains void and cannot therefore be enforced until the relevant party consents it. Al-bzdwy states: "A contract made jokingly by a person can be formed because of the choice the person made, however, the contract

⁴⁴ Alsrkh'sy, (1993) *Acuwl Alsrkh'sy*. Beirut: Dar Alketab Alelmiah, p. 187 (In Arabic).

⁴⁵ Ibid.

⁴⁶ Yusuf Ali, the Holy Qur'an (Qur'an 6: 29) Surah 3, Al-Nessa'.

cannot be enforceable because such contract was not assented and intended".⁴⁷ Having reached this, the difference between the Hanafi School and the majority of Muslim jurists becomes largely formal. While the majority of Muslim jurists focus on the intention of the party, the Hanafis finds that intention is a condition for the enforcement of the contract.⁴⁸ Thus, the difference between Muslim jurists on the principal of mutual consent is less important to my present thesis. This is because Muslim jurists agree that the first principal to be considered in contracts under Islamic law is that contracting parties must have an intention in order to make their contract enforceable. That is to say, automated contracts cannot be enforceable under Islamic law because they are made by electronic agents and therefore operators lack intention and knowledge about them.

6.2.3. The Subject Matter

Subject matter which translated from the Arabic, *mhl alaql*, is the primary part that contracting parties must objectively consent to. Subject matter of contract is given a great importance under Islamic law and is surrounded by various rules and conditions. For example, the subject matter must first of all, be of legal value (licit).⁴⁹ The lawfulness of the subject matter means that something can be permissibly traded, legally owned or authorized by the parties. Second, this something must exist and potentially be capable of delivery at the time of contracting. It is true that there might sometimes be obstacles to the process of delivery; however there should be a limit to the nature of obstacles. For example, in a situation where the subject matter is a car, it should at least be ready to be delivered to the buyer. Should there be a problem that stops it being delivered, the car should at least be at the stage of production at the time of contracting.

⁴⁷Albkh'ary, A. (2003) *kshf Alasrar a'n 'Acuwl Albzdwy*. 4th ed. Beirut: Dar Alktb Ala'lmya, p. 381 (In Arabic).

⁴⁸ For details on the topic of intention under Islamic law, see the work of Nabil, S. (2009) The Role of Intention (*Niyya*) Under Saudi Arabian Hanbali Law, *Arab Law Quarterly*, 23(4), pp. 469-475.

⁴⁹ Nicholas, K. P.(1970) The Influence of Islamic Law on Contemporary Middle Eastern Legal Systems: The Formation and Binding Force of Contracts, *Columbia Journal of Transnational Law*, 9, pp. 384-390.

Third, the subject matter must have the potential to be precisely determined.⁵⁰ The golden principle in these conditions is that contract under Islamic law should not contain any element of hazard (*gharar*).⁵¹ Muslim jurists agree that *gharar* can exist if contracting parties do not have perfect knowledge of the counter values intended to be exchanged as a result of their transactions.⁵²

Gharar is a concept that is difficult to identify under Islamic law due to the fact that the concept eludes more than one meaning; it includes risk, peril, uncertainty, speculation, want of knowledge and unknown outcome or results.⁵³ Muslim jurists agree that *gharar* exists when there is uncertainty about the existence of the subject matter. Should there be uncertainty about the actual existence of the subject matter at the time of contracting, this would vitiate the contract. However, Muslim jurists differ on the degree of uncertainty that should be applied to a subject matter for it to be considered *gharar*.

First, *gharar* exists when the non existence of the subject matter is almost confirmed, which means the degree of uncertainty takes the value between zero to one. Jurists have presented numerous examples in some sale contracts that contain a type of *gharar*. For example, it is *gharar* where a vendor sells fish in the sea or sells a foetus of an animal in its mother womb. Such transactions are considered as illegal under all Islamic schools.⁵⁴ Second, *gharar* exists when the probability of existence of the subject matter is equal to the probability of non-existence. Al-Kasani states: “*Gharar* is the risk where the

⁵⁰ Ibid.

⁵¹ Kamali, M. H (1999) *Uncertainty and Risk Taking (Gharar) in Islamic Law*, Paper presented at the International Conference on Takaful / Islamic Insurance, 2-3 July 1999, Hotel Hilton Kuala Lumpur.

⁵² Interestingly enough, according to Saleh, it would be mistaken to suppose that *gharar* under Islamic law occurs only in bilateral contracts for exchange or countervalues. *Gharar* under Islamic law can also damage gratuitous contracts and unilateral transactions like donation, wills and powers of attorney

⁵³ The term *gharar* means speculation on events that might and might not occur. In other words, it is a transaction where the gain of each party is not clearly determined. Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, p. 56

⁵⁴ Al-Snhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Beirut: Dar a'eya' Altrath Alarby, p. 11(In Arabic).

probability of existence and the probability non-existence have the same value".⁵⁵ While the majority of Muslim jurists agree that *gharar* exists in such cases, Maliki jurists do not.⁵⁶ Third, *gharar* exists when the existence of the subject matter outweighs its non-existence, to the degree that non-existence takes the value between zero to one. Such transactions are also considered illegal under all Islamic schools.⁵⁷ However, two exceptions have been made to this general rule; *Slm* and *Alastcunaa'* contracts. On the one hand, *Alastcunaa'* is a contract when a person goes into an on-the-spot purchase of a product to be manufactured using the same materials as the first manufactured product, according to the designated specifications against a determined price. On the other hand, *Slm* is a contract where both commodity and consideration are exchanged simultaneously without the commodity being deferred. The majority of Muslim jurists agree that contracts of *Slm* and *Alastcunaa'* are valid even though the subject matter of these two contracts does not exist at the time of contracting.⁵⁸ These two contracts are permitted due to necessity and the need of the people at that time.⁵⁹

Furthermore, Muslim jurists agree that *gharar* also exists when the subject matter is not able to be handed over whether it exists or not. That is to say, contracting parties have uncertainty over the subject matter's availability. The subject matter here may exist, however uncertainty surrounds its availability at the time of contracting. Muslim jurists under all Islamic schools are in agreement that such transactions are *gharar* because the

⁵⁵ Al-Kasani, (1910) *Bdaya' Alcunaya' fy Trtyb Alshraya*. Vol. 5 Cairo: Dar Alma'rfh, p. 263 (In Arabic).

⁵⁶ Alhnfy, A. (2001) *Fth Algdyr shrh Alhdayh*. 5th ed, Vol. 5 Beirut: Dar a'eya' Altrath Alarby, p.105; Ebn Qedamh, (2003) *Almughni*, Vol. 4 Riyadh: Dar Alshwaf, p. 205; Abn jwzy,(1999) *Algwanyn Alfghyh fy tlkhyu md'hb Almalkyh*, Cairo: Dar Alma'rfh, p. 261 (In Arabic).

⁵⁷ Al-Kasani, (2004) *Bdaya' Alcunaya' fy Trtyb Alshraya*. Vol. 5 Damascus: Dar Alqalem, pp. 138-139; Alhnfy, A. (2001) *Fth Algdyr shrh Alhdayh*. 5th ed, Vol. 5 Beirut: Dar a'eya' Altrath Alarby, p. 102.

⁵⁸ Saleh argues that during the Prophet's time and particularly during the later Arab empire, people continued to trade what they did not have in hand, what they did not see and even what they did not own. Although business contingencies and legal requirement were about to conflict, Islamic law yield to the pressure which led to exempt certain transactions under specific conditions. Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, pp. 64-65.

⁵⁹ Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 2th ed. Vol. 3 Beirut: Dar a'eya' Altrath Alarby, pp. 25-31 (In Arabic). Saleh argues that although *Alastcunaa'* or manufacturing a commodity is justified on the ground of necessity, the exact nature of the contract of manufacture is still disputed. See, Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, p. 61.

subject matter cannot be delivered.⁶⁰ The concept of *gharar* can contain other elements such as the lack of knowledge (*jahalah*- ignorance or uncertainty over the subject matter). While *gharar* in the above examples concerns the uncertainty affecting the existence of the subject matter and its availability, the present *gharar* is concerned with more detailed information on the subject matter, which is known to exist and able to take place. The *gharar* exists due to undefined subject matter such as the commodity or the price to be paid is unknown or unwell defined. In other words, if the object of sale is a car, the buyer should have knowledge about the colour of the car, its facilities, features...etc. If the contracting parties lack such knowledge, the contract is considered *gharar*. Thus according to Saleh, avoidance *gharar* in any transaction would require the observance of the following three rules: "(a) No want of knowledge regarding the existence of the exchanged countervalues; (b) No want of knowledge regarding the characteristics of the exchanged countervalues; and (c) Control of the parties over the exchanged countervalues should be effective".⁶¹

Some jurists⁶² do not distinguish between the concepts of *gharar* and *jahalah*, instead, they treat them as one concept (*gharar*). For example, Aldhereer argues that the concept of *gharar* is wider than the concept of *jahalah*; every unknown commodity is *gharar*, but not every *gharar* is unknown.⁶³ That is to say, *gharar* could exist and be well defined, but the vendor for example, cannot hand the subject matter over to the purchaser. Thus, *gharar* is prescribed when the existence of the subject matter is unknown even if it is well defined, whereas the element of *jahalah* is where the subject matter does exist but its

⁶⁰ Al-Kasani, (1910) *Bdaya' Alcunaya' fy Trtyb Alshraya*. Vol. 5 Cairo: Dar Alma'rfh, pp. 147-148(In Arabic).

⁶¹ Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, p. 52.

⁶² For example, Hasanuzzaman argues that discussion on the concept of *gharar* reflects a confusion in clearly distinguishing between *jahl* and *gharar*. *Gharar* is found in the nature (*asl*) of contract itself, in *jahalah* it is not the nature but the condition or *wasf* of the contract that is defective. See Saleh, N. (1986). *Unlawful Gain and Legitimate Profit in Islamic Law: Riba, Gharar and Islamic Banking*. reviewed by Hasanuzzaman, S. M, (1991) *Journal of Research in Islamic Economics*, Vol. 3, p. 120.

⁶³ Aldhereer, (1993) *Algrr fy Ala'gwd watharh fy Alttbygat Alma'acurh*. Jeddah: Alma'hd Ala'slAmy llbhwth w Altdryb, p. 45 (In Arabic).

features are unknown. To illustrate this, a person who buys a house for a certain price without knowing its features or whether it is suitable for dwelling has gone into *jahalah*.⁶⁴ As Kamali states, such transactions are prohibited so as to prevent dispute arising between the parties.⁶⁵

As will be discussed below, the concept of *gharar (jahalah)* can prove problematic in automated contracts.⁶⁶ Since these contracts are made by electronic agents, operators do not necessarily have a precise determination of the subject matter and price (quantity and quality). However, Muslim jurists disagree on what is the right way to determine and describe the subject matter. For example, if the subject matter is present, the Malikis and Shafis are in agreement that parties should view clearly the subject matter to determine its substance and attributes.⁶⁷ The Hanbalis and Hanafis suggest that if the subject matter is present, it is not important for the parties to view it; it is sufficient that the subject matter is pointed out by the parties.⁶⁸ More differences occur among Muslim jurists when the subject matter is absent so that the parties cannot either view or point out to the subject matter. For example, the Shafi school holds a radical view: by asking the parties to view the subject matter in order to prevent the element of *gharar*.⁶⁹ The majority of Muslim jurists suggest that if the subject matter is absent, it is sufficient that the subject matter is well defined by the parties, or as the jurists put it, the subject matter

⁶⁴ Ibid.

⁶⁵ Kamali, M. H. (1999) *Uncertainty and Risk Taking (Gharar) in Islamic Law*, Paper presented at the International Conference on Takaful / Islamic Insurance, 2-3 July 1999, Hotel Hilton Kuala Lumpur. (Online) Available at: <http://pitihkawe.multiply.com/journal/item/1> [Accessed 10/Oct/2008]. Makdisi explains ... [T]he manner in which an act was qualified as morally good or bad in the spiritual domain of Islamic religion was quite different from the manner in which that same act was qualified as legally valid or invalid in the temporal domain of Islamic law. Islamic law was secular, not canonical... Thus, it was a system focused on ensuring that an individual received justice, not that one be a good person. Makdisi, J. (1999) *The Islamic Origins of the Common Law*, *North Carolina Law Review*, Vol. 77 p. 1704.

⁶⁶ Full discussion on how the concept of *gharar (jahalah)* can prove problematic in the enforceability of automated contracts will be conducted in 5.2.2 Application the Principal of Mutual Consent on Automated Contracts.

⁶⁷ Almgrby, (2003) *MwAhh Aljlyl*. Vol. 4 Beirut: Dar a'alm Alktb, pp. 285-286 (In Arabic).

⁶⁸ Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 2th ed. Vol. 3 Beirut: Dar a'eya' Altrath Alarby, p. 46 (In Arabic).

⁶⁹ Ibid, p. 47.

is given the 'anti-ignorance description'.⁷⁰ Nevertheless, the majority of Muslim jurists assign a right to the contracting party called 'option of inspection' or known as *Khyar Al-rw'yh*. This means that although the absent subject matter is well described to the purchaser, the purchaser holds a right to reject the purchase when he sees the product in case he is not satisfied with the product's description.⁷¹

Abn Algym and Abn Tymyh consider *gharar/jahalalah* as gambling; where a vendor sells a stray animal, the transaction is at risk and, therefore, the purchaser pays much less than its real price.⁷² Accordingly, should the subject matter of the contract, i.e. a stray animal is found, the purchaser wins the difference between the paid price and the real price of the animal. On the other hand, where the animal is not found, the vendor wins the reduced price for nothing and the purchaser losses what he has paid out to the vendor. Thus, in such transactions, one party unlawfully 'eats' the other party's money which causes enmity and hatred.⁷³ The principles of Islamic law aim to achieve fair equivalence between parties in a transaction in order to avoid any dispute, as much as possible, that might arise from one of the parties. In Muslims' belief, selling non existence is void in order to protect contracting parties against any sort of risk that are likely to cause imbalance of the benefits gained.⁷⁴ It shows a general policy that uncertain subject matter is risky and this risk is avoided on the ground that it may lead to future disputes and litigation.⁷⁵ Therefore, the element of *gharar* has been a significant issue in Islamic law

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Abn Algym, (1993) *Elam Almoqeen*. 3th ed Beirut: Dar Alketab Alelmiah, p. 111 (In Arabic).

⁷³ Ibid.

⁷⁴ Concern for protecting individuals from unfairness is a significant attribute of the Holy Quran, and it as a result forbidden games of hazard. The inspiration of protecting the weak against abuse or mistreatment by the strong party led to rule that all transactions should be free from uncertainty and speculation. According to Saleh, this could only be ensured by the contracting parties having perfect knowledge of the countervalues intended to be exchanged. See, Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, p. 67.

⁷⁵ Al-Snhwry comments that such rules might in somehow influence modern commercial dealings. He makes this observation: "the way *gharar* and *riba* is prohibited under Islamic law might influence a great rate to comprise contemporary deals". Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 3th ed. Beirut: Dar a'eya' Alrath Alarby, p. 11(In Arabic).

which affects the validity of the contract. *Gharar* may render the transaction totally null and void.⁷⁶

Unlike the usury interest (*Riba*) whose prohibition is narrated in Quran,⁷⁷ *gharar* was forbidden by the teachings of the Prophet Mohammed. For example, Abu Huraira reports that Allah's messenger forbids two types of transactions (*Mulamasa* and *Munabadha*). *Mulamasa* is when a man touches another's garment of cloth or anything else without turning it over. *Munabadha* is when a man throws his cloth to another, and the other throws his cloth back to the other, thus confirming their contract without inspection or mutual consent.⁷⁸ Furthermore, Ibn Abbas reports Allah's messenger as saying: "He who buys food-grain should not sell it until he has taken possession of it." Also *Ibn Umar* reports that the Prophet Mohammed forbids the sale of fruits until they are clearly in good condition.⁷⁹ Given that these statements are derived from a divine source *Sunnah*, the forbidden of *gharar* becomes reliable. That is to say, the forbidden of *gharar* is not subject to human reasoning. Human reasoning in this instance is acceptable only for the interpretation of human beings in order to reveal its most precise meaning. In the next section, I will discuss whether the concept of *gharar* exists in automated contracts.

⁷⁶ Asherman, J. (1982) *Doing Business in Saudi Arabia: The Contemporary Application of Islamic Law*, *the International Lawyer*, 16, p. 326.

⁷⁷ See section 5.3.1 Qur'an.

⁷⁸ Muslim jurists are in agreement on these definitions. See for example, Abu Zahra, M. (1999) *Almkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 322 (In Arabic).

⁷⁹ Almost all Muslim jurists (except Hanafis and Malikis) agree that the sale of fruits or agricultural products which have not yet ripened is permissible. Muslim jurists are in agreement about the legality of the sale of fruits and agricultural products after they have been collected from trees or picked up from the field. Divergence among Muslim jurists exists over the sale of fruits or agricultural products which have already ripened but have not yet been collected. Generally speaking, schools of law concur in considering that the sale of fruits or agricultural products cannot be lawful except when the signs of readiness are shown, but they disagree on interpretation of "signs of readiness". See, Saleh, N. (1986) *Unlawful Gain and Legitimate Profit in Islamic Law*. London: Cambridge University Press, pp. 59-60.

6.2.3.1. Existence of *Gharar* in Automated Contracts

Automated contracts are completed by electronic agents autonomously and without the operators' direct intervention. It seems therefore that perceiving the existence of *gharar* may be problematical in automated contracts, the prohibited element which turns the contract illegal under Islamic law. Contracting parties' knowledge of the contract and its content should not be lacking. If contracting parties do not have perfect knowledge of the counter values intended to be exchanged as result of their transactions then this is relevant to the concept of *gharar*. As explained earlier, *gharar* can exist if contracting party lacks information about the nature and attributes of the subject matter, has doubts over its availability and existence, its quantity, or if it requires exact information concerning the price, the unit of currency in which the price is paid, and the terms of its payment. Any of these elements can render the contract totally null under Islamic law.⁸⁰

None of the above elements of *gharar* seem to be a problem in automated contracts. However, the condition that requires precise determination of the subject matter and price (quantity and quality) can indeed be a concern and may invalidate automated contracts. In the case of the simplest of electronic agents,⁸¹ those programmed to carry out a specific task, the operators may lack knowledge over some small details of the subject matter and it is certainly not the important ones. For example, in a specific deal, an operator may not exactly know what the price of the deal is or it is not known for certain to him. However it is evident that the price is within predefined limits determined by the operator such as highest and lowest acceptable price. This situation is what is called under Islamic law trifling or *al-gharar al-yasir*. According to Muslim jurists, *gharar* could be trifling (*al-gharar al-yasir*) or excessive (*al-gharar al-kathir*). A contract is hardly free of slight *gharar*. Some Muslim scholars believe that "in real

⁸⁰ Ibid.

⁸¹ See the discussion on these simplest electronic agents in section 2.2 Electronic Agent Technology.

life, *gharar* cannot be avoided totally in trade, it is one of degree as most commercial transactions may be said to involve some element of uncertainty".⁸² The scholar Al-Shatby also points out that: "it is difficult to remove from contracts all *gharar*, besides, it narrows the scope of transactions".⁸³ Examples of such slight *gharar* include selling a lined overcoat though its lining cannot be seen, or renting a house for a month, where the month can be thirty or thirty one days.⁸⁴

On the other hand, excessive *gharar* is when *gharar* dominates the contract so much that it comes to entirely characterize it.⁸⁵ This includes delivery of a subject matter that is not attainable, when the price or the object of contract is unknown, a deferred sale in which the deferment period is unknown, such as when so and so arrives or dies, and the sale of that is not expected to survive. This is the variety of *gharar* which Muslim jurists generally agree renders the transaction invalid. On the other hand, *al-gharr al-yasir* is the variety which does not necessarily render transactions invalid.⁸⁶ As scholar Abn Aljwzy points out: "*gharar* is prohibited and avoided under Islamic law, unless it is very little in which case it is tolerated".⁸⁷

When an individual gives certain instructions which include the highest and lowest acceptable price and sends his electronic agent into the Internet to buy a ticket for him, the operator cannot claim that he does not know the price of the ticket just because the price was not precisely determined. The exact price may not be known to the operator but what is evident is that the price was within certain predefined limits set by the operator.

⁸² Abn Algym, (1993) *Elam Almoqeen*. 3th ed Beirut: Dar Alketab Alelmiah, p. 34 (In Arabic).

⁸³ Al-Shatbya, (1998) *Almoafkat*, 2th ed Beirut: Dar Alkotop Alelmiah, p.345 (In Arabic).

⁸⁴ For more info on such examples, see Al-saati, A. (2003) *The Permissible Gharar (Risk) in Classical Islamic Jurisprudence*, *J.KAU: Islamic Econ*, 16(2), pp.3-19 (1424 A.H / 2003 A.D). (Online) Available at: http://islamiccenter.kau.edu.sa/english/Journal/Issues/Pdf/16_2/162-Al-Saati55.pdf [Accessed 10/Oct/2008].

⁸⁵ Al-saati, A. (2003) the permissible gharr (risk) in classical Islamic jurisprudence, *J.KAU: Islamic econ*, 16(2), pp. 3-19.

⁸⁶ Ibid.

⁸⁷ Al-Gharnati Ibn Juzay M. A. (1975) *Qawanin al-Ahkam al-Shar'iyah*. Cairo: Alam al-Fikr, p. 268 (In Arabic).

Such ignorance over the precise price or the lack of knowledge on the part of the operators on some other details such the time the transaction was being made, remains under this type of *gharar*. Under the Islamic law, these incidents are tolerated and permissible. Maliki and Hanbali jurists consider the validity of contract dependent upon the knowledge of the price to avoid *gharar* i.e., it is enough that the price is clearly determined. The Hanafi School suggests that when an object or its price is within sight, it needs no description, as there is no *gharar* involved. There is no disagreement among Hanafi jurists that the price in such instances has been clearly described.⁸⁸

However, when it comes to the advancement of electronic agents, the case will definitely be different. Chapter 2 clarifies that the central focus of this study is developed electronic agents whose tasks are not simply receiving orders and sending automatic confirmations. Instead they are more autonomous from their operators to the extent that they can complete transactions alone without their operators' intervention.⁸⁹ Such cases, with regards to advanced electronic agents, are not yet available and thus it is important to determine the vital details of the subject matter that the operators of electronic agents do not know. In addition, as a result of the fact that the concept of automated contracts is still really in its infancy, Muslim jurists have not come to realize this issue yet. However, if a transaction was completed independently of the operator by the electronic agent, the operators would normally lack very substantial details of the subject matter which therefore may constitute excessive or *al-gharar al-kathir* in automated contracts.

For example, Muslim jurists have discussed lack of knowledge with regards to genus which includes the ignorance of the entity, type and attributes of the object. The Maliki School permits the sale of something belonging to an unknown genus on condition that

⁸⁸ Al-Snhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Vol. 5 Beirut: Dar a'eya' Altrath Alarby, p. 40 (In Arabic).

⁸⁹ See section 2.2 Electronic agent technology.

the purchaser has the right to option of inspection i.e. he has the right to rescind the sale.⁹⁰ A person who enters into a contract dealing with a certain subject matter he has never seen it before has a right to cancel the contract when he sees it. This right is offered due to concerns inherent in *gharar* and the risks associated with such deals. The Hanafi School gives this right (i.e. "option of inspection") to the purchaser without it even being stipulated in the contract.⁹¹ That is to say, if operators lack knowledge with regards to the genus of contract their electronic agents is making, this gives the operator the right to reject the goods within three days after the sight. This is according to a *Hadeeth* narrated by the Prophet Mohammed.⁹² Interestingly enough, the option of inspection is provided by international laws on electronic commerce law.⁹³ The only difference under this legislation is that unlike Islamic law, if the purchaser is not happy about the genus of the goods or is not satisfied with other descriptions, the right to return the goods is open to the purchaser for longer than three days⁹⁴ In the KSA, the ETR 2007 [SA] does not provide purchasers the right of inspection. So, without this right given to the purchasers, according to Islamic law, the transaction formed is considered *gharar*.⁹⁵

Furthermore, in automated contracts, operators may lack knowledge about the exact quantity. Knowledge of an object's quantity is a condition under Islamic law as it is

⁹⁰ Almgrby (2003) *MwAhb Aljlyl*. Vol. 4 Beirut: Dar a'alm Alktb, p. 245 (In Arabic).

⁹¹ Ibn Al-Humam, (1999) *Fath Al-Qadir*. Vol. 5 Riyadh: Dar Alshwaf, p. 137(In Arabic).

⁹² The Prophet Mohammed says to a man that: "When you sell, say: no cheating and I have a choice for three days". This Hadeeth was narrated by Alhakm.

⁹³ For example, under the Consumer Protection (Distance Selling) Regulations 2000, 7. provides that in good time prior to the conclusion of the contract the supplier shall - (a) provide to the consumer the following information - (vi) "the existence of a right of cancellation...".

⁹⁴ The Consumer Protection (Distance Selling) Regulations 2000, 11 (2) states: "Where the supplier complies with regulation 8, the cancellation period ends on the expiry of the period of seven working days beginning with the day after the day on which the consumer receives the goods". However, I have my own observation on how this practically would be applied in trade world. It is usually difficult if not impossible if you are not happy with the product to return it within 7 days. It is just too short time.

⁹⁵ Nevertheless, one can argue that as the right of inspection is already an Islamic rule on contract, the ETR 2007 [SA] did not need to adopt it.

invalid to sell an object when this information is unknown because it involves *gharar*.⁹⁶ In automated contracts, operators of electronic agents may possibly lack knowledge about the time it might take to deliver the object. Muslim jurists have discussed the lack of knowledge over the time in delivering the object and agreed that this is excessive *gharar*, which renders the contract invalid.⁹⁷

6.3 Conclusion

This chapter has discussed the concept of mutual consent under Islamic law and presented the existing definitions of this concept, namely, the definitions of the four Islamic schools: the Malikis, Shafis, Hanbalis, and Hanafis. The chapter has concluded that the difference between Muslim jurists is largely formal. While the majority of Muslim jurists assert the intention of the party in contract formation, the Hanafis find that intention is a condition only for the enforcement of the contract. In other words, a concluded contract will not be enforceable if the party did not intend it. So, the first principal to constitute a party's assent in a contract is to intend that contract. Secondly, the party must have complete knowledge of the subject matter in order to avoid what is called *gharar* (an element which renders the contract invalid under Islamic law). This requires the party to have precise determination of the subject matter and price (quantity and quality) in order to prevent dispute from arising with the other parties. In circumstances, where a party lacks knowledge over small details of the subject matter, this type of *gharar* is considered small (*Yasir*) and therefore permissible. However, where a party lacks knowledge over excessive details of the subject matter, Muslim jurists agreed that this is a prohibited *gharar* and it would render the contract invalid.

⁹⁶ Al-Snhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Vol. 5 Beirut: Dar a'eya' Altrath Alarby, p. 40 (In Arabic).

⁹⁷ Ibid.

The contract administered by the electronic agent limits the knowledge of the operators about the contract. Therefore, on the one hand, it creates doubts as to whether we should attribute the contract to the intentions of the operators. It was suggested that operators of electronic agents do not intend automated contracts since automated contracts are made by electronic agents autonomously about which the operators have no knowledge. On the other hand, it presents evidence of the existence of *gharar* as the operators in such instances may lack knowledge of some excessive details over the contract's subject matter. If a transaction is completed independently of the operator by the electronic agent, the operators would normally lack substantial details of the subject matter such as price, time of delivery and description. In this case the transaction constitutes excessive or *al-gharar al-kathir* and automated contracts would be considered invalid.

Having questioned the use of mutual consent for the enforceability of automated contracts under Islamic law on the ground that automated contracts are not consensual, in the next chapter, I will discuss the enforceability of automated contracts through the application of Islamic agency principles. I'll discuss whether electronic agents can be deemed as agents under Islamic law so automated contracts can be enforced under Islamic agency law. I first discuss Islamic concept of agency and then investigate whether the attribution of electronic agents as agents is applicable.

CHAPTER 7: The Enforceability of Automated Contracts and Islamic Agency Theory

7.1 Introduction

This chapter evaluates whether electronic agents can be agents under Islamic agency theory. The aim of this discussion is to consider the applicability of Islamic agency principles for the enforceability of automated contracts in the KSA. Thus, it is necessary in this chapter to first discuss the Islamic law of agency and determine its requirements and criteria for agency. Second, the question of whether these requirements are applicable to electronic agents must be answered. To this end, barriers standing against such application will be explored along with the ways Islamic law can deal with such barriers. More specifically, this chapter is interested in the possibility under Islamic law of granting electronic agents with legal personality. Thus the Islamic concept of legal personality is investigated along with its attribution to non human beings such as electronic agents.

7.2 Islamic Principles of Agency Law

7.2.1 The Definition of Agency

Modern Muslim jurists acknowledge that there has been almost no modification on the law of agency or “*Al-Nyabh*” since the early days of Islam.¹ Agency agreement has been found in traditional Islamic texts as a nominated contract and has its own specific rules. An attempt to define agency relationship under Islamic law provides the following definition: "Authorizing a capable person, similar to him (the principal), to achieve something that can be authorized under the law of agency".² This means that not every matter under Islamic law can be delegated for others to do. According to Muslim jurists,

¹ Mo'qbel, T.(2001) *Alwakalh in Islamic jurisprudence*. Beirut: Dar Alkotop Alelmiah, p.22 (In Arabic).

² Albhwty, (2003) *Alrwz' Almrba' fy shrh zad Almstgna*. Riyadh: Dar Al'argm lltbaa'h walnshr waltwzya', p. 280 (In Arabic).

there are certain acts a Muslim man cannot authorize others to do on his or her behalf. One obvious example is the pure religious acts, in particular, praying and fasting. Mo'qbel argues that this is not something exclusive to Islamic law.³ Law sometimes, for the exercise or performance, requires discretion or special personal skill, or for the purpose of doing an act which the principal is personally required, by or pursuant to any statute, to do in person.⁴

7.2.1.1 Creation of Agency Relationship

According to the above definition of agency, agency relationship involves two contracting parties: a principal and an agent. The definition points out that agents must be capable similar to the principal. Therefore, it is important to explore what the capacity of principals is under Islamic law. Muslim jurists, generally speaking, agree that principals must be capable persons and not of those who do not have sound minds or those who are considered minors.⁵ That is to say, the principals, under Islamic law, must be in possession of good judgement and be of adult age. However, Muslim jurists disagree on whether a sound mind should act as a principal. The term (*Alcuby Almmyz*) or 'sound mind' under Islamic law refers to individuals between the age of 7 – 15 years. This group of individuals is in a transition stage from being children to teenagers. In the next few sections, the term 'sound mind' will be used to refer to this definition.

Some Muslim jurists suggest that if individuals of sound mind wish to assign an agent, it is important first to decide whether the agent will contribute something beneficial to that individual. The sound-minded individual is permitted to assign an agent only when it is certain that the act of assignation will definitely be beneficial to

³ Mo'qbel, *op, cit.*, p. 22.

⁴ Ibid.

⁵ Alzhiliy, W.(2000) *Alfkr Al-a'slamy w'adlth.* 4th ed, Vol. 4. Cairo: Dar Alfkr Almoacur p. 256 (In Arabic).

him. Examples include: divorce, gift, and charity.⁶ However after centuries of deliberation, the majority of Muslim jurists assert that in cases relating to rental and purchasing it is often difficult to decide whether the agent is going to be beneficial or otherwise to the sound minded individual. In these cases, Muslim jurists agree that what the agent does on behalf of the sound minded would be conditional on the approval of his guardian.⁷ In other words, what this means is that if the agent bought a house on behalf of the sound minded individual, the guardian can withdraw the purchase if he found, for example, the price of the house was too high.⁸

It would seem that this situation gives the right to the guardian of a sound-minded individual to cancel any transactions made with honest third parties who have not committed any negligent acts and, hence, this could threaten the stability of the trade. By contrast, the Shafi School suggests that because sound-minded individuals are not adults and lack legal capacity, they cannot therefore be principals.⁹ For the same reason, the majority of Muslim jurists prevent sound-minded individuals acting as principals. The same position also holds true for agents. The philosophy of the majority of Muslim jurists is that if sound-minded individuals cannot act on their own because they are not adults, they should therefore not be allowed to act on behalf of others. As Alzhiliy states:

Acting on your own behalf is more important than on others' behalf. Taking the fact that a person is prevented to act for his own, it seems then appropriate for that person to be banned from acting on behalf of others.¹⁰

⁶ Ebn Qedamh, (2003) *Almughni*. Vol. 4 Riyadh: Dar Alshwaf, p. 205 (In Arabic).

⁷ Ibid.

⁸ Ibid.

⁹ Mo'qbel, T.(2001) *Alwakalh in Islamic jurisprudence*. Beirut: Dar Alkotop Alelmiah, p. 22 (In Arabic).

¹⁰ Alzhiliy, W. (2000) *Alfkr Al-a'slamy w'adlth*. 4th ed, Vol. 4. Cairo: Dar Alfkr Almoacur, p. 256 (In Arabic).

The Hanafi school's position is very different: sound-minded individuals can act as agents, regardless of whether or not their guardian allows them.¹¹ Alkafyf states: "it is not necessary for the agent to be an adult, he should only not be a mad person".¹² In the same vein, Abu zhrh also states: "It is not an issue whether or not the agent is an adult, the only condition for the agent is to be wise".¹³ In the opinion of the Hanafis, the task of the agent is only to represent what the principal wants and the sound-minded individuals are able to do.¹⁴

Al-Hmad¹⁵ argues that the position taken by the majority of Muslim jurists is not to allow sound-minded individuals to be principals or agents. This is a more secure outlook as it can save sound-minded individuals from damaging their interests.¹⁶ In KSA, the practice in courts and Ministry of Justice follows this position where sound-minded individuals are not allowed to be principals nor agents. The principal and the agent must both be wise and of adult age in the KSA. Thus, if acts are made by minors (infants or sound minded individuals) they will be deemed invalid, even though the person, on whose behalf the agent works for, chose to ratify them later.¹⁷

To establish an agency relationship, the majority of Muslim jurists agree that the principal and the agent must also meet the condition of formula or "*Alcuygh*". The condition of this formula seeks to give an indication to a communication of an offer and an acceptance between the principal and the agent which indicates the consent of the

¹¹ This position is similar to the one adopted under common law. See our discussion under 3.3. Principles of Agency Law.

¹² Alkafyf, A. (n.d) *AhkAm Alma'amlat Alshra'iyh*. Cairo: Dar Alfkr Ala'rby, p.344 (In Arabic).

¹³ Abu zhrh, M. (1999) *Almlkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 328 (In Arabic).

¹⁴ Alseeyti, J. A. (2001) *Alashbah wa alnthaeer fy qoaed Alfgh Alshafi'ih*. Beirut: Dar Alkotop Alelmiah, p. 318 (In Arabic).

¹⁵ Al-Hmad is a Saudi judge.

¹⁶ Al-Hamad, H. (2007) *Agd Alwkalh fy Alfgh AIA'slamy wttbygath fy ktabat Ala'dl balmmlkh Ala'rbyh Alsa'wdyh, Mjhlh Ala'dl*, 7(23), p. 143 (In Arabic).

¹⁷ Ibid.

parties to enter into an agency relationship.¹⁸ The rule of the formula is not exceptional to Islamic law as the same requirement was also found under common law in which the agency relationship arises when one person (a 'principal') manifests assent to another person (an 'agent') that the agent shall act on the principal's behalf and the agent manifests assent or otherwise consents so to act.¹⁹

This is not to state that the above type of agency i.e., agreement between the principal and the agent, is the only available way under Islamic law in which the agency relationship arises. This is similar to common law, where an agency relationship under Islamic law needs not to be contractual. That is to say, agency can be concluded in any available manner, as long as the manner used demonstrates the parties' mutual consent to have an agency relationship.²⁰ For example, it is possible for an agent to bind a principal as a third party even though the principal did not make an offer to the agent and only showed willingness to be bound.²¹ Agency relationship can also still be created under Islamic law if an offer is made by the principal followed by the agent acting on the principal's behalf without either accepting or rejecting the offer.²²

Similar to common law, Muslim jurists have also discussed the possibility of the agent binding the principal as a third party even though there are no wilful signs or requests from the latter to the agent to do so. Agents, under Islamic law, are called *fz'wl*. In this context, agency relationship is not established by the previous consent of parties, but rather by subsequent consent. In other words, an act is completed by an officious agent in the name or on behalf of a person without the latter's authority at all. The person whose name or on whose behalf the act is carried out for, ratifies the act later and

¹⁸ This shows that the agency relationship is not an exception. To form it, it demands consent of contracting parties.

¹⁹ See section. 4.3. Principles of Agency Law.

²⁰ Al-Hamad, H. (2007) *Agd Alwkalh fy Alfgh AlA'slamy wttbygath fy ktabat Ala'dl balmmlkh Ala'rbyh Alsa'wdyh, Mjllh Ala'dl*, 7(23), p. 143 (In Arabic).

²¹ Ibid.

²² Ibid.

makes it as valid and effectual as if it had been originally carried out by an authority. This type of agency locates its roots in the *Hadeeth* of the Prophet Mohammed. Urwah ibn Abulja'd al-Bariqi narrated that Prophet Mohammed gave one of his companions a dinar²³ to buy a sacrificial animal or a sheep. The companion bought two sheep, sold one of them for a dinar, and brought him a sheep and the remaining dinar. Muslim jurists state that the companion was an officious agent when he bought two sheep and sold one. Nevertheless, Prophet Mohammed invoked blessing on him in his business dealing.²⁴

In the next section, I discuss whether Islamic principles of agency law allow electronic agents to be agents so that they can have an agency relationship to bind the operators. I discuss this issue, its challenges, and more importantly how those challenges are confronted using Islamic available methods of interpretation that were outlined in the previous chapter.²⁵ The importance of addressing this issue is the reference it establishes in the ETR 2007 [SA], which states that:

It is allowed for a contract to be created through automated computer systems or directly between two automated computer systems-or more-which are already programmed beforehand to perform tasks. These automated computer systems represent contracting parties and the contracts formed thereby are correct, valid, and create their legal effects, although there is no direct intervention from any natural person in the contract formation process.²⁶

This section states the fact that that *automated computer systems represent contracting parties*. As I see it, the word *represent* used here refers to the legal status of

²³ Dinar was the money used for buying and selling at that time and it is still the name of the official currency in several Islamic countries today.

²⁴ This Hadeeth was narrated by Alhakm.

²⁵ This includes those sources which have been discussed in the previous chapter, mainly to use human reasoning when the divine sources are silent or human reasoning is used without evidence from the divine sources as human reasoning in this instance is not binding. As discussed above, in such circumstances, I can agree/disagree and create different human reasoning.

²⁶ S. 11(1). See appendix I.

automated computer systems²⁷ when they conclude transactions for their operators. The concept of representation can be taken as a significant indication that Saudi policy makers view the work that this computer software carries out as similar to the work of ordinary agents. This suggests that the relationship between this computer software and the operators is that of an agency relationship. As such, an interesting question that emerges is whether this attribution is applicable under Islamic law or not. Since the Saudi regime depends totally on Islamic law as the only source of its law, it is important to examine whether Islamic law would allow electronic agents to be agents so that the rational underpinnings of the ETR 2007 [SA] can be grounded within its legal system.

7.2.2 Application of Principles of Agency to Automated Contracts

The proposition of treating electronic agents as agents can be very challenging since, as indicated above, there is intense debate between Muslim jurists over the capacity of agents. The majority of Muslim jurists place a lot of stress on the capacity of agents to the extent that they are of the opinion that sound-minded individuals are not competent to act as agents under Islamic law. By contrast, the principles of agency under common law state that agents must only have a minimum capacity. That is to say, the right of being an agent is open to all persons with sound mind. This includes infants and other persons with limited or no capacity to contract on their own behalf and are competent to act and contract as agents under common law.²⁸

²⁷ This is another term used to refer to electronic agents. It must be noted here that there are also many other names that can be used to refer to the agent technology. For instance, “software agents”, “software robots”, “softbots”... etc. See, Jennings, N. & Wooldridge, M. (1998). *Applications of Intelligent Agents*, Heidelberg, Germany p. 56. (Online) Available at: <http://jasss.soc.surrey.ac.uk/2/3/sichman.html> [Accessed 07/Feb/2008].

²⁸ In common law as we have seen, minor may act as an agent, even to bind a principal when the minor would lack capacity to bind him or herself to the same transaction. Children for example under common law, who cannot contract for themselves, can contract on behalf of principals. See section. 4.3. Principles of Agency Law.

It seems that Islamic law considers the work of agents as significant to the extent that it is not open to sound minds. This sensitive proposition, regarding the capacity of agents and the work agents do on behalf of the principal, can indicate the difficulty in accepting electronic agents as agents under Islamic law. There is no doubt that the enterprise of granting electronic agents agency under Islamic law is very complex indeed. This is because if sound minds, let alone infants, are prohibited to act as agents under Islamic law, we must ask the question, Will Muslim jurists treat computer programs as agents? Thus, the first and the most difficult issue that emerges in this discussion is that while Islamic law requires agents to be wise and be an adult, electronic agents lack this capability.

7.2.2.1. Lack of Capacity of Electronic Agents

The position of Islamic law is clear in which agents need to possess these traits to constitute the capacity of the agents to act on behalf of the principals. Alalayli²⁹ in an interview, argued that at the time of the Prophet Mohammed only wise and adult were considered capable to play the role of agent. Infants and sound minds are prohibited to act as agents only because Muslim jurists believe that they lack the competence to perform actions for others and therefore are banned from being agents. Likewise, one that lacks sound judgment is prohibited to act as an agent because logically, he would not be able to perform functions for others. In other words, he is of the opinion that it is not an objective of Islamic law that agents must necessarily be wise and of adult age. These conditions were set out by traditional Islamic jurists only to ensure the agents' ability to

²⁹ An interview carried out in Aug-2008, King Saud University, Riyadh-Saudi Arabia. Alalayli is a professor at the King Saud University, Riyadh-Saudi Arabia. I deliberately interviewed Alalayli because he is aware of both western and Islamic laws and this makes him exceptional in the KSA. Al- Alalayli holds a PhD from a France university and this makes him aware of positive laws in particular and western laws in general. Alalayli also holds high diploma degree in Islamic law from the University of *Al'azhr Alshryf*, Cairo, the most famous Islamic university in the world. His father was appointed a decade ago as a scholar of Lebanon (*mfty*) and this has helped him significantly to understand and to improve his knowledge of Islamic law. So, I believe that speaking to Alalayli on such novel issue i.e., whether electronic agents can be agents, would make a considerable contribution to my thesis.

carry out their duties. So, if it is evident now that electronic agents are sophisticated enough to work as agents and have the ability to act on behalf of someone else, then this computer software need not, in order to act as an agent, be wise and adult as it is understood in the traditional sense.³⁰ In the same vein, Shryfat states that:

The main role of electronic agents on the Internet is not merely to transfer and deliver the words or intention from one person to another. It is a fact now that these automated agents can act independently to create contracts on behalf of the operators. They do not only deliver what would have been told by the operators, rather they use their own characteristics such as autonomy to complete transactions. This way of operating makes it pointless to ask for electronic agents to be wise and adult in order to be treated agents as what electronic agents can do now for their operators is sometimes better than what a wise and adult' person can do for his principal.³¹

In addition, the conditions for agents to be wise and of adult age are not mentioned in the Qur'an nor narrated in the *Sunnah* of the Prophet Mohammed. Rather, they are only the requirements of traditional Muslim jurists and are not based on any divine statement. That is to say, these requirements were not reached through consulting divine sources. Accordingly, these conditions can be suggested to be dispensed. The previous chapter highlighted how human reasoning is accepted in Islamic law when the divine sources are silent, however such instances are conditional on not contradicting the principles and morals of Islam.³² The acceptance of electronic agents would not in principle contradict the spirit of Islamic law or any of its general principles so long as electronic agents are competent enough to act for their operators.

Nevertheless, the humanity of agents seems to be another obstacle. It is a fundamental principle in Islamic law that the capacity to act is exclusive only to human beings.³³ Because Islamic law is essentially a religious law, capacity to act has been

³⁰ Ibid.

³¹ Shryfat, M. (2006) *Al-t'aqed abra Internet*, Beirut: Dar a'hya' Altrath Alarby, p. 65 (In Arabic).

³² See section 5.3.3 Human Reasoning.

³³ In the next section when discussing the possibility to grant electronic agent legal personality, I will clarify more the concept of capacity under Islamic law prospective.

conferred only to humans, who in the Islamic belief, is a creation with has a mission; as a vicegerents on earth. As such, capacity to act under Islamic law is ethical in essence and cannot easily be conferred to non human beings. Thus, no matter how great and sophisticated electronic agents are, they remain at the end a mere computer program. In other words, since electronic agents are not human beings, they cannot therefore under Islamic law have the capacity of agents.

In addition, the work of agents requires them to be honest and loyal. The Qur'an states in the context of the story of Joseph when he said: "Set me over the store-houses of the land: I will indeed guard them, as one that knows (their importance)."³⁴ Muslim interpreters suggest that Joseph was, over the store-houses of the land, an agent on behalf of the King and he suggested himself because he was loyal and honest.³⁵ The loyalty of agents requires them to act reasonably and to refrain from conduct that is likely to damage the principal's enterprise. Moreover, an agent has a duty to take action only within the scope of the agent's authority. An agent also needs to comply with all lawful instructions received from the principal and persons designated by the principal concerning the agent's actions.³⁶ Islamic law views these qualities as ones that both humans and electronic agents cannot accordingly own.³⁷

Although this argument is reasonable, nevertheless, it can be countered by the fact that minors are also humans who are not permitted to act as agents under Islamic law.³⁸

As already shown, minors have been banned by Muslim jurists as lacking competence

³⁴ See the Holy Qur'an, (Yusuf Ali translation), American Trust Publication, 1977, Surah 12. Yusuf (Joseph). (Online) Available at:

http://www.harunyahya.com/Quran_translation/Quran_translation_index.php [Accessed 01/Feb/2009].

³⁵ Albry, (2003) *Jama' Albyan fy tfsyr Algran*. Beirut: Dar Alktb Ala'lmya, p. 381 (In Arabic).

³⁶ These duties are fundamental in agency laws. See, Alzhiliy, W.(2000) *Alfkr Al-a'slamy w'adlth*. 4th ed, Vol. 4. Cairo: Dar Alfkr Almoacur, p. 256 (In Arabic).

³⁷ Unlike positive law, in Islamic law, there are no debates recorded about the statement that concepts such as loyalty are not inclusively conferred to human beings. For example, under positive law, it has been suggested that animals such as dolphins and dogs possess the character of loyalty. To view those debates, see Bates, J. (1994) The Role of emotion in believable agents, *Communications of the ACM*, 37(7), pp. 122-125. I also found such arguments on the Internet by groups of animal rights.

³⁸ See Section 7.2.1.1 Creation of Agency Relationship.

as agents. By contrast, because wise and adult persons are in principle able to execute functions on behalf of others, they are allowed to be agents.³⁹ So, the point of agency can arguably be said to revolve around the capacity and efficiency of agents to perform functions assigned by principals much more than the agents as being human beings.

Nevertheless, by following this interpretation and treating electronic agents as agents under Islamic law (despite their inanimate character), there is still no guarantee that Islamic principles of agency law would not pose other barriers to the proposal. Under common law, it has been seen that there are a number of agency principles that electronic agents find difficult to fulfil and for them to be granted the agency role. For example, according to the notion of common law, agents become liable in a number of disputes, mainly when they exceed the principals' mandates. Electronic agents, by contrast, obviously cannot be held liable when they exceed their operators' mandates.⁴⁰ Furthermore, there were dilemmas associated with the type of authority that electronic agents have to have to bind the operators; is it actual, apparent, or ratification authority. Under each one of these authorities, a set of requirements need to be satisfied before the agents can be granted. Electronic agents are faced with a major challenge in meeting those requirements as it was necessary for the issue to be resolved, or they will not be granted.⁴¹

Islamic agency law can also pose similar challenges. Principles of Islamic agency law also provide that agents would be held responsible in a number of disputes, whereas electronic agents, as stated, cannot be held liable. For example, an agent may be held liable to a third party if at the time of contracting, the agent did not disclose the identity of the principal. The law of Islamic agency will make both the agent and the principal

³⁹ Ibid.

⁴⁰ See Section 4.3.1. Application the Principles of Agency on Automated Contracts.

⁴¹ Ibid.

liable even though the actions made by the agent were authorized by the principal.⁴² In the same way as common law, Islamic law holds agents liable when they exceed the principal's structures.⁴³ Muslim jurists highlight that agents must comply strictly with the principal's instructions. The agent is usually given certain instructions in which he must act accordingly. In case the agent does not act according to these mandates (i.e. their actions exceed the authority), the principal will not be held liable for these actions. Rather, it is the agent who will in such cases, be held liable.⁴⁴ This appears today a fundamental principle under agency laws.

Another challenge that can be posed by Islamic agency law, as noted previously, relates to the concept of agency relationship, defined as a consensual relationship where no special formality is required; only an agent and a principal consenting to their association with each other are needed.⁴⁵ When the agent consents to act on behalf of the principal, the agent then has the authority to bind the principal.⁴⁶ The same argument discussed under common law could also be raised here.⁴⁷ That is to say, even electronic agents are deemed competent to act as agents, however, because they lack legal capacity, they would be challenged on how to consent – a requirement set out as necessary for forming an agency relationship with the principal.

There are further issues surrounding the proposal of granting electronic agents the agency role. What is the type of agency that would bind electronic agents to the operators: is it specific or general agency? General agency theory grants the agent

⁴² Alzhiliy, W. (2000) *Alfkr Al-a'slamy w'adlth*, 4th Ed. Vol. 4 Cairo: Dar Alfkr Almoacur, p. 256 (In Arabic). This is a different approach to that adopted under common law. Under common law, we have seen that if the agent did not disclose the identity of his/her principal, the law of common agency will make the agent alone liable. See the case of *Rutter v Linton* (1934) *Rutter v Linton* [1935] 35 NSW SR on 32.

⁴³ Al-Snhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Vol. 5. Beirut: Dar a'eya' Altrath Alarby, pp. 80-85 (In Arabic).

⁴⁴ Ibid.

⁴⁵ See Section 7.2.1.1 Creation of Agency Relationship.

⁴⁶ Ibid.

⁴⁷ See Section 4.3.1. Application of the Principles of Agency to Automated Contracts.

authority to bind the principal on general matters as opposed to specific ones. For example, the principal asks the agent to act whenever the agent thinks it will benefit the principal.⁴⁸ If the principal restricts the agent to only specific acts such as buying a certain item, then this is what is called specific agency.⁴⁹ If electronic agents complete transactions on the Internet on behalf of the operators and without the latter's knowledge, this is not considered to be specific agency but rather general agency. While all the Islamic schools allow principals to grant specific agency to their agents, I found that Muslim jurists tend to disagree on whether general agency should be allowed under Islamic law. On the one hand, the Shafis and the Hanbalis suggest that general agency cannot be permitted because this type of authority could be dangerous to the interest of principals.⁵⁰ That is to say, the principal must mention clearly to the agent the matters required to be achieved on his behalf. Following this position, operators also need to name their electronic agents at every transaction they require to complete. On the other hand, the Hanafis say that general agency should be allowed to be granted to agents because a person can have massive business deals with multiple tasks to be achieved. It sounds unreasonable to ask the person to appoint an agent each time he wants these tasks to be done.⁵¹ In the same vein, some other Muslim jurists suggest that agents can possibly be granted general agency however, the agents are not permitted to act on personal matters of the principals such as divorce and marriage. Such matters are important and therefore require a particular delegation from the principal.⁵² The practice in the KSA is that general agency is permissible and a business owner can authorise a person such as the executive manager to act in the interest of the business.⁵³ This means

⁴⁸ Al-Hamad, H. (2007) *Agd Alwkalh fy Alfgh AlA'slamy wttbygath fy ktabat Ala'dl balmmlkh Ala'rbyh Alsa'wdyh, Mjhl Ala'dl*, 7(23), pp. 148-149 (In Arabic).

⁴⁹ Ibid.

⁵⁰ Ebn Qedamh, (2003) *Almughni*. Vol. 4 Riyadh: Dar Alshwaf, p. 205 (In Arabic).

⁵¹ Al-Kasani, (1910) *Bdaya' Alcunaya' fy Trtyb Alshraya*. Vol. 5 Cairo: Dar Alma'rfh, pp. 15-27(In Arabic).

⁵² Al-Hamad, H. (2007) *Agd Alwkalh fy Alfgh AlA'slamy wttbygath fy ktabat Ala'dl balmmlkh Ala'rbyh Alsa'wdyh, Mjhl Ala'dl*, 7(23), pp. 148-149 (In Arabic).

⁵³ Ibid.

that if electronic agents are treated under Islamic law as agents, they can enjoy general agency to bind their operators on the Internet and it would not be necessary to ask the operator to authorise every transaction made by the electronic agent.

Commenting on the issue above i.e. challenges to Islamic agency law, Alalayli suggests that electronic agents can be conceptualised agents as an exception to the general rule under Islamic law which requires agents to be wise and adult.⁵⁴ This consequently requires that any rule or principle created for agents should not exceptionally be applied to electronic agents that would hold electronic agents liable.⁵⁵ There is a fundamental requirement under Islamic law to make exceptions to general rules. One of the main roles human reasoning plays in Islamic law is in making exceptions to rules mentioned in the Qur'an, *Sunnah*, or edicts promulgated by traditional Muslim jurists. Making exceptions in such ways are only applicable in the existence of public interest, where there is damage to be eliminated, or to permit unlawfulness because it is necessary to the public.⁵⁶ In both the ancient and modern history of Islam, a number of exceptions have been made to conclusive divine statements. For instance, the Qur'an states:

Verily the *Sadaqat* (*charity*) are (only) for the poor, needy, those employed on it, those whose hearts are to be reconciled, slaves, debtors, those in the way of Allah and the wayfarers.⁵⁷

This statement has restricted the recipients of charity, or "*zakah*" to eight categories. One of the groups mentioned is those whose hearts are to be reconciled, called in Arabic "*Al-muallafatu qulubuhum*". They include certain types of leaders, chiefs, influential people or heroes whose beliefs are not yet settled. Islam sees it fit to give them from the *zakah* as reconciliation for their hearts, settling their beliefs, utilising them for the benefit of Islam and Muslims and to influence their communities. These individuals used to

⁵⁴ An interview made in Aug-2008, King Saud University, Riyadh-Saudi Arabia.

⁵⁵ Ibid.

⁵⁶ See Section 5.4.3.3 Human Reasoning.

⁵⁷ Yusuf Ali, the Holy Qur'an (Qur'an 10: 60) Surah At-Taubah.

come to the prophet of Islam and the president after him (Alkhlyfh 'Abw bkr Alcudyg) and take their share from the *zakah*. When the presidency came to Omr Abn Alkhtab, such people arrived to take their share of charity. Alkhlyfh Omr Abn Alkhtab prevented them from their share and stated that: "no need of you, God (*Allah*) has strengthened us by Islam".⁵⁸

Muslim jurists state that Omr Abn Alkhtab made an exception here to a general rule indicated clearly in the Qur'an in which charity should be given to eight categories including *Al-muallafatu qulubuhum*. Because Omr Abn Alkhtab at that time felt Muslims are strong enough and therefore do not need to reconcile types of leaders, chiefs, influential people or heroes, he made an exception to give charity only to seven instead of eight categories. Muslim jurists also, as discussed in the previous section,⁵⁹ made an exception to the general rule which provides that the subject matter of contract must exist at the time of contracting. Muslim jurists permitted two contracts, *Slm* and *Alastcunaa'* exceptionally on the ground that these two contracts were necessary at that time to the needs of public.⁶⁰

It is interesting to note that this perspective i.e. making exceptions to some agency principles corresponds to common law. Authors writing about common law have called for exceptions to agency principles and suggested that the aspect of the capacity concept relating to the liability of the agent should not be applied to electronic agents.⁶¹ However, if electronic agents possess rights similar to those given to a human person or a legal entity, these exceptions to agency law would not then be necessary. This is because by granting electronic agents legal personality, electronic agents will be capable of agency with the ability to enter into contracts, acquire rights and duties on behalf of others and

⁵⁸ Altbry, (2003) *Jama' Albyan fy tfsyr Algran*. Beirut: Dar Alktb Ala'lmya, p. 381 (In Arabic).

⁵⁹ See Section 6.2.3 Consent to Subject Matter

⁶⁰ Ibid.

⁶¹ See in this context, words of Fisher. Fisher, P, J. (1997) Computers as Agents: a proposed approach to be revised U.C.C Article 2, *Indiana Journal Law*, 72(2), p. 557.

carry out liability that would result from their actions. Therefore, in the next section, I shall discuss this challenge to Islamic law i.e. whether Islamic law can grant electronic agents legal personality for the aim of easing the proposal of attributing agency to electronic agents.

7.3 Electronic Agents and Legal Personality

7.3.1 The Concept of Legal Personality under Islamic Law

The concept of legal personality under Islamic law does not exist in traditional Islamic texts.⁶² Instead, classical Muslim jurists adopt a term called *dhimmah*. *Dhimmah* has different meanings under Islamic law.⁶³ In this context, *dhimmah* refers to the capacity (*Ahliyyat*) for acquiring rights and obligations. The term *ahliyyay* in Arabic means ability or capacity, and is used technically to refer to the capacity for acquiring rights and duties.⁶⁴ The definition of *dhimmah* is debatable among Muslim jurists. Algrafy defines the term in question as: "...juristic (*shra'y*) meaning presumed in an adult allows obliging and being obliged as well".⁶⁵ According to Algrafy, *dhimmah* requires the person to be wise and adult before he can have *dhimmah*. So, whoever grows up to be unwise, he does not have *dhimmah*.⁶⁶ In a similar definition, Taj Aldyn Alsbky states:

⁶² Al-Hmydawwy claims that legal personality is unknown to Islamic law. See Al-Hmydawwy, (1999) *Hsam bd al-Wahd Kazm. al-Mwt w Atharh al-Qanwnyt*. Baghdad: Baghdad University Law School, (Unpublished PhD thesis), p. 202 (In Arabic).

⁶³ Abn mnt'wr (1997) *Isan Ala'rb*. Vol. 1 Beirut: Dar Alma'arf, p. 108. For example, it is evident that non-Muslims can join the Muslim community without accepting Islam as a religion. This can be done through what is called under Islamic law as the "*Dimmah* contract". According to this contract, a none-Muslim agrees to live in an Islamic state and enjoy the protection it offers while keeping his/her own belief. Further, s/he, according to this contract, is exempt from implementing Islamic imperatives when they differ from those determined by his/her own religion. For example, eating pork and drinking alcohol are legitimate for non-Muslims living in an Islamic state. See Al-awa, Mhmd Slym, *Nt'am 'Ahl Ald'mh: rw'yh A'slamy M'acurt*. (Online) Available at: http://mdarik.islamonline.net/servlet/Satellite?c=ArticleA_C&cid=1173694916288&pagename=Zone-Arabic-Shariah%2FSRALayout [Accessed 10/Sep/2009].

⁶⁴ This can be found in many Islamic texts. For example, Alzarqa, (2004) *Al-Fqh al-Aslamy fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslamy*. Damascus: Dar Alqalem, p. 267 (In Arabic).

⁶⁵ Algrafy, (1998) *Alfrwg*. Vol. 3 Beirut: Dar Alktb Ala'lmyh, pp. 226-231.

⁶⁶ *Ibid*.

Our scholars state that *dhimmah* is presumed meaning in an adult allows him to oblige as well as being obliged and this meaning should make it clear that a human being who is not wise and adult does not have *dhimmah*.⁶⁷

Unlike the above definitions, Aljrjany defines *dhimmah* "as a description which enables any human being to oblige and be obliged". He asserts that "unlike animals, every human being is born with *dhimmah* to oblige and be obliged".⁶⁸ Alzraga defines *dhimmah* as a repository, that is, "as a juristic container presumed in a person in order to encompass all its debts and obligations that are related to it".⁶⁹ Abu zhrh states that *dhimmah*: "is a matter presumed to be a place for rights and duties".⁷⁰ One of the interpretations of the Journal of Juristic Rules (*Mjlt Al'Ahkam Ala'dly*)⁷¹ states: "*dhimmah* is the soul of the person". The author goes on to write: "this is how article 612 of the Journal of Juristic Rules defines *dhimmah*, it is a description which grants any human being a capacity to own his money and carries out whatever obligation on that money".⁷² Khlaf argues: "*dhimmah* is a human inherent description that enables human beings for rights before others and bears duties for others."⁷³ In the same vein, Alsnhwry states that *dhimmah* is a "juristic (*shra'y*) description that is presumed by the legislator to exist in a human being and according with which [the person] becomes able to oblige and be obliged".⁷⁴

⁶⁷ Alsbky, T. (1991) *Al'ashbah Walnt'ay'r*. Vol. 1 Beirut: Dar Alktb Ala'lmyh, pp. 363-64 (In Arabic).

⁶⁸ Aljrjany, A. (1988) *Alta'ryfat*. 4th ed Beirut: Dar Alktb Alarby, p. 143(In Arabic).

⁶⁹ This definition is quoted by Alzarqa, (2004) *Al-Fqh al-Aslami fy Thwbbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslami*. Damascus: Dar Alqalem, p. 738 (In Arabic).

⁷⁰ Abu zhrh,(1964) *Ahkam Altrkat w Almwaryth*. Cairo: Dar Alfkr Alarby, p. 16 (In Arabic).

⁷¹ Journal of Judicial Rules (*Mjlt Al'Ahkam Ala'dly*) established after the cessation of the Crimean first War between Muslim Ottomans and the Russians, which led to the survival of a large Muslim community under the Russians authority. The Ottoman Empire asked the Orthodox Church in Moscow a clear codification of the treatment of Muslim citizens which led the Russians to ask the Ottoman Empire the same for Russians citizens who live in Muslim community. Sultan Abdul-Majid asked a committee of scholars from Hanfi school, joined by a number of scholars from other Islamic schools, to regulate the judiciary and the Islamic jurisprudence, here Journal of Judicial Rules was issued from: The Columbia Encyclopaedia six edition; 2007).

⁷² Hydr, A. (1991) *Drr Alhkam shrh mjlt Al'ahkam* Vol. 1 Beirut: Dar Aljyl, p. 25. Translated into Arabic by Fhmy Alhsyny,

⁷³ Abdalwhab, A. (2007) *A'lm 'Acuwl Alfgh*. Mw'sst Nwnbg Alfkr, pp. 135-36. (In Arabic).

⁷⁴ This definition is quoted by Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slami*, Beirut: Dar a'hya' Altrath Alarby, p. 20 (In Arabic).

On the one hand, the difference in the above definitions is largely formal. *Dhimmah* as seen, is described by Muslim jurists sometimes as a juristic description, presumed matter, inherent description, or presumed meaning, but they all agree that *dhimmah* is a place for acquisition rights and duties. However, on the other hand, Muslim jurists disagree in these definitions about whether only adults can have *dhimmah* and whether *dhimmah* is inherent or innate in humans. The majority of Muslim jurists (*Aljmhwr*) holds the position that *dhimmah* is attributed to every human being when born. Nevertheless, *Aljmhwr* differs between two capabilities or *ahliyyat* of *dhimmah*: capacity to acquire rights and bear obligations (*ahliyyat al-wujub*) and capacity of performance (*ahliyyat al-ada*). On the one hand, *ahliyyat al-wujub* is defined by Muslim jurists as a condition that is required for the acquisition of individual rights or duties. On the other hand, *ahliyyat al-ada* refers to the ability for executing or exercising rights and duties.⁷⁵ Although these concepts are equally important elements of *dhimmah*, it is the first concept, *ahliyyat al-wujub*, which is the core issue of *dhimmah*. *Ahliyyat al-wujub* corresponds to the living status of human beings and it, therefore, exists *ipso facto* and *ab initio* to every living human being. *Dhimmah* can exist without *ahliyyat al-ada* but can under no circumstances exist without *ahliyyat al-wujub*. The concept of *dhimmah* is said to necessarily coexist with the concept of *ahliyyat al-wujub*.⁷⁶ Therefore, *ahliyyat al-ada* has nothing to do with the acquisition of rights and duties. One may completely lack *ahliyyat al-ada* and still be able to gain rights and assume duties (*ahliyyat al-wujub*). Exercising rights and duties in such an instance only becomes available if performed through the guardian or the testamentary guardian of that individual. Full capacity for executing is assigned to those who reach the age of maturity or discretion unaffected by any deficiency hindering them from being fully mentally developed. Imperfect or

⁷⁵ Alsnhwry, A.(1997) *Mcuadr Alhg fy Alfgh Ala'slamy*, Vol. 1 Beirut: Dar a'hya' Alrath Alarby, p. 20 (In Arabic).

⁷⁶ Ibid,pp. 736-737.

deficient capacity, on the other hand, is assigned to those processing some discretion such as children at the age less than seven or the insane.⁷⁷

As such, numerous Muslim scholars argue that *ahliyyat al-wujub* holds similar definition with *dhimmah* as they both have been granted to every human being and defined by dint of the way a human being becomes capable of acquiring rights. Algrafy for example states: "indeed, *dhimmah* among Muslim jurists was a difficult term to be defined where mostly believe that *dhimmah* is *ahliyyat al-wujub*".⁷⁸ Alkht'ry bk also asserts that: "*ahliyyat al-wujub* depends on *dhimmah* which is a juristic description enables a human being to oblige and be obliged".⁷⁹ Alsnhwry argues that clearly there is a similarity between the concepts of, *ahliyyat al-wujub* and *dhimmah*. Alsnhwry states:

As *ahliyyat al-wujub* is defined as the capacity of human beings for acquiring rights and duties, the relationship between *dhimmah* and *ahliyyat al-wujub* becomes serious. *Dhimmah* is the capacity of a human being to have rights and duties and *ahliyyat al-wujub* is this capacity. *Dhimmah* is associated with human beings, a human being is born with separate *dhimmah* and accordingly is granted *ahliyyat al-wujub*. *Ahliyyat al-wujub* hence is based upon the existence of *dhimmah*.⁸⁰

In the same vein, Khlaf states *ahliyyat al-wujub* is:

The capacity for a human being for having rights and duties and it is significant because it differs human beings from all kind of animals to make them able to have rights and duties and this is what is called (*dhimmah*)...this capacity e.g., *ahliyyat al-wujub* is proved for every human described as a human being whether male, female, whether foetus, child or adult, wise or unwise, mad or sick, *dhimmah* is totally based on inherent description of humans.⁸¹

The authors of the above statements have found that there is no distinction between *dhimmah* and *ahliyyat al-wujub*. Both *dhimmah* and *ahliyyat al-wujub* are bestowed on

⁷⁷ Ibid.

⁷⁸ Algrafy. (1998) *Alfrwg*. Vol. 3 Beirut: Dar Alktb Ala'lmyh, pp. 226-231-231. (In Arabic).

⁷⁹ Alkhz'ry bk. (1987) *Acuwl Alfgh*, Beirut: DarAlglm, p. 91. (In Arabic).

⁸⁰ Alsnhwry, A.(1997) *Mcuadr Alhg fy Alfgh Ala'slamy*, Vol. 1 Beirut: Dar a'hya' Alrath Alarby, p. 20 (In Arabic).

⁸¹ Abdalwhab, A. (2007) *A'lm 'Acuwl Alfgh*. (N.P): Mw'sst Nwnbg Alfkr, pp. 135-36. (In Arabic).

every human being so that no human being lacks these capacities.⁸² Nevertheless, other Muslim scholars argue that *ahliyyat al-wujub* is distinct from *dhimmah*. Algrafy, for example, argues that the distinction lies in the fact that *ahliyyat al-wujub* is a condition required for the acquisition of individual rights or duties.⁸³ It often varies in accordance with the rights and duties concerned. *Dhimmah*, on the other hand, is a prerequisite for having any right or duty. To put it another way, *dhimmah* is a condition in the entity to which the right or duty is being attributed, that is, meeting the conditions for acquisition of a particular right or duty. Within this, we could have equal subjects with different abilities for acquisition or *ahliyyat al-wujub*. More specifically, Algrafy states:

When state that someone has a *dhimmah*, this means he has the capacity to be dealt with and this makes the two concepts, *dhimmah* and *ahliyyat al-wujub* different...these two concepts do not depend on each other. An act can legally be recognized without *dhimmah* such as a sound mind who has a capacity to act despite he lacks *dhimmah*, this is according to most opinions of Muslim jurists.⁸⁴ Vice versa is true. *Dhimmah* can exist without capacity such as slaves who are interdicted for their master rights. *Dhimmah* and *ahliyyat al-wujub* can exist together only in the free, adult, wise person.⁸⁵

In light of this statement, the difference between *dhimmah* and *ahliyyat al-wujub* lies in the mandate's condition. While *dhimmah* requires the person to be adult and wise, *ahliyyat al-wujub* does not as such capability is acquired automatically by every human being at birth.⁸⁶ As shown in the above discussion, the opinion of Algrafy in which *dhimmah* is attributed only to adults is debatable since many Muslim jurists have disagreed with his notion and established that every human is born with separate *dhimmah*.⁸⁷

⁸² Ibid.

⁸³ Algrafy.(1998) *Alfrwg*. Beirut: Dar Alktb Ala'lmyh, pp. 226-29.

⁸⁴ Based on the proposition I have made earlier that every human is born with *dhimmah*, the author is mistaken when he states: "this is according to most opinions of Muslim jurists".

⁸⁵ Algrafy.(1998) *Alfrwg*. Beirut: Dar Alktb Ala'lmyh, pp. 226-29.

⁸⁶ Ibid. p. 233.

⁸⁷ See the book of Abn alshat,(1998) *Idrar alshrouk a'la a'nwa'a alfrouk*, Beirut: Dar Alktb Ala'lmya , and article of Culyha' bnt Ashwr, *Nt'ryh Ald'mh fy Alshrya'h walganwn wa'lagthA balmyrath walwcuylh*, Ala'khwān Almslmwn. (Online) Available at: <http://www.ikhwanonline.net/More.asp?ID=360> [Accessed 10/Nov/2009] (In Arabic).

7.3.1.1 Concept of *Dhimmah*

Most importantly, Muslim jurists while defining *dhimmah*, discuss that the concept of *dhimmah* under Islamic law embraces all rights and obligations, whether they are religious or financial. Alzarqa states that: “the concept of *dhimmah* represents that aspect of legal personality which is supposed to contain an account of the entire person's rights and obligations whether they are religious or financial in nature”.⁸⁸ Alftlawy also finds the doctrine of *dhimmah* which means: “a presumed or imaginary repository that contains all the rights and obligations relating to a person here and hereafter.”⁸⁹ Echoing this, Alsnhwry states:

...[D]*himmah* does not only depend on the capacity of human beings to acquire financial rights. Rather, it is a description that allows all rights and duties whether non financial such as prayer or even financial rights of religious nature such as donation (*zakat*). The concept of *dhimmah* therefore is wider under Islamic law.⁹⁰

The attribution of religious rights and obligations to the concept of *dhimmah* comes from the relationship that Muslim jurists espy between *dhimmah* and vicegerency. In Muslims' believe, human beings have been created to be God's vicegerents on earth. The objective of this vicegerency is to bring the ethical imperatives constituting the ethical arm of the divine will into actuality. The main explicator of these imperatives is divine sources whose message is to bring ethics or moral standards to their completion. As such, the imperatives detailed in divine sources are ethical in essence, though they might be clothed in legal forms and enactments; the latter are used as means to the former. In this way, the nature of *dhimmah* is determined. It has been conferred on human beings to enable them to assume and bear their mission as vicegerents. As such, it is a capacity for

⁸⁸ Alzarqa, (2004) *Al-Fqh al-Aslami fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslami*. Damascus: Dar Alqalem, p. 267 (In Arabic).

⁸⁹ Al-Ftlawy, M. (1999) *Nt'ryh Al dhimma Almaliyh: Drasah Mgarnah fy Alfghyn Alwz'iy walislami*. Cairo: Dar Alfkr Almoacur, p. 37 (In Arabic).

⁹⁰ Alsnhwry, A.(1997) *Mcuadr Alhg fy Alfgh Ala'slami, dar a'hya' Alrath Alarby*. Vol. 1 Beirut: Dar a'hya' Alrath Alarby, p. 42 (In Arabic).

acquiring rights and obligations that are ethical in essence and this makes the concept of *dhimmah* under Islamic law to be based on moral personality.⁹¹ This should come as no surprise because Islamic law has the nature of a multidimensional system wherein the law is based on ethics, it is reasonable for the concept of *dhimmah*, as the capacity of acquisition in this system, to have this nature too. This result is particularly important with regard to the present discussion i.e., the possibility to attribute legal personality to none human beings such as electronic agents.

Some commentators therefore argue that *dhimmah* has no association with the concept of legal personality as it stands in law. In their perspective, *dhimmah* contains religious rights and obligations and it is therefore implausible to distinguish between legal personality and *dhimmah*.⁹² According to these commentators, two differences make these concepts non-identical to each other. The first difference concerns their source: while the giver of *dhimmah* is God, it is the state that assigns legal personality.⁹³ On the one hand, it is true that the definition of legal personality, as discussed previously, is secular in which it is used as a mere device and makes it possible for policymakers to vary in its granting or withdrawing from a particular entity. In other words, legal personality is used as a mere device to make it possible for policymakers to either grant or withdraw from a particular entity.⁹⁴ On the other hand, one could argue that legal personality is a quality inherited in humans and to claim it as assigned by the state dismisses this fact. The lawmaker or the state does no more than recognize what already

⁹¹ Ibid.

⁹² See for instance, Lerrick, A. & Main, Q. J., (1982) *Saudi Business and Labour Law: its interpretation and application*. 2nd ed. London: Graham & Trotman, pp.106; Schacht, J. (1986) *An Introduction to Islamic Law*. Oxford: calendar Press, reprinted, pp.125-126.; Alzhiliy, W. (1997) *Alfkr Al-a'slamy w'adlth*, 4th ed. Vol. 4. Damascus: Dar al-Fkr. p.2961 (In Arabic); Nyazee, (1998) *Islamic Law of business Organization Corporations. Islamic Law and Jurisprudence*. Islamabad: International Institute of Islamic Thought, p. 106.

⁹³ Lerrick, A. & Main, Q. J., (1982) *Saudi Business and Labour Law: its interpretation and application*. 2nd ed. London: Graham & Trotman, pp. 106; Schacht, J. (1986) *An Introduction to Islamic Law*. Oxford: calendar Press, reprinted, pp. 125-126.

⁹⁴ See Section 4.3.2.1 Defining Legal Personality.

exists in humans. The real assigner therefore, cannot be the state; it is either God or Nature, according to one's belief.

The second difference concerns their ability to encompass rights and duties: while *dhimmah* expands to embrace matters related to the hereafter, legal personality is limited to those connected to this world.⁹⁵ This claims that *dhimmah* is wider than legal personality, the capacity for acquisition in Islamic law, the trans-ethical, religious, and legal system makes it true. It is true that *dhimmah* embraces rights and obligations related to this world and hereafter, rights and obligations of different nature, i.e., ethical, religious, and legal. Therefore, it seems reasonable to claim that the term *dhimmah* instead of legal personality should be used to refer to one's ability to have rights and duties in Islamic law. Associating the term "legal personality" under Islamic law instead of *dhimmah* can inaccurately give the impression that only "legal" rights and duties can be gained through this ability. Furthermore, this objection can still hold true, in my opinion, even if *dhimmah* is similar to "legal personality" understood as an ability to have "legal" rights and duties, since legal enactments and procedures are used in Islamic law as a means to actualize imperatives of an ethical nature. That is to say, legal rights and duties here are no more than ethical ones' clothed in legal wording.

Therefore, in the rest of the thesis, the term *dhimmah*, instead of legal personality, will be used to refer to one's ability to have rights and duties in Islamic law. The second reason for the preference given to the term *dhimmah*, when talking about the capacity for acquiring rights in Islamic law, is that, unlike the term legal personality, *dhimmah* evokes the concept's special origin. In other words, when the term *dhimmah* is utilized, it evoked the idea of being endowed by God, and so it seems more appropriate to use it when talking about the capacity for acquiring rights in Islamic law, the way ordinate by God.

⁹⁵ Alzhiliy, W.(1997) *Alfkr Al-a'slamy w'adlth*, 4th ed. Vol. 4. Damascus: Dar al-Fkr. p. 2961 (In Arabic).

7.3.2 Application of the Concept of *Dhimmah* to Electronic Agents

In the previous discussion, I have clarified that the concept of *dhimmah* under Islamic law embraces rights and obligation related to this world and hereafter (religious and financial). This meaning, as I see it, makes *dhimmah* a religious rather than a legal concept. This result is important to the present discussion. If *dhimmah* is a religious concept developed to signify an aspect that characterizes religious rights and obligations, which means *dhimmah* under Islamic law is based on a non legal factor, i.e. humanity or the quality of being human, considering that religious rights and obligations can be gained only by human beings. By contrast, the concept of legal personality under secular laws associates only with the financial rights and obligations of a person. This makes the concept of legal personality purely a legal matter in the hands of policymakers to either grant or withdraw it from a particular entity and being human is not seen as a condition in order to be recognised a legal person.⁹⁶

Thus, by stating humanity is an essential condition for the attribution of *dhimmah*, this makes it an unavailable option to attribute *dhimmah* to non human beings such as electronic agents. This is clearly expressed by some Muslim jurists. For example, the Hanafis suggest that *dhimmah* cannot be attributed to non human beings such as endowment (*waqf*)⁹⁷, public treasury (*bait al-mal*), hospitals, mosques...etc. Alkhfyf states: "there is no such clear statement of Muslim jurists which indicates that such entities have the capacity of *dhimmah*".⁹⁸ In the same vein, Regaah argues that companies under Islamic law are not recognized *dhimmah* and this is one of most important distinctions between *dhimmah* and legal personality under positive laws. In his words, the author states:

⁹⁶ See Section 4.3.2.1 Defining Legal Personality.

⁹⁷ *Waqf* in Islam refers to inalienable or certain properties cease to be a subject of any transaction such as rent, ownership, or inheritance, or to be used as a deposit provided that their products, advantages and benefits are devoted as resource for the benefit of certain people or entities.

⁹⁸ Alkhfyf, A. (n.d) *AhkAm Alma'amlat Alshra'yh*. Cairo: Dar Alfkr Ala'rby, pp. 236-237 (In Arabic).

Islamic law does not recognize *dhimmah* to companies separated of their members. This is because Islamic law attempts only to regulate the relationship between people each other and what helps people to worship their God (*Allah*).⁹⁹

Therefore, the main focus of Islamic law is in human beings, granting them *dhimmah* to help them to comply with their duties here and hereafter. Whilst defining *dhimmah* as including religious' rights and duties, it is easy to understand that *dhimmah* is not a concept created to be attributed to companies or entities, otherwise, it would perfectly be followed to ask companies and entities to perform religious duties. *Dhimmah* under Islamic law therefore exists only for human beings.¹⁰⁰

However, some modern jurists, by contrast, argue that in the early days of Islam, the *waqf* was permitted to be a contracting party, is obtained rights and is obliged by liabilities and obligations.¹⁰¹ According to these commentators, this should be taken as evidence that non human beings can be granted *dhimmah*. For example, it is articulated in traditional Islamic texts that if the administrator¹⁰² of the *waqf*, before being dismissed, bought something for the endowment and did not pay the price, the next administrator of the *waqf* had to pay the amount to the seller. Furthermore, according to these modern jurists, it is a fundamental rule that the tenancy contract is terminated once the tenant or the landlord is dead. By contrast, in traditional Islamic texts, it is found that in the tenancy contract the administrator of the *waqf* made (such as renting a plot of land for the benefit of the *waqf*) is not terminated even when the administrator has died. In the same

⁹⁹ Regaah, A. (2005) *Almdkhl ldrast Ganwn Alshrkat*. 2th ed sudan: Regaah, p. 165.

¹⁰⁰ Regaah argues that *dhimmah* is defined under Islamic law in this way because Islamic law at that time was simple so it was not necessary to regulate the relationships between companies and their members. The relying in business at that time was more on human beings and their religious fear. Consequently, Islamic law on the one hand, defines partnership but on the other hand it does not define company. Regaah, A. (2005) *Almdkhl ldrast Ganwn Alshrkat*. 2th ed sudan: Regaah, p. 165.

¹⁰¹ See for example, Abu Zahra, M. (1999) *Almkyh wnt'ryh Alogwd*. Cairo: Dar Alma'rfh, p. 264 (In Arabic); Alkafyf, A. (n.d) *AhkAm Alma'amlat Alshra'yh*. Cairo: Dar Alfkr Ala'rby, pp. 236-237 (In Arabic). In English see these discussions in Zahraa, M. (1995) Legal Personality in Islamic Law, *Arab Law Quarterly*, 10(3), pp. 205-206; Lerrick, A. & Main, Q. J., (1982) *Saudi Business and Labour Law: its interpretation and application*. 2th ed. London: Graham & Trotman, pp. 106-107.

¹⁰² The administrator is a sort of agent or representative working on behalf of the *waqf* business for the benefit of its beneficiaries.

vein, when attempting to separate rights and liabilities between non human beings, traditional Muslim jurists provided that if an administrator of a mosque hired someone to refresh the carpet and then the administrator was dismissed and replaced by someone else, the new administrator would be obliged to pay the amount while the previous administrator would not be asked to pay at all.¹⁰³

According to Alsanhury and Alzraga, the administrator in the above-mentioned examples appears as a mere guardian.¹⁰⁴ None of the transactions carried out by the administrator on behalf of the *waqf* or mosque, involved the administrator's own *dhimmah*. According to these authors, as a separation of *dhimmah* which was made between these entities and the administrator, this is clear evidence that these entities were having separate *dhimmah*. Therefore, Islamic law permits *dhimmah* to be granted to non-human beings.¹⁰⁵ The practice in the KSA is that corporate bodies are attributed separate *dhimmah* and this is according to Saudi Arabian Company Law.¹⁰⁶

Even though we may agree that non human beings such as *waqf* were granted *dhimmah* under Islamic law, the analogy to electronic agents is inapplicable. I discussed earlier the concept of *dhimmah* and claimed it refers to two capacities: one refers to the capacity to acquire rights and bear obligations (*ahliyyat al-wujup*) and the other refers to the capacity of performance.¹⁰⁷ *Dhimmah* which modern Muslim scholars attempt to prove to *waqf* and mosque refers only to *ahliyyat al-wujup* i.e., a capacity of these entities to acquire rights and bear obligations. That is to say, *dhimmah* given to such

¹⁰³ These examples are cited in, Nasir Cf. Jamal J. (1986) *The Islamic Law of Personal Status*. London: Graham and Trotman, p. 247.

¹⁰⁴ Alsnhwry, A. (1997) *Mcuadr Alhg fy Alfgh Ala'slamy*. 4th ed. Beirut: Dar a'eya' Altrath Alarby, p. 81 (In Arabic); Alzarqa, (2004) *Al-Fqh al-Aslamy fy Thwbh al-jdyd, al-Mdkhl al-Anzryh al-Altzam al-amh fy al-Fqh al-Aslamy*. Damascus: Dar Alqalem, p. 421 (In Arabic).

¹⁰⁵ Ibid.

¹⁰⁶ The Companies Regulation 1965, was promulgated in 1965, see article 13. (Online) Available at; (In Arabic). <http://www.commerce.gov.sa/circular/10-1.asp#1>. [Accessed 20/August/2009].

¹⁰⁷ See Section 6.3.2. 1 Defining Legal Personality

entities does not include *ahliyyat alada* i.e., a capacity of performance and to conduct affairs.

What makes this point easier to understand in a commercial legal context is when corporation bodies lack this capacity of performance and therefore cannot act on their own behalf; acts in these cases are completed through human beings (representatives, agents, etc) who act on behalf of these bodies (*ahliyyat alada*) and deliver to them later the legal effects (*ahliyyat al-wujup*). Human beings as discussed earlier are the only beings who can have dual capacities; to conduct affairs by themselves and to acquire rights and bear obligations.¹⁰⁸ What must be granted to electronic agents is not merely a capacity to acquire rights and bear obligations as is the case with corporation bodies. Rather, because electronic agents conduct affairs on their own and not via representatives, electronic agents should therefore also be granted the capacity of performance. That is to say, *dhimmah* that is suggested to be given to electronic agents is similar to that conferred to human beings and not to that conferred to non human beings. This makes electronic agents unable to have *dhimmah* under Islamic law.

Some modern Muslim scholars have discussed whether animals can have *dhimmah*, similar to human beings and this could benefit the attribution of *dhimmah* to electronic agents under Islamic law. Alnjar argues that it is possible under Islamic law to attribute *dhimmah* to non human beings such as animals. In his words, Alnjar states:

Sympathy and aid are rights narrated for animals by the Prophet Mohammed and these rights necessary require *dhimmah* for animals. *Dhimmah* for animals is granted for religious rather than for legal purposes.¹⁰⁹

Interestingly enough, Alnjar proceeds to argue that those who reject the idea i.e., attributing *dhimmah* to animals, the rejection is only on the real (natural) *dhimmah* and

¹⁰⁸ Ibid.

¹⁰⁹ Alnjar, A.(1996) *Alshh'cuyh watharh fy Alfgh AIA'slamy mgarnaa balganwn*, Cairo: Dar Alnhz'h Alarbyh Algahr, p. 74.

not the juristic *dhimmah* as it is understandable that the former is attributed only to human beings.¹¹⁰

In opposition to Alnjar's argument, Alnjyry finds that Islamic law should abstain from attributing *dhimmah* to non human beings such as animals.¹¹¹ From his point of view, *dhimmah* that is today granted to corporate bodies refers to a group of individuals or money set out for a particular continuous purpose and *dhimmah* therefore allows them to enjoy their own rights and duties within both legal and social frameworks. Animals, by contrast, do not fit into such frameworks and so cannot be judged in this way.¹¹² While this argument would seem to be flawed given that animals can also achieve a particular continuous purpose, the main concern with Alnjar's argument is his lack of evidence for the distinction between the real (natural) and the juristic *dhimmah*. *Dhimmah* as defined above does not distinguish between two different types of *dhimmah*. It is granted to human beings in order to encompass all their debts and obligations that are related to it whether religious or financial.¹¹³ Hydr states: "*dhimmah* might not mean directly the brain of a human being, nonetheless the brain relates to it. Animals should therefore be excluded from having *dhimmah*".¹¹⁴

More importantly, Alnjyry argues that rights such as sympathy and aid which have been recognized for animals by the prophet of Islam are not the kind of rights that require *dhimmah*. According to Alnjyry, Alnjar was wrong when he thought that sympathy for animals means *dhimmah* for them. Rights are divided into four categories. The first is human rights which refer to basic rights such as the right to live, to maintain dignity and to achieve equality to name a few. These are for any human being which enables them to

¹¹⁰ Ibid.

¹¹¹ Alnjyry. (2009) *Hi Llhywan Shh'cuyh Aa'tbaryh?*, *Mjllh Alwa'y Ala'slamy*, 528, published on Oct 10-2009.

¹¹² Ibid.

¹¹³ See definitions of *dhimmah* in Section 7.3.1 Defining Legal Personality under Islamic Law.

¹¹⁴ Hydr, A. (1991) *Drr Alhkam shrh mjlt Al'ahkam* Vol. 1 Beirut: Dar Aljyl, p. 25. Translated into Arabic by Fhmy Alhsyny,

perform their duties in the society that they live in. The second is civil rights which are associated with the individual himself such as the right to think, to express ideas, to perform actions and hold on to a specific belief. The third is rights which regulate the protection of one's body, name, reputation and privacy. Finally, ethical rights which are set up religiously and legally such as the right to greet others on the street, to provide advices to the society, to move damages from the street, to visit penitents and to smile at people. Alnjry argues that:

All these rights are strictly related to human beings. Rights of animals such as sympathy and aid are ethical rights presented religiously, therefore, they cannot be asked by law. Such ethical rights are not imposed by law and any right that is not imposed by law does not need *dhimmah* to be achieved.¹¹⁵

Furthermore, even though we may agree that animals should be granted *dhimmah* under Islamic law in order to help them to acquire rights such as aid and sympathy, the analogy to electronic agents is also not yet applicable. This is because *dhimmah* in this case refers only to *ahliyyat al-wujup* i.e., a capacity of these entities to acquire rights and bear obligations. It does not include *ahliyyat alada* i.e., a capacity of performance and to conduct affairs. I have already clarified that electronic agents is not merely a capacity to acquire rights and bear obligations as the case with corporation bodies. Rather, because electronic agents conduct affairs by their own and not by representatives, this also suggests electronic agents to be granted the capacity of performance. That is to say, *dhimmah* that is suggested to be given to electronic agents is similar to that conferred to human beings and not to that suggested to animals.

However, referring back to the concept of *dhimmah*, it was found that the concept is designed originally to human beings to enable them to assume and bear their mission as

¹¹⁵ Alnjry. (2009) HI Llhywan Shh'cuyh Aa'tbaryh? *Mjllh Alwa'y Ala'slamy*, 528. published on Oct 10-2009.

vicegerents.¹¹⁶ As such, the attribution of separate *dhimmah* to none human beings such as *waqf* and mosque should be taken as an exceptional to the general rule for the concept of *dhimmah* under Islamic law. This is understandable because as stated above, when there is *al-maslih al-mursalh* or public interest, it is a fundamental interest under Islamic law to make exceptions to general rules. Therefore, if the public interest was the reason to attribute the capacity to acquire rights and bear obligations (*ahliyyat al-wujup*) to none human beings such as *waqf* and mosque or modern companies, it seems then same analogy can be applied to electronic agents. That is to say, the capacity of performance (*ahliyyat alada*) can also be developed to be granted exceptionally to electronic agents because there is clearly a public interest for using this advanced technology i.e., electronic agents in conducting businesses today. When there is no precise evidence in the divine statements on the issue in question, the principle of public interest must play a major role within the framework of Islamic law to reform and develop its rules. Such human reasoning also serves the spirit of Islamic law since it complies with what has been explained in the introduction of the concept of Islamic law that human reasoning can be made in according to the interest of public and on principles such as; “*changing rules according to the changing of times circumstances and places*”.¹¹⁷ According to Alkardawi, there is a consensus between Muslim scholars on this issue, especially Maliki and Hanbali school of Islamic law.¹¹⁸ Among them, Abn Algym and Abn Tymyh are recognized for using the public interest as the basis for reforming orthodox Islamic law.

7.4 Conclusion

This chapter has discussed the enforceability of automated contracts in terms of Islamic agency principles. On one side, according to Islamic agency principles, the

¹¹⁶ See the discussion in section 7.3.1.1 Concept of *Dhimmah*.

¹¹⁷ Ibid.

¹¹⁸ Shafis is less recognized among Muslim schools on the use of the public interest. Alkardawi, Y. (2000), *Alsyasah Alshra'iah fi dhou'a nsous Alshria'ah wmkasdha*, Cairo: Alresalah, p. 201.

rationale for enforcing contracts made by electronic agents is that electronic agents must be competent to act as agents. Under Islamic law, agents must be wise and be adults to the extent that even the sound minded, let alone infants, are prohibited to act as agents under Islamic law. The concept of (wise and adult) was presented as a traditional understanding of the term which requires agents to be human beings. This is where the proposition regarding accepting electronic agents as agents appeared unattainable under Islamic law. This lack of capacity of electronic agents will also prevent them to consent – a requirement set out as necessary in order to form an agency relationship with the principal. Furthermore, electronic agents cannot be held liable whereas Islamic agency law principally holds agents liable in some instances. Accordingly, automated contracts cannot be enforced through the application of Islamic agency principles.

However, the more convincing argument is that the concept of wise and adult is not presented in terms of the traditional understanding of this concept, as this would require agents to be human beings. Rather, it was presented to ensure the agents' ability to carry out their duties. Therefore, it is possible to present an argument that electronic agents are sophisticated enough to work as agents and have the ability to act on behalf of another in the same way any wise and adult individual would do for their principals. Other Muslim jurists argued that since it is a fundamental interest under Islamic law to make exceptions to general rules, electronic agents can be agents under Islamic law exceptional to the general rule which requires agents to be wise and adult. It followed that any rule or principle created for agents should not exceptionally be applied to electronic agents such that which would hold electronic agents liable.

Furthermore, these opinions of Muslim jurists which determined the requirements of agency (wise and adult) have not been derived from divine sources (the Qur'an and the *Sunnah*). Accordingly, such efforts are not reliable and binding which means that there is

a legitimate reason to dispense these requirements of agency and create a modern human reasoning that accepts electronic agents as competent to act as agents. This proposition does not conflict with any principle or moral of Islamic law and this is the only condition under Islamic law for making new human reasoning.

The attempt to grant electronic agent legal personality under Islamic law, in order to ease the application of agency principles to electronic agents, was shown to be confronted by a conservative view toward the term legal personality. First, it was shown that the term legal personality does not exist under Islamic law. Concept of *dhimmah* was developed instead which was defined as a place for acquisition rights and duties with two capacities; one refers to the capacity to acquire rights and bear obligations (*ahliyyat al-wujub*) and the other refers to the capacity of performance. The concept of *dhimmah*, with its two types of *ahliyyat*, has been explained to have different meaning than legal personality in positive laws. While the latter includes only financial rights and obligation, the former includes religious rights and duties as well. The attribution of religious rights and duties to the concept of *dhimmah* was explained on the ground that *dhimmah* is conferred on human beings to enable them to assume and bear their mission as vicegerents. For this understanding of legal personality, it was easy to realize that it is a concept designed to human beings and cannot therefore be granted to electronic agents.

It is true that non human beings were arguably granted *dhimmah* nevertheless, these entities were only given the capacity to acquire rights and bear obligations (*ahliyyat al-wujub*) and not the capacity of performance, the capacity that is suggested to be given to electronic agents. However, if *ahliyyat al-wujub* for the public interest, was developed to be granted to none human beings, then I suppose for the same reason a development can be achieved under Islamic law to the concept of *ahliyyat alada* to include electronic agents.

CHAPTER 8: Conclusion

The aim of this dissertation has been to establish how contracts made by electronic agents might be made enforceable under Islamic law. This question is significant because automated contracts are new and their enforceability under Islamic law has not been subjected to previous investigation, research or legal analysis. The enforceability of automated contracts under Islamic Law is especially important in Saudi Arabia where Islamic law constitutes the legal system.

The discussion found that there were a number of conceptual obstacles preventing automated contracts from being enforceable under Islamic law. Some of these obstacles have proven to exist only under Islamic law while others have proven to exist only under common law. This similarity between the two legal systems regarding the enforceability of automated contracts proves that Islamic law is not alone in its inability to enforce contracts made by electronic agents. This may indicate that the challenge of automated contracts is an international problem. In the next paragraphs, I summarise the conclusions reached in the previous chapters and reflect on their significance to the enforcement of automated contracts concluded under Islamic law.

The concept of mutual consent both under Islamic and common law is resistant to adaptation to contracts made by electronic agents. Under Islamic law, the contract being administered by the electronic agent limits the operator's knowledge' about the contract. Therefore, on the one hand, it creates doubts about attributing the contract to the intention of the operators. It has been suggested that the operators of electronic agents do not intend automated contracts since such contracts are made by electronic agents autonomously and the operators have no knowledge about them. On the other hand, there is the possibility of the existence of *gharar* because the operators in such

instances may lack the knowledge of some excessive details about the contract's subject matter. If a transaction is completed independently of the operator by the electronic agent, the operator would normally lack substantial details of the subject matter such as price, time of delivery and description. In this case the transaction constitutes excessive or *al-gharar al-kathir* and automated contracts would be considered invalid.

Under common law, because a transaction is made by an electronic agent autonomously and without the operator's knowledge there are limits to the application of the objective approach to mutual consent. This objective approach requires a reasonable man to believe that offer and acceptance to the contract had been manifested by the contracting party. This is what would make the objective approach applicable; "apparent intention" to rely upon by the other party. For some commentators, it becomes difficult to argue that a reasonable person would conclude that the communication of the offer and acceptance in automated contracts was apparently made by the operators as what is really apparent is that such communication was made by electronic agents. Those who conduct their business with the electronic agents have no reasonable belief that the contract communication was made by the operators. Arguments that some people may have limited knowledge of these facts remain unconvincing, as the use of electronic agents in forming contracts becomes more and more widespread. That is to say, the public cannot deny their knowledge that automated contracts are formed by electronic agents autonomously and without the operators' awareness or direct intervention.

For the effective application of agency principles to electronic agents, several requirements under both Islamic and common law must be fulfilled. These concern a common definition of agency theory that bars the idea that electronic agents can be

treated as agents. According to Islamic agency principles, electronic agents must be competent to act. Under Islamic law, agents must be wise and of adult age; even the sound-minded, let alone infants, are prohibited to act as agents under Islamic law. The concepts of 'wise' and 'adult' have been subject to a traditionalist understanding which requires agents to be human beings. This is where the proposition regarding accepting electronic agents as agents appeared unattainable under Islamic law. This lack of capacity of electronic agents will also prevent them to consent – a requirement set out as necessary in order to form an agency relationship with the principal.

The lack of personality of electronic agents was also a barrier to treating them as agents under common law. Moreover, even if common law allowed electronic agents to be agents to bind their operators, another difficulty is the type of authority they have in making transactions on behalf of the operators. Dilemmas arose regarding the type of authority that electronic agents must possess in order to bind their operators. Authority could fall into one of several categories: actual, apparent, or ratificational. Under each one of these authorities, a set of requirements needs to be satisfied before the agents can be recognised. Electronic agents are faced with a major challenge in meeting those requirements as it was necessary for the issue to be resolved or they will not be considered as agents. Furthermore, agency law as it applies in both the Islamic and common systems raised other issues including the possibility of agents being held liable in some instances but not electronic agents who, in return cannot be held liable. Accordingly, automated contracts cannot be enforced through the application of Islamic or common agency principles.

There have been attempts to overcome the barriers erected by agency principles through granting electronic agent legal personality. These efforts have been opposed by conservative view of the term 'legal personality'. First, it was argued that the term

‘legal personality’ does not exist under Islamic law. The concept of *dhimmah* was developed instead which was defined as a place for acquisition rights and duties with two capacities; one refers to the capacity to acquire rights and bear obligations (*ahliyyat al-wujub*) and the other refers to the capacity of performance. The concept of *dhimmah*, with its two types of *ahliyyat*, has been explained to have different meaning than legal personality in common law. While the latter includes only financial rights and obligation, the former includes religious rights and duties as well. The attribution of religious rights and duties to the concept of *dhimmah* was explained on the ground that *dhimmah* is conferred on human beings to enable them to assume and bear their mission as vicegerents. With regard to this understanding of legal personality, it can be seen that it is a concept designed for human beings and cannot therefore be granted to electronic agents. Similarly, because the legal personality that is assumed by electronic agents is most like that conferred to human beings; the agents become subject to tests of moral entitlement to this legal personality, such as consciousness, free will, rationality etc. However, it is difficult to attribute these concepts to electronic agents because they are linked to the innate biological or mental characteristics that define human beings.

This conclusion can create a duality in the Saudi legal system. This is because on the one hand, there are conceptual obstacles which question the enforceability of automated contracts under Islamic law and on the other hand, as has been explained in Chapter 6, the Electronic Transactions Regulation (ETR) 2007 specifically S. 12 articulates that contracts issued by these automated agents should be valid and enforceable. The Saudi regime states in its constitution, art. 67 that Islamic law is the only source of law however, the rational underpinnings of the ETR 2007 [SA] on the enforceability of automated contracts does not seem grounded in Islamic law. This duality within the Saudi legal system is apparent in the case of interest rates (*Riba*). On

the one hand, interest rates are forbidden according to the Qur'an and *Sunnah*.¹ However, on the other hand, interest rates remain used in Saudi Arabia and in commercial trade, although there are no specific rules governing them as yet. A further example of this duality is in insurance contracts. Insurance is prohibited by the majority of Muslim jurists, especially among jurists in Saudi Arabia. In their opinion, insurance contracts have the element of uncertainty (*gharar*) with respect the subject matter and hence, the contract should totally null and void under Islamic law. However, insurance is practised and regulated under the Saudi Arabian Commercial Court Law of 1931.²

To overcome this duality, it is important to avoid the traditional narrow interpretation of concepts of agent, legal person and all related conception conditions, otherwise difficulties and barriers against the enforceability of automated contracts under Islamic law may continue to arise. Electronic agents should be treated as agents. Operators delegate their duties to electronic agents to carry out specific tasks on their behalf and this relationship is an agency relationship. Treating electronic agents as agents under agency law reflects the electronic agents' actual role in contract formation as they are no longer merely communication tools and passive conduits. The premise and accompanying characterization of electronic agents as communication tools appears to be flawed and an erroneous approach to this advanced technology. This is because these labels are only applicable to the first generation of electronic agents which could only make or accept an offer if, and only if, they were pre-programmed by their operators. The later, advanced generations can operate autonomously and without operators' direct intervention, knowledge, or expectation. They can execute

¹ The Qur'an states: O you who believe fear Allah and give up what remains of your demand for usury if you are indeed believers ... But if you repent, you shall have your capital sums: deal not unjustly, and you shall not be dealt with unjustly (*Qur'an* 1:29).

² The Saudi government's view is that insurance contracts should be permitted due to necessity and the need of the society.

transactions on behalf of their operators who may not necessarily be conscious of the activity. The role of electronic agents therefore is a key aspect of automated contract formation; the characterization of electronic agents as tools denies and neglects this fact.

Such reformation of established agency principles can arguably be pursued and implemented under Islamic law. On the one hand, traditionalists may call this reformation in order to dissolve the rules that have been established over the past several hundred years by the “great scholars” of Muslim history. This will ensure that the arguments imposed by some modernists (Muslim and non-Muslims) mean that Muslims' reasoning is restricted to encrustations of the past several hundred years.³ Moreover, it will ensure the repetitive allegations which claim that Islamic law is not incompatible with this modern trade framework since the rules and cases covered in orthodox Islamic law are finite and the changing demands (social and economic) of the public are beyond measure.

On the other hand, radical reformers may advocate the purposeful elimination of Islamic influence from the trade movement and the adoption of secularity; electronic agents will be treated as agents regardless of any position that may be taken by Muslim traditionalists. This secularization, as I see it, is not the path towards realizing the issue, coupled with the Saudis' resistance to secularization. Any new idea or approach cannot be achieved through secularization. Without a firm Islamic-based justification for any new proposition on economic and legal issues, the changes being promoted will fail to be accepted as legitimate by individual citizens, particularly in the KSA. That is to say, it is important to find a balance between these two extremes which should embrace “a broadened doctrine of human reasoning” that would accept the need for electronic

³ I have already showed in the introduction some examples of these views. See page 6-7.

agents to be treated as agents under the Islamic agency theory. The use of this new method of online trade is deemed to be for the benefit of public.

As has been seen in the discussion of the concept of Islamic law, the principle of public interest is well known to Muslim jurists and has played a major role within the framework of Islamic law to reform and develop its rules. As Alkardawi points out, the evidence suggests that Islam, in its every rule, serves people's best interests.⁴ The object of Islam is to free human beings from any suffering or damage whether spiritual or physical, real or expected.⁵ The principle of public interest can and should play an important role in the evolution of a more modern, liberal form of trade. An ideal expression of this is the application of agency principles to include electronic agents under Islamic law.

The principle of public interest is an active mechanism under Islamic law and is a great path for reforming the established principles of Islamic law. The acceptance by Muslim jurists that they must satisfy the public interest when they make laws and policies will help to dispel all those gross misinterpretations of Islamic law such as that Islamic law is rigid or is an immutable 'law of God' based on unchanging texts written in the Middle Ages. From my prospective, the application of the public interest to extend the concept of agency to include electronic agents sends an important message that Islamic law is an imminently flexible, dynamic jurisprudence, fully compatible with the modern trade framework.

The approach taken in this dissertation to the analysis of automated contracts is not the only approach that can be adopted for the analysis of such contracts under Islamic Law. However, this dissertation is the first of its kind and so can be considered as a

⁴ Alkardawi, Y. (2000), *Alsyasah Alshra'iah fi dhou'a nsous Alshria'ah wmkasdha*, Cairo: Alresalah, p. 210.

⁵ Ibid.

starting point for future research in the field. Given that the Saudi Government has established a governmental committee whose mandate is to reform the Electronic Transactions Regulation (ETR) 2007 [SA], the researcher hopes this study will pave the way for further detailed study upon which regulation can be made about the sort of contracts under discussion. That is to say, expanding the concept of agency and legal personality under Islamic law to include electronic agents can be one of the choices available and it remains for other researchers to present more options to overcome barriers related to such contracts. This, as stated above in Chapter 5, is conditional on not contradicting the principles of Islamic law and the rules laid down in the Qur'an or *Sunnah*.

The novelty of automated contacts and the absence of any studies on their enforceability under Islamic law has presented a great opportunity to re-examine the basics of Islamic legal concepts and principles and their capacity to grapple with contemporary issues. For example, further researches might expand the concept of agency and legal personality under Islamic law to include electronic agents, and in the process develop legal grounds for such expansion. Further researches may also find that expanding legal concepts is not necessary as the ones already in existence are sufficient to address this problem and enforce these types of contracts. Other research could adopt an extreme position by arguing that Islamic law does not permit this technology and contracts concluded thereof. Therefore Islamic law should not be a reference point for the enforceability of these contracts in Saudi Arabia. This conclusion means that there is a risk of negative impact on the development of automated contracts in the country. For example, when the Islamic law forbidding interest rates was overruled in Saudi Arabia, there was not much interest from the public in these types of product because although they were legal in the country, they

were contradictory to Islamic law.⁶ Therefore, the enforceability of automated contracts through Islamic law is important to avoid the public's lack of confidence in using these contracts in Saudi Arabia.

Many experts⁷ hold that agent technology will become one of the platforms for future electronic trade, and that electronic commerce as practised today is only a first step towards the formation of true electronic marketplaces. That is to say, whatever impact automated contracts and their enforceability causes traditional Islamic principles of contract, it is important to confront them and present solutions in light of Islamic law. The topic of automated contracts and their enforceability is an interdisciplinary area; law and technology. This could be a challenge to those undertaken the topic. Therefore, it requires in-depth knowledge to frame a clear view regarding the electronic agents' technology and how they work to complete transactions independently. It requires knowledge about technical details and analysis of information that might appear very scientific and unavailable information to legal researchers. Lacking such details over the technology of electronic agents may result in inappropriate assessment of their role in contract formation and this therefore can affect any suggestion that would be presented in support of their legal status.

Furthermore, this research could be taken further by not just involving electronic agents in contract formation, but also by covering issues such as the involvement of electronic agents in crimes such as the violation of privacy and intellectual property right. There are numerous questions and problems associated with the impact of the use of electronic agents on privacy and related interests. There needs to be more debate about the various risks to privacy occasioned by electronic agents' operations and of the way in which data protection rules under Saudi law can moderate these risks. In

⁶ Abdul Karim, A. (2008) The Emergence of Islamic Banking in the UK: A Comparative Study with Muslim Countries, *Arab Law Quarterly*, 22 (2) pp. 180-198.

⁷ Bing, J. (2004) Electronic agents and intellectual property law, *Artificial Intelligence and Law*, 12 (1-2), pp. 39-52.

2008, the IT Criminal Regulation was designed in Saudi Arabia to formulate rules to fight crimes resulting from the abuse of IT and the internet.⁸ The IT Criminal Regulation declares that any Internet activities that damage individuals and society's rights will be punished by a fine of 500,000 Riyals (\$130.000) and one year in prison.⁹ In the absence of specific data protection rules, there seem to be questions about whether this regulation can fully cover the range of electronic agents' operations. An aspect of electronic agents' operations that have not been articulated in the IT Criminal Regulation is when these agents, during the execution of certain operations in the interest of an individual, disclose personal information about this individual without their knowledge. This might include sensitive details that unwittingly aid advertising companies in their implementation of what is known as direct marketing. Electronic agents can also send certain unsavoury links to individuals - especially to children.¹⁰ All the operations of electronic agents have not been articulated in IT Criminal Regulation and so there are important question(s) revolve about liability. Should the operator, Internet Service Provider (ISP), or programmer of the electronic agent be responsible?

⁸ The IT Criminal Regulation. (Online) Available at: <http://www.oefre.unibe.ch/law/icl/sa000000.html>. [Accessed 31/March/2010]. (In Arabic)

⁹ See IT Criminal Regulation, article 3.

¹⁰ For more details on the impact of the use of electronic agents on privacy, see, Bygrave, A. (2001) Electronic Agents and Privacy: A Cyberspace Odyssey, *International Journal of Law and Information Technology*, 9 (3), pp. 275-294.

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APPENDICES

Appendix I

Electronic Transactions Regulation

Issued by the Royal Decree No. M/18 dated 8.3.1428 AH (2007 AD), the Resolution of the Council of Ministers No. 80 dated 7.3.1428 AH (2007 AD) and the circular of the Minister of Justice No. 13/T/3098 dated 11.4.1428 AH (2007 AD).

Chapter III: Electronic Transaction Execution

Article 10

1. Acceptance and approval of contracts can be expressed by an electronic transaction; the contract is considered valid and executable when it is executed in accordance with the provisions of this act.
2. The contract shall not lose its validity or executability for the mere reason that it is executed through one or more electronic records.

Article 11

1. Contracts may be concluded through automated or direct electronic data systems between two or more electronic data systems which are prepared and programmed in advance to perform such functions as representatives of the parties to the contract. The contract shall be considered valid, effective and legally binding in spite of the lack of direct interference by a person of a natural capacity in the contract conclusion process.
2. Contracts may be concluded between an automated electronic data system and a person of a natural capacity if it is known or presumed that he knows that he is transacting with an automated system which will undertake the task of concluding or executing the contract.

Article 12

The electronic record is considered to be issued by the originator if it is sent by him or by another person on his behalf or sent by an automated system programmed by the originator to automatically act on behalf of the originator. The mediator will not be considered as automatically act on behalf of the originator.

Uniform Commercial Code §2 2003

§ 2-103. Definitions and Index of Definitions

(1) In this Article unless the context otherwise requires (g) "Electronic agent" means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, without review or action by an individual.

PART 2. FORM, FORMATION AND READJUSTMENT OF CONTRACT

§ 2-212. ATTRIBUTION

An electronic record or electronic signature is attributable to a person if it was the act of the person or the person's electronic agent or the person is otherwise legally bound by the act.

Uniform Computer Information Transactions Act 1999

SECTION 102. DEFINITIONS

(a) [General definitions.] In this [Act]:

(27) "Electronic agent" means a computer program, or electronic or other automated means, used independently to initiate an action, or to respond to electronic messages or performances, on the person's behalf without review or action by an individual at the time of the action or response to the message or performance.

SECTION 107. LEGAL RECOGNITION OF ELECTRONIC RECORD AND AUTHENTICATION; USE OF ELECTRONIC AGENTS

(d) [Party bound by electronic agent.] A person that uses an electronic agent that it has selected for making an authentication, performance, or agreement, including manifestation of assent, is bound by the operations of the electronic agent, even if no individual was aware of or reviewed the agent's operations or the results of the operations.

SECTION 212. DETERMINING ATTRIBUTION

(a) [When attribution established.] An electronic authentication, display, message, record, or performance is attributed to a person if it was the act of the person or its electronic agent, or if the person is bound by it under agency or other law. The party relying on attribution of an electronic authentication, display, message, record, or performance to another person has the burden of establishing attribution.

Official Comments

5. Electronic Agents. Operations of an electronic agent generally bind the party that used the electronic agent for that purpose. Subsection (d). This rule is limited to situations where the party selects the agent, and includes cases where the party consciously elects to employ the agent on its own behalf, whether that agent was created by it, licensed from another, or otherwise adopted for this purpose. The term "selects" does not require a choice from among several electronic agents, but merely a conscious decision to use a particular agent. The concept here embodies principles like those in agency law, but it does not depend on agency law. The electronic agent must be operating within its intended purpose. For human agents, this is often described as acting within the scope of authority. Here, the focus is on whether the agent was used for the relevant purpose. For a similar concept in a different context, see *Playboy Enterprises, Inc. v. Webworld, Inc.*, 991 F. Supp. 543 (N.D. Tex. 1997), *aff'd*, 168 F.3d 486 (5th Cir. 1999). Cases of fraud, manipulation and the like are discussed in Section 206.

3-Nature of Attribution. Subsection (a) clarifies that the party seeking to attribute the source of an electronic authentication, message, record or performance to a particular party bears the burden of doing so. "Burden of establishing" means "the burden of persuading the trier of fact that the existence of a fact (e.g., attribution) is more probable than its non-existence." In effect, a party (either the licensor or the licensee) that desires to attribute an order or a shipment or license to a particular party bears the burden and the risk of being able to do so. Attribution might involve reliance on agency law principles.

Electronic Transactions Act 1999

SECTION 2. DEFINITIONS.

In this [Act]: (2) "Automated transaction" means a transaction conducted or performed, in whole or in part, by electronic means or electronic records, in which the acts or records of one or both parties are not reviewed by an individual in the ordinary course in forming a contract, performing under an existing contract, or fulfilling an obligation required by the transaction.

(3) "Computer program" means a set of statements or instructions to be used directly or indirectly in an information processing system in order to bring about a certain result

(6) "Electronic agent" means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, without review or action by an individual.

SECTION 14. AUTOMATED TRANSACTION.

In an automated transaction, the following rules apply: (1) A contract may be formed by the interaction of electronic agents of the parties, even if no individual was aware of or reviewed the electronic agents' actions or the resulting terms and agreements. (2) A contract may be formed by the interaction of an electronic agent and an individual, acting on the individual's own behalf or for another person, including by an interaction in which the individual performs actions that the individual is free to refuse to perform and which the individual knows or has reason to know will cause the electronic agent to complete the transaction or performance

Official Comments

2. "Automated Transaction." An automated transaction is a transaction performed or conducted by electronic means in which machines are used without human intervention to form contracts and perform obligations under existing contracts. Such broad coverage is necessary because of the diversity of transactions to which this Act may apply. As with electronic agents, this definition addresses the circumstance where electronic records may result in action or performance by a party although no human review of the electronic records is anticipated. Section 14 provides specific rules to assure that where one or both parties do not review the electronic records, the resulting agreement will be

effective. The critical element in this definition is the lack of a human actor on one or both sides of a transaction. For example, if one orders books from Bookseller.com through Bookseller's website, the transaction would be an automated transaction because Bookseller took and confirmed the order via its machine. Similarly, if Automaker and supplier do business through Electronic Data Interchange, Automaker's computer, upon receiving information within certain pre-programmed parameters, will send an electronic order to supplier's computer. If Supplier's computer confirms the order and processes the shipment because the order falls within pre-programmed parameters in Supplier's computer, this would be a fully automated transaction. If, instead, the Supplier relies on a human employee to review, accept, and process the Buyer's order, then only the Automaker's side of the transaction would be automated. In either case, the entire transaction falls within this definition.

5. "Electronic agent." This definition establishes that an electronic agent is a machine. As the term "electronic agent" has come to be recognized, it is limited to a tool function. The effect on the party using the agent is addressed in the operative provisions of the Act (e.g., Section 14) An electronic agent, such as a computer program or other automated means employed by a person, is a tool of that person. As a general rule, the employer of a tool is responsible for the results obtained by the use of that tool since the tool has no independent volition of its own. However, an electronic agent, by definition, is capable within the parameters of its programming, of initiating, responding or interacting with other parties or their electronic agents once it has been activated by a party, without further attention of that party. While this Act proceeds on the paradigm that an electronic agent is capable of performing only within the technical structures of its preset programming, it is conceivable that, within the useful life of this Act, electronic agents may be created with the ability to act autonomously, and not just automatically. That is, through developments in artificial intelligence, a computer may be able to "learn through experience, modify the instructions in their own programs, and even devise new instructions." Allen and Widdison, "Can Computers Make Contracts?" *9 Harv. J.L. & Tech* 25 (Winter, 1996). If such developments occur, courts may construe the definition of electronic agent accordingly, in order to recognize such new capabilities. The examples involving Bookseller.com and Automaker in the Comment to the definition of Automated Transaction are equally applicable here. Bookseller acts through an electronic agent in processing an order for books. Automaker and the supplier each act through electronic agents in facilitating and effectuating the just-in-time inventory process through EDI.

1. This section confirms that contracts can be formed by machines functioning as electronic agents for parties to a transaction. It negates any claim that lack of human intent, at the time of contract formation, prevents contract formation. When machines are involved, the requisite intention flows from the programming and use of the machine. As in other cases, these are salutary provisions consistent with the fundamental purpose of the Act to remove barriers to electronic transactions while leaving the substantive law, e.g., law of mistake, law of contract formation, unaffected to the greatest extent possible.

The Electronic Signatures in Global and National Commerce Act 2000

SEC. 106. DEFINITIONS.

(3) **ELECTRONIC AGENT.**—The term “electronic agent” means a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part without review or action by an individual at the time of the action or response.

Appendix II of Official Azhar Fatwā

بسم الله الرحمن الرحيم

الأزهر
مكتب الإمام الأكبر
شيخ الأزهر

بنك
الشركة المصرفية العربية الدولية
التاريخ / / ٢٠٠٠ م
المسيد / حساب رقم
تحية طيبة وبعد:
تحيط سيادتكم علما بأنه قد تم تجديد رصيدكم طرفنا وقدره ١٠٠٠٠٠٠ جم (فقط) مائه ألف جنيه مصري لا غير) عن الفترة من ٢٠٠٢/١/١ حتى ٢٠٠٢/١٢/٣١ م بعائد ١٠% سنويا والعاقد قدره ١٠٠٠٠٠ جنيهها مصريا لجمالي المبلغ + العائد في تاريخ الاستحقاق ١١٠٠٠٠٠ جنيهها مصريا المبلغ الجديد مضافا اليه العائد حتى ٢٠٠٢/١٢/٣١ ١١٠٠٠٠٠ جنيهها مصريا

وقد أحال فضيلة الإمام الأكبر الكتاب ومرفقه للعرض على مجلس مجمع
البحوث الإسلامية في جلسته القادمة .

وعقد المجلس جلسته في يوم الخميس ٢٥ من شعبان سنة ١٤٢٣
هـ الموافق ٣١ من أكتوبر سنة ٢٠٠٢ م وعرض عليه الموضوع المذكور
وبعد مناقشات الأعضاء ودراستهم قرر المجلس: الموافقة على أن
استثمار الأموال في البنوك التي تحدد الربح مقدما لحلال شرعا ولا بأس
به .

ولما لهذا الموضوع من أهمية خاصة لدى المواطنين الذين يريدون
معرفة الحكم الشرعي في استثمار أموالهم لدى البنوك التي تحدد الربح



بسم الله الرحمن الرحيم

مكتبة الإمام الأكبر
شيخ الأزهر

مقماً ، وقد كثرت استفساراتهم عن ذلك فقد رأت الأمانة لعامة لمجمع
البحوث الإسلامية أن تعد الفتوى بالأمانة الشرعية وخلصاً لقرال أعضاء
المجمع حتى تقدم للمواطنين صورة واضحة كاملة تعلمون إليها لغوسهم
وقد قلمت الأمانة بعرض نص الفاترى بصرفها الكاملة على مجلس
مجمع البحوث الإسلامية فى جلسته المنعقدة فى يوم الخميس ٢٣ من
رمضان ١٤٢٣هـ الموافق ٢٨ من أوفبر ٢٠٠٢م وبعد قرائتها
ومداخلات الأعضاء فى صياغتها تمت موافقتهم عليها

وهذا نص الفتوى

الذين يتعاملون مع بنك الشركة المسرفية العربية التولية - أر مح هبره
من البنوك - ويقومون بتقديم أموالهم ومدخراتهم إلى البنك أوكون وكلاء
عندهم فى استثمارها فى معاملته المشروعة ، مقابل ربح يسرف لهم
يحدد مقدماً فى مدد يتلقى مع المتعاملين معه عليها . . .

هذه المعاملة بتلك الصورة حلال ولا شبهة فيها ، لأنه لم يرد نص فى
كتاب الله أو من السنة قنبوية يمنع هذه المعاملة التى يتم فيها تحديد
الربح أو العائد مقدماً ، ما دام للطرفان يرتكبان هذا النوع من المعاملة .

قال الله - تعالى - : " يا أيها الذين آمنوا لا تأكلوا أموالكم بينكم بالباطل
لا أن تكون تجارة عن تراض منكم " . . . (سورة التميم : الآية ٢٩)



(٢)

أو : يا من أمنتم بالله حق الإيمان ، لا يحل لكم ، ولا يليق بكم ، أن يأكل بعضكم مال غيرهم بالطرق الباطلة التي حرمها الله - تعالى - كالسرقة ، أو الغصب ، أو الربا ، أو غير ذلك مما حرمه الله - تعالى - لكن يباح لكم أن تتبادلوا المنافع فيما بينكم عن طريق المعاملات الناشئة عن التراضي الذي لا يحل حراما ولا يحرم حلالا ، سواء أكان هذا التراضي فيما بينكم عن طريق التلغظ أم الكتابية أم الإشارة أم غير ذلك مما يدل على الموافقة والقبول بين الطرفين .

ومما لا شك فيه أن تراضي الطرفين على تحديد الربح مقدما من الأمور المقبولة شرعا وعقلا حتى يعرف كل طرف حقه .

ومن المعروف أن البنوك عندما تحدد للمعاملين معها هذه الأرباح أو العوائد مقدما ، إنما تحددتها بعد دراسة دقيقة لأحوال الأسواق العالمية والمحلية وللأوضاع الاقتصادية في المجتمع ، ولظروف كل معاملة ولتوقعها ولمتوسط أرباحها .

ومن المعروف كذلك أن هذا التحديد قابل للزيادة والنقص ، بدليل أن شهادات الاستثمار بدأت بتحديد العائد 4% ثم ارتفع هذا العائد إلى أكثر من 15% ثم تنخفض الآن إلى ما يقرب من 10% .

والذي روج بهذا التحديد الدليل للزيادة أو النقصان ، هو المسائل عن هذا لشأن طبقا للتعليمات التي تصدرها الجهة المختصة في الدولة . ومن فوائد هذا التحديد - لا سيما في زماننا هذا الذي كثر فيها الاحتراف عن الحق والصدق - أن في هذا التحديد منفعة لصاحب المال ، ومنفعة - أيضا - للقائم على إدارة هذه البنوك المستثمرة للأموال .



بسم الله الرحمن الرحيم

الأزهر
سنة الإمام الأكبر
شيخ الأزهر

ففيه منفعة لصاحب المال ، لأنه يعرفه حقه معرفة خالصة عن الجهالة ،
ويعتقضي هذه المعرفة ينظم حيتته .
وفيه منفعة للقائمين على إدارة هذه البنوك ، لأن هذا التحديد يجعلهم
يجتهدون في عملهم وفي نشاطهم حتى يحققوا ما يزيد على الربح الذي
حددوه لصاحب المال ، وحتى يكون القاتض بعد صرفهم لأصحاب الأموال
حقوقهم ، حقا خالصا لهم في مقابلهم ونشاطهم .
وقد نقل : إن البنوك قد تخسر فكيف تحدد هذه البنوك للمستثمرين
أسوأهم عدوها الأرباح مقدما ؟
والجواب : إذا خسرت البنوك في صفقة ما قبلها تربح في صفقات
أخرى ، وبذلك تغطي الأرباح الخسائر .
ومع ذلك فإنه في حالة حدوث خسارة فإن الأمر مرده إلى القضاء ،
والخلاصة أن تحديد الربح مقدما للذين يستثمرون أموالهم عن طريق
الوكالة الاستثمارية في البنوك أو غيرها حلال ولا شبهة في هذه المعاملة
فهي من قبيل المصالح المرسللة وليست من العقائد أو العبادات التي لا
يجوز التغيير أو التبدل فيها .
وبناء على ما سبق فإن استثمار الأموال لدى البنوك التي تحدد الربح
أو العائد مقدما حلال شرعا ولا بأس به والله أعلم .

شيخ الأزهر

محمد سيد طنطاوي

دكتور / محمد سيد طنطاوي

٦١٤٢

٢٧ من رمضان ١٤٢٢

٢٥ من ربيع الأول ١٤٢٢



Office of the Grand Imam, Rector of *Al-Azhar*

Investing funds with banks that pre-specify profits

Dr. Hasan Abbas Zaki, Chairman of the Board of Directors of the Arab Banking Corporation, sent a letter dated 22/10/2002 to H.E. the Grand Imam Dr. Muhammad Sayyid Tantawi, Rector of Al-Azhar. Its text follows:

"H.E. Dr. Muhammad Sayyid Tantawi,

Rector of *Al-Azha*

Greetings and prayers for Peace, Mercy, and blessings of Allah Customers of the International Arab Banking Corporation forward their funds and savings to the Bank to use and invest them in its permissible dealings, in exchange for profit distributions that are pre-determined, and the distribution times are likewise agreed-upon with the customer. We respectfully ask you for the [Islamic] legal status of this dealing.

[Signature]

This is the text of the *fatwā*

Those who deal with the International Arab Banking Corporation Bank – or any other bank – forward their funds and savings to the bank as an agent who invests the funds on their behalf in its permissible dealings, in exchange for a profit distribution that is pre-determined, and at distribution times that are mutually agreed-upon ...

This dealing, in this form, is permissible, without any doubt of impermissibility. This follows from the fact that no Canonical Text in the Book of Allah or the Prophetic Sunnah forbids this type of transaction within which profits or returns are pre-specified, as long as the transaction is concluded with mutual consent.

Allah, transcendent is He, said: "Oh people of faith, do not devour your properties among yourselves unjustly, the exception being trade conducted by mutual consent..." (Al-Nisā":29) The verse means: Oh people with true faith, it is not permissible for you, and unseemly, that any of you devour the wealth of another in impermissible ways (e.g. theft, usurpation, or usury, and other forbidden means). In contrast, you are

permitted to exchange benefits through dealings conducted by mutual consent, provided that no forbidden transaction is thus made permissible or vice versa. This applies regardless of whether the mutual consent is established verbally, in written form, or in any other form that indicates mutual agreement and acceptance.

There is no doubt that mutual agreement on pre-specified profits is Legally and logically permissible, so that each party will know his rights. It is well known that banks only pre-specify profits or returns based on precise studies of international and domestic

markets, and economic conditions in the society. In addition, returns are customized for each specific transaction type, given its average profitability.

Moreover, it is well known that pre-specified profits vary from time period to another. For instance, investment certificates initially specified a return of 4%, which increased subsequently to more than 15%, now returning to near 10%. The parties that specify those changing rates of returns are required to obey the regulations issued by the relevant government agencies.

This pre-specification of profits is beneficial, especially in this age, when deviations from truth and fair dealing have become rampant. Thus, prespecification of profits provides benefits both to the providers of funds, as well as to the banks that invest those funds.

It is beneficial to the provider of funds since it allows him to know his rights without any uncertainty. Thus, he may arrange the affairs of his life accordingly. It is also beneficial to those who manage those banks, since the pre-specification of profits gives them the incentive for working hard, since they keep all excess profits above what they promised the provider of funds. This excess profit compensation is justified by their hard work.

It may be said that banks may lose, thus wondering how they can pre-specify profits for the investors. In reply, we say that if banks lose on one transaction, they win on many others, thus profits can cover losses.

In addition, if losses are indeed incurred, the dispute will have to be resolved in court. In summary, pre-specification of profits to those who forward their funds to banks and similar institutions through an investment agency is Legally permissible. There is no doubt regarding the Islamic Legality of this transaction, since it belongs to the general area judged according to benefits, i.e. wherein there are no explicit Texts. In addition, this type of transaction does not belong to the areas of creed and ritual acts of worship, wherein changes and other innovations are not permitted.

Based on the preceding, investing funds with banks that pre-specify profits or returns is Islamically Legal, and there is no harm therein, and Allah knows best,

[Signed]

Rector of *Al-Azhar*

Dr. Muhammad Sayyid Tantawi

27 Ramadan 1423 A.H.

2 December 2002 A.D.

Appendix III

بسم الله الرحمن الرحيم

فضيلة الشيخ/

السلام عليكم ورحمة الله وبركاته...

من باب قوله تعالى: (فأسألوا أهل الذكر إن كنتم لا تعلمون) فأني أرجو بيان رأيكم الفقهي مع الاستشهاد بالدليل في المسألة التالية:

لا يخفى على فضيلتكم تطور طرق التعاقد في العصر الراهن وخصوصاً في بيئة الإنترنت. ولعل من أحدث الطرق المستخدمة والتي بدأت تثير الكثير من المشاكل وتثير النزاعات بين الأطراف هي التعاقد عبر برامج حاسوبية تعمل بشكل تلقائي بعيداً عن سيطرة المشغل نفسه. ولتقريب الصورة فإليكم المسألة الافتراضية التالية:

برمج زيد كمبيوتره الشخصي عن طريق استخدام إحدى برامج السوفت وير المتخصصة للقيام في غيابه ببيع وشراء أسهم عبر الإنترنت. نظراً لغياب زيد عن البيوع التي يجريها له كمبيوتره وعدم علمه بها تثار الكثير من المشكلات من ناحية مدى صحة وشرعية مثل هذه العقود. الحقيقة أن هناك جهوداً دولية حديثة للتعامل قانونياً مع هذه البرامج على أنها وكلاء عن المشغلين وليست فقط أدوات أو أجهزة. والهدف من مثل هذا التوجه هو تقادي الإشكاليات التي عادة ما يثيرها متطلبات العقد الأساسية خاصة تلك التي تشترط لصحة العقد أن يتراضي أثناء العقد طرفين ذو أهلية قانونية.

السؤال المطروح الآن هو/ أنه هل من الممكن في الفقه الإسلامي تبني مثل هذا التوجه بمعنى أن يتم التعامل مع هذه البرامج المتقدمة على أنها وكلاء عن المشغلين بحيث ينطبق أحكام عقد النيابة في مثل هذه العقود؟ في تصور فضيلتكم ما لذي يمنع مثل التوجه؟ هل في بنية أحكام النيابة في الفقه الإسلامي نفسها ما يمنع منح غير الإنسان صفة الوكيل؟ وفي نظر فضيلتكم ما نوع هذه الأحكام؟ هل الإشكالية فقط في كون البرامج لا تتمتع بصفة طبيعية وبالتالي غير قادرة على قبول عقد الوكالة أم أن هناك ملابسات أخرى؟ هل الأحكام في ذاتها لها قابلية المرونة لمثل هذه البرامج لكن ما يمنع هو كون هذه البرامج لا تستحق مثل هذه الصفة الشرعية؟ هل ترون أن الإجابة بعدم إمكانية تبني مثل هذا التوجه قد يضع أحكام الفقه الإسلامي في زاوية الاتهام كما هو المعتاد؟ هل الإشكالية هنا نظرية أم إشكالية تطبيقية؟

مع خالص شكري وتقديري لما يسطره يدكم هنا الذي أسأل الله أن يسجل لكم في ميزان خدمة هذا الفقه العظيم.

الباحث

وليد محمد الماجد

In the name of Allah, Most Gracious, Most Merciful

Sheik/

Peace be upon you and the mercy of God...

As Allah says in the Holy Book: "Ask those who have attained the correct religious knowledge when seeking an Islamic judgement about a certain matter", I hope, therefore, that you will give me guidance on an issue into which I am conducting research.

It is no secret that there has been an evolution in the methods of forming contracts in the current era, especially in the context of the Internet. One of the newest methods used, which has started to raise a lot of challenges, is forming contracts via computer programs which work autonomously and without the control of the operator himself. To make this issue clearer, I provide the following example:

Zaid programmed his computer software to buy and sell shares on the Internet on his behalf. Since Zaid will be absent and will have no knowledge of transactions made by the computer, the principle of mutual consent, which requires two contracting parties to consent to each other, may not be satisfied. This will consequently raise concerns about the validity and the enforceability of these transactions. To avoid this consequence, it has been suggested that these computer programs could be treated as agents so that transactions made by these computer programs can be enforced based on agency principles.

The questions now are: is it possible in Islamic law to adopt this approach, i.e., to treat computer programs as agents so that transactions made by these computer programs can be enforced based on agency principles? In your opinion, what can prevent such an approach? Are there principles under Islamic agency law which would prevent non-human beings, such as these computers, being treated as agents? Can you explain what these challenges are? Does the problem exist only in the fact that these computer programs do not have a legal personality and are therefore unable to be treated as agents, or are there other challenges?

With my sincere thanks and appreciation

Researcher
Walid Mohammed Almajid

Appendix IV



Electronic Agents and Legal Personality: Time to Treat Them as Human Beings

Walid Mohammed Almajid*

Note: this paper, which is a part of chapter 3 of the dissertation, has been published on proceedings of the 2007 Annual BILETA Conference, Hertfordshire, 16-17 April, (online) Available at:

<http://www.bileta.ac.uk/Document%20Library/1/Electronic%20Agents%20and%20Legal%201%20>(last accessed March/31/2010). It has been cited by the following articles: Katz, A. (2009) Intelligent agents and Internet Commerce in Ancient Rome, *Computers & Law*, 20 (1), pp. 35–38; Hildebrandt, M; Olivier, D; Koops, B; Chiffelle, J. (2010) Bridging the Accountability Gap: Rights for New Entities in the Information Society? *Minnesota Journal of Law, Science & Technology*, 11(2), pp. 55-68; and Kokswijk, V. (2008) Granting Personality to a Virtual Identity, *International Journal of Human and Social Sciences*, 2(4), pp.208-215.

1. Introduction

Most legislations whether internationally or nationally deal with intelligent agents in a way which does not reflect the certainty of their features. In the past, no one other than human beings could do the functions that intelligent agents do at present. Intelligent agents ramble quickly into various places, search for information, and achieve several stages of a transaction from product and merchant brokering through to negotiation, sale, distribution and payment. Nonetheless, legislations chose to classify them as communication tools. The reason to choose this is perhaps there doesn't appear to be any difficulty in implementing it or¹the legislations could lack the legal tools that may well recognize the acts of intelligent agents. However, by doing so, intelligent agents become legally irrelevant to contracts formed through them, all generated legal effects are totally attributed to users regardless of whether intended, predicted, or mistaken.²It seems a crucial issue, in order to adopt different approaches of the contractual capacities of intelligent agents, to prove that these legal effects are indeed generated by the intelligent agents' own intention. The problem here, as will be shown, is that the cognitive intention or the (autonomy) of intelligent agents is still debatable and has not been evidenced yet.³

However, as the autonomy of intelligent agents increases, the idea that treats intelligent agents as no more than passive adjuncts would quickly be limited. By then, holding the users unwittingly liable would become unjust and would discourage using agent technology in conducting commerce on-line. Accordingly, this paper suggests granting

intelligent agents legal personality analogous to other legal entities. This would bring good economy and commercial interests not less than encouraging businesses to rely on this new technology in conducting business without concerns that they will be overwhelmed by liabilities get done all their properties. It will examine the possibility of the idea with no intention to provide the final answer. The idea of attributing legal personality to intelligent agents deserves indeed, further study and research.

First, the paper demonstrates the issue of intelligent agent's autonomy. Secondly, it explains legal issues associated when using intelligent agents in contracts formation. This will be included that the idea of a mere communication tool does not solve those issues in question. The paper then discusses the idea of legal personality. It will be shown here whether this can be achieved by its traditional requirements, or other requirements, such as insurance, are necessary for the success of this approach.

2- Autonomy: Source of Concern

The term "intelligence" used to describe intelligent agents was employed, as Jennings & Wooldridge state, in order to refer to their capability of flexible autonomous actions.⁴Although autonomy is always used to describe the function of intelligent agents, its extent is still very ambiguous. If autonomous programs are not such a new phenomenon for example, we have EDI and cash machines, what makes intelligent agents so special? Many authors have attempted to answer this question. Intelligent agents are mostly described as they function; with no direct intervention or control from any human beings, based on their own experiences with no full forecasting of their behaviour.

A hypothesis is necessary here. Suppose Tom programmed his software agent to book the lowest flight price, with a top price of 300 Pounds, from London to New York. The program, after gathering information from the internet, decided to buy from a travel agent known as (Bot Agency) which offered to sell the flight for only 150 Pounds. The

disaster happened when Tom discovered that Bot Agency was nothing more than a fake agency. Moreover, it was common knowledge among people that this sham agency was convicted for several fraud cases. For the first step, one may say that the purchasing process from the agency was entirely up to the intelligent agent and Tom could do nothing about it. A better and accurate explanation may say that Tom had already predetermined the destination and date. The price of the flight was obviously not known to him for certain, but it is clear that the price was within predefined limits, and not unenforceable. Accordingly, the contract was not actually formed through the will of the intelligent agent or, as is sometimes delegated, through its own experience. The will of the human being to conclude the contract exists and is predetermined.⁵The only thing the intelligent agent has to do is specify the contracting party. This illustrates the limited autonomy of intelligent agents which indicates that there is direct intervention and control from human beings. Nonetheless, the limited autonomy allowed a contract with an agency which was totally unfavourable to the user which in turn proves that users do not always forecast their intelligent agents' behaviour. Moreover, intelligent agents cannot make decisions based on their self-created instructions.⁶This is not to deny the fact that once those intelligent agents set to work, no further intervention of users is necessary, but the entire function of intelligent agents, generally speaking, totally depends on the instructions that are set by users.

The example given above is merely a hypothesis and other hypotheses can, of course, lead to different results. This is the cost when issues under examination remain at the research stage because there are no cases which could discipline the analysis in question. However, although there are various opinions regarding the degree of intelligent agents' autonomy, there is a general consensus that their involvement in generating contracts with little or no human discretion has produced legal problems. The following section will illustrate these problems.

3- Contract Legal Problems

The limited degree of intelligent agent's autonomy, as illustrated above, has not encouraged the law to decide whether intelligent agents deserve to be attributed a separate (intentional state) from its user. Thus, this limited autonomy remains unrecognised with intelligent agents still lacking contracting capacity i.e. they are not yet considered to be legal persons in the eyes of the law. The law apparently prefers to wait, either studies or researches decide on the issue or future technology development offers new software with clear independence.

This attitude toward intelligent agents assumes that transactions can never be concluded between intelligent agents and human beings. Accordingly, this led to another legal problem which is the ambiguity in specifying contracting parties. In order to clarify the contracting parties, there must be two parties involved in contract-making. Since intelligent agents are not considered by current law to be legal persons, the buyer and seller are the only parties who can be relevant to the contract. In the example given above, where Tom's software bought a ticket from the agency, the contract is then formed between Tom and the travel agency. If we adopt this fiction, it would threaten another legal requirement. This is where Tom is not aware of the fact that his software has actually made a transaction with the agency. Here, one party has no actual knowledge of who he is dealing with. Accordingly one cannot argue that there was mutual consent between contracting parties. Therefore, on what ground is Tom bound by the transaction made with the travel agency?

Furthermore, because intelligent agents are no more than a communication tool, this has also created another dilemma which seems to be the most difficult issue associated with using intelligent agents in contracts formation so far. In the present era, it is well known that although intelligent agents are called “intelligent”⁷ they are not always perfect in their performance. People must have heard passive cases of errors and damages occurring on the internet by intelligent agents.⁸ Users, as Leon Wein has mentioned, quite often programmed or designed their intelligent agents to perform in a manner which would be non-negligent, however the intelligent agents’ decision to behave in a certain way could be considered negligent.⁹ In cases where intelligent agents are not yet legal persons, it is absurd to attribute the responsibility of these damages to someone other than the users.

In fact, this new phenomenon, the involvement of intelligent agents in generating contracts, created two main dilemmas or questions. First, the law faces a question of validity of contracts concluded by such programs i.e., whether or not users can be bound to contracts where their knowledge of the existence of the communications and contracts is lacking. Secondly, law also faces a question of liability of who is going to bear those errors and losses which occur as a result of intelligent agents.

4-Legal Personality to Intelligent Agents

Law, in order to grant intelligent agents legal personality, must first recognise an intentional state to them. Those acts that are done through intelligent agents must be legally taken as potentially done by them. This will allow intelligent agents to be a part of contracting and acquiring rights and duties not merely on behalf of others but as for their own selves as well. If they are given an intentional state, contracts formed through them would be deemed formed between buyers (customers) and intelligent agents. Sellers whose intelligent agents work on their behalf will later be attributed the contracts’ legal effects.

On one hand, there would not be a question of validity here since the contracts were actually formed between two legal persons, hence the acts which occurred as a result would be attributed to those who intended to form them. On the other hand however, the question of liability still seems unsettled. Since intelligent agents became a part of the contracting, they would be responsible for any losses or damages during their performance. In the example given above, the intelligent agent would be held liable for the damages caused to Tom when it negligently bought from an agency with a bad reputation. A non-natural legal person surely must be object of asset in order to ensure that it could fulfill its financial obligations and liabilities. Corporate bodies, as legal persons, are legally allowed to be sued because if they are held liable, their assets would be affected directly and sometimes liquidated. Now, because intelligent agents lack assets, holding them liable for damages indeed appears to be an absurd approach as well as meaningless. Therefore, as long as intelligent agents have no assets, the idea to grant them legal personality would not solve the issue of liability and therefore is not of benefit.

In order to solve this matter, Sartor Giovanni had suggested a banking deposit to function as an asset for intelligent agents.¹⁰ This fund would represent a warranty for counterparties, which would need to be secured when finalising a contract with intelligent agents. A minimum amount of “capital” should be established by users, similar to what happens to commercial corporations. Intelligent agents then have to ensure that they will not act beyond the fund deposited in the bank. This is practically

impossible because intelligent agents are given legal personality on the basis that they are cognitive tools with no human beings' control upon them. Therefore, nobody, including users, can guarantee that intelligent agents will act within the limited amount. Accordingly, it is expected that acting beyond the fund deposited would probably happen, but then, the question is, who would be held liable for those excesses? The fund deposited in the bank does not seem as though it could compensate all those who would suffer from the intelligent agent's errors. Particularly, damages that may occur by intelligent agents take several forms such as breaching someone's privacy or making damages to other computers by sending viruses. Furthermore, while the bank deposit's idea may warrant counterparties, users are left without warranty.

Therefore, the bank deposits idea does not seem a good solution to the problem in question. The following section discusses an alternative option, which is purchasing insurance in order to create assets for intelligent agents.

5- Insurance Policy

The idea of insuring intelligent agents, which is suggested by Lawrence Solum, is not sufficiently clear.¹¹ There are many questions associated with this idea that are left without answers. As consequences, the idea of insurance has been strongly criticized by Curtis Karnow on the basis that it ignores an important principle of insurance contracts known as *causation analysis*.¹² This principle, as will be seen below, is complex to implement when insuring intelligent agents. Beside that, there are other issues, although they are not doctrine, one cannot overlook their essentiality. For example, Jean-Francois Lerouge questioned this idea with several points e.g., at what extent are insurance companies ready to insure those risks associated with intelligent agents?¹³ Due to the absence of any human being's control, insurance companies could expect huge losses and damages.

Furthermore, Anthony Bellia found purchasing insurance for intelligent agents to be of no benefit.¹⁴ He argues that if the approach that treats intelligent agents as mere tools is criticized on the basis that it lays huge liabilities on the shoulders of users, what new ideas can insurance make in this regard? If the insurance fee is paid by users, not intelligent agents, in addition to the increase of instalments when compensating damages, why then deemed intelligent agents (persons) if the users ultimately bear all the risk of loss?¹⁵ In fact, this argument can easily be invoked. When insurance premiums increase, wherever the cost reaches, it remains limited compared to the liability when intelligent agents are deemed to be merely transmitting the will of users. However, the rest of the paper will focus on *causation analysis* that has been illustrated by Curtis Karnow.

Most insurance companies are based on traditional tort causation analysis (proximate cause analysis).¹⁶ In simple words, insurance companies must know, before compensating for damage, the proximate cause from all the causes which will be held ultimately responsible for the damage.¹⁷ In order to illustrate this, let us suppose that an intelligent agent sent an innocent message to a computer system. Suppose also that this message initiated a process leading the addressed system to crash due to a fault of that system. Assume that this message was a necessary condition for the crash to happen (without the message the crash would not have occurred).¹⁸ Before the insurance company would compensate, it is necessary to identify the real cause of the crash. Therefore, the company would have to decide, out of many possible factors which had caused the injury. For example, did the message really cause the crash? Or was some defective procedure of the

addressee system the real cause, with the message only providing the occasion for the internal fault to operate?¹⁹ Furthermore, there are may be other intelligent agents involved in causing the crash. The insurance company would find it extremely hard to specify the proximate cause of the damage and cannot guarantee that the insured intelligent agent involved was potentially a cause of the crash. This is particularly the case in a complex environment where it is practically hard to identify the source of an agent or its code which caused the damage.

As a result of proximate cause being difficult to determine, insurance companies may find it the fundamental reason why they should not insure intelligent agents. Curtis Karnow accordingly, suggested an insurance company named (Turing Registry), which does not depend on the proximate cause relationship between the injury and the intelligent agent. He proposed therefore that, the only thing that would make the Turing Registry compensate is the mere presence of the intelligent agent in the disaster which occurred, with there being no need to investigate what, who, when or why.²⁰

However, the Turing Registry has been strongly criticized²¹ and even Curtis Karnow does not find his proposal the best solution. In fact, not taking into account the causation relationship may hold innocents liable and those who are irrelevant to the injury. Although this seems unfair, in a complex environment where intelligent agents work, online companies may accept it as an ideal proposal.

6- Conclusion

In conclusion, the idea of attributing legal personality to intelligent agents is optimistic and therefore needs more analysis. It is not necessary to reflect on the right solution to the intelligent agents' problems but at least it shows that the law is able to comprehend agent technology via different approaches.

If the issue of asset could be solved, intelligent agents could be granted legal personality. The issue of whether their limited autonomy deserves personality is potentially a matter of time as the autonomy, mobility, and intelligence of intelligent agents increase. Nonetheless, this does not mean we have to sit back and wait. Finally, as result of having to use intelligent agents in digital economy, we must pay the price.

*Saudi PhD candidate, school of law, Lancaster University. Bachelor degree, college of Administrative Sciences, School of Law, King Saud University, Saudi Arabia. LL.M. degree, school of law, Aberdeen University. He has been invited to be a visiting scholar at University of Washington, school of law, Seattle, United States. Member of Society of Computers & Law (SCL).

¹Cross, S.R. *Agency, Contract and Intelligent Software Agents*, (International Review of Law Computer & Technology, Vol. 17 No. 2, 175-189: July 2003), p 180. He stated: "Treating intelligent agents as mere communication tool is not controversial or difficult to apply since it currently appears so common-sense".

²Most legal analyses for the use of intelligent agents focus on the human users or legal entities on behalf of which these agents are operated, and adopt the legal fiction that anything issuing from these agents is considered to be really issued by the natural or legal persons that use them.

³Searle, John R. *Minds, brains, and programs, in Behavioural and Brain Sciences*, vol. 3, Cambridge University Press. 1980, pp 417-424. He stated: "one can interpret a cognitive state of software agents as nothing more than an imaginary dream that only exists in the mind of the observer". See also, Giusella

Finocchiaro, *The conclusion of the electronic contract through “software agents”: A false legal problem? Brief considerations*, in Proceedings of LEA 2002. Workshop on the Law of Electronic Agents, CIRSFID, Bologna, 2002, pp 20-21.

⁴Jennings, N & Wooldridge, M. *Intelligent Agents: Theory and Practice*, Knowledge Engineering Review Vol. 10 No. 2, June 1995, (Cambridge University Press: 1995) pp. 56-70.

⁵Supra 3 Giusella Finocchiaro, p 22.

⁶See the definition of intelligent agent of Russell & Norvig. It is defined as: “an agent’s behaviour can be based on both its own experience and the built-in knowledge used in constructing the agent for the particular environment in which it operates. A system is autonomous to the extent that its behaviour is determined by its own experiences.” See Stuart, Russell & Peter Norvig. *Artificial Intelligence: A modern approach*, (New Jersey: 1995) p 35.

⁷Ian has found that although intelligent agents are often described as “intelligent”, means that they have some ability to carry out sophisticated and autonomous tasks, would seem to lack legal capacity. See Ian R. Kerr, *The Legality of Software-Mediated Transactions*, Proceedings of IASTED International Conference: Law and Technology, (IASTED /ACTA Press:2000) p 91.

⁸On 21 September, 1999, Argos advertised the sale of televisions on its website for only £2.99. Customers started to place orders over the internet to take advantage of the great offer. Thereafter, Argos refused to deliver the televisions to the customers on the grounds that they had been incorrectly priced by mistake. He claimed that the correct price is £299 not £2.99 and that was due to a computer error.

⁹Leon E. Wein, *the Responsibility of Intelligent Artificial: Toward an Automation Jurisprudence*, 6 HARV. J.L &TECH. 103 (1992) note 43, p 103.

¹⁰Sartor, Giovanni. *Agents in Cyber law*, In Proceedings of the Workshop on the Law of Electronic Agents, CIRSFID (LEA02) Gevenini, 2002.

¹¹Lawrence B. Solum, *Legal Personhood for Artificial Intelligences*, 70 North Carolina Law Review, 1231 (1992).

¹²Curtis, E. A. Karnow. *Liability For Distributed Artificial Intelligences*, p.22, available at <http://www.law.berkeley.edu/journals/btlj/articles/vol11/Karnow/html/text.html>.

¹³Jean-Francois Lerouge. *The Use of Electronic Agents Questioned Under Contractual Law: Suggested Solutions on a European and American level*, The John Marshall Journal of Computer and Information Law, 18 (2):430–00, 2000, p411

¹⁴Anthony, Bellia. *Contracting with Electronic Agents*, Emory Law Journal, vol. 50, 200, p 1067

¹⁵Ibid

¹⁶Supra 12 p.22

¹⁷ Ibid

¹⁸Sartor, Giovanni. *Intentional concepts and the legal discipline of software agents*, in: Open Agent Societies: Normative Specifications in Multi-Agent Systems, editor J.Pitt, Wiley, London 2002, p.18

¹⁹ Ibid

²⁰Supra 12 p.22

²¹For example, Allen and Widdison pointed out that the costs of Turing Registry would mean that the conferral of personality would prove too expensive to justify itself. See Tom Allen & Robin Widdison, *Can computers make contracts?* 9 Harvard Journal of Law and Technology, 25 (1996) p 42