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Title of Thesis:

Privacy Regulation of Cellular Network Data: A Comparative Study with
Recommendations for the Kingdom of Saudi Arabia

Subtitle

What lessons can the Kingdom of Saudi Arabia learn from the experience of other
countries in implementing privacy legislation for cellular network data?

A thesis
submitted in fulfilment
of the requirements for the degree
of
Doctor of Philosophy in Law
at
The University of Waikato
by
Ahmed Aldubayyan



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Year of submission

2023

Abstract

One of the primary economic objectives of multinational technology corporations is to amass a significant amount of personal data, potentially leading to significant infringements of individuals' privacy rights. The advent of the technology revolution has resulted in a swift evolution of privacy laws in numerous jurisdictions. This can be attributed to the enhanced capacity of governmental and commercial entities to monitor and accumulate extensive data, as well as the economic objectives of global technology corporations to amass copious amounts of personal information. The Kingdom of Saudi Arabia has yet to implement legal provisions that ensure the privacy rights of its citizens and has also not introduced any legislation that safeguards the confidentiality rights of its citizens. The Kingdom of Saudi Arabia is currently contemplating the possibility of implementing a privacy legislation that considers not only its own distinct national culture, but also the role of privacy within the cultures of the surrounding region, as well as on a global scale. Annually, a vast number of international tourists travel to the Kingdom of Saudi Arabia, which has established a comprehensive plan and outlook aimed at luring multinational corporations across diverse sectors. Due to the aforementioned circumstances, it is imperative for the Kingdom of Saudi Arabia to establish a robust legislative framework that can effectively protect personal data. It is noteworthy that the Kingdom of Saudi Arabia operates under the governance of Sharia Law and Islamic Jurisprudence, which serve to safeguard the entitlement to confidentiality and privacy of personal data. The preservation of privacy and confidentiality of personal information is a significant concern for the inhabitants of the Kingdom of Saudi Arabia, and they handle these issues with great sensitivity. In contemporary times, characterised by technological advancements and rapid global and economic development, it is imperative to institute legislation that protects the data and information infrastructure of the Kingdom of Saudi Arabia, in addition to the personal privacy of its populace. The thesis delves into the significance of privacy and examines the measures taken by various jurisdictions to safeguard the personal information of their residents. Additionally, it explores the potential lessons that the Kingdom of Saudi Arabia can draw from these examples.

Thesis Acknowledgment

I would like to extend my sincere appreciation to all individuals who have made valuable contributions to my doctoral odyssey, including my family and friends. Special mentions are deserved for Professor Margaret Wilson, Dr. Gay Morgan, and Dr Anna Marie Brennan. I would also like to express my sincere gratitude for the valuable contributions made by Dr. Amr Ragab, Mr. Abdullah Alsif, Professor Khaled Alghathbar, and Mr. Khaled Tashlan. Finally, I must acknowledge the contributions of the Bureau of Experts to the Council of Ministers in the Kingdom of Saudi Arabia.

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Thesis Introduction and Research Methodology

The issue of privacy is currently one of the most pressing concerns in contemporary society¹. Individuals have transformed into sources of information that can be gathered and employed by various entities, such as governmental bodies, the general populace, and private enterprises². The aforementioned outcome can be attributed to the progress made in technology and the unparalleled encroachment on the inherent worth of individuals. Several decades ago, the perception of the self was distinct from the present-day reality³. One of the issues under consideration is the ethical implications of invading an individual's privacy, whether such invasion is deemed legitimate or illegitimate⁴. It could be argued that compromising an individual's right to privacy may be justifiable in order to ensure the safety and security of the broader community⁵. Illustrative instances comprise the strategic placement of pivotal locations, the efficient administration of scarce resources, and the governance of cellular data networks with the aim of mitigating their susceptibility to devastation. Nevertheless, the narrative continues, as confidential data is subsequently exchanged and employed to modify the information⁶. The impact of spatial and temporal social and cultural differences on privacy rights is significant.

The extent to which individuals define the limitations of the right to privacy and the value they place on their own existence significantly influence the exercise of this fundamental right⁷. Diverse viewpoints are observed across various regions of the world⁸. Temporal variations in

¹ Solove, Daniel J. "Understanding Privacy" (2008) Harvard University Press GWU Legal Studies Research Paper No. 420, GWU Law School Public Law Research Paper No. 420, P Abstract.

² Christians, Clifford G. "The Ethics Of Privacy" (2010) Journalism Ethics: A Philosophical Approach 210.

³ Holtrop, Niels, Jaap E. Wieringa, Maarten J. Gijzenberg, And Peter C. Verhoef. "No Future Without The Past? Predicting Churn In The Face Of Customer Privacy" (2017) International Journal Of Research In Marketing 34, No. 1: 154-172.

⁴ Ruebhausen, Oscar M., And Orville G. Brim Jr. "Privacy And Behavioural Research" (1965) Colum. L. Rev. 65: 1184.

⁵ Bygrave, Lee A. "Data Protection Pursuant To The Right To Privacy In Human Rights Treaties" (1998) International Journal Of Law And Information Technology 6, No. 3: 247-284.

⁶ Mason, Richard O. "Four Ethical Issues Of The Information Age" (1986) MIS Quarterly: 5-12.

⁷ Rubinfeld, Jed. "The Right Of Privacy" (1989) Harvard Law Review 737-807.

⁸ Cherednychenko, Olha O. "Fundamental Rights And Private Law: A Relationship Of Subordination Or Complementarity?" (2007) Utrecht L. Rev. 3: 1.

daily habits and societal trends have resulted in fluctuations over time⁹. These fluctuations have intensified in recent decades. The widespread integration of information technology has exerted a significant influence, particularly on contemporary individuals' perceptions of privacy¹⁰. These events take place and subsequently, in a brief span of time, the individual's customary existence undergoes significant alteration. Furthermore, the network presently facilitates instantaneous connections with users located in different cities and nations¹¹. The person exhibits proficiency in interpersonal communication with diverse individuals. With the aid of technology, it is feasible to concurrently monitor one's health, home, or vehicle in real-time while engaging in work-related activities¹². The increasing significance of technology in individuals' lives may potentially impact their privacy. As individuals become increasingly reliant on technology, technology companies are afforded greater opportunities to collect data, thereby increasing the potential privacy risks faced by individuals¹³.

Amidst the current global economic and social landscape, digital technology has emerged as the predominant force. Unless a country is part of the knowledge revolution during the present era, it risks missing out on a significant opportunity for progress¹⁴. The enhancement of information technology infrastructure is expected to augment the efficacy of facilities, accelerate the progression and provision of novel equipment and services. The implementation of this initiative has the potential to stimulate the creation of novel job opportunities and environmentally sustainable markets, enhance both domestic and international commerce, and streamline the dissemination of information¹⁵. The implementation of an information system has the potential to enhance healthcare through the facilitation of telemedicine¹⁶. The legal

⁹ Bilchitz, David "Corporations And The Limits Of State-Based Models For Protecting Fundamental Rights In International Law" (2016) *Indiana Journal Of Global Legal Studies* 23, No. 1: 143-170.

¹⁰ Cheung, Christy, Zach WY Lee, And Tommy KH Chan "Self-Disclosure In Social Networking Sites: The Role Of Perceived Cost, Perceived Benefits And Social Influence" (2015) *Internet Research* 25, No. 2: 279-299.

¹¹ Hiltz, Starr Roxanne, And Murray Turoff "The Network Nation: Human Communication Via Computer" (1993) Mit Press.

¹² Awolusi, Ibukun, Eric Marks, And Matthew Hallowell "Wearable Technology For Personalized Construction Safety Monitoring And Trending: Review Of Applicable Devices" (2018) *Automation In Construction* 85: 96-106.

¹³ Acquisti, Alessandro, Curtis Taylor, And Liad Wagman "The Economics Of Privacy" (2016) *Journal Of Economic Literature* 54, No. 2: 442-492.

¹⁴ Poster, Mark. "Cyber Democracy: The Internet And The Public Sphere" (2013) *Routledge In Information Subject*, Pp. 95-115.

¹⁵ Scholl, Hans Jochen "E-Government: A Special Case Of ICT-Enabled Business Process Change (In 36th Annual Hawaii International Conference On System Sciences, 2003)

¹⁶ Rahi, Samar, Mubsher Munawar Khan, And Mahmoud Alghizzawi. "Factors Influencing The Adoption Of Telemedicine Health Services During COVID-19 Pandemic Crisis: An Integrative Research Model" (2021) *Enterprise Information Systems* 15, No. 6: 769-793.

framework required to preserve user data in order to achieve technical advancement is among the established fixed assets for technology and information technology management. With the expansion of social networks, there is a significant increase in the transmission of personal data throughout the network¹⁷. International privacy regulations have been established in over 89¹⁸ countries across various regions such as Asia, Africa, Europe, Latin America, and the Caribbean. The majority of these nations have established a governmental entity to guarantee the implementation of law enforcement measures aimed at protecting privacy regulations¹⁹.

Privacy rights have been extensively documented on a global scale, as they have been affirmed in various international human rights treaties, including the Universal Declaration of Human Rights, and Conventions in Articles 12 and 17²⁰. A code of practise has been established by the International Labour Organisation to provide guidance on safeguarding the personal information of employees²¹. In accordance with the guidelines set forth by the Organization for Economic Cooperation and Development (OECD), more than 60 nations have implemented regulations pertaining to data flow or privacy, which serve to govern the transfer of data across international borders²². Several nations that have implemented the OECD guidelines also adhere to one or more data privacy regulations at the international or local level. The Global Privacy Assembly facilitates the collaboration of privacy commissioners on a global scale by fostering connections among various privacy entities²³. In addition, the Assembly offers its members the option to consider non-binding resolutions and release statements pertaining to safeguarding privacy. The International Conference of Data Protection and Privacy Commissioners plays a pivotal role in setting standards, providing recommendations and

¹⁷ Gross, Ralph, And Alessandro Acquisti. "Information Revelation And Privacy In Online Social Networks." (ACM Workshop On Privacy In The Electronic Society, 2005 Pp. 71-80.)

¹⁸ Greenleaf, Graham "Global Data Privacy Laws: 89 Countries And Accelerating Privacy Laws & Business International Report 115" (2012) Queen Mary University Of London School Of Law.

¹⁹ Greenleaf, Graham. "Global Data Privacy Laws 2019: 132 National Laws & Many Bills" (2019).

²⁰ Faunce, Thomas A "Will International Human Rights Subsume Medical Ethics? Intersections In The UNESCO Universal Bioethics Declaration" (2005) 31 Journal Of Medical Ethics 173. Also See Cerna, Christina M "Universality Of Human Rights And Cultural Diversity: Implementation Of Human Rights In Different Socio-Cultural Contexts" (1994) 16 Hum. Rts. Q. 740.

²¹ Bach, Stephen. "International Migration Of Health Workers: Labour And Social Issues" (2003) Geneva: International Labour Office.

²² Kuner, Christopher. Regulation Of Transborder Data Flows Under Data Protection And Privacy Law: Past, Present, And Future (2010) TILT Law & Technology Working Paper 016.

²³ Robinson, Lisa, Kosuke Kizawa, And Elettra Ronchi. "Interoperability Of Privacy And Data Protection Frameworks" (2021).

guidance for data authorities and analysts²⁴. Additionally, it serves as an exceptional international platform for exchanging information, fostering collaboration and promoting concerted regulatory action aimed at a diverse range of internet companies²⁵.

Despite this, safeguarding the confidentiality of data in cellular networks and other components is an imperative aspect that contributes to enhancing the quality of life in contemporary society. This is especially relevant given the remarkable technological advancements that have sparked a heightened concern for privacy²⁶. The proliferation of information gathering, dissemination, and utilization, electronic information provision, digitised data, and the worldwide expansion of markets and organisations collectively pose a significant challenge to individual self-determination²⁷. The term "private life" lacks a precise definition in the context of legal implications, potentially due to its ambiguous nature²⁸. The various connotations attributed to it are derived from either particular facets or the overarching notion. In each instance, it can be inferred that the reference pertains to the entitlement of the person to safeguard and uphold specific facets of their personal sphere.

The tripartite components of privacy protection rights encompass notice, permission, and obligation. The efficacy of these components may be compromised if they are enforced in isolation. The involvement of non-governmental entities, as well as the autonomy of individuals, is a crucial component²⁹. It is imperative that legislation mandates a collector of personal information to disclose the rationale behind the collection, the scope of its usage for other objectives, the possibility of sharing, and the duration of retention. The collector is obligated to inform the individual whose personal information is to be collected about the nature and extent of the information that will be obtained, the intended purposes and uses of such information, the methods of storage employed, and the disclosure requirements, if any,

²⁴ 加藤尚徳, 板倉陽一郎, And 村上陽亮. "International Conference Of Data Protection & Privacy Commissioners 2017 参加報告." 研究報告電子化知的財産・社会基盤 (EIP) 2018, No. 8 (2018): 1-5.

²⁵ Ibid.

²⁶ Junglas, Iris A., Norman A. Johnson, And Christiane Spitzmüller. "Personality Traits And Concern For Privacy: An Empirical Study In The Context Of Location-Based Services" (2008) *European Journal Of Information Systems* 17: 387-402.

²⁷ Cavoukian, Ann "Privacy In The Clouds" (2008) *Identity In The Information Society* 1, No. 1: 89-108.

²⁸ Lederer, Scott, Jason I. Hong, Anind K. Dey, And James A. Landay. "Personal Privacy Through Understanding And Action: Five Pitfalls For Designers" (2004) *Personal And Ubiquitous Computing* 8: 440-454.

²⁹ Westin, Alan F "Science, Privacy, And Freedom: Issues And Proposals For The 1970's" (1966) Part I--The Current Impact Of Surveillance On Privacy" *Columbia Law Review* 66, No. 6: 1003-1050.

imposed upon the individual³⁰. The act of providing notice guarantees the availability of precise information, regardless of whether the information is intended for dissemination or not³¹. In the event that users are unable to provide precise justifications for data collection, the manner in which the data will be employed, data storage methodologies, the duration for which the data will be preserved, and any additional data that may be necessary for future collection, these users must assume responsibility³². The responsibility persists, particularly in cases where data proprietors refuse to authorise the utilisation of their data by the user.

The Kingdom of Saudi Arabia has depended on the Holy Quran, the Sunnah of the Prophet, and Islamic law as the principal sources of legislation. This results from the insufficient academic research on privacy and the restricted accessibility of court opinions on privacy to academic scholars³³.

Article (37) of the Kingdom of Saudi Arabia's governing law (Basic Law of Governance) pertains to the sacredness of the house in accordance with its state of affairs³⁴. Residences are considered to be sacrosanct and cannot be violated³⁵. Unauthorized access is strictly prohibited without the express consent of the rightful owners. Searches are only permissible in situations that are explicitly designated by the Law³⁶. The topic of discussion is the concept of privacy within the Kingdom of Saudi Arabia. Article (40) of the aforementioned Statute also upholds the sanctity of communications³⁷. The safeguarding of communication privacy, encompassing various modes of communication such as telephone and postal services, must be duly regarded and not be susceptible to seizure, disruption, exhibition, or monitoring, unless explicitly authorised by legal provisions³⁸. This clause encompasses various forms of communication,

³⁰ Cavoukian, Ann. "Privacy By Design: The 7 Foundational Principles" (2009) Information And Privacy Commissioner Of Ontario, Canada 5: 12.

³¹ Richards, Neil, And Woodrow Hartzog. "A Duty Of Loyalty For Privacy Law" (2009) Wash. UL Rev. 99: 961.

³² Cavoukian, Ann. "Privacy By Design: The 7 Foundational Principles" (2009) Information And Privacy Commissioner Of Ontario, Canada 5: 12.

³³ Almebrad, Abdulaziz. "The Sufficiency of Information Privacy Protection in Saudi Arabia." (2018). And AlSagri, Hatoon S., and Saad S. AlAboodi. "Privacy awareness of online social networking in Saudi Arabia." In 2015 International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA), pp. 1-6. IEEE, 2015.

³⁴ Basic Law Of Governance 1992, (SA)

³⁵ Al-Fahad, Abdulaziz H "Ornamental Constitutionalism: The Saudi Basic Law Of Governance" (2005) Yale J. Int'l L. 30 : 375.

³⁶ Vogel, Frank E. "Islamic Law And The Legal System Of Saudi: Studies Of Saudi Arabia" (2000) Vol. 8. Brill.

³⁷ Basic Law Of Governance 1992, (SA)

³⁸ Al-Fahad, Abdulaziz H. "Ornamental Constitutionalism: The Saudi Basic Law Of Governance." (2005) Yale J. Int'l L. 30 : 375.

such as telegraph and postal correspondence, telephone-based information, and other similar means of transmitting messages³⁹.

Based on the preceding information, it is evident that Saudi Arabia lacks a comprehensive legal framework that effectively safeguards privacy. The nation lacks a comprehensive privacy framework or essential legislation pertaining to economic affairs, wireless communication networks, or safeguarding personal data for both private and public domains⁴⁰. The absence of robust privacy regulations is notable, despite the existence of distinct rules and regulations governing privacy protection and compliance requirements for diverse government agencies. The legal provisions pertaining to privacy rights exhibit notable variations in comparison to those employed in nations adhering to the European Union framework⁴¹. The aforementioned provisions indicate that extant privacy regulations primarily centre on individual privacy, specifically in relation to digital communications and commercial transactions conducted by private entities⁴². The extant fundamental legislation on governance underscores the significance and indispensability of implementing regulations that oversee the safeguarding of individual data in the Saudi Arabian realm, and that these regulations ought to be overseen by a novel autonomous governmental or ministerial entity. The present thesis aims to examine the inherent tensions that emerge between technology and privacy, while also elucidating the infrastructure and privacy concerns associated with cellular data networks. Furthermore, the thesis will discuss the international treaties (multilateral or bilateral) and customary international laws on privacy. It will also offer recommendations and propose measures for personal data protection for the kingdom of Saudi Arabia. Ultimately, the thesis will culminate with a set of recommendations intended for lawmakers within the jurisdiction of the Kingdom of Saudi Arabia.

³⁹ Law, Saudi Arabia Basic "The Basic Law Of Governance" (1992) Royal Order No. A/91 27.

⁴⁰ Shackelford, Scott J. "Protecting Intellectual Property And Privacy In The Digital Age: The Use Of National Cybersecurity Strategies To Mitigate Cyber Risk" (2016) Chap. L. Rev. 19: 445.

⁴¹ Voss, W. Gregory. "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) The Business Lawyer 72, No. 1: 221-234. Refer to Regulation (EU) 2016/679 of the European Parliament and of the Council dated 27 April 2016, concerning the protection of natural persons in relation to the processing of personal data and the free movement of such data, while repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ 2 119/1.

⁴² Tikkinen-Piri, Christina, Anna Rohunen, And Jouni Markkula. "EU General Data Protection Regulation: Changes And Implications For Personal Data Collecting Companies" (2018) Computer Law & Security Review 34, No. 1: 134-153.

I. Research Questions and Introduction

The primary enquiry of the research is: what lessons can the Kingdom of Saudi Arabia learn from the experience of other countries in implementing privacy legislation for cellular network data?

The central argument that will be the focus of discussion throughout the entirety of the thesis will be identified. The recognition of privacy as a fundamental constitutional right of great significance is evident in the constitutions of individual nations and the international community⁴³. Therefore, every person is entitled to this basic right⁴⁴. The increased prevalence and accessibility of technological devices, such as communication networks, cellular network data, and smart mobile phones, has heightened the probability of privacy infringement in contemporary times as compared to a decade ago⁴⁵. The probability of a breach of privacy in contemporary times is higher than it was a decade ago⁴⁶. The probability of experiencing a privacy violation in contemporary times is significantly higher compared to the past decade. As a result of technological advancements, it has become possible to remotely monitor, analyze, and trace objects situated at considerable distances. The disclosure of an individual's complete personal life to the public renders them susceptible to vulnerability⁴⁷. The unauthorised disclosure of personal information of an individual renders them equally susceptible to vulnerability. In light of the heightened importance of safeguarding individuals' privacy, the aforementioned protocols have been devised and are presently being executed. In light of the present state of affairs, safeguarding the entitlement to individual privacy is of utmost importance.

⁴³ Shen, Nelson, Therese Bernier, Lydia Sequeira, John Strauss, Michelle Pannor Silver, Abigail Carter-Langford, And David Wiljer. "Understanding The Patient Privacy Perspective On Health Information Exchange: A Systematic Review" (2019) *International Journal Of Medical Informatics* 125: 1-12.

⁴⁴ Cranston, Maurice "Are There Any Human Rights?" (1983) *Daedalus*: 1-17.

⁴⁵ Houghton, David J., And Adam N. Joinson. "Privacy, Social Network Sites, And Social Relations In Human Services In The Network Society" (2014) Routledge: Pp. 77-97.

⁴⁶ Garfinkel, Simson *Database Nation: The Death Of Privacy In The 21st Century* (O'Reilly Media Inc, 2000) P12.

⁴⁷ Posner, Richard A "The Right Of Privacy" (1977) *Ga. L. Rev.* 12: 393.

The primary query can thereafter be subdivided into two ancillary enquiries: (1) What are the present restrictions of data privacy in the legislation of the Kingdom of Saudi Arabia compared to other national jurisdictions? (2) What legislation can be enacted in the Kingdom of Saudi Arabia to rectify the current limitations?

II. Statement of the Problem

Contemporary Internet users are preoccupied with achieving equilibrium between their desire for privacy and their desire for augmented social connectivity facilitated by advancements in information and communication technologies, including cellular network data⁴⁸. The individuals involved are contemplating methods to utilise technology in facilitating extensive cross-border social and cultural interactions⁴⁹. As a result, the internet has emerged as a platform for publishing a wide range of content, encompassing novel forms of cultural, social, and political expression that are facilitated by the diverse array of software available on the internet⁵⁰. The exercise of this fundamental right has been revolutionised by the Internet. The Internet's promotion and, in certain situations, necessity of divulging personal information to reap its advantages increases the likelihood of privacy breaches.

III. Background of the Study

The Kingdom of Saudi Arabia introduced Vision 2030⁵¹ in 2016⁵² as a comprehensive project aimed at revitalising and transforming the country. The government of Saudi Arabia is

⁴⁸ Khan, Jalaluddin, Haider Abbas, And Jalal Al-Muhtadi. "Survey On Mobile User's Data Privacy Threats And Defense Mechanisms" (2005) *Procedia Computer Science* 56: 376-383.

⁴⁹ Weidenfeld, Adi "Tourism And Cross Border Regional Innovation Systems" (2013) *Annals Of Tourism Research* 42: 191-213.

⁵⁰ Kahn, Richard, And Douglas Kellner. "Oppositional Politics And The Internet: A Critical/Reconstructive Approach." (2005) *Cultural Politics* 1, No. 1: 75-100.

⁵¹ Amran, YH Ahssein, YH Mugahed Amran, Rayed Alyousef, And Hisham Alabduljabbar "Renewable And Sustainable Energy Production In Saudi Arabia According To Saudi Vision 2030; Current Status And Future Prospects" (2020) *Journal Of Cleaner Production* 247:119602.

⁵² Mitchell, Brendan, And Abdulrahman Alfuraih. "The Kingdom Of Saudi Arabia: Achieving The Aspirations Of The National Transformation Program 2020 And Saudi Vision 2030 Through Education"(2018) *Journal Of Education And Development* 2, No. 3: 36.

formulating an ambitious strategy aimed at enhancing various aspects of the nation⁵³. The implementation of Vision 2030 will be the shared responsibility of both the public and private sectors, encompassing both for-profit and non-profit entities⁵⁴. The Vision 2030 initiative encompasses a set of supplementary measures aimed at swiftly realising these principles, thereby positioning the Kingdom at the forefront by the year 2030⁵⁵. The implementation of the next-generation network constitutes a crucial element of the technical advancement strategies. This will enhance the capacity of cellular networks and the World Wide Web. In 2019, Saudi Arabia was among the pioneering countries to provide its inhabitants with fifth-generation cellular networks⁵⁶. Furthermore, the nation is projected to extend its coverage to numerous new urban centres and erect additional infrastructure in the coming years, in addition to its current reach of over 5,200 towers across 30 cities⁵⁷. This innovation is anticipated to yield download rates of up to 1110MB/s⁵⁸. In addition, due to the reliance of contemporary commerce on a resilient digital framework, the government intends to collaborate with private enterprises, particularly those in the telecommunications industry, to enhance the digital infrastructure across the Kingdom⁵⁹. The promotion of local investment in information and communications technology (ICT) enterprises would additionally facilitate the growth of the digital economy. One of the technical development priorities outlined in Vision 2030 is the enhancement of broadband service quality⁶⁰. The objective is to attain coverage rates of up to 90 percent in the highly populated cities within the Kingdom, and 66 percent in other metropolitan regions⁶¹. Moreover, the implementation of e-Government in The Kingdom of

⁵³ Alzahrani, A. "Markets And Language Policy In Saudi Arabia: How The English Language Can Contribute To The Success Of The Saudi Vision 2030" (2017) *International Journal Of English Language And Linguistics Research* 5, No. 6:1-12.

⁵⁴ Kosárová, Dominika. "Saudi Arabia's Vision 2030" (2020) In *Security Forum*, Pp. 124-134.

⁵⁵ Fakeeh, Khalid A. "KSA 2030 Vision (Kingdom Of Saudi Arabia's 2030 Project) And Its Focus On Families And Students" (2016) *International Journal Of Computer Applications* 149, No. 1: 46-48. Also See Kassem, Hazem S., Mohammed Aljuaid, Bader Alhafi Alotaibi, And Rabab Ghozy. "Mapping And Analysis Of Sustainability-Oriented Partnerships In Non-Profit Organizations: The Case Of Saudi Arabia." (2020) *Sustainability* 12, No. 17: 7178.

⁵⁶ Patzold, Matthias. "5G Sets Sail Around The Globe Mobile Radio" (2019) *IEEE Vehicular Technology Magazine* 14, No. 2: 5-11.

⁵⁷ Saudi Press Agency "Kingdom's Telecommunications Sector Internationally Leads In Deploying Fifth Generation Towers <.Www.Spa.Gov.Sa/2017198.>.

⁵⁸ Ibid.

⁵⁹ Woishi, Wasmi. "The Impact Of Digitization On The Economy Of KSA In The Context Of Vision 2030" (2019) *Int J Eng Appl Sci Technol* 4, No. 04: 312-316.

⁶⁰ Aljarallah, Sulaiman, And Russell Lock. "An Investigation Into Sustainable E-Government In Saudi Arabia" (2020) *Electronic Journal Of E-Government* 18, No. 1: Pp1-16.

⁶¹ Government Of The Kingdom Of Saudi Arabia Vision2030, Further: Nurunnabi, Mohammad. "Transformation From An Oil-Based Economy To A Knowledge-Based Economy In Saudi Arabia: The Direction Of Saudi Vision 2030" (2017) *Journal Of The Knowledge Economy* 8, No. 2: 536-564.

Saudi Arabia seeks to achieve a position of international prominence in the field of electronic governance⁶². The objective will be achieved by means of expanding the scope of services, enhancing their calibre, and elevating benchmarks, leading to decreased latency, heightened attainment, and economised temporal and physical resources⁶³. Furthermore, enhancements have been made to online employment opportunities, virtual education, passport processing, traffic and civil matters, electronic payment systems, and the dissemination of corporate documentation⁶⁴.

Notwithstanding the absence of a privacy law in the Kingdom of Saudi Arabia, it is important to note that the safeguarding of personal information of its citizens is not entirely disregarded. The subject in question is fully safeguarded by the principles of Sharia law, which comprehensively uphold all privacy rights without any exemptions⁶⁵. The legal framework in Saudi Arabia is based on Sharia law, which is derived from the Qur'an, Sunnah, and Islamic jurisprudence⁶⁶. Furthermore, the legal framework of Saudi Arabia encompasses various discussions regarding the importance of an individual's right to personal privacy⁶⁷. Hence, the enquiry that necessitates resolution pertains to the adequacy of extant laws and regulations in the Kingdom of Saudi Arabia, including those that address privacy concerns, in safeguarding personal privacy, especially among cellular data network users. The development of a robust and distinctive privacy legislation in the Kingdom of Saudi Arabia is imperative to safeguard individuals and their liberties, particularly with respect to personal privacy and mobile phone data networks.

IV. Purpose Statement

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Kinuthia, Wanjira. "Educational Development In Kenya And The Role Of Information And Communication Technology" (2009) International Journal Of Education And Development Using ICT 5, No. 2.

⁶⁵ Abokhodair, Norah, And Sarah Vieweg. "Privacy & Social Media In The Context Of The Arab Gulf" (In Proceedings Of The 2016 ACM Conference On Designing Interactive Systems, Pp. 672-683. 2016).

⁶⁶ Vogel, Frank Edward "Islamic Law And Legal System Studies Of Saudi Arabia" (1993) Harvard University.

⁶⁷ Abokhodair, Norah, And Sarah Vieweg. "Privacy & Social Media In The Context Of The Arab Gulf" (In Proceedings Of The 2016 ACM Conference On Designing Interactive Systems, Pp. 672-683. 2016).

The aim of this study is to furnish the Saudi legislators with a precise understanding of the privacy legislation and to carry out a thorough examination of the worldwide data protection framework, with the intention of enabling the Saudi legislators to choose the privacy and data protection law that is best suited for the Kingdom of Saudi Arabia. The concept has resulted in the establishment of privacy legislation in several nations, with the most prominent being the safeguarding of the right to privacy under the United States Constitution⁶⁸. Furthermore, the study analysed the General Data Protection Regulation of the European Union, alongside the privacy laws of the United Arab Emirates, Argentina, and New Zealand⁶⁹. The rationale behind selecting these jurisdictions for privacy research is to conduct a comparative analysis between those with a robust foundation and successful implementation of privacy laws and those with more moderate policies. This approach aims to provide legislators in the Kingdom of Saudi Arabia with a broader understanding of the diverse range of jurisdictions and their respective approaches to privacy. Moreover, the inclusion of additional jurisdictions in the analysis is due to the cultural similarity of their legal systems.

V. Significance of the Study

The present research is intended to establish a benchmark for privacy legislation in the Arab region, with a specific focus on the Kingdom of Saudi Arabia. This is due to the limited amount of scholarly enquiry on the subject of privacy in these locales⁷⁰. Research is a manifestation of individuals' motivation to enhance their quality of life by attaining a greater level of ease and resolving the various predicaments that communities encounter, whether examined from an academic or societal perspective⁷¹.

⁶⁸ Kramer, Irwin R. "The Birth Of Privacy Law: A Century Since Warren And Brandeis." (1989) *Cath. UL Rev.* 39: 703.

⁶⁹ Krzysztofek, Mariusz. "GDPR: General Data Protection Regulation (EU) 2016/679: Post-Reform Personal Data Protection In The European Union" (2018) Kluwer Law International BV.

⁷⁰ Tuffour, Isaac. "A Critical Overview Of Interpretative Phenomenological Analysis: A Contemporary Qualitative Research Approach" (2017) *Journal Of Healthcare Communications* 2, No. 4: 52.

⁷¹ Pacione, Michael. "Urban Environmental Quality And Human Wellbeing—A Social Geographical Perspective" (2003) *Landscape And Urban Planning* 65, No. 1-2: 19-30.

The objective of the study is to accurately ascertain the individual constituents of the current privacy framework, with the purpose of formulating a resolution to the issue at hand⁷². The present investigation utilises a qualitative research methodology, which aims to comprehend and describe phenomena and actions that take place within human or social settings. The human and social cultures of legal sciences are examined in various countries with respect to their respective national constitutions and legal systems. In reaction to the dominance of statistical research in the realm of social sciences, the qualitative method emerged during the early 1900s⁷³ as a novel concept. This action was taken as a reaction to the prevalence of statistical research within the field. This methodology was developed as a response to the limitations of quantitative tools in analysing and understanding social phenomena⁷⁴. The data provided was utilised by both social scientists and politicians⁷⁵. The explanatory or qualitative research approach is commonly referred to as the methodology that aims to provide explanations for the outcomes of quantitative investigations⁷⁶. Its primary objective is to elucidate and interpret the results of such studies. The focal point of natural science is the investigation of inherent characteristics of phenomena, as suggested by its nomenclature⁷⁷. The utilisation of ethnographic research methodologies is a prevalent practise within this realm of academic investigation.

This research utilises scholarly sources such as academic literature, books, and journal articles to examine the privacy provisions within the constitutions being analysed. The Kingdom of Saudi Arabia has relied on the Holy Qur'an, the Prophet's Sunnah, and Islamic jurisprudence as the primary sources of legislation⁷⁸. This is due to the lack of academic research on privacy and the limited accessibility of Saudi court rulings on privacy to academic researchers. Furthermore, the research evaluated the current privacy regulations in Saudi Arabia.

⁷² Lasswell, Harold Dwight, And Myres Smith Macdougall. "Jurisprudence For A Free Society: Studies In Law, Science, And Policy" (1992) Martinus Nijhoff Publishers Vol. 1.

⁷³ Mahoney, James, And Gary Goertz "A Tale Of Two Cultures: Contrasting Quantitative And Qualitative Research" (2006) Political Analysis 14, No. 3: 227-249.

⁷⁴ Ormston, Rachel, Liz Spencer, Matt Barnard, And Dawn Snape "The Foundations Of Qualitative Research" (2014) Qualitative Research Practice: A Guide For Social Science Students And Researchers 2, No. 7: 52-55.

⁷⁵ Ramady, Mohamed A "The Saudi Arabian Economy: Policies, Achievements, And Challenges" (2010).

⁷⁶ Elliott, Jane "Using Narrative In Social Research: Qualitative And Quantitative Approaches" (2005) Sage.

⁷⁷ Ormston, Rachel, Liz Spencer, Matt Barnard, And Dawn Snape "The Foundations Of Qualitative Research" (2014) Qualitative Research Practice: A Guide For Social Science Students And Researchers 2, No. 7: 52-55.

⁷⁸ Karl, David J "Islamic Law In Saudi Arabia: What Foreign Attorney's Should Know" (1991) Geo. Wash. J. Int'l L. & Econ. 25: 131.

I. Data collection methods

A research method that was utilised in this study was the utilisation of secondary data sources. The development of privacy legislation was the subject of this study's primary purpose. In addition to the secondary data sample, privacy legislation from Saudi Arabia and a number of other countries were included. During the process of developing the proposed draft legislation, the existing laws were analysed in order to determine the boundaries that have been set according to international privacy norms. It was with the specific intention of drafting legislation for the Kingdom of Saudi Arabia that the research was carried out. For the purpose of gathering information, the researcher went to a number of different libraries in Saudi Arabia. In addition to laws, the items that were collected included books and journal articles. The purpose of this research is to conduct an analysis of a variety of transnational regulations in order to provide Saudi Arabian regulators with a comprehensive understanding of the most effective approach—whether it be stringent or lenient—that should be implemented, the specific practices that require restriction, and the strategies for enforcing privacy regulations. The researcher seeks legislation from both developed and developing legal frameworks.

The research was done at the National Cybersecurity Authority and the Bureau of Experts inside the Council of Ministers. The National Cybersecurity Authority serves as the regulatory body for computer and cyber security in the Kingdom. The Bureau of Experts is the governmental legal advisory entity responsible for the formulation of legislation by legal specialists.

II. Data Analysis methods

In order to answer the first sub-question, a comparison of the respective pieces of law was carried out as part of the study process. The research compared the Saudi law to other legislation in order to discover whether or not there are any privacy practices that are absent from the Saudi legislation but are present in other legislation. The research was conducted in order to determine whether or not there are any such practices. They proceeded to add the practices that were lacking into the draft legislation prescription for the second particular query once they had identified the practices that were lacking. After the fact, a number of practises

that were not included in the draft law prescription were eventually inserted into it on the grounds of their cultural compatibility and universal applicability.

III. Organisation of the Study

The present thesis comprises six distinct sections. The initial section presents a comprehensive examination of the significance of safeguarding one's privacy in the digital realm. The discourse pertains to the evolution of privacy legislation in the United States over time⁷⁹. The introductory chapter delves into the various levels of individual anonymity. The second chapter of the study provides a comprehensive analysis of the hardware, software, cloud computing, server, data centre, and cellular network infrastructure technology, and their potential impact on the privacy of cellular networks. Furthermore, Chapter 3 examines the national regulations pertaining to privacy, highlighting diverse privacy treaties and jurisdictions. The chapter centred on the interconnection between the United States and the European Union. The text encompasses instances of data privacy laws in the United Arab Emirates, Argentina, and New Zealand. Chapter four of the study demonstrates the measures taken to safeguard legal culture and personal privacy within the jurisdiction of the Kingdom of Saudi Arabia. The present chapter has furnished instances of the legal culture, explicated the significance of Sharia Law, and elucidated the notion of privacy in the Qur'an, the Sunnah, and Islamic jurisprudence⁸⁰. The concluding section of the chapter pertains to the correlation between Saudi culture and privacy, and the efficacy of the Saudi Arabian legal system, which is based on Sharia law, in safeguarding individuals' confidential data. Chapter five provides an analysis of the existing legal framework governing privacy in the Kingdom of Saudi Arabia. Several laws have been enacted in recent years, including the Basic Law of Governance in 1992, the Telecom Act in 2001, the Credit Information Law in 2008, the Income Tax Law in 2004, the Electronic Transaction Law in 2007, the Anti-Money Laundering Law in 2012, and the Law of Criminal Procedure in 2013⁸¹. Chapter 6 contains the recommendations and proposed plan for safeguarding personal data in the Kingdom of Saudi Arabia.

⁷⁹ Solove, Daniel J "A Brief History Of Information Privacy Law" (2016) Proskauer On Privacy, PLI.

⁸⁰ Hassan, Farooq A "The Sources Of Islamic Law" In Proceedings Of The ASIL Annual Meeting (1984) Cambridge University Press Vol. 76, Pp. 65-75.

⁸¹ Al-Habshan, Khalid Saad. "Current Practices And Improvement Of Saudi Corporate Governance Framework" (2017) J. Pol. & L. 10: 81.

Chapter One: Privacy Conceptualisation

Introduction

It is the objective of this chapter to create a working definition of privacy in order to facilitate subsequent data collecting and analysis for the purpose of the study. The right to privacy is a fundamental right that can be affected by geographic location, the passage of time, and cultural norms⁸². However, the extent to which this right is upheld also depends on an individual's awareness of the limitations placed on their privacy and their understanding of its significance. The evolution of individuals notions of personal privacy has been accelerated by demographic changes in response to their changing social and technological environments over the past few decades⁸³. The ubiquitous integration of information technology in daily routines has led to a significant broadening of individuals perspectives regarding the definition of privacy infringement⁸⁴. This can be attributed to the lack of prior assumptions in accommodating the relentless emergence of novel circumstances⁸⁵. These occurrences are atypical and do not stem from the routine, everyday actions of an individual within a limited timeframe. Consequently, they do not conform to the conventional patterns upon which most of extant data protection frameworks are predicated. individuals today have the capacity to connect their personal experiences and those of individuals across the globe, thereby enabling the possibility of worldwide communication on a frequent and instantaneous basis⁸⁶.

Given the apprehensions surrounding technology and multifarious information systems, it is apparent that a robust theoretical framework is imperative for safeguarding privacy. Primarily, it is imperative to establish stronger connections among the various issues that pertain to the

⁸² Georgiadou, Yola, Rolf A. de By, and Ourania Kounadi. "Location Privacy in the Wake of the GDPR" (2019) ISPRS international journal of geo-information 8, no. 3: 157. Also see Li, Yao, Alfred Kobsa, Bart P. Knijnenburg, and M-H. Carolyn Nguyen. "Cross-Cultural Privacy Prediction" (2017) Proc. Priv. Enhancing Technol. no. 2: 113-132.

⁸³ Solove, Daniel J. "The digital person: Technology and privacy in the information age" (2004) Vol. 1. NyU Press. Also see National Research Council. "Engaging privacy and information technology in a digital age" (2007) National Academies Press.

⁸⁴ Xu, Heng, Tamara Dinev, H. Jeff Smith, and Paul Hart. "Examining the formation of individual's privacy concerns: Toward an integrative view." (2008).

⁸⁵ Brincker, Maria. "Privacy in public and the contextual conditions of agency." (2017).

⁸⁶ Fischer-Hübner, Simone. "Privacy and security at risk in the global information society." (1998) Information Communication & Society 1, no. 4: 420-441.

entitlement of privacy. Data protection concerns are often addressed in a manner that isolates them or treats them as governed by a separate entity⁸⁷. A consistent approach and framework of data protection rights is of great importance as it forms the foundation for addressing instances where the state infringes on the rights of individuals under the pretext of providing protection. Finally, it is imperative to establish universal privacy rights to oversee progress and assess whether it jeopardises personal privacy.

Invasion of privacy is a significant issue that can be caused either intentionally or unintentionally. Even though it has been regarded as a serious offence in the United States for more than a century⁸⁸, Commonwealth courts have traditionally shied away from admitting any such action arising under common law⁸⁹. In 2004⁹⁰, both the New Zealand Court of Appeal and the House of Lords⁹¹ found that the common law permits a remedy for the wrongful use of personal information. When privacy invasion becomes a crime in the eyes of the law, three major concerns arise⁹². Firstly, there appears to be dispute among judges over the extent of the lawsuit⁹³. Legal punishment is debatable for a privacy breach that does not result in additional exposure⁹⁴. In the United States, such invasions have typically been subject to a privacy process⁹⁵. However, the English and New Zealand versions of the framework contain significantly less information about the persons who could be affected⁹⁶. The second issue is determining which laws protect privacy the most. In this scenario, both American and New Zealand tort law apply⁹⁷. Thirdly, in circumstances involving the media, it can be difficult to find a balance between the opposing ideals of privacy and freedom of speech when judging

⁸⁷ Bamberger, Kenneth A., and Deirdre K. Mulligan. "Privacy in Europe: Initial data on governance choices and corporate practices." (2013) *Geo. Wash. L. Rev.* 81: 1529.

⁸⁸ Warren, Samuel. Louis Brandeis. "The Right To Privacy" (1890) *Harvard Law Review* 4, No. 5.: 193-220.

⁸⁹ Brown, R. Blake. Cecil A. "Wright And The Foundations Of Canadian Tort Law Scholarship" (2001) *Sask. L. Rev.* 64.: 169.

⁹⁰ Juristocracy, Who Wants. Smillie, John---" Who Wants Juristocracy?" (2006) *Otalawrw* 2; 2006 11 *Otago Law Review* 183.11, No. 2.

⁹¹ Witzleb, Normann. "Justifying Gain-Based Remedies For Invasions Of Privacy" (2009) *Oxford Journal Of Legal Studies* 29, No. 2: 325-363.

⁹² Robertson, David W "Causation In The Restatement (Third) Of Torts: Three Arguable Mistakes" (2009) *Wake Forest L. Rev.* 44, 2009: 1007.

⁹³ Moreham, N. A. Violating Article 8. (2007) *The Cambridge Law Journal* 66, No. 1: 35-37.

⁹⁴ Hunt, Chris DL "Privacy In The Common Law: A Critical Appraisal Of The Ontario Court Of Appeal's Decision" (2011) In *Jones V. Tsige. Queen's LJ* 37: 665.

⁹⁵ Determann, Lothar, and Robert Sprague. "Intrusive monitoring: Employee privacy expectations are reasonable in Europe, destroyed in the United States." (2011) *Berkeley Tech. LJ* 26: 979.

⁹⁶ Brown, Russell "Rethinking Privacy: Exclusivity, Private Relation And Tort Law" (2005) *Alta. L. Rev.* 43: 589.

⁹⁷ Thomson, Mark "The Increasing Protection Of Personal Privacy" (2008) *Convergence* 4: 257.

whether to consider a breach of privacy a mistake⁹⁸. In the United States, freedom of speech is frequently considered more important than individual privacy⁹⁹. Unless there is a strong public interest in disclosure, New Zealand courts will normally protect the privacy of individuals' information. English courts are more globally minded in their deliberations¹⁰⁰. Thus, this chapter will examine the definition of the term 'privacy,' the historical context of the notion, an illustration of constitutional privacy, an explanation of the numerous modes of privacy, and an illustration of how technology can be used to breach privacy.

Notion of Privacy

Scholars in the legal discipline are largely in agreement about the challenge of defining a notion that encroaches upon an individual's entitlement to confidentiality¹⁰¹. Hence, the notion of an individual's entitlement to privacy may possess diverse and distinct implications, not only across disparate legal frameworks, but also within a singular legal framework¹⁰². The legal system and judicial bodies hold responsibility for matters pertaining to privacy, and their focus lies in formulating legal provisions that ensure the safeguarding of this fundamental right and address the various forms of its infringement. Achieving consensus on the definition of the right to privacy is widely regarded as a highly challenging task, with near unanimity among scholars and experts on this matter¹⁰³. The reason for the variability in definitions of this concept can be attributed to its diverse foundation and the differences in definitions across various legal systems¹⁰⁴. Several governments have conflated the notions of data protection and privacy, wherein the latter is situated within the framework of the right to safeguard personal information. The definitional challenge of certain phrases arises from the diversity of jurisprudential and legal frameworks across multiple nations¹⁰⁵.

⁹⁸ Sloviter, Dolores K. "A Federal Judge Views Diversity Jurisdiction Through The Lens Of Federalism" (1992) *Virginia Law Review*: 1671-1687.

⁹⁹ Gewirtz, Paul. "Privacy and Speech" *The Supreme Court Review* 2001" (2001): 139-199.

¹⁰⁰ Hunt, Chris DL "Conceptualizing Privacy And Elucidating Its Importance: Foundational Considerations For The Development Of Canada's Fledgling Privacy Tort" (2011) 37. *Queen's LJ* 1: 167.

¹⁰¹ Parker, Richard B. "A definition of privacy." (2017) In *Privacy*, pp. 83-104. Routledge.

¹⁰² Gavison, Ruth. "Privacy and the Limits of Law." (1980) *The Yale law journal* 89, no. 3: 421-471.

¹⁰³ Warren, Samuel, and Louis Brandeis. "The right to privacy." (1989) In *Killing the Messenger: 100 Years of Media Criticism*, pp. 1-21. Columbia University Press.

¹⁰⁴ Gavison, Ruth. "Privacy and the Limits of Law." (1980) *The Yale law journal* 89, no. 3: 421-471.

¹⁰⁵ Witzleb, Normann, David Lindsay, Moira Paterson, and Sharon Rodrick, eds. "Emerging challenges in privacy law: Comparative perspectives" (2014) No. 23. Cambridge University Press.

The present study posits that the challenge in defining the concept of "privacy" in the context of cultural, religious, traditional, and belief systems, as it pertains to the daily lives of individuals, stems from the term's contextual variability, whereby its meaning is contingent upon the specific circumstances in which it is employed. Hence, the establishment of texts with the objective of ensuring the protection of rights and the continual quantification of privacy violations in accordance with international laws and regulations hold minimal significance¹⁰⁶. In certain countries, data protection laws can only be extended to such areas as tax collection legislation, for example, which is typically open to the sharing of personal financial information¹⁰⁷. Privacy laws may conflict with laws on freedom of speech¹⁰⁸. Some economic analysts and psychologists have described the disclosure of personal details as a "voluntary concession"¹⁰⁹ to obtain promotions and opportunities, because personally disclosed data can theoretically be exploited or manipulated for reasons other than those for which they were requested, including for the theft of addresses or card numbers¹¹⁰.

In the last century, privacy has been defined in numerous ways. Warren and Brandeis¹¹¹ define the term to mean "the privilege to be let alone"¹¹². Pound¹¹³ and Freund¹¹⁴ described the protection of privacy as an expansion of "individuality or individual hood"¹¹⁵, while Westin¹¹⁶ emphasised data privacy and control, and the right of persons, groups, or organisations to be

¹⁰⁶ Catania, David A "The Universal Declaration Of Human Rights And Sodomy Laws: A Federal Common Law Right To Privacy For Homosexuals Based On Customary International Law" (1993) 31 Am. Crim. L. Rev. 289.

¹⁰⁷ Danezis, George, Josep Domingo-Ferrer, Marit Hansen, Jaap-Henk Hoepman, Daniel Le Metayer, Rodica Tirtea, And Stefan Schiffner. "Privacy And Data Protection By Design-From Policy To Engineering" (2015) European Centre For Cyber Security, 2015.

¹⁰⁸ Lukács, Adrienn. "What Is Privacy? The History And Definition Of Privacy" (2016) University Of Szeged.

¹⁰⁹ Simmons, Joseph P., Leif D. Nelson, And Uri Simonsohn. "False-Positive Psychology: Undisclosed Flexibility In Data Collection And Analysis Allows Presenting Anything As Significant" (2011) 22 Psychological Science 1359.

¹¹⁰ Jourard, Sidney M., And Paul Lasakow "Some Factors In Self-Disclosure" (1958) 56 The Journal Of Abnormal And Social Psychology 91.

¹¹¹ Barron, James H. Warren And Brandeis, "The Right To Privacy" (1890) 4 Harv. L. Rev. 193 Demystifying A Landmark Citation (1979, 13 Suffolk UL Rev. 875.

¹¹² Warren, Samuel D., And Louis D. Brandeis "The Right To Privacy" (1890) Harvard Law Review, 1890: 193-220.

¹¹³ Pound, Roscoe. "Individual Interests Of Substance: Promised Advantages" (1945) 59 Harvard Law Review 1-42.

¹¹⁴ Freund, Paul Abraham "Privacy: One Concept Or Many" (1971) 13 Nomos 1.

¹¹⁵ Pound, Roscoe "Interests Of Personality" (1915) 28 Harvard Law Review 343.

¹¹⁶ Westin, Alan F. "Privacy And Freedom" (1967) Atheneum, New York: 52-63.

informed if, where, and how their information is being distributed to others¹¹⁷. Parent¹¹⁸ provides a strictly contextual description of personal data protection by adding that privacy is a requirement that forbids the retention of unreported private information about someone. "Privacy is the state of not having unreported individual knowledge about one owned by others"¹¹⁹. Alternatively, privacy may be understood as the drawing of limits that control the ability of persons or groups to interfere with the life of others¹²⁰.

Furthermore, Weinstein¹²¹ has explained that privacy is related to psychology¹²². However, privacy may be a source of control exercised by ourselves or others, "the control we have over information about ourselves¹²³", "the condition under which there is control over acquaintance with one's personal affairs by the one enjoying it¹²⁴", "the individual's ability to control the circulation of information relating to him¹²⁵". Furthermore, this defines privacy as the claim of individuals to decide for themselves where, how and to what degree knowledge about them can be transmitted to others¹²⁶. For some, unrestricted interference in other people's acts, a right lost because the sound of driving or breathing pollutes the air, is another essential feature of privacy¹²⁷.

The term "access" refers to "perceiving a person with one's senses (for example, seeing, hearing, or touching them), gaining physical proximity to them, and/or obtaining information about them¹²⁸". According to Professor Nicole Moreham, the term "privacy" should be defined as "the state of desired access or freedom from unwanted access¹²⁹." It is possible to violate an

¹¹⁷ Westin, Alan F. "Intrusions On Privacy: Self-Revelation, Curiosity, And Surveillance In: Alan F. Westin" (1967) *Privacy And Freedom* Atheneum, New York: 52-63.

¹¹⁸ Parent, William A "Privacy, Morality, And The Law" (1983) 2 *Philosophy & Public Affairs* 269-288.

¹¹⁹ Parent, William A. *Recent Work On The Concept Of Privacy* (1983) 20 *American Philosophical Quarterly* 341-355.

¹²⁰ Gavison, Ruth. "Privacy and the Limits of Law." (1980) *The Yale law journal* 89, no. 3: 421-471.

¹²¹ Weinstein, David. "Protecting A Juror's Right To Privacy: Constitutional Constraints And Policy Options" (1997) 70 *Temp. L. Rev.* 70 1.

¹²² Weinstein, Michael A. "The Uses Of Privacy In The Good Life" (1971) In J Roland Pennock And John W Chapman *Privacy And Personality*, New York, Routledge, 1971 88-104.

¹²³ Pennock, James Roland, And John William Chapman, Eds. "Privacy: Yearbook Of The American Society For Political And Legal Philosophy" (1971) Atherton, 1971.

¹²⁴ Gross, Hyman. "Privacy And Autonomy" (2017) In *Privacy And Personality*, Pp. 169-181. Routledge, 2017.

¹²⁵ Miller, Arthur Raphael. *Assault On Privacy* (1971).

¹²⁶ Westin, Alan F. "Privacy And Freedom" (1968) *Washington And Lee Law Review* 25, No. 1: 166.

¹²⁷ Van Den Haag, Ernest. "On Privacy" (2017) In *Privacy And Personality*, Pp. 149-168. Routledge.

¹²⁸ Cheung, Anne SY "Rethinking Public Privacy In The Internet Era: A Study Of Virtual Persecution By The Internet Crowd" (2009) *Journal Of Media Law* 1, No. 2: 191-217.

¹²⁹ Chen, Tommy "PJS And The Tort Of Misuse Of Private Information" (2016) *Journal Of Intellectual Property Law & Practice* 11, No. 12: 892-900).

individual's right to privacy by either acquiring unauthorised access to that individual or assisting a third party in doing so¹³⁰. In addition, Professor Nicole Moreham contends that every legal right needs to comprise an objective criterion of reasonableness because it would be excessively vast to base a legal interest solely on the individual desires of a claimant¹³¹. Therefore, the courts ought to defend a person's right to privacy if that person has a desire that is reasonable given the circumstances under which they find themselves¹³².

Parker¹³³ proposed that three conditions should be met to arrive at an optimal understanding of privacy. The first is that the meaning should work with the details, the second is that the interpretation of privacy ought to be carried out by legal professionals and judicial bodies, and the third is that the definition should be clear¹³⁴.

Others have argued that there is no general concept of protection¹³⁵, but that a number of different basic standards can be systematically presented.¹³⁶ As many have pointed out, secrecy is a common expectation if people are to easily share information about themselves¹³⁷. However, the frequent scandals that accompany advances in protection, information and cooperation suggest something else. The transparency of information in these disputes¹³⁸, for example, suggests that there have been violations of commonly held values, norms, and ethics. From this point of view, the advertising of controversies can be called a contradiction¹³⁹. Provided that innovations cross borders seamlessly into a globalised business environment, society's background – and ideas about privacy, where technology consequently plays a major

¹³⁰ Moreham, Nicole A “The Right to Respect for Private Life in The European Convention On Human Rights: A Re-Examination” (2008).

¹³¹ Moreham, Nicole A. “A Conceptual Framework for The New Zealand Tort of Intrusion” (2016) Victoria U. Wellington L. Rev. 47: 283.

¹³² Moreham, Nicole A “Privacy in Public Places” (2006) The Cambridge Law Journal 65, No. 3: 606-635).

¹³³ Richard B. Parker “A Definition of Privacy” (1974) Rutgers Law Review 27, No. 2: 275-297).

¹³⁴ Ibid.

¹³⁵ Bennett, Charles H., Gilles Brassard, And Jean-Marc Robert “Privacy Amplification by Public Discussion” (1988) SIAM Journal on Computing 17, No. 2: 210-229.

¹³⁶ Wang, Guan, Zutao Zhu, Wenliang Du, And Zhouxuan Teng “Inference Analysis in Privacy-Preserving Data Re-Publishing” (In 2008 Eighth IEEE International Conference on Data Mining, Pp. 1079-1084).

¹³⁷ Scott-Hayward, Christine S., Henry F. Fradella, and Ryan G. Fischer. "Does Privacy Require Secrecy: Societal Expectations of Privacy in the Digital Age." (2015) Am. J. Crim. L. 43: 19.

¹³⁸ Thompson, John B “Political Scandal: Power and Visibility in The Media Age” (2013) John Wiley & Sons, 2013.

¹³⁹ Nissenbaum, Helen “Privacy as Contextual Integrity” (2004) Wash. L. Rev. 79: 119).

role – undergoes a great deal of change¹⁴⁰. Thus, the restricting obligations of the debacle are ethically and legally placed in different contexts¹⁴¹.

Different conceptions of privacy protection exist in the United States and the European Union¹⁴². A community that is continually present in the United States teaches an effect that includes its protection association¹⁴³, which is another piece of evidence of the different privacy consequences between the United States and the European Union, as well as numerous other European nations¹⁴⁴.

With regard to education about privacy, Europe and the US differ at a common basis¹⁴⁵. The protection of personal privacy is affirmed throughout the United States to meet the demands of freedom and particularly freedom against the state, as historically understood¹⁴⁶. In Europe¹⁴⁷ on the other hand, personal privacy is perceived as an integrity mechanism for the etiquette and autonomy of proper rights¹⁴⁸. The frameworks for privacy legislation both in the US and in the EU are a function of these educational activities¹⁴⁹. Overall, Europeans believe that government is less forgiving of protection violations and is insistent on respecting personal protection rights¹⁵⁰. In the US, protection is at the very centre of the principle of confidentiality against needless government investigations and captures¹⁵¹. The legal process for gathering personal

¹⁴⁰ Vermesan, Ovidiu, And Peter Friess, Eds “Internet Of Things-From Research And Innovation To Market Deployment” (2014) Vol. 29. Aalborg: River Publishers.

¹⁴¹ Vezyridis, Paraskevas, And Stephen Timmons “Understanding The Care. Data Conundrum: New Information Flows For Economic Growth” (2017) *Big Data & Society* 4, No. 1: 2053951716688490.

¹⁴² Shaffer, Gregory “The Power Of EU Collective Action: The Impact Of EU Data Privacy Regulation On US Business Practice” (1999) *European Law Journal* 5, No. 4: 419-437.

¹⁴³ Puaschunder, Julia M “Dignity Of Privacy Or Utility In Communication? The Predicament Of Digitalization In The Big Data Age” (2020) *Journal Of Risk Finance*, Forthcoming.

¹⁴⁴ Shaffer, Gregory “Globalization And Social Protection: The Impact Of EU And International Rules In The Ratcheting Up Of US Privacy Standards Yale J” (2000) *Int'l L.* 25: 1.

¹⁴⁵ Budak, Jelena, Ivan-Damir Anić, And Edo Rajh “Public Attitudes Towards Privacy And Surveillance In Croatia. Innovation” (2013) *The European Journal Of Social Science Research* 26, No. 1-2: 100-118.

¹⁴⁶ Brown, Wendy “States Of Injury: Power And Freedom In Late Modernity” (2020) Princeton University Press.

¹⁴⁷ Bennett, Colin J “Regulating Privacy: Data Protection And Public Policy In Europe And The United States” (1992) Cornell University Press.

¹⁴⁸ Whitman, James Q “The Two Western Cultures Of Privacy: Dignity Versus Liberty” (2003) *Yale LJ* 113: 1151.

¹⁴⁹ Westin, Alan F “Social And Political Dimensions Of Privacy” (2003) *Journal Of Social Issues* 59, No. 2: 431-453).

¹⁵⁰ Hallinan, Dara, Michael Friedewald, And Paul Mccarthy “Citizens' Perceptions Of Data Protection And Privacy In Europe” (2012) *Computer Law & Security Review* 28, No. 3: 263-272.

¹⁵¹ Cohen, Julie E “Privacy, Visibility, Transparency, And Exposure” (2008) *The University Of Chicago Law Review* 75, No. 1: 181-201.

information¹⁵², for example identity, addresses, religious views and locations, allows the individual to properly "opt-in" only in EU member states¹⁵³. This situation is in sharp contrast with the US "opt-out" stance, which allows the individual to include the provision that personal data is not shared¹⁵⁴. The arbitration of production materialised in the 'safe harbour'¹⁵⁵ deal between the EU and the US on foreign markets. Limited regulation¹⁵⁶ enables US companies that voluntarily adhere to EU values to conduct the transfer of trans-border data¹⁵⁷ to EU member countries¹⁵⁸. The preceding analysis of the concept of privacy has revealed that there are culturally and legislatively diverse ways of determining the meaning of privacy.

The Oxford Dictionary¹⁵⁹ defines privacy as "a state in which one is not observed or disturbed by other people¹⁶⁰", or "the state of being free from public attention¹⁶¹". The American Heritage Dictionary¹⁶² describes privacy as "the quality or condition of being secluded from the presence or view of others¹⁶³", or "the state of being free from public attention or unsanctioned intrusion¹⁶⁴". And the legislative understanding of privacy protection is "freedom from unauthorised intrusion: state of being let alone and able to keep certain especially personal matters to oneself¹⁶⁵". The Oxford Dictionary¹⁶⁶, for instance, describes data protection as "laws and regulations that make it illegal to store or share some types of information about people

¹⁵² Kasower, Sheldon "System And Method For Gathering, Processing, Authenticating And Distributing Personal Information" (2009) U.S. Patent Application 11/834,662, Filed February 12.

¹⁵³ Simon, Christian M., Jamie L'heureux, Jeffrey C. Murray, Patricia Winokur, George Weiner, Elizabeth Newbury, Laura Shinkunas, And Bridget Zimmerman "Active Choice But Not Too Active: Public Perspectives On Biobank Consent Models" (2011) *Genetics In Medicine* 13, No. 9: 821-831.

¹⁵⁴ Cheung, Anne SY "Location Privacy: The Challenges Of Mobile Service Devices" (2014) *Computer Law & Security Review* 30, No. 1: 41-54.

¹⁵⁵ Schwartz, Paul M. "The EU-US Privacy Collision: A Turn To Institutions And Procedures" (1966) *Harv. L. Rev.* 126 2012.

¹⁵⁶ Colonna, Liane "Article 4 Of The EU Data Protection Directive And The Irrelevance Of The EU-US Safe Harbour Program?" (2014) *International Data Privacy Law* 4, No. 3: 203-221.

¹⁵⁷ Terpan, Fabien "EU-US Data Transfer From Safe Harbour To Privacy Shield: Back To Square One?" (2018) *European Papers* 3, No. 3: 1045-1059.

¹⁵⁸ Kuner, Christopher. "Reality And Illusion In EU Data Transfer Regulation Post Schrems" (2017) *German Law Journal* 18, No. 4: 881-918.

¹⁵⁹ Dictionary, Oxford English. "Oxford English Dictionary" (1989) Simpson, JA & Weiner, ESC.

¹⁶⁰ Dictionary, Oxford English. "Lexico" (2018).

¹⁶¹ Ibid.

¹⁶² Morris, William. "American Heritage Dictionary Of The English Language" (1969) American Heritage, 1969.

¹⁶³ American Heritage Dictionary, And American Heritage Publishing Staff. "The American Heritage Dictionary" (1987) Dell Publishing Company.

¹⁶⁴ Ibis.

¹⁶⁵ Gove, Philip B. "New International Dictionary" (1986) Springfield, MA: Merriam-Webster Inc.

¹⁶⁶ Matthews, Peter Hugoe, And Peter Hugoe Matthews "The Concise Oxford Dictionary Of Linguistics" (2014) Oxford University Press.

without their knowledge or permission¹⁶⁷”, and the Cambridge Dictionary¹⁶⁸ defines data protection as “legal control over access to and use of data stored in computers¹⁶⁹”.

Distinctions between "privacy" and "secret"

The word “privacy” overlaps with the word secrecy¹⁷⁰, and the gap or overlap between privacy and secrecy may be slight but is nevertheless important. For example, the term "privacy" requires definitional precision and a comprehensive grasp of individual and group interests¹⁷¹. Therefore, the distinction between privacy and secrecy can be achieved. The emergence of internal differences resulting from the conflicting values of personal and group cultures and negotiating between the rights of individuals and groups, and often the disparities between them, are articulated gracefully¹⁷². Secrecy also ensures that information is not accessible except to those with the right to access it because it concerns them¹⁷³. Secrecy can be a harmful attribute. Conversely, confidentiality refers to the right of a person to regulate the information sharing they legally control¹⁷⁴. Privacy is a privilege which should be enjoyed by all¹⁷⁵. A practical example reflects the difference between secrecy and privacy: digital businesses gather information from users and then use algorithms¹⁷⁶ to show advertisements on this basis. Users have no say over how their personal data are passed on under this model¹⁷⁷. Content publishers and advertisers, meanwhile, never know precisely how the underground digital advertising

¹⁶⁷ Baldick, Chris. “The Concise Oxford Dictionary of Literary Terms” (1996) Oxford University Press.

¹⁶⁸ Dictionary, Cambridge. “Cambridge Advanced Learner’s Dictionary” (2008) PONS-Worterbucher, Klett Ernst Verlag GmbH.

¹⁶⁹ Audi, Robert, And Paul Audi, Eds “The Cambridge Dictionary of Philosophy” (1999) Vol. 584. Cambridge: Cambridge University Press.

¹⁷⁰ Margulis, Stephen T. “On The Status and Contribution of Westin's and Altman's Theories of Privacy” (2003) Journal of Social Issues 59, No. 2: 411-429.

¹⁷¹ Depaulo, Bella M., Chris Wetzel, R. Weylin Sternglanz, And Molly J. Walker Wilson “Verbal and Nonverbal Dynamics of Privacy, Secrecy, And Deceit” (2003) Journal of Social Issues 59, No: 391-410.

¹⁷² Scott-Hayward, Christine S., Henry F. Fradella, And Ryan G. Fischer. “Does Privacy Require Secrecy: Societal Expectations of Privacy in The Digital Age” (2015) Am. J. Crim. L. 43: 19.

¹⁷³ Warren, Carol, And Barbara Laslett “Privacy and Secrecy: A Conceptual Comparison” (1977) Journal of Social Issues 33, No. 3: 43-51.

¹⁷⁴ Weinberg, Bruce D., George R. Milne, Yana G. Andonova, And Fatima M. “Hajjat. Internet Of Things: Convenience Vs. Privacy and Secrecy” (2015) Business Horizons 58, No. 6: 615-624.

¹⁷⁵ Smith-Bell, Michele, And William J. Winslade. “Privacy, Confidentiality, And Privilege in Psychotherapeutic Relationships” (1994) American Journal Of Orthopsychiatry 64, No. 2: 180-193.

¹⁷⁶ Lavallo, Steven M “Planning Algorithms” (2006) Cambridge University Press.

¹⁷⁷ Motwani, Rajeev, And Prabhakar Raghavan “Randomized Algorithms” (1995) Cambridge University Press.

world operates¹⁷⁸. If privacy takes priority over secrecy for the digital advertising industry, the latter does not collect users' personal data without their approval¹⁷⁹. It will instead let users know how, where and why their data is being gathered and give them the opportunity of opting out¹⁸⁰.

Distinctions between “privacy” and “security”

The concepts of security and privacy are intertwined, but privacy concerns all of a user's rights to the protection of personal data and how they are used¹⁸¹. Security refers to the protection of the user's personal data¹⁸². For example, when users open a bank account, they share their personal data with the bank, which is consistent with the bank's privacy policy and guarantees that the money is secure. Privacy may be endangered if the bank sells consumer data to other firms for commercial purposes, but the money of the customer remains secure¹⁸³. The privacy and security of the bank's computers could be at risk if they are vulnerable to malicious cyber-attacks,¹⁸⁴ such that customer information and money are compromised¹⁸⁵. Confidentiality, integrity, availability and protection of user information and sensitive data against unauthorised

¹⁷⁸ Jin, Yuxi, and Bernd Skiera. "How Do Privacy Laws Impact the Value for Advertisers, Publishers and Users in the Online Advertising Market? A Comparison of the EU, US and China." (2022) *Journal of Creating Value* 8, no. 2: 306-327.

¹⁷⁹ Tene, Omer, and Jules Polonetsky. "Big Data for all: Privacy and User Control in the Age of Analytics." (2012) *Nw. J. Tech. & Intell. Prop.* 11: 239.

¹⁸⁰ Hermalin, Benjamin E., and Michael L. Katz. "Privacy, Property Rights And Efficiency: The Economics Of Privacy As Secrecy" (2006) *Quantitative Marketing And Economics* 4, No. 3: 209-239.

¹⁸¹ Chin, Erika, Adrienne Porter Felt, Vyas Sekar, and David Wagner "Measuring User Confidence In Smartphone Security And Privacy" (2012) In *Proceedings Of The Eighth Symposium On Usable Privacy And Security*, Pp. 1-16.

¹⁸² Solove, Daniel J "Nothing To Hide: The False Trade-Off Between Privacy And Security" (2011) Yale University Press.

¹⁸³ Holtzman, David H. "Privacy Lost: How Technology is Endangering your Privacy" (2006) John Wiley & Sons.

¹⁸⁴ Peng, Chen, Hongtao Sun, Mingjin Yang, and Yu-Long Wang "A Survey On Security Communication And Control For Smart Grids Under Malicious Cyber-Attacks" (2019) *IEEE Transactions On Systems, Man, And Cybernetics: Systems* 49, No. 8: 1554-1569.

¹⁸⁵ Nepomuceno, Marcelo Vinhal, Michel Laroche, Marie-Odile Richard, and Axel Eggert "Relationship Between Intangibility And Perceived Risk: Moderating Effect Of Privacy, System Security And General Security Concerns" (2012) *Journal Of Consumer Marketing*.

access are therefore among the aims of security¹⁸⁶. Privacy applies to the rights of people and organisations with regard to their personal information¹⁸⁷.

Historical periods of privacy

In history and tradition¹⁸⁸, the focus of privacy has changed from issues that are readily discernible by an individual's ears and eyes, to spatial and territorial anonymity, then to more remote kinds of privacy infringement where privacy intrusions may arise at a single venue¹⁸⁹. Territorial integrity, the restriction on invasion of domestic and other surroundings, is the foundation of the earliest descriptions, as illustrated in an English¹⁹⁰ proverb that goes back to the eighteenth¹⁹¹ century and means that a man's house is his safe haven¹⁹². In particular, for the English people a home is a shelter which protects an individual¹⁹³. The proverb also implies that anything that happens at home has to be reviewed and resolved at the same location¹⁹⁴. Long before that point in time, individuals were exposed to a form of cultural protection that was acceptable at the time¹⁹⁵. The first stage in the process of cultural safeguarding happened when individuals began producing their own garments during the Palaeolithic period¹⁹⁶. Privacy

¹⁸⁶ Wilkowska, Wiktoria, And Martina Ziefle. "Perception Of Privacy And Security For Acceptance Of E-Health Technologies: Exploratory Analysis For Diverse User Groups" (2011) In 2011 5th International Conference On Pervasive Computing Technologies For Healthcare (Pervasivehealth) And Workshops, Pp. 593-600. IEEE, 2011.

¹⁸⁷ Chin, Erika, Adrienne Porter Felt, Vyas Sekar, And David Wagner "Measuring User Confidence In Smartphone Security And Privacy" (2012) In Proceedings Of The Eighth Symposium On Usable Privacy And Security, Pp. 1-16.

¹⁸⁸ Moore Jr, Barrington "Privacy: Studies In Social And Cultural History" (2017) Studies In Social And Cultural History. Routledge.

¹⁸⁹ Holvast, Jan. History Of Privacy "In The History Of Information Security" (2007) Pp. 737-769. Elsevier Science BV.

¹⁹⁰ Hafetz, Jonathan L. "A Man's Home Is His Castle: Reflections On The Home, The Family, And Privacy During The Late Nineteenth And Early Twentieth Centuries" (2001) Wm. & Mary J. Women & L. 8: 175.

¹⁹¹ Cuddihy, William, And B. Carmon Hardy. "A Man's House Was Not His Castle: Origins Of The Fourth Amendment To The United States Constitution" (1980) The William And Mary Quarterly: A Magazine Of Early American History: 372-400.

¹⁹² Vickery, Amanda. "An Englishman's Home Is His Castle? Thresholds, Boundaries And Privacies In The Eighteenth-Century London House" (2008) Past And Present 199, No. 1: 147-173.

¹⁹³ Lever, Annabelle. "On Privacy" Routledge, 2013.

¹⁹⁴ Preston, Diane. "Of Castles And Caravans: Our Desire For Privacy Is Fundamental" (2014) Australian Rationalist, The 94: 18.

¹⁹⁵ Nissenbaum, Helen "Privacy In Context: Technology, Policy, And The Integrity Of Social Life" (2009) Stanford University Press.

¹⁹⁶ Hoffecker, John F "Innovation And Technological Knowledge In The Upper Paleolithic Of Northern Eurasia" (2005) Evolutionary Anthropology: Issues, News, And Reviews: Issues, News, And Reviews 14, No. 5 (2005): 186-198.

became the foundation of human life¹⁹⁷. In fact, people have been learning about privacy through the resources that have been accessible to them throughout the ages and centuries, and some of the privacy measures that they have devised are still in use today¹⁹⁸.

Earlier mentions of privacy

The development of the idea of privacy can be traced to antiquity. Both the basic understanding of privacy and the requirements it placed on ancient societies made it the exception for most of antiquity. In the early ages, people's lives and ways of life were characterised by the peculiarities of the society of the times. Many nations across the globe, hundreds¹⁹⁹ of years ago, adopted laws and regulations to guarantee the protection of people's privacy under Greek²⁰⁰ and ancient Chinese rule²⁰¹. For example, investigating ancient Greek²⁰² history, and especially factors which at that time were characteristic of the individual and which safeguarded the right of the individual to privacy under Greek law²⁰³, it can be seen that cultures naturally manifest a concern for privacy, even though these ancient people had little concept of privacy²⁰⁴. An example of this in ancient Greek culture²⁰⁵ is shown in the way early Greek engineers²⁰⁶ built low-level homes to shield the occupants from exposure to public gaze using small windows, only adequate for light to enter the building. The ancient Greeks adopted this sort of architecture to protect the privacy of their homes²⁰⁷.

¹⁹⁷ Woogara, Jay "Patients' Privacy Of The Person And Human Rights" (2005) Nursing Ethics 12, No. 3: 273-287.

¹⁹⁸ Davenport, Nikole "Smart Washers May Clean Your Clothes, But Hacks Can Clean Out Your Privacy, And Underdeveloped Regulations Could Leave You Hanging On A Line" (2015) J. Marshall J. Info. Tech. & Privacy L. 32: 259.

¹⁹⁹ Banisar, David, And Simon Davies. "Global Trends In Privacy Protection: An International Survey Of Privacy, Data Protection, And Surveillance Laws And Developments" (1999) J. Marshall J. Computer & Info. L. 18: 1.

²⁰⁰ Sealey, Bertram Raphael Izod, And Raphael Sealey. "The Justice Of The Greeks" (1994) University Of Michigan Press.

²⁰¹ Collins, Terry "Ancient China: An Interactive History Adventure" (2012) Capstone Classroom.

²⁰² Sansone, David. "Ancient Greek Civilization" (2016) John Wiley & Sons.

²⁰³ Gormley, Ken. "One Hundred Years Of Privacy" (1992) Wis. L. Rev.: 1335.

²⁰⁴ Rubinfeld, Jed. "The Right Of Privacy" (1989) Harvard Law Review: 737-807.

²⁰⁵ Goldhill, Simon, And Robin Osborne, Eds. "Art And Text In Ancient Greek Culture" (1994) Cambridge: Cambridge University Press.

²⁰⁶ Havelock, Eric A., And Jackson P. Hershbell. "Communication Arts In The Ancient World." (1978).

²⁰⁷ Burke, Samantha. Delos: "Investigating The Notion Of Privacy Within The Ancient Greek House" (2000) Phd Diss., University Of Leicester.

Furthermore, ancient Greek doctors vowed to uphold privacy and personal protections, as the following indicates²⁰⁸: “I’ll stick to myself, keeping this stuff shamefully spoken about, what I can see or hear during or outside of the procedure with respect to the lives of men, who cannot extend outside.”²⁰⁹. Another example is afforded by the Nutria Monastery, where an instance is cited of a priest who died and was found long afterwards²¹⁰. In stone cubicles, known as “beehive” huts, monks meditated in isolation²¹¹. In the architecture²¹² of personal privacy, individual beds, personal clothing and customs are considered to be historical innovations to safeguard privacy²¹³.

Similarly, ancient Chinese law²¹⁴ stressed the importance of defending common rights, and criminal law is the cornerstone of their legal system²¹⁵. The old Chinese regulatory framework set down human duties and obligations, and implicitly secured individual rights and choice²¹⁶. In comparison, a review of animal experiments²¹⁷ by Alan Westin²¹⁸ found that the need for privacy is not limited to humans alone. However, what is considered “private” is distinct in these various contexts. To suggest various approaches to the subject, limitations on privacy can refer to improper interference, restrictions on views and information, exclusion or restricted usage in matters controlled by government²¹⁹.

²⁰⁸ Moskop, John C., Catherine A. Marco, Gregory Luke Larkin, Joel M. Geiderman, And Arthur R. Derse. From Hippocrates To HIPAA: “Privacy And Confidentiality In Emergency Medicine—Part I: Conceptual, Moral, And Legal Foundations” (2005) *Annals Of Emergency Medicine* 45, No. 1: 53-59.

²⁰⁹ Beatson, George T. Meeting IX.—May 20, 1896: “On The Treatment Of Inoperable Cases Of Carcinoma Of The Mamma: Suggestions For A New Method Of Treatment, With Illustrative Cases” (1896) *Transactions. Medico-Chirurgical Society Of Edinburgh* 15: 153.

²¹⁰ Mackinlay, James Boniface. Saint Edmund King And Martyr: “A History Of His Life And Times With An Account Of The Translation Of His Incorrupt Body” (1893) Etc. From Original Mss. Art And Book Company.

²¹¹ Ferenstein, Greg. “The Birth And Death Of Privacy: 3,000 Years Of History Told Through 46 Images”

²¹² Dejean, Joan. “A New Interiority: The Architecture Of Privacy In Eighteenth-Century Paris” (2011) *Paris: Life And Luxury In The Eighteenth Century*: 33-51.

²¹³ Applegate, Mary, And Janice M. Morse. “Personal Privacy And Interactional Patterns In A Nursing Home” (1994) *Journal Of Aging Studies* 8, No. 4: 413-434.

²¹⁴ Chen, Jianfu, Ed. *Chinese Law: “Towards An Understanding Of Chinese Law, Its Nature And Developments”* (1999) Vol. 3. Martinus Nijhoff Publishers.

²¹⁵ Liang, Bin. “The Changing Chinese Legal System, 1978–Present: Centralization Of Power And Rationalization Of The Legal System” (2007) Routledge.

²¹⁶ Ladany, Laszlo. “Law And Legality In China: The Testament Of A China-Watcher” (1992) University Of Hawaii Press.

²¹⁷ Klopfer, Peter H., And Daniel I. Rubenstein. “The Concept Privacy And Its Biological Basis” (1977) *Journal Of Social Issues* 33, No. 3: 52-65.

²¹⁸ Westin, Alan F. “Privacy And Freedom” (1968) *Washington And Lee Law Review* 25, No. 1 : 166.

²¹⁹ Hoofnagle, Chris Jay, And Jennifer M. Urban. “Alan Westin's Privacy Homo Economicus” (2014) *Wake Forest L. Rev.* 49 : 261.

The concept of privacy has its historical origins in philosophically oriented debates²²⁰, the most prominent being that of Aristotle²²¹, who distinguishes between two spheres of existence: civil culture, which is connected with the political sphere of life, and private family culture, which was associated with domestic life²²². This distinction between public and private is then applied as a measure of the government's sphere of control versus the sphere of self-regulation²²³. All the best things and gifts this world affords are “normal,” in the sense of being generally available in the natural state. But the individual owns himself and his own body and can acquire his own possessions through his personal effort²²⁴.

Recent mentions of privacy

France

In 1789²²⁵, the French Parliament²²⁶ released a resolution banning the publishing of information infringing on the individual's rights²²⁷ and in addition levied fines on any who violated the terms of the resolution. The idea of personal protection was first established in Article 2²²⁸ in the civil and citizens' rights declaration of 1789²²⁹. After the resolution was successfully passed by the French Parliament, the privacy law was first applied in l'Affaire Rachel of 1858²³⁰, when a Parisian newspaper wanted to show the image of the famous actress Mademoiselle Rachel²³¹

²²⁰ Lipinski, Tomas A. “Privacy Rights: Moral And Legal Foundations” (2012) Journal Of Information Ethics 21, No. 1: 83.

²²¹ Swanson, Judith A. “Aristotle On How To Preserve A Regime: Maintaining Precedent, Privacy, And Peace Through The Rule Of Law” (1997) Justice V. Law In Greek Political Thought, Maryland: Rowman & Littlefield Publishers, Inc: 153-182.

²²² Moore, Adam D. “Privacy Rights: Moral And Legal Foundations” (1968) Penn State Press, 2010.

²²³ Lucas, Donald W. Aristotle Poetics.

²²⁴ Dutta, Sneha. “Is Personal Privacy A New Indian Cultural Value?-The Influence Of Privacy Consciousness On Consumer Psychology And Online Behaviour”

²²⁵ Warman, Caroline. “Tolerance: The Beacon Of The Enlightenment” (2016) Open Book Publishers, 2016.

²²⁶ Deringer, Kathryn F. “Privacy And The Press: The Convergence Of British And French Law In Accordance With The European Convention Of Human Rights” (2003) Penn St. Int'l L. Rev. 22: 191.

²²⁷ Frears, J. R. “The French Parliament And The European Community” (1975) 1. JCMS: Journal Of Common Market Studies 14, No. 2: 140-156.

²²⁸ Smartt, Ursula “Media And Entertainment Law” (2011) Taylor & Francis.

²²⁹ Johnson, Vincent Robert “The Declaration Of The Rights Of Man And Of Citizens Of 1789, The Reign Of Terror, And The Revolutionary Tribunal Of Paris” (1990) BC Int'l & Comp. L. Rev. 13: 1.

²³⁰ Palmer, Vernon V., Ed. “The Recovery Of Non-Pecuniary Loss In European Contract Law” (2015) Cambridge University Press.

²³¹ Chalon, Jean, Carlos De Angulo, And John Crouch. “304 Sartorial Politics In Early Modern Europe” (2019) Fashioning Women : 303.

on her deathbed, disregarding her privacy in both life and death²³². In 1970²³³, the principle of the protection of privacy was declared in Article 9²³⁴ of the Civil Code²³⁵, and a distinction was made between private and public life in France²³⁶.

United States of America

The freedom of individuals to choose whether to conduct certain actions has progressively been assured and secured by the 1791 Bill of Rights²³⁷. However, coinciding with the emergence of popular newspapers, two lawyers wrote²³⁸ "The Right to Privacy²³⁹", dealing with political, social, and economic reform²⁴⁰ and the recognition of "one's right to be left alone."²⁴¹ The debate began to take a more formal form in written discussions of the idea of privacy²⁴². The two argued that the present regulation provided a way to encourage political, social, and economic change²⁴³. Both were primarily attracted to journals and photography that at the time were new media and news technologies. Regularly pointing out infringements in other contexts, they concentrated on impediments to privacy arising from the public disclosure of personal life-related information²⁴⁴.

The lawyers felt that a more general right to privacy would cover certain cases, protecting the boundaries governing the communication of one's thoughts and feelings with others²⁴⁵. These

²³² Richardson, Megan. "The Right To Privacy: Origins And Influence Of A Nineteenth-Century Idea" (2017) Vol. 40. Cambridge University Press.

²³³ Colvin, Madeleine, Ed. "Developing Key Privacy Rights" (2022) Bloomsbury Publishing.

²³⁴ Trouille, Helen. "Private Life And Public Image: Privacy Legislation In France" (2000) *International & Comparative Law Quarterly* 49, No. 1: 199-208.

²³⁵ Muenchinger, Nancy E. "Workplace Privacy-France: Electronic Workplace Privacy In France Computer" (2002) *Law & Security Review* 18, No. 6 : 421-426.

²³⁶ Assis-Zanini, Leonardo Estevam De. "The Protection Of The Image And Privacy In France" (2018) *Revista De Derecho Privado* 34: 157-175.

²³⁷ Amar, Akhil Reed. "The Bill Of Rights: Creation And Reconstruction" (1998) Yale University Press.

²³⁸ Myers, Cayce. Warren, Samuel & Louis Brandeis. "The Right To Privacy"(2020) 4 *Harv. L. Rev.* 193 (1890). *Communication Law And Policy* 25, No. 4 : 519-522.

²³⁹ Brandeis, Louis, And Samuel Warren. "The Right To Privacy" (1890) *Harvard Law Review* 4, No. 5 (1890): 193-220.

²⁴⁰ Bezanson, Randall P. "The Right To Privacy Revisited: Privacy, News, And Social Change" (1992) 1890-1990. *Calif. L. Rev.* 80 : 1133.

²⁴¹ Warren, Samuel D., And Louis D. Brandeis. "The Right To Privacy" (1890) *Harvard Law Review*: 193-220.

²⁴² Kramer, Irwin R. "The Birth Of Privacy Law: A Century Since Warren And Brandeis" (1989) *Cath. UL Rev.* 39 : 703.

²⁴³ Decew, Judith Wagner. "In Pursuit Of Privacy: Law, Ethics, And The Rise Of Technology" (1997) Cornell University Press.

²⁴⁴ Solove, Daniel J. "A Brief History Of Information Privacy Law" (2016) *Proskauer On Privacy*, PLI.

²⁴⁵ Warren, Samuel D., And Louis D. Brandeis. "Privacy, Photography, And The Press" (1997) *Harvard Law Review* 110, No. 04 : 1086-1103.

scholars maintained that these rights to privacy were founded upon the concept of "inviolability", which was part of the right to immunity from the revelation of their identity. In 1890²⁴⁶, Brandeis noted that the lawyers' article was not an attempt to secure the protection of goods or intellectual property but to gain reassurance accompanying the protection of privacy. Both lawyers believed that the presumption of privacy had already been introduced into common law and came under the protection of the 'one-home' principle. It is necessary for modern technology to understand protection under the principle of privacy explicitly and separately²⁴⁷.

By analogy with the law of slander and defamation, the two lawyers indicated that limitations on the right to privacy could be found and that the right would not preclude, for example, the revelation of details about presidential officials²⁴⁸. This interpretation laid the groundwork for the definition of privacy, later known as personal information access, by Warren and Brandeis²⁴⁹. In those days, telephones mostly shared communal lines, and presumably operators were curious. In 1967²⁵⁰, telephones had become private property, and the transition was made to electromechanical equipment, providing private lines. During the 1970s, the implications of revolutionary technology became clear to individual consumers, who raised protection and privacy concerns, and questions about fair practice in information sharing²⁵¹. Although the right to privacy was not acknowledged for the first cases after the publication of Warren and Brandeis' paper, public, state, and federal courts quickly began to endorse and extend the right to privacy²⁵².

²⁴⁶ Bratman, Ben. Brandeis And Warren's "The Right To Privacy And The Birth Of The Right To Privacy" (2001) *Tenn. L. Rev.* 69 : 623.

²⁴⁷ Igo, Sarah E. "The Known Citizen: A History Of Privacy In Modern America" (2018) Harvard University Press.

²⁴⁸ Glancy, Dorothy J. "Invention Of The Right To Privacy, The." (1979) *Ariz. L. Rev.* 21: 1.

²⁴⁹ Dreyfuss, Rochelle Cooper. Warren And Brandies Redux: "Finding (More) Privacy Protection In Intellectual Property Lore" (1999) SSRN 146075.

²⁵⁰ Turkington, Richard C. Legacy Of The Warren And Brandeis Article: "The Emerging Unencumbered Constitutional Right To Informational Privacy" (1989) *N. Ill. UL Rev.* 10: 479.

²⁵¹ Dreyfuss, Rochelle Cooper. Warren And Brandeis Redux: "Finding (More) Privacy Protection In Intellectual Property Lore" (1999) SSRN 146075.

²⁵² Brandeis, Louis Dembitz, and Samuel D. Warren "The right to privacy" (2023) Good Press.

Germany

Germany²⁵³ adopted what is known as the general personal rights law²⁵⁴ (allgemeines Persönlichkeitsrecht) alien to German civil law²⁵⁵ and proclaimed in 1908²⁵⁶ by the Imperial Court²⁵⁷. After the collapse of the Nazi regime²⁵⁸, it was necessary for Germany to follow the principle of freedom of expression so that they could include Article 5²⁵⁹ in the Basic Law of 1949²⁶⁰ (Grundgesetz) granting personal protections of all kinds, from personal to general human rights and privacy²⁶¹.

International

In 1984²⁶², the United Nations introduced the Human Rights Charter, which asserted in section 12²⁶³ and 17²⁶⁴ that “No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks²⁶⁵”. Section 7²⁶⁶ of European

²⁵³ Flaherty, David H. “Protecting Privacy In Surveillance Societies: The Federal Republic Of Germany, Sweden, France, Canada, And The United States” (2014) UNC Press Books.

²⁵⁴ Brüggemeier, Gert, Aurelia Colombi Ciacchi, And Giovanni Comandé, Eds “Fundamental Rights And Private Law In The European Union: Comparative Analyses Of Selected Case Patterns” (2010) Vol. 2. Cambridge University Press.

²⁵⁵ Eberle, Edward J. “Human Dignity, Privacy, And Personality In German And American Constitutional Law” (1997) Utah L. Rev.: 963.

²⁵⁶ Henkin, Louis. “Privacy And Autonomy” (1974) Columbia Law Review 74, No. 8: 1410-1433.

²⁵⁷ Maehle, Andreas-Holger. “Protecting Patient Privacy Or Serving Public Interests? Challenges To Medical Confidentiality In Imperial Germany” (2003) Social History Of Medicine 16, No. 3 : 383-401.

²⁵⁸ Rosenthal, Gabriele, Ed. “The Holocaust In Three Generations: Families Of Victims And Perpetrators Of The Nazi Regime” (2010) Barbara Budrich.

²⁵⁹ Andries, Edward M. “On The German Constitution's Fiftieth Anniversary: Jacques Maritain And The 1949 Basic Law (Grundgesetz)”(1999) Emory Int'l L. Rev. 13 : 1.

²⁶⁰ Tschentscher, Axel. “The Basic Law (Grundgesetz) 2016: The Constitution Of The Federal Republic Of Germany (May 23rd, 1949)–Introduction And Translation” (2016) Bod-Books On Demand.

²⁶¹ Benda, Ernst. “The Protection Of Human Dignity (Article 1 Of The Basic Law)” (2000) SMUL Rev. 53: 443.

²⁶² Hannum, Hurst. “The Status Of The Universal Declaration Of Human Rights In National And International Law” (1995) Ga. J. Int'l & Comp. L. 25: 287.

²⁶³ Harrington, Joanna. “The Absent Dialogue: Extradition And The International Covenant On Civil And Political Rights” (2006) Queen's LJ 32: 82.

²⁶⁴ Revel, Michel. “Article 12: Respect For Cultural Diversity And Pluralism” (2009) The UNESCO Universal Declaration On Bioethics And Human Rights: Background, Principles And Application: 199-209.

²⁶⁵ Diggelmann, Oliver, And Maria Nicole Cleis. "How The Right To Privacy Became A Human Right" (2014) Human Rights Law Review 14, No. 3 : 441-458.

²⁶⁶ Menéndez, Agustín José. “Chartering Europe: Legal Status And Policy Implications Of The Charter Of Fundamental Rights Of The European Union” (2002) JCMS: Journal Of Common Market Studies 40, No. 3: 471-490.

Charter on Human Rights²⁶⁷ declares: “All have the freedom to honour their private and personal life, their house and correspondence.” The OECD²⁶⁸ drew up a system for protecting personal data and its methods of dissemination and has set guidelines for regulating the system’s information processing phase, guaranteeing privacy at the compilation, storage, processing, and publishing levels, and ensuring that such relevant details are collected in a permissible way²⁶⁹. The privacy of the individual includes immunity against groundless surgical exams, assessments, or body checks²⁷⁰. Furthermore, organisations that focus on protecting privacy, for instance, hold yearly international meetings on privacy protection and have appointed commissioners²⁷¹. There is also a global network that focuses on privacy enforcement²⁷², and a telecommunications group that concentrates mainly on data protection worldwide²⁷³.

Constitutional right to privacy in the US

The right to privacy and protection is a basic right that has been acknowledged in the US since the United States Federal Supreme Court voted in 1965²⁷⁴ to recognise and affirm it²⁷⁵. In the case known as "Griswold v. Connecticut²⁷⁶" governed by US constitutional law²⁷⁷, the tribunal

²⁶⁷ Lemmens, Paul. “The Relation Between The Charter Of Fundamental Rights Of The European Union And The European Convention On Human Rights–Substantive Aspects” (2001) Maastricht Journal Of European And Comparative Law 8, No. 1: 49-67.

²⁶⁸ Tene, Omer. “Privacy: The New Generations” (2011) International Data Privacy Law 1, No. 1: 15-27.

²⁶⁹ OLIVEIRA, SR De M., And Osmar R. Zaiãne. “Toward Standardization In Privacy-Preserving Data Mining” (2004) In Embrapa Informática Agropecuária-Artigo Em Anais De Congresso (ALICE). In: International Workshop On Data Mining Standards, Services And Platforms 2 Seattle. Proceedings... Illinois: University Of Illinois.

²⁷⁰ Clarke, Roger. “Beyond The OECD Guidelines: Privacy Protection For The 21st Century” (2009) Canberra, Australia: Xamax Consultancy Pty Ltd.

²⁷¹ Waters, Nigel. “Rethinking Information Privacy-A Third Way In Data Protection?” (1999) In 21st International Conference On Privacy And Personal Data Protection.

²⁷² He, Qingfeng. “Privacy Enforcement With An Extended Role-Based Access Control Model” (2003) North Carolina State University. Dept. Of Computer Science.

²⁷³ Commissioners, Data Protection. “International Working Group On Data Protection In Telecommunications” (2018).

²⁷⁴ Flemming, Gregory N., David B. Holian, And Susan Gluck Mezey. “An Integrated Model Of Privacy Decision Making In State Supreme Courts” (1998) American Politics Quarterly 26, No. 1: 35-58.

²⁷⁵ Cox, Archibald. “The Supreme Court, 1965 Term” (1966) Harvard Law Review 80, No. 1: 91-272.

²⁷⁶ Bailey, Martha J. “Momma's Got The Pill: How Anthony Comstock And Griswold V. Connecticut Shaped US Childbearing” (2010) American Economic Review 100, No. 1: 98-129.

²⁷⁷ Tushnet, Mark. “The Possibilities Of Comparative Constitutional Law” (1999) The Yale Law Journal 108, No. 6: 1225-1309.

ruled that what married couples²⁷⁸ do in their own homes affects them alone and that they have a right to personal privacy in which nobody can interfere²⁷⁹. The Griswold case²⁸⁰ threw out the charge of offering contraception information, advice and assistance to married couples against a doctor at the Yale School of Medicine²⁸¹ and the director of a birth control clinic²⁸². The constitutional right²⁸³ to privacy was defined by Justice William Douglas²⁸⁴ as protection of various aspects of privacy, including the institution of marriage and the sexual life of married couples²⁸⁵. Prior to 1965²⁸⁶, the constitutional rights of Americans were restricted to the rights enumerated in the Bill of Rights²⁸⁷. The Supreme Court tried to combine many individual principles in four constitutional amendments²⁸⁸, namely the first²⁸⁹, fourth²⁹⁰, fifth²⁹¹ and ninth²⁹² amendments, submitting them to the Supreme Court for it to make its decision to recognise the particular right in question²⁹³. As a result of a comprehensive application of these distinct words, the Supreme Court²⁹⁴ determined that the right to protection must be acknowledged and maintained it as a constitutional right in US culture²⁹⁵. Despite the Supreme Court's²⁹⁶ affirmation of the right to privacy, its limits and essence remain ambiguous and no

²⁷⁸ Hafen, Bruce C. "The Constitutional Status Of Marriage, Kinship, And Sexual Privacy: Balancing The Individual And Social Interests" (1983) Michigan Law Review 81, No. 3: 463-574.

²⁷⁹ Saifee, Seema. "Penumbra, Privacy, And The Death Of Morals-Based Legislation: Comparing US Constitutional Law With The Inherent Right Of Privacy In Islamic Jurisprudence" (2003) Fordham Int'l LJ 27: 370.

²⁸⁰ Kauper, Paul G. "Penumbra, Peripheries, Emanations, Things Fundamental And Things Forgotten: The Griswold Case" (1965) Michigan Law Review 64, No. 2 : 235-258.

²⁸¹ Roraback, Catherine G. "Griswold V. Connecticut: A Brief Case History" (1989) Ohio NUL Rev. 16: 395.

²⁸² Dixon, Robert G. "The Griswold Penumbra: Constitutional Charter For An Expanded Law Of Privacy?" (1965) Michigan Law Review 64, No. 2 : 197-218.

²⁸³ Helsen, David. "Griswold V. Connecticut And The Unenumerated Right Of Privacy" (1994) N. Ill. UL Rev. 15 : 33.

²⁸⁴ Beaney, William M. "The Griswold Case And The Expanding Right To Privacy" (1966) Wis. L. Rev. : 979.

²⁸⁵ Gross, Hyman. "The Concept Of Privacy" (1997) NYUL Rev. 42 : 34.

²⁸⁶ Branch, Taylor. "At Canaan's Edge: America In The King Years" (2007) 1965-68. Simon And Schuster.

²⁸⁷ Amar, Akhil Reed. "The Bill Of Rights As A Constitution" (1991) Yale Law Journal: 1131-1210.

²⁸⁸ Fairman, Charles. "Does The Fourteenth Amendment Incorporate The Bill Of Rights: The Original Understanding" (1949) Stan. L. Rev. 2: 5.

²⁸⁹ Akhil Reed Amar, "The Bill Of Rights As A Constitution" (1991) Yale Law Journal: 1131-1210.

²⁹⁰ Curtis, Michael Kent. "No State Shall Abridge: The Fourteenth Amendment And The Bill Of Rights" (1986) Duke University Press.

²⁹¹ William Michael Treanor, "The Origins And Original Significance Of The Just Compensation Clause Of The Fifth Amendment" (1984) Yale LJ 94: 694.

²⁹² Suzanna. Sherry "The Ninth Amendment: Righting An Unwritten Constitution" (1988) Chi.-Kent L. Rev. 64 : 1001.

²⁹³ Amar, A.R. "The Bill Of Rights As A Constitution" (1991) Yale Law Journal, Pp.1131-1210.

²⁹⁴ Robert J. Reinstein, "Completing The Constitution: The Declaration Of Independence, Bill Of Rights And Fourteenth Amendment" (1993) Temple L. Rev. 66 : 361.

²⁹⁵ Bennett, Michael J. "When Dreams Came True: The GI Bill And The Making Of Modern America" (1996) Brassey's, Inc., 1313 Dolley Madison Blvd., Suite 401, Mclean, VA 22101.

²⁹⁶ Alfred Hill, "The Bill Of Rights And The Supervisory Power" (1969) Columbia Law Review 69, No. 2: 181-215.

consensus has been achieved²⁹⁷. In addition, it is essential to consider Justice Harlan's concurring opinion in *Griswold*, in which he concluded that the Fourteenth Amendment confers a right to privacy²⁹⁸. He bases his concurrence on the reasoning in his dissenting opinion in *Poe v. Ullman*. (1961)²⁹⁹. In that conclusion, he stated, "I believe that this Connecticut law, as interpreted to apply to these appellants, is in violation of the Fourteenth Amendment. I feel that a law that makes it a crime for married couples to take contraceptives is an intolerable and unreasonable intrusion into the most private aspects of an individual's life."³⁰⁰ In privacy issues decided after *Griswold*, the Supreme Court has traditionally relied on Justice Harlan's concurrence rather than Justice Douglas's majority opinion³⁰¹. *Eisenstadt v. Baird* (1971)³⁰² and *Lawrence v. Texas* (2003)³⁰³ are two of the most influential instances in which the Supreme Court has expanded the right to privacy. In each of these instances, the Supreme Court relied on the Fourteenth Amendment, not penumbras³⁰⁴.

In addition, some constitutional lawyers³⁰⁵ in the United States³⁰⁶ claim that the protection of privacy is not among the rights guaranteed by the constitution³⁰⁷. In this vein, a federal judge³⁰⁸ argues that the US Constitution does not expressly or in any other manner affirm that privacy

²⁹⁷ William J Brennan Jr "The Bill Of Rights And The States: The Revival Of State Constitutions As Guardians Of Individual Rights" (1986) NYUL Rev. 61: 535.

²⁹⁸ Helscher, David. "Griswold V. Connecticut And The Unenumerated Right Of Privacy" (1994) N. Ill. UL Rev. 15: 33.

²⁹⁹ Kauper, Paul G. "Penumbras, Peripheries, Emanations, Things Fundamental And Things Forgotten: The Griswold Case" (1965) Mich. L. Rev. 64 : 235.

³⁰⁰ Katin, Ernest. "Griswold V. Connecticut: The Justices And Connecticut's Uncommonly Silly Law" (1966) Notre Dame Law. 42 : 680.

³⁰¹ Greene, Jamal. "The So-Called Right To Privacy" (2009) UC Davis L. Rev. 43: 715.

³⁰² Gavison, Ruth. "Privacy And The Limits Of Law" (1980) The Yale Law Journal 89, No. 3: 421-471.

³⁰³ Spindelman, Marc. "Surviving Lawrence V. Texas" (2003) Mich. L. Rev. 102 : 1615.

³⁰⁴ Nowak, Miranda. "The Supreme Court and the Body: A Historical Critique of Privacy" (2010) PhD diss., Columbia University.

³⁰⁵ Ward, Kathleen Anne. "Williams V. Attorney General Of Alabama: Does A Constitutional Right To Sexual Privacy Exist" (2008) T. Jefferson L. Rev. 31: 1.

³⁰⁶ Barker, John C. "Constitutional Privacy Rights In The Private Workplace, Under The Federal And California Constitutions" (1991) Hastings Const. LQ 19: 1107.

³⁰⁷ Richards, Neil M. "Why Data Privacy Law Is (Mostly) Constitutional" (2014) Wm. & Mary L. Rev. 56: 1501.

³⁰⁸ Gifford, James S. Jus "Cogens And Fourteenth Amendment Privileges Or Immunities: A Framework Of Substantive, Fundamental Human Rights In A Constitutional Safe-Harbour" (1999) Ariz. J. Int'l & Comp. L. 16 : 481.

is a basic right³⁰⁹. There is no such right in all the 27³¹⁰ amendments applied to the constitution so far³¹¹.

In view of the above discussion, it is apparent that the definition of privacy³¹² is based mainly on the interpretation of the word, one's understanding of its nature, the limitations on the environment, its substance, and the form of government under which a person resides³¹³. In order to develop our knowledge and expertise in dealing with the issue, it is therefore important to acknowledge the concept of privacy and concentrate on its fundamental components and basic forms³¹⁴.

In what is known now as the right to privacy or to constitutional privacy³¹⁵, many countries protect interests. For example, constitutional privacy is used to eliminate anti-homosexuality legislation³¹⁶ and protect the right of the individual to choose their life partner³¹⁷. Several EU countries³¹⁸ now protect homosexual marriages, such as the Netherlands³¹⁹, where marriages have been permitted for nearly 10 years³²⁰, Germany³²¹, which permitted them in 2017³²² and

³⁰⁹ Mckay, Robert B. "The Right Of Privacy: Emanations And Intimations" (1965) Michigan Law Review 64, No. 2: 259-282.

³¹⁰ Rule, James B. "Privacy In Peril: How We Are Sacrificing A Fundamental Right In Exchange For Security And Convenience" (2007) Oxford University Press.

³¹¹ Fuster, Gloria González. "The Emergence Of Personal Data Protection As A Fundamental Right Of The EU" (2014) Vol. 16. Springer Science & Business.

³¹² Feinberg, Joel. "Autonomy, Sovereignty, And Privacy: Moral Ideals In The Constitution" (1982) Notre Dame L. Rev. 58: 445.

³¹³ Dwork, Cynthia, And Aaron Roth. "The Algorithmic Foundations Of Differential Privacy" (2014) Foundations And Trends In Theoretical Computer Science 9, No. 3-4 : 211-407.

³¹⁴ Bauerschmidt, Joseph E. "Mother Of Mercy--Is This The End Of RICO--Justice Scalia Invites Constitutional Void-For-Vagueness Challenge To RICO Pattern" (1989) Notre Dame L. Rev. 65: 1106.

³¹⁵ Kreimer, Seth F. Sunlight, Secrets, And Scarlet Letters: "The Tension Between Privacy And Disclosure In Constitutional Law" (1991) University Of Pennsylvania Law Review 140, No. 1: 1-147.

³¹⁶ Tamale, Sylvia. "A Human Rights Impact Assessment Of The Anti-Homosexuality Bill" (2009) East African Journal Of Peace And Human Rights 15, No. 2: 509-519.

³¹⁷ Strasser, Mark. "Sex, Law, And The Sacred Precincts Of The Marital Bedroom: On State And Federal Right To Privacy Jurisprudence" (2000) Notre Dame JL Ethics & Pub. Pol'y 14: 753.

³¹⁸ Kochenov, Dimitry. "Democracy And Human Rights--Not For Gay People: EU Eastern Enlargement And Its Impact On The Protection Of The Rights Of Sexual Minorities" (2006) Tex. Wesleyan L. Rev. 13: 459.

³¹⁹ Patterson, Nicholas J. "The Repercussions In The European Union Of The Netherlands Same-Sex Marriage Law" (2001): 301.

³²⁰ Sanchez-Osorio, Marilyn. "The Road To Recognition And Application Of The Fundamental Constitutional Right To Marry Of Sexual Minorities In The United States, The Netherlands, And Hungary: A Comparative Legal Study" (2001) ILSA J. Int'l & Comp. L. 8: 131.

³²¹ Rohde-Abuba, Caterina, Stefan Vennmann, And Tatjana Zimenkova. "The Destruction Of The Heterosexual Family? The Discourse Of Opponents Of The Gender Mainstreaming Educational Curriculum In Baden-Württemberg, Germany" (2019) Sexuality & Culture 23, No. 3: 718-736.

³²² Drägenstein, B., Olaf Schwarze, Corinna Kapfelsperger, And Philipp Aigner. "Homosexuality: The History Of Gender In Germany. Somewhere Over The Rainbow" (2018) Münster: Waxmann: 53-76.

New Zealand³²³, the first nation in the Pacific region³²⁴ to legalise homosexual marriages in 2013³²⁵.

Types of privacy

The implementation of privacy is certainly a matter of safety and a vital proof of good ties, as life without privacy results in disturbance, dissatisfaction, and violence³²⁶. Since few people understand the true meaning of privacy, we seldom find proof of its functioning³²⁷. But if people can be sure of confidentiality, they will sense the difference because it improves relationships and physical and mental wellbeing³²⁸. Privacy can be categorised in several ways, as follows.

Personal privacy³²⁹, also known as individual privacy, is one of the most significant features of human beings³³⁰ and all cultures. It refers to the right of individuals to possess and maintain all that they consider their supreme rights as individuals, such as private bodily functions and showing or hiding bodily characteristics³³¹. It noted that the concept of privacy was not regarded as a fundamental principle until the Universal Declaration of Human Rights³³² introduced by

³²³ Langford, Malcolm. "Same-Sex Marriage In Polarized Times: Revisiting *Joslin V New Zealand* (HRC)" (2017) In *Integrated Human Rights In Practice*. Edward Elgar Publishing.

³²⁴ Farran, Sue. Transsexuals, Fa'Afaine, "Fakaleiti And Marriage Law In The Pacific: Considerations For The Future" (2004) *The Journal Of The Polynesian Society* 113, No. 2: 119-142.

³²⁵ Roos, Oscar I., And Anita Mackay. "The Evolutionary Interpretation Of Treaties And The Right To Marry: Why Article 23 (2) Of The ICCPR Should Be Reinterpreted To Encompass Same-Sex Marriage" (2016) *Geo. Wash. Int'l L. Rev.* 49: 879.

³²⁶ Pedersen, Darhl M. "Psychological Functions Of Privacy" (1997) *Journal Of Environmental Psychology* 17, No. 2: 147-156.

³²⁷ Burgoon, Judee K., Roxanne Parrott, Beth A. Le Poire, Douglas L. Kelley, Joseph B. Walther, And Denise Perry "Maintaining And Restoring Privacy Through Communication In Different Types Of Relationships" (1989) *Journal Of Social And Personal Relationships* 6, No. 2: 131-158.

³²⁸ Kelvin, Peter. "A Social-Psychological Examination Of Privacy" (1973) *British Journal Of Social And Clinical Psychology* 12, No. 3: 248-261.

³²⁹ Lederer, Scott, Jason I. Hong, Anind K. Dey, And James A. Landay. "Personal Privacy Through Understanding And Action: Five Pitfalls For Designers" (2004) *Personal And Ubiquitous Computing* 8, No. 6 : 440-454.

³³⁰ Chen, Kuanchin, And Alan I. Rea Jr. "Protecting Personal Information Online: A Survey Of User Privacy Concerns And Control Techniques" (2004) *Journal Of Computer Information Systems* 44, No. 4: 85-92.

³³¹ Stone, Eugene F., Hal G. Gueutal, Donald G. Gardner, And Stephen McClure. "A Field Experiment Comparing Information-Privacy Values, Beliefs, And Attitudes Across Several Types Of Organizations" (1983) *Journal Of Applied Psychology* 68, No. 3: 459.

³³² Nickel, James W. *Making Sense Of Human Rights: "Philosophical Reflections On The Universal Declaration Of Human Rights"* (1987) Univ Of California Press.

the UN³³³, and later adopted in 1948³³⁴, led to its universal acceptance³³⁵. Article 12³³⁶ states that there should be no unfair interference with one's personal privacy or belongings, for instance home or family. It stipulated, furthermore, that there should be no interference with an individual's emails, or campaigns damaging reputation. And everyone has the legal right to defend him/herself from such interference or campaigns.

It is therefore prudent and beneficial to stress four essential and appropriate aspects of personal privacy, namely: (a) a person's right not to be regulated or interfered with by others in his / her private relations; (b) a basic individual right not to have one's privacy invaded or exposed to other people; (c) the right to be protected from defamation whether oral or written; and (d) the freedom of the citizen without interference to think and believe what he wills³³⁷.

*Cultural privacy*³³⁸ is the second type of privacy rights. All cultures have cultural characteristics³³⁹, and when attempting to comprehend these societies, no reasonable person will disregard or neglect them³⁴⁰. Anyone who studies the composition of contemporary countries, for instance, would discover that these countries contain numerous cultural and ethical minorities³⁴¹. These separate communities are proud of the social, spiritual, racial, and historical distinctions³⁴² that set them apart other nations and groups³⁴³.

³³³ Hannum, Hurst. "The Status Of The Universal Declaration Of Human Rights In National And International Law" (1995) Ga. J. Int'l & Comp. L. 25 : 287.

³³⁴ Bloustein, Edward J. "Privacy As An Aspect Of Human Dignity: An Answer To Dean Prosser" (1964) NYUL Rev. 39 : 962.

³³⁵ Nickel, James W. Making Sense Of Human Rights: "Philosophical Reflections On The Universal Declaration Of Human Rights" (1987) Univ Of California Press.

³³⁶ Revel, Michel. "Article 12: Respect For Cultural Diversity And Pluralism" (2009) The UNESCO Universal Declaration On Bioethics And Human Rights: Background, Principles And Application: 199-209.

³³⁷ Lundy, Laura. "Voice'is Not Enough: Conceptualising Article 12 Of The United Nations Convention On The Rights Of The Child" (2007) British Educational Research Journal 33, No. 6: 927-942.

³³⁸ Li, Yao, Alfred Kobsa, Bart P. Knijnenburg, And MH Carolyn Nguyen. "Cross-Cultural Privacy Prediction" (2017) Proceedings On Privacy Enhancing Technologies, No. 2: 113-132.

³³⁹ Kinzig, Ann P., Paige Warren, Chris Martin, Diane Hope, And Madhusudan Katti. "The Effects Of Human Socioeconomic Status And Cultural Characteristics On Urban Patterns Of Biodiversity" (2005) Ecology And Society 10, No. 1.

³⁴⁰ Finn, Rachel L., David Wright, And Michael Friedewald. "Seven Types Of Privacy" (2013) In European Data Protection: Coming Of Age, Pp. 3-32. Springer, Dordrecht.

³⁴¹ Kaya, Naz, And Margaret J. Weber. "Cross-Cultural Differences In The Perception Of Crowding And Privacy Regulation: American And Turkish Students" (2003) Journal Of Environmental Psychology 23, No. 3: 301-309.

³⁴² Newell, Patricia Brierley. "A Cross-Cultural Comparison Of Privacy Definitions And Functions: A Systems Approach" (1998) Journal Of Environmental Psychology 18, No. 4: 357-371.

³⁴³ Harris, Paul B., Carol M. Werner, Barbara B. Brown, And Dave Ingebritsen. "Relocation And Privacy Regulation: A Cross-Cultural Analysis" (1995) Journal Of Environmental Psychology 15, No. 4: 311-320.

Intellectual privacy³⁴⁴ is the third type of rights to privacy. Intellectual privacy means anonymity, the right to pursue one's interests and curiosity and keep one's thoughts private³⁴⁵. It also means respecting the ideas of others because one's way of expressing one's thoughts may result in people feeling violated if one dismisses, ignores, or depreciates them³⁴⁶. An insistence on intellectual privacy ensures that each person has the right to privacy and complete security regarding anything he or she believes in³⁴⁷. The individual's proposals or views of all sides of a matter under all its aspects should not be monitored³⁴⁸.

Data retention and privacy of access³⁴⁹ is the fourth category, where individuals are able to decide who, when and to what degree knowledge is transmitted to others³⁵⁰. Where the definition of privacy is both private and public, i.e., when it refers to privacy in general, it does not mean that other persons have no personal information about the user but rather that it regulates that information³⁵¹. Generally speaking, this form of privacy is like one's medical status, monthly salary, or weight and sexual orientation, and it can even be exceptional, based on situations and cultures³⁵². Newspapers and public materials are also included in the public domain. Once the content becomes part of the public record, using it after a lengthy period of time and being received from a public source does not constitute a breach of privacy, nor does it if undocumented information is not maintained³⁵³.

³⁴⁴ Richards, Neil. "Intellectual Privacy: Rethinking Civil Liberties In The Digital Age" (2015) Oxford University Press, USA.

³⁴⁵ Zittrain, Jonathan. "What The Publisher Can Teach The Patient: Intellectual Property And Privacy In An Era Of Trusted Privication" (2000) Stanford Law Review: 1201-1250.

³⁴⁶ Hann, Il-Horn, Kai-Lung Hui, Sang-Yong Tom Lee, And Ivan PL Png. "Overcoming Online Information Privacy Concerns: An Information-Processing Theory Approach" (2007) Journal Of Management Information Systems 24, No. 2: 13-42.

³⁴⁷ Blitz, Marc Jonathan. "The Where And Why Of Intellectual Privacy" (2009) Tex. L. Rev. See Also 87 : 15.

³⁴⁸ Richards, Neil. "Intellectual Privacy: Rethinking Civil Liberties In The Digital Age." (2015) Oxford University Press, USA.

³⁴⁹ Granger, Marie-Pierre, And Kristina Irion. "The Court Of Justice And The Data Retention Directive In Digital Rights Ireland: Telling Off The EU Legislator And Teaching A Lesson In Privacy And Data Protection" (2014) European Law Review 39, No. 4: 835-850.

³⁵⁰ Bignami, Francesca. "Privacy And Law Enforcement In The European Union: The Data Retention Directive" (2007) Chi. J. Int'l L. 8: 233.

³⁵¹ Feiler, Lukas. "The Legality Of The Data Retention Directive In Light Of The Fundamental Rights To Privacy And Data Protection" (2010) European Journal Of Law And Technology 1, No. 3.

³⁵² Bignami, Francesca. "Protecting Privacy Against The Police In The European Union: The Data Retention Directive" (2007) Duke Law School Science, Technology And Innovation Research Paper Series.

³⁵³ Chiou, Lesley, And Catherine Tucker. "Search Engines And Data Retention: Implications For Privacy And Antitrust" (2017) No. W23815. National Bureau Of Economic Research.

*Privacy and human dignity*³⁵⁴ comprise the fifth type in which the value, the ‘privacy of the individual’³⁵⁵ binds all concerns about privacy to a single value, revealing the individual’s nature and humanity, and requiring the honesty, dignity, independence, and freedom of the individual³⁵⁶. Respect for these principles establishes and unifies the definition of privacy³⁵⁷. An analysis of the five categories of rights to privacy, shows how critical each is, protecting the individual from interference and violation of human dignity. All five forms bring an individual under scrutiny in a way that can influence the independence and meaning of the individual, breaching his / her human integrity and moral personality³⁵⁸. The importance of protection against potential damage to a person’s rights and reputation is the universal intellectual thread that encompasses multiple privacy problems that preclude collecting sensitive records, recording telephone calls, wiretapping, and monitoring television use³⁵⁹. Overall, the only way to respect the individual’s privacy is in accord with the equality of human beings³⁶⁰.

The sixth category pertains to *privacy and intimacy*³⁶¹, with a strong emphasis on the interconnectedness between intimacy and privacy³⁶². A link between intimacy and privacy is evident³⁶³. Indeed, the correlation between seclusion and intimacy is profoundly intricate. The concepts of privacy and intimacy are frequently regarded as competing demands³⁶⁴. According to Weiss (1987), the argument is made that privacy plays a crucial role in establishing authentic intimacy³⁶⁵. Intimacy can be understood as a manifestation of interpersonal privacy, wherein

³⁵⁴ Bloustein, Edward J. “Privacy As An Aspect Of Human Dignity: An Answer To Dean Prosser” (1964) NYUL Rev. 39: 962.

³⁵⁵ Aviles Pagan, Luis Anibal. “Human Dignity, Privacy And Personality Rights In The Constitutional Jurisprudence Of Germany, The United States And The Commonwealth Of Puerto Rico” (1998) Rev. Jur. UPR 67: 343.

³⁵⁶ Mccrudden, Christopher. “Human Dignity And Judicial Interpretation Of Human Rights” (2008) European Journal Of International Law 19, No. 4: 655-724.

³⁵⁷ Andorno, Roberto. “Human Dignity And Human Rights As A Common Ground For A Global Bioethics” (2009) Journal Of Medicine And Philosophy 34, No. 3: 223-240.

³⁵⁸ Habermas, Jürgen. “The Concept Of Human Dignity And The Realistic Utopia Of Human Rights” (2012) In Philosophical Dimensions Of Human Rights, Pp. 63-79. Springer, Dordrecht.

³⁵⁹ Beyleveld, Deryck, And Roger Brownsword. “Human Dignity, Human Rights, And Human Genetics” (1998) Mod. L. Rev. 61: 661.

³⁶⁰ Rotenberg, Mark. “Protecting Human Dignity In The Digital Age” (2009) In Proceedings Of The Third United Nations Educational, Scientific And Cultural Organization Congress On Ethical, Legal And Societal Challenges Of Cyberspace. Retrieved On July, Vol. 14, P. 2000.

³⁶¹ Judith Decew “Privacy” Stanford Encyclopedia Of Philosophy, First Published Tue May 14, 2002; Substantive Revision Thu Jan 18, 2018. .< [Www.Plato.Stanford.Edu/Entries/Privacy/](http://www.Plato.Stanford.Edu/Entries/Privacy/)>

³⁶² Robert S. Gerstein Intimacy And Privacy University Of California, Los Angeles, P76.

³⁶³ Ibid At P81.

³⁶⁴ Avrum Geurin Weiss “Privacy and Intimacy” (1987) Journal Of Humanistic Psychology 27:1, 118-125

³⁶⁵ Ibid P121.

individuals with a strong sense of personal privacy converge in a shared space³⁶⁶. According to Anderson (2013)³⁶⁷, a citation from *Bowers v. Hardwick*, 478 U.S. 186, 208 (1986) suggests that the core of the Constitution's safeguarding of privacy is in the individual's ability to engage in intimate relationships inside the confines of their own residence³⁶⁸. The correlation between privacy and intimacy has been consistently shown in scholarly literature, exemplified by the comprehensive research conducted by Gerstein in 1978³⁶⁹. Gerstein (1978) emphasises that intimate connections exhibit characteristics of both high intensity and significant relevance for the individuals involved in these relationships³⁷⁰. Allen (1988) posits that there is an argument advocating for the protection of the domain of family life from external observation and interference³⁷¹. Based on the provided definitions, solitude functions as a sanctuary for individual and delicate emotions³⁷². On the other hand, Lever contends that there is frequently a convergence of issues over privacy and inaccessibility³⁷³. According to Allen (2016), the concept of privacy serves as a means of protecting personal intimacy by placing constraints on the intrusion of outsiders into the lives of individuals³⁷⁴. Despite this, the concept of privacy acts as a means of protecting personal intimacy³⁷⁵.

The seventh category pertains to the notions of *Privacy and interpersonal relationships*³⁷⁶. Altman (1975) established the concept of privacy as a mechanism for regulating and

³⁶⁶ Ibid.

³⁶⁷ Heidi Reamer Anderson, "Plotting Privacy as Intimacy" (2013) *Indiana Law Review* 46, No. 2: 311-340

³⁶⁸ Ibid At 311: *Bowers V. Hardwick*, 478 U.S. 186, 208 (1986) (Blackmun, J., Dissenting), Overruled By 539 U.S. 558 (2003). In *Bowers*, The Court Rejected Due Process And Privacy-Based Arguments Challenging The Constitutionality Of A Georgia Statute Criminalizing Sodomy. Also The Case Found Here *Bowers V. Hardwick*, 478 U.S. 186 (1986)

³⁶⁹ Simone Van Der Hof Marga M. "Groothuis Editors Innovating Government Normative, Policy And Technological Dimensions Of Modern Government T.M.C." ASSER PRESS, P 21.

³⁷⁰ Mordechai Gordon "(): Friendship, Intimacy And Humor, Educational Philosophy And Theory" P5. Further: Gerstein, George L., Donald H. Perkel, And K. N. Subramanian. "Identification Of Functionally Related Neural Assemblies." (1978) *Brain Research* 140, No. 1: 43-62.

³⁷¹ Simone Van Der Hof Marga M. "Groothuis Editors Innovating Government Normative, Policy And Technological Dimensions Of Modern Government T.M.C." ASSER PRESS, P 21. Further: Allen AL Uneasy Access: Privacy For Women In A Free Society" (1988) Rowan & Littlefield, Totowa

³⁷² Ibid P21.

³⁷³ Annabelle Lever "The Value Of Privacy A Democratic Conception Of Privacy, Chapter 2" (2015) Author House Press, P15.

³⁷⁴ Allen, Anita L "Protecting One's Own Privacy In A Big Data Economy" (2016). All Faculty Scholarship. 1716. P73.

³⁷⁵ Ibid.

³⁷⁶ Judith Decew "Privacy" *Stanford Encyclopedia Of Philosophy*, First Published Tue May 14, 2002; Substantive Revision Thu Jan 18, 2018. < [Www.Plato.Stanford.Edu/Entries/Privacy/](http://www.plato.stanford.edu/entries/privacy/)>

constraining social interactions³⁷⁷. The level of self-disclosure possesses the potential to affect the level of social engagement, thereby influencing the presence of a theoretical interpersonal barrier³⁷⁸. The concept of privacy is multifaceted and involves a range of dimensions. It is characterised by the deliberate exercise of control over personal boundaries, whether by individuals or collectives³⁷⁹. Moreover, in their seminal work published in (1890), Warren and Brandeis define privacy as the right to be safeguarded against the unauthorised disclosure of personal information, particularly when it occurs through several channels of media transmission³⁸⁰. The notion of private life comprises various dimensions, including emotional states, sensory perceptions, cognitive processes, social interactions, interpersonal connections, textual forms of expression, and verbal communications³⁸¹. In 1965, the Constitutional Court of the United States rendered a decision to construe privacy as a form of entitlement to self-governance, wherein individuals possess the authority to make decisions pertaining to various private affairs³⁸². Therefore, the process of boundary regulation encompasses the act of self-disclosure, which involves the spoken communication of personal information³⁸³. In summary, the act of regulating the disclosure of personal information, both in terms of what is shared and received, can be considered a sort of boundary regulation³⁸⁴. The extent to which we exert control over this exchange of information directly impacts our ability to safeguard our privacy within a certain social relationship³⁸⁵.

³⁷⁷ Altman, I “Environment And Social Behaviour: Privacy, Personal Space, Territory, And Crowding” (1975)

Brooks/Cole, Monterey, P6.

³⁷⁸ Valerian J. Derlega And Alan L. Chaikin “Privacy And Self-Disclosure In Social Relationships JOURNAL OF SOCIAL” (1977) Issues VOLUME 33, NUMBER 3, Old Dominion University, P103.

³⁷⁹ Ibid.

³⁸⁰ Warren SD, Brandeis LD “The Right To Privacy. The Implicit Made Explicit” (1890) Harv Law Rev, Pp 193–220. Also In: Schoeman FD (Ed) “Philosophical Dimensions Of Privacy: An Anthology.” (1984) Cambridge University Press, Cambridge, P195.

³⁸¹ Ibid, Also See Simone Van Der Hof Marga M. “Groothuis Innovating Government Normative, Policy And Technological Dimensions Of Modern Government T.M.C.” ASSER PRESS Volume 20, P20.

³⁸² Griswold V. Connecticut, 381 U.S. 479 (1965). Also See Simone Van Der Hof Marga M. Groothuis Innovating Government Normative, Policy And Technological Dimensions Of Modern Government T.M.C. ASSER PRESS Volume 20, P20.

³⁸³ Valerian J. Derlega And Alan L. Chaikin “Privacy And Self-Disclosure In Social Relationships JOURNAL OF SOCIAL” (1977) Issues VOLUME 33, NUMBER 3, Old Dominion University, P103.

³⁸⁴ Ibid.

³⁸⁵ Ibid.

*Privacy and minimal mobility*³⁸⁶ are included in the eighth type of privacy, which deals with exclusive access to one's own room or space³⁸⁷. Privacy defends individuals from unauthorised disclosure to others, whether this is physical contact, sensitive data, or our object of concern³⁸⁸. Data privacy has to do with the convenience of others and their perception of personal data, the degree to which access can be made and the extent to which the interest of other individuals can be drawn³⁸⁹. Thus, privacy is better understood as an interest in restricting access and when an individual is totally unavailable to anyone else, he or she can have absolute secrecy³⁹⁰. Data privacy can be accomplished by means of three different but intertwined securities — that an individual does not have knowledge about an entity, respects "anonymity" so that a person does not rely on an individual, and "isolation" so that a person has no direct connection to another person³⁹¹.

*Privacy limitations*³⁹² constitute the ninth type of privacy, raising the question of limits the principle of privacy might impose on lifestyles and families, for instance, on birth control, abortion, and mixed marriages. Actual categories of privacy issues are defined, and questions of freedom are posed³⁹³. Barnett³⁹⁴ unequivocally removed any doubt regarding the right of a citizen to make substantial personal choices about family and activities as legitimate questions

³⁸⁶ Ma, Chris YT, David KY Yau, Nung Kwan Yip, And Nageswara SV Rao. "Privacy Vulnerability Of Published Anonymous Mobility Traces" (2010) In Proceedings Of The Sixteenth Annual International Conference On Mobile Computing And Networking, Pp. 185-196.

³⁸⁷ Judith Decew Privacy Stanford Encyclopedia Of Philosophy, First Published Tue May 14, 2002; Substantive Revision Thu Jan 18, 2018. < www.Plato.Stanford.Edu/Entries/Privacy/>.

³⁸⁸ Andrienko, Natalia, Gennady Andrienko, Georg Fuchs, And Piotr Jankowski. "Scalable And Privacy-Respectful Interactive Discovery Of Place Semantics From Human Mobility Traces" (2016) Information Visualization 15, No. 2 : 117-153.

³⁸⁹ Gao, Jing, Lijun Sun, And Ming Cai. "Quantifying Privacy Vulnerability Of Individual Mobility Traces: A Case Study Of License Plate Recognition Data" (2019) Transportation Research Part C: Emerging Technologies 104: 78-94.

³⁹⁰ Thompson, Paul B. "Privacy, Secrecy And Security" (2001) Ethics And Information Technology 3, No. 1: 13-19.

³⁹¹ Logrippo, Luigi. "Multi-Level Access Control, Directed Graphs And Partial Orders In Flow Control For Data Secrecy And Privacy" (2017) In International Symposium On Foundations And Practice Of Security, Pp. 111-123. Springer, Cham.

³⁹² Allen, Anita L. "The Virtuous Spy: Privacy As An Ethical Limit" (2008) The Monist 91, No. 1: 3-22.

³⁹³ Ahmed, Tousif, Apu Kapadia, Venkatesh Potluri, And Manohar Swaminathan. "Up To A Limit? Privacy Concerns Of Bystanders And Their Willingness To Share Additional Information With Visually Impaired Users Of Assistive Technologies" (2018) Proceedings Of The ACM On Interactive, Mobile, Wearable And Ubiquitous Technologies 2, No. 3 : 1-27.

³⁹⁴ Patten, Christi, Therese Barnett, And Daniel Houlihan. "Ethics In Marital And Family Therapy: A Review Of The Literature" (1991) Professional Psychology: Research And Practice 22, No. 2 : 171.

of privacy³⁹⁵. Some also emphasise the value of privacy standards that allow users to monitor access to them, and standards that enhance the self-expression of persons and the growth of their social relationships³⁹⁶. Privacy also guarantees protection from violence and social domination when viewing or managing sensitive information³⁹⁷.

As explained above, the diversity of types of privacy indicates that every person has their own culture and characteristics, so that it is difficult to transfer, and subordinate a given culture to another. Types of privacy are defined in such a way that specific data-protection legislation cannot be adopted in total by any system in the world and made subject to the Kingdom of Saudi Arabia, so it must be studied and developed in a way that reflects the culture, privacy and society of this or any particular country, since matters of privacy may differ from one culture to another.

Privacy and technology

Both privacy and technology continue to encounter a variety of obstacles³⁹⁸. As a result of advances in technology and other factors, modernisation efforts in legal theory are becoming increasingly possible³⁹⁹. For a long time, legal experts in the preservation of privacy have acknowledged that advances in technology have transformed the means of both safeguarding and abusing individuals' private⁴⁰⁰. Because of their ability to disseminate information⁴⁰¹, recent developments in fields such as the written media, broadcast materials, and even information technology all have the potential to play a part in various types of invasions of privacy. In the United States of America, the concept of a legal right to one's privacy is a relatively new legal

³⁹⁵ Barnett, Larry D. "Population Growth, Population Organization Participants, And The Right Of Privacy" (1978) Fam. LQ 12: 37.

³⁹⁶ Barnett, Stephen R. "The Right To One's Own Image: Publicity And Privacy Rights In The United States And Spain" (1999) The American Journal Of Comparative Law 47, No. 4: 555-581.

³⁹⁷ Ibid.

³⁹⁸ Jeroen Van Den Hoven, Martijn Blaauw, Wolter Pieters, And Martijn Warnier "Privacy And Information Technology" Stanford Encyclopedia Of Philosophy, First Published Thu Nov 20, 2014; Substantive Revision Wed Oct 30, 2019. www.Plato.Stanford.Edu.

³⁹⁹ Agre, Philip E., And Marc Rotenberg, Eds. "Technology And Privacy: The New Landscape" (1998) Mit Press.

⁴⁰⁰ DeVries, Will Thomas. "Protecting privacy in the digital age." (2003) Berkeley Tech. LJ 18: 283. Also see Nissenbaum, Helen. "Protecting privacy in an information age: The problem of privacy in public" (2020) In The ethics of information technologies, pp. 141-178. Routledge.

⁴⁰¹ Meingast, Marci, Tanya Roosta, And Shankar Sastry. "Security And Privacy Issues With Health Care Information Technology" (2006) In 2006 International Conference Of The IEEE Engineering In Medicine And Biology Society, Pp. 5453-5458.

doctrine⁴⁰². This concept may be traced back to a scholarly article that was written by Samuel Warren and Louis Brandeis and published in a legal review journal in the month of December 1890⁴⁰³. Because of the limited legal remedies that were available during the beginning of the technological era, particularly in relation to the advent of the camera, there were situations that occurred in which personal information or photos of persons were collected without their explicit agreement⁴⁰⁴. An individual could not be aware that an outside organisation had acquired their personal information, photograph, or identity without their permission in certain circumstances⁴⁰⁵.

The concept of privacy, which involves the acknowledgement and protection of personal information, has been widely acknowledged throughout history. Nevertheless, the incorporation of technology has given rise to ongoing apprehensions surrounding privacy throughout contemporary times⁴⁰⁶. The proliferation of many information technologies, particularly the introduction of computers during the twentieth century, has greatly heightened the significance of privacy as a critical global issue⁴⁰⁷. However, the prevalence of fear continues to be substantial in contemporary times⁴⁰⁸. Thomas Nagel, a prominent American philosopher, asserts that there has been a notable deterioration in the crucial yet fragile principles governing personal privacy within the United States over the past two decades⁴⁰⁹.

⁴⁰² Glancy, Dorothy J. "Invention Of The Right To Privacy, The." (1979) *Ariz. L. Rev.* 21: 1.

⁴⁰³ *Ibid* At P1.

⁴⁰⁴ Cayce Myers "Warren, Samuel & Louis Brandeis. The Right To Privacy" (2020) 4 *Harv. L. Rev.* 193 (1890), *Communication Law And Policy*, 25:4, 519-522, DOI: 10.1080/10811680.2020.1805984

⁴⁰⁵ *Ibid*.

⁴⁰⁶ Solove, Daniel J. "Understanding Privacy" (2008), P4.

⁴⁰⁷ Jeroen Van Den Hoven, Martijn Blaauw, Wolter Pieters, And Martijn Warnier "Privacy And Information Technology" *Stanford Encyclopedia Of Philosophy*, First Published Thu Nov 20, 2014; Substantive Revision Wed Oct 30, 2019. [.Www.Plato.Stanford.Edu](http://www.Plato.Stanford.Edu).

⁴⁰⁸ Solove, Daniel J. "Understanding Privacy." (2008), P5.

⁴⁰⁹ Nagel, Thomas. "Concealment And Exposure." (1998) *Philosophy & Public Affairs* 27, No. 1: 3-30. Also See Solove, Daniel J. "Understanding Privacy." (2008), P5.

One of the prominent issues pertains to the ongoing conflict between the principles of privacy and the advancements in technology⁴¹⁰. Consider the concealed surveillance device⁴¹¹, also known as a hidden camera, which is primarily intended for security and surveillance purposes. These devices are utilised both within residential settings and in public establishments, including educational institutions, medical facilities, and commercial premises⁴¹². Conversely, there are others who perceive it as a mechanism for surveillance and a means to violate the sacredness and confidentiality of individuals' lives, regardless of their geographical location⁴¹³. Surveillance devices, such as concealed cameras, have the capability to monitor and exhibit an individual's unscripted behaviours, encompassing even the most intimate actions, across many contexts⁴¹⁴. It is plausible for individuals to remain oblivious to the existence of these cameras, whether within their personal dwellings or in public areas⁴¹⁵.

The rapid advancement of technology and its widespread incorporation into various aspects of life have led to the inevitable rise of concerns around privacy⁴¹⁶. These concerns involve a range of issues, including the facilitation of identity theft through data mining, the misuse of information, instances of cyberbullying and harassment, and the possible risks related with location settings⁴¹⁷. These worries often arise when a new technology is introduced⁴¹⁸. According to Kontzer and Greenemeier (2006), contemporary technology has facilitated data collecting and integration to an extent that was previously inconceivable, resulting in both advantageous outcomes and unforeseen repercussions⁴¹⁹. The pervasive integration of technology into individuals' daily routines and established behaviours has given rise to a

⁴¹⁰ Kwasny, Michelle, Kelly Caine, Wendy A. Rogers, And Arthur D. Fisk. "Privacy And Technology: Folk Definitions And Perspectives" (2008) In CHI'08 Extended Abstracts On Human Factors In Computing Systems, Pp. 3291-3296.

⁴¹¹ Senior, Andrew, Sharath Pankanti, Arun Hampapur, Lisa Brown, Ying-Li Tian, Ahmet Ekin, Jonathan Connell, Chiao Fe Shu, And Max Lu. "Enabling Video Privacy Through Computer Vision" (2005) IEEE Security & Privacy 3, No. 3: 50-57.

⁴¹² Senior, A., Pankanti, S., Hampapur, A., Brown, L., Tian, Y.L., Ekin, A., Connell, J., Shu, C.F. And Lu, M., "Enabling Video Privacy Through Computer Vision" (2005) IEEE Security & Privacy, 3(3), Pp.50-57.

⁴¹³ Slobogin, Christopher. "Public Privacy: Camera Surveillance Of Public Places And The Right To Anonymity" (2002) Miss. Lj 72: 213.

⁴¹⁴ Moncrieff, Simon, Svetha Venkatesh, And Geoff AW West. "Dynamic Privacy In Public Surveillance" (2009) Computer 42, No. 9: 22-28.

⁴¹⁵ Ibid.

⁴¹⁶ Santanen, Eric. "The Value Of Protecting Privacy." (2019) Business Horizons 62, No. 1: 5-14.

⁴¹⁷ Amanda Hetler "6 Common Social Media Privacy Issues" Published 30 June 2023 At Teachtarget <www.teachtarget.com/whatis/feature/6-common-social-media-privacy-issues>.

⁴¹⁸ Ibid.

⁴¹⁹ Kontzer, Tony, And Larry Greenemeier. "Sad State Of Data Security." (2006) Informationweek 1070: 18-21. Also See Conger, Sue, Joanne H. Pratt, And Karen D. Loch. "Personal Information Privacy And Emerging Technologies" (2013) Information Systems Journal 23, No. 5: 401-417.

phenomenon characterised by a restricted acknowledgement of the potential drawbacks and constraints associated with emerging technologies⁴²⁰. The observed behaviour can be attributed directly to the extensive utilisation of technology⁴²¹. Despite the widespread awareness of the notion of privacy in the domain of technology, individuals possess a restricted understanding of this idea⁴²². Below is an exemplification of certain novel technological advancements.

Facial recognition systems⁴²³ are usually used to identify individuals by comparing selected faces to images stored in databases via tracking cameras and video clips⁴²⁴. At a time when the fields and applications of this technology are increasing for various security and commercial reasons, this technology poses ethical questions concerning the infringement of citizens' privacy without any legal or legislative restrictions governing its application⁴²⁵. Facial recognition techniques convert data into digital form that matches data stored in databases by analysing the features and dimensions of the human face, for example the shape of the nose, distance between the eyes, analogy between both ears, the contours of the lips, etc⁴²⁶. This technology is then used to classify the owner of the face, according to each device and analysis phase, within fractions of a second or a few seconds⁴²⁷.

Due to the ease of remotely identifying facial data compared with reliance on fingerprints and voice, this technology has spread extensively to other arenas. It is not simple to distinguish a voice in public or crowded places and if a person has a cold, the voice will change⁴²⁸. For

⁴²⁰ Santanen, Eric. "The Value Of Protecting Privacy." (2019) *Business Horizons* 62, No. 1: 5-14.

⁴²¹ Ibid.

⁴²² Ibid.

⁴²³ Cavoukian, Ann, Tom Marinelli, Alex Stoianov, Karl Martin, Konstantinos N. Plataniotis, Michelle Chibba, Les Desouza, And Soren Frederiksen. "Biometric Encryption: Creating A Privacy-Preserving 'Watch-List' Facial Recognition System." (2013) In *Security And Privacy In Biometrics*, Pp. 215-238. Springer, London.

⁴²⁴ Erkin, Zekeriya, Martin Franz, Jorge Guajardo, Stefan Katzenbeisser, Inald Lagendijk, And Tomas Toft. "Privacy-Preserving Face Recognition" (2009) In *International Symposium On Privacy Enhancing Technologies Symposium*, Pp. 235-253. Springer, Berlin, Heidelberg.

⁴²⁵ Buckley, Ben, And Matt Hunter. "Say Cheese! Privacy And Facial Recognition" (2011) *Computer Law & Security Review* 27, No. 6: 637-640.

⁴²⁶ Erkin, Zekeriya, Martin Franz, Jorge Guajardo, Stefan Katzenbeisser, Inald Lagendijk, and Tomas Toft. "Privacy-preserving face recognition." (In *Privacy Enhancing Technologies: 9th International Symposium, PETS 2009*, Seattle, WA, USA, August 5-7, 2009. *Proceedings 9*, pp. 235-253. Springer Berlin Heidelberg, 2009).

⁴²⁷ De Andrade, Norberto Nuno Gomes, Aaron Martin, And Shara Monteleone. "All The Better To See You With, My Dear: Facial Recognition And Privacy In Online Social Networks" (2013) *IEEE Security & Privacy* 11, No. 3: 21-28.

⁴²⁸ Jain, Anil K., Arun Ross, and Salil Prabhakar. "An introduction to biometric recognition." (2004) *IEEE Transactions on circuits and systems for video technology* 14, no. 1: 4-20.

several reasons⁴²⁹, a fingerprint can be distorted, by burning for example, and due to ophthalmic diseases, an eye print can be altered. There are privacy problems, however, because the random capturing, storing, and reviewing of public photos violate the right to privacy⁴³⁰. There is also the lack of regulatory mechanisms since, despite several international attempts to enforce legislation, there are no clear laws that govern this technology⁴³¹. This gap in the law therefore opens the door to violence, in particular, if citizens' photos are acquired and used without their knowledge and permission⁴³².

The use of mobile telephones⁴³³ and the transmission of data through cell towers⁴³⁴ are a part of everyday life throughout the world. The manufacture of this technology was not intended seriously and explicitly⁴³⁵ to protect the privacy between users, but rather to be a means of direct, rapid contact between users. Despite recent developments, the technology on which cell phones and towers depend has not progressed enough to protect consumer confidentiality. Legislation to ensure adequate privacy often plays an important role in protecting cell phone users and mobile towers in general, since the two problems are not adequately connected to provide the requisite security because of the tensions between privacy legislation and technology⁴³⁶.

⁴²⁹ Anderson, William Robert, Steven E. Turner, And Steven Pujia. "Video-Based Privacy Supporting System" (2019) U.S. Patent 10,282,563, Issued May 7, 2019.

⁴³⁰ Mazura, Jan C., Krishna Juluru, Joseph J. Chen, Tara A. Morgan, Majnu John, And Eliot L. Siegel. "Facial Recognition Software Success Rates For The Identification Of 3D Surface Reconstructed Facial Images: Implications For Patient Privacy And Security." (2012) *Journal Of Digital Imaging* 25, No. 3: 347-351.

⁴³¹ Kindt, Els J. "Transparency and Accountability Mechanisms for Facial Recognition." (2021) *The German Marshall Fund of the United States*. Also see Wright, Elias. "The future of facial recognition is not fully known: Developing privacy and security regulatory mechanisms for facial recognition in the retail sector." (2018) *Fordham Intell. Prop. Media & Ent. LJ* 29: 611.

⁴³² Bowyer, Kevin W. "Face Recognition Technology: Security Versus Privacy" (2004) *IEEE Technology And Society Magazine* 23, No. 1 : 9-19.

⁴³³ Urban, Jennifer M., Chris Jay Hoofnagle, And Su Li. "Mobile Phones And Privacy" (2012) *BCLT Research Paper Series*.

⁴³⁴ Smith, Alisa, Sean Madden, And Robert P. Barton. "An Empirical Examination Of Societal Expectations Of Privacy In The Digital Age Of GPS, Cell Phone Towers, & Drones" (2016) *Alb. LJ Sci. & Tech.* 26: 111.

⁴³⁵ Minch, Robert P. "Privacy Issues In Location-Aware Mobile Devices" (2004) In *37th Annual Hawaii International Conference On System Sciences. Proceedings Of The*, Pp. 10-Pp.

⁴³⁶ Acs, Gergely, And Claude Castelluccia. "A Case Study: Privacy Preserving Release Of Spatio-Temporal Density In Paris" (2014) In *Proceedings Of The 20th ACM SIGKDD International Conference On Knowledge Discovery And Data Mining*, Pp. 1679-1688.

In the Carpenter case⁴³⁷, the US government⁴³⁸ used data without warrant to determine the location of the defendant's telephone⁴³⁹. The accused found himself in the vicinity of four robberies in the same city⁴⁴⁰. The government's argument was as follows: if your call data are not private, the data your telephone sent to the communication tower of the company are not private either. However, Judge Roberts⁴⁴¹ refused to accept that individuals have the right, wherever they are, to maintain privacy. In this case⁴⁴², he pointed out that the five judges of the Supreme Court⁴⁴³ had unanimously agreed that the use of GPS information without prior permission from the court was unacceptable. Thus, by a majority of four out of five judges⁴⁴⁴, the US Supreme Court took an important step, since it acknowledged that the government has no right to use cell information to discover where the user was found without prior consent.

The need for balance between privacy and technology is a convincing argument to resolve privacy violations where privacy and digital technology clash⁴⁴⁵. For example, tests for drugs and alcohol for pilots seem fully justified out of concern for public safety⁴⁴⁶. Modern precise technology is developed in such a way as to strike an equilibrium between respecting privacy and the need to use these technologies, rather than overusing or compromising privacy as a reason for achieving an unknown objective⁴⁴⁷. In contexts of public protection and health, new technology can be beneficial. However, anxiety linked to technical use and the lack of

⁴³⁷ Peltz-Steele, Richard J. "Carpenter Privacy Case Vexes Justices, While Tech Giant Microsoft Battles Government In Second US Supreme Court Privacy Case With International Implications" (2017) ABA Section Of International Law, Privacy, Cybersecurity & Digital Rights Committee Quarterly Newsletter, Winter.

⁴³⁸ Cottrill, Caitlin D. "Location Privacy: Who Protects?" (2011) Journal Of The Urban & Regional Information Systems Association 23, No. 2.

⁴³⁹ Caminker, Evan. "Location Tracking And Digital Data: Can Carpenter Build A Stable Privacy Doctrine?" (2019) The Supreme Court Review 2018, No. 1: 411-481.

⁴⁴⁰ Henderson, Stephen E. "Carpenter V. United States And The Fourth Amendment: The Best Way Forward" (2017) Wm. & Mary Bill Rts. J. 26: 495.

⁴⁴¹ Gray, David. "Collective Rights And The Fourth Amendment After Carpenter" (2019) Md. L. Rev. 79: 66.

⁴⁴² Ibis.

⁴⁴³ Joh, Elizabeth E. "Artificial Intelligence And Policing: Hints In The Carpenter Decision" (2018) Ohio St. J. Crim. L. 16: 281.

⁴⁴⁴ Peltz-Steele, Richard J. "Carpenter Privacy Case Vexes Justices, While Tech Giant Microsoft Battles Government In Second US Supreme Court Privacy Case With International Implications" (2017) ABA Section Of International Law, Privacy, Cybersecurity & Digital Rights Committee Quarterly Newsletter, Winter.

⁴⁴⁵ Wang, Tian, Md Zakirul Alam Bhuiyan, Guojun Wang, Lianyong Qi, Jie Wu, And Thair Hayajneh. "Preserving Balance Between Privacy And Data Integrity In Edge-Assisted Internet Of Things" (2019) IEEE Internet Of Things Journal 7, No. 4: 2679-2689.

⁴⁴⁶ See P95-119-131-136 And 150 Of Legitimate Privacy Violations/Breach.

⁴⁴⁷ Myers, Elizabeth S. "Containing Cell Phones: Restoring The Balance Between Privacy And Government Interests In Fourth Amendment Cell Phone Searches And Seizures" (2015) Suffolk UL Rev. 48: 203.

knowledge often harms privacy. A compromise will need to be found between privacy concerns and public protection considerations⁴⁴⁸.

Historically, the increasing capacity to collect and transmit information has had negative implications for the protection of privacy⁴⁴⁹. The more information systems are used, the more information is held in many databases around the world, and the subjects of that information do not know and cannot monitor⁴⁵⁰ information that others may have or how they may use it. Such information is likely to be sold for profit or may be used for reasons unknown to and not authorised by the people concerned⁴⁵¹. The principle of privacy of information is increasingly relevant as information management systems expand⁴⁵². However, the consequences of privacy infringement can also lead to extremes. Privacy regulations have been amended in several countries to address technical changes and address these concerns and protect privacy rights⁴⁵³. However, the new global privacy scheme is being criticised for being incoherent and ineffectual⁴⁵⁴.

Conclusion

Regarding the interpretation of privacy safeguards, the term “privacy”⁴⁵⁵ is generally coupled with the phrase “data protection”⁴⁵⁶. Academics have long debated the legitimacy of the popular concept of privacy, which is the right to be alone. However, the notion of "right to be left

⁴⁴⁸ Chawki, Mohamed. “Anonymity In Cyberspace: Finding The Balance Between Privacy And Security” (2010) *International Journal Of Technology Transfer And Commercialisation* 9, No. 3: 183-199.

⁴⁴⁹ Westin, Alan F. "Social and political dimensions of privacy." (2003) *Journal of social issues* 59, no. 2: 431-453. Also see Nissenbaum, Helen. "Protecting privacy in an information age: The problem of privacy in public." (2020) In *The ethics of information technologies*, pp. 141-178. Routledge.

⁴⁵⁰ Pardo, Abelardo, And George Siemens. “Ethical And Privacy Principles For Learning Analytics” (2014) *British Journal Of Educational Technology* 45, No. 3: 438-450.

⁴⁵¹ Acquisti, Alessandro, Curtis Taylor, and Liad Wagman. "The economics of privacy" (2016) *Journal of economic Literature* 54, no. 2: 442-492.

⁴⁵² Perera, Charith, Rajiv Ranjan, Lizhe Wang, Samee Khan, And Albert Zomaya. “Privacy Of Big Data In The Internet Of Things Era” *IEEE IT Professional Magazine* (17 2015: 32-39.)

⁴⁵³ Borgesius, Frederik Zuiderveen, And Joost Poort. “Online Price Discrimination And EU Data Privacy Law” (2017) *Journal Of Consumer Policy* 40, No. 3 : 347-366.

⁴⁵⁴ Richards, Neil M., And Daniel J. Solove. “Prosser's Privacy Law: A Mixed Legacy” (2010) *Calif. L. Rev.* 98 : 1887.

⁴⁵⁵ Koops, Bert-Jaap, And Ronald Leenes. “Privacy Regulation Cannot Be Hardcoded. A Critical Comment On The ‘Privacy By Design’ provision In Data-Protection Law” (2014) *International Review Of Law, Computers & Technology* 28, No. 2: 159-171.

⁴⁵⁶ Finn, Rachel L., And David Wright. “Privacy, Data Protection And Ethics For Civil Drone Practice: A Survey Of Industry, Regulators And Civil Society Organisations” (2016) *Computer Law & Security Review* 32, No. 4 : 577-586.

alone⁴⁵⁷" is highly prized in matters of personal privacy. Originally created by Judge Cooley⁴⁵⁸ to explain why trespass against a person is unlawful under tort law, Warren and Brandeis are widely credited with popularising the term in their 1890⁴⁵⁹ article. There has been a lot of intellectual opposition to the Warren and Brandeis⁴⁶⁰ formulation. Its vagueness is the first issue⁴⁶¹. The text provides neither conceptual nor practical guidance on the scope of the right because neither the "right to be left alone" nor the idea of "inviolable personality"⁴⁶² are clearly defined. The phrase "right to be left alone" itself seems to be less a definition of privacy than it does merely a description of one example of it, which is a similar criticism⁴⁶³. The second criticism is that this notion of privacy is incredibly broad, which is related to the preceding ambiguity⁴⁶⁴. As Gavison⁴⁶⁵ argues on the Warren and Brandeis privacy formulation, "[it] encompasses nearly every conceivable complaint that could ever be made."⁴⁶⁶ The use of the phrase "right to be left alone" in American constitutional law is an illustration of such a conceptual over broadness⁴⁶⁷. In this sense, "right to be left alone" is commonly associated with the concept of privacy and is considered to entail "living one's life as one pleases." This exemplifies conceptual overextension⁴⁶⁸. This "substantive" notion of privacy, which provides a sphere of decisional autonomy, is the basis for the current legal rationale of abortion in the United States⁴⁶⁹. This justification is based on the *Roe v. Wade*⁴⁷⁰ ruling. It has received a significant deal of criticism since it is viewed as an "assertion of liberty per se" rather than a "claim of privacy."⁴⁷¹

⁴⁵⁷ Thomson, Judith Jarvis. "The Right To Privacy." (1975) *Philosophy & Public Affairs* (1975): 295-314.

⁴⁵⁸ Thomas M Cooley, "A Treatise On The Law Of Torts" (1888) 2d Ed Chicago: Callaghan, At 29.

⁴⁵⁹ Kramer, Irwin R. "The Birth Of Privacy Law: A Century Since Warren And Brandeis." (1989) *Cath. UL Rev.* 39: 703.

⁴⁶⁰ Kalven Jr, Harry. "Privacy In Tort Law--Were Warren And Brandeis Wrong." (1966) *Law & Contemp. Probs.* 31: 326.

⁴⁶¹ Gavison, Ruth. "Privacy And The Limits Of Law." (1980) *The Yale Law Journal* 89, No. 3: 421-471.

⁴⁶² Bruyer, Richard B. "Privacy: A Review And Critique Of The Literature." (2005) *Alta. L. Rev.* 43: 553.

⁴⁶³ Cox, Neville. "Hilary Delany And Eoin Carolan, The Right To Privacy: A Doctrinal And Comparative Analysis." (2009): 473.

⁴⁶⁴ Gavison, Ruth. "Privacy And The Limits Of Law." (1980) *The Yale Law Journal* 89, No. 3: 421-471.

⁴⁶⁵ *Ibid.*

⁴⁶⁶ *Ibid.*

⁴⁶⁷ Fenwick, H. M., And Gavin Phillipson "Media Freedom Under The Human Rights Act" (2006) Oxford University Press.

⁴⁶⁸ Cox, Neville. "Hilary Delany And Eoin Carolan, The Right To Privacy: A Doctrinal And Comparative Analysis." (2009): 473.

⁴⁶⁹ Rubenfeld, Jed. "The right of privacy." (1989) *Harvard Law Review*: 737-807.

⁴⁷⁰ Levine, Phillip B., Douglas Staiger, Thomas J. Kane, And David J. Zimmerman. "Roe V Wade And American Fertility." (1999) *American Journal Of Public Health* 89, No. 2: 199-203.

⁴⁷¹ Hunt, Chris DL. "Conceptualizing Privacy And Elucidating Its Importance: Foundational Considerations For The Development Of Canada's Fledgling Privacy Tort" (2011) 37. *Queen's LJ* 1: 167.

Though some have argued that the right to privacy has not been widely established, a number of universal concepts are regularly presented⁴⁷². Others have argued that privacy is a condition where no one should have unreported personal data about anyone else⁴⁷³. As an alternative, privacy might be defined as the imposition of limits on the right of individuals or groups to intervene⁴⁷⁴. Therefore, Professor Nicole Moreham and other legal experts, international treaties, and privacy legislation from around the globe are the current navigators in the development of a worldwide applicable concept of privacy⁴⁷⁵. To elaborate, the right to privacy is described as including all parts of a person's life and all information that a person in a social environment would fairly expect to be within their control in terms of dissemination and disclosure, if they so choose⁴⁷⁶. In a social situation, for instance, a person would expect to have choice over whether or not particular information about themselves is shared with other individuals. This illustrates that "privacy protection means protection against unauthorised access by others" in reference to other individuals. Simply expressed, "control" refers to the capacity to answer "yes" or "no"⁴⁷⁷. However, just like with any other alternative, exerting this authority does not always guarantee that one will get their way. In this way, it parallels an argument made by Professor Nicole Moreham, who argued that "privacy is best defined as the state of "desired "inaccess" or as "freedom from unwanted access"⁴⁷⁸". A person is said to be in a state of privacy if they are only seen, heard, touched, or learned about if and only if and only to the extent that they choose to be so, and only if and only to the extent that they are seen, heard, or learned about⁴⁷⁹.

Privacy is an individual's special privilege and a human right guaranteed by various rules because it prohibits others from intruding and detracting from it. Data protection therefore

⁴⁷² Rubinfeld, Jed. "The right of privacy" (1989) *Harvard Law Review*: 737-807.

⁴⁷³ Moore, Adam D. "Privacy: its meaning and value." (2003) *American Philosophical Quarterly* 40, no. 3: 215-227.

⁴⁷⁴ Gavison, Ruth. "Privacy and the Limits of Law." (1980) *The Yale law journal* 89, no. 3: 421-471.

⁴⁷⁵ Moreham, N A And Others (Eds), Tugendhat And Christie "The Law Of Privacy And The Media" (2016) New York ; Online Edn, Oxford Academic.

⁴⁷⁶ Susser, Daniel, Beate Roessler, And Helen Nissenbaum. "Technology, Autonomy, And Manipulation." (2019) *Internet Policy Review* 8, No. 2.

⁴⁷⁷ Hickford, Mark. "A Conceptual Approach To Privacy." (NZLC MP19, Report For The New Zealand Law Commission 1 November 2007).

⁴⁷⁸ N A Moreham 'Privacy In The Common Law: A Doctrinal And Theoretical Analysis' (2005) 121 *LQR* 628, 636.

⁴⁷⁹ Hickford, Mark. "A Conceptual Approach To Privacy." (NZLC MP19, Report For The New Zealand Law Commission 1 November 2007).

draws on natural rights' theory and is typically related to emerging information and communication technologies. They are related to information technology by the essence of privacy rights and the users of this technology are individuals whose privacy is assured by laws and regulations. Consequently, the preservation of an individual's privacy is a basic component of our right to defend not only our lives, but also the world, the environment, and all that is properly ours, including developing technology. The right to privacy helps us to decide whether or not we manage our information and personal existence, since nobody can invade other people's personal territory without their permission. In addition, privacy laws would enable us to find out who has information on us, and when and where, how, and when we use the portions, we wish to reveal. There is no question, therefore, that the concept of privacy is an essential indication of good interactions in life, and conversely, without guarantees of privacy, the circumstances of life can result in anger, dissatisfaction and violence.

It should be noted that privacy conflicts with other values within social dimensions⁴⁸⁰. Active discourse regarding data and privacy, for example, is based on the social dimension of privacy and the advancement of technology, since private life is a core value in which equality and the dignity of the person can be seen within free, autonomous societies⁴⁸¹. The latest feature is the troubling advancement of technology that invades anonymity and impacts people and culture⁴⁸². Privacy in law, media, communications, healthcare, and the economy has entered into policy and social activities. It has become an important topic in many sciences, including engineering, health sciences and others⁴⁸³. This development is also a strong motivation to pursue modern solutions to the quest for privacy and social dimension in general⁴⁸⁴.

⁴⁸⁰ Hmielowski, Jay D., Amanda D. Boyd, Genevieve Harvey, And Jinho Joo. "The Social Dimensions Of Smart Meters In The United States: Demographics, Privacy, And Technology Readiness" (2019) *Energy Research & Social Science* 55: 189-197.

⁴⁸¹ Westin, Alan F. "Social And Political Dimensions Of Privacy" (2003) *Journal Of Social Issues* 59, No. 2: 431-453.

⁴⁸² Schoeman, Ferdinand David, Ed. "Philosophical Dimensions Of Privacy: An Anthology" (1984) Cambridge University Press.

⁴⁸³ Sheehan, Kim Bartel, And Mariea Grubbs Hoy. "Dimensions Of Privacy Concern Among Online Consumers" (2000) *Journal Of Public Policy & Marketing* 19, No. : 62-73.

⁴⁸⁴ Hmielowski, Jay D., Amanda D. Boyd, Genevieve Harvey, And Jinho Joo. "The Social Dimensions Of Smart Meters In The United States: Demographics, Privacy, And Technology Readiness." (2019) *Energy Research & Social Science* 55: 189-197.

As regards privacy and other principles⁴⁸⁵, it can be imagined for example, that certain private information could be made public without the knowledge of the person concerned. Such information might be gained by data extraction capabilities, redefinition of anonymous data sets, thermal sensor cameras, vehicle plate readers, predictive analysis and facial recognition⁴⁸⁶.

The implementation of privacy in any situation for individuals or at the level of a country can safeguard reputation, respect, social management, trust, and freedom. Thus, the recommendation of the thesis to protect the privacy of cellular network data in Saudi Arabia is the primary focus of this study since protection is vital for the national aspiration to achieve the goal of becoming more proactive among other nations.

⁴⁸⁵ Wright, David, And Charles Raab. "Privacy Principles, Risks And Harms" (2014) *International Review Of Law, Computers & Technology* 28, No. 3: 277-298.

⁴⁸⁶ Cavoukian, Ann. "Privacy By Design: The 7 Foundational Principles" (2009) *Information And Privacy Commissioner Of Ontario, Canada* 5.

Chapter Two: Cellular Networks Infrastructure and Privacy

Introduction

Digital technology has become a pioneer in global economic, social and political change, and nations will have little opportunity to advance in this age unless they take part in the information transformation⁴⁸⁷. Major steps should be taken by nations as they develop their information technology processes to emulate those in advanced countries, and thus mainly concentrate on key enterprises, with priority being given to protecting users' data and rights in order to satisfy the needs of all individuals.

Information infrastructure depends on continuously developing technology innovation products, such as smartphones, robots, and computers, software operating systems, brain-computer interface, swallowable medical devices, generative adversarial networks, algorithms, artificial intelligence, blockchains, audio-visual tapes, coaxial cable, satellites, balloon satellites, optical communication lines, microwave networks, receivers, scanners, copiers, and printers, in addition to advances in computing and information operations and network technologies. However, information technology infrastructure stretches beyond hardware and software, and covers applications, operations and relationships⁴⁸⁸. There may be the material itself, for example, sound and photos, library archives or other media, irrespective of their purpose, and also rules, customs, interfaces, and broadcast codes to enable network communications and protect the privacy and safety of network-based information⁴⁸⁹. The most critical factor is the "human being" who works to create and take advantage of information, develop software systems and services, and the regulation required for the achievement of information technology objectives⁴⁹⁰.

⁴⁸⁷ Schwab, Klaus. "The Fourth Industrial Revolution" (2017) Currency.

⁴⁸⁸ Tallon, Paul P., And Alain Pinsonneault. "Competing Perspectives On The Link Between Strategic Information Technology Alignment And Organizational Agility: Insights From A Mediation Model" (2011) MIS Quarterly: 463-486.

⁴⁸⁹ He, Yuwen, Chunhong Zhang, Xinning Zhu, And Yang Ji. "Generative Adversarial Network Based Image Privacy Protection Algorithm." (In Tenth International Conference On Graphics And Image Processing ICGIP 2018, Vol. 11069, Pp. 635-645. SPIE, 2019.)

⁴⁹⁰ Solove, Daniel J. "Why Privacy Matters Even If You Have 'Nothing To Hide'" (2011) Chronicle Of Higher Education 15.

Information systems, for instance, allow for health care to be implemented using telemedicine by connecting physicians with more financial resources in remote areas for challenging diagnostic consultations⁴⁹¹. If a computer and wireless link are available, a consultant can provide research databases and direct inquiries, and telecommunications providers can provide telecommunication services, an essential gift for physicians working remotely if fibre optic networks are available. Information infrastructure can also enhance factory productivity, speed the manufacture and distribution of new equipment and services, open new employment and green markets, boost domestic and foreign trade and promote the flow of information⁴⁹². On a policy level, information technology can be used to strengthen the political involvement of people by developing open, interactive electronic conferences⁴⁹³. The required legal structure to safeguard user privacy and meet the goal of a proper and secure use of technological advancement is therefore essential for technology and information technology management. This chapter will therefore discuss the meaning of the word 'infrastructure', will illustrate information technology frameworks, and also the cellular data infrastructure for mobile networks. Finally, the chapter will explain how information technology infrastructure is related to privacy.

Notion of infrastructure

The quest for the meaning of a specific word relies heavily on the linguistic method of semantics which contrasts formulas in order to differentiate the linguistic roots and derivations of words. Semantics also draws on the linguistic history of civilisations since, besides contrasting languages, it uses the study of cultures, institutions and other sciences and arts to determine language issues⁴⁹⁴. Language can be seen as a branch connecting words as smaller

⁴⁹¹ Haleem, Abid, Mohd Javaid, Ravi Pratap Singh, And Rajiv Suman. "Telemedicine For Healthcare: Capabilities, Features, Barriers, And Applications." (2021) *Sensors International* 2: 100117.

⁴⁹² Jiang, Yufan, Hongyan Wang, And Zuankuo Liu. "The Impact Of The Free Trade Zone On Green Total Factor Productivity—Evidence From The Shanghai Pilot Free Trade Zone." (2021) *Energy Policy* 148: 112000.

⁴⁹³ OJO, John Sunday. "E-Governance: An Imperative For Sustainable Grass Root Development In Nigeria." (2014) *Journal Of Public Administration And Policy Research* 6, No. 4: 77-89.

⁴⁹⁴ National Research Council. "Beyond Productivity: Information Technology, Innovation, And Creativity" (2003) National Academies Press.

branches⁴⁹⁵. Historical linguistics is the study of the ancient roots of words and studies the evolution of a word by means of records and texts, and sometimes the past of human groups that use these words⁴⁹⁶. Words make up a language's vocabulary, forming units, so that the units and the language are constituted through their interaction⁴⁹⁷. That is the reason the units modify the language⁴⁹⁸. Complex interactions between language units include knowledge of linguistic production from one period to another⁴⁹⁹. Classical dictionaries, for example, generally give the sense of a word at the time of its authors, but each word also includes connotations, which colour the significance⁵⁰⁰ of the word.

There are various general verbal meanings for information technology infrastructure. The Cambridge Dictionary⁵⁰¹ definition of the term 'infrastructure' is 'the basic systems and services, such as transport and power supplies, that a country or organization uses in order to work effectively'⁵⁰². As noted by the online Dictionary of Etymology⁵⁰³, the term 'infrastructure' has been in use since at least 1878⁵⁰⁴. Originally this term meant 'installations which are the foundation of all processes or structures'⁵⁰⁵.

Other sources, like the Oxford English Dictionary⁵⁰⁶, trace the root of the word 'infrastructure' to its early use in 1927⁵⁰⁷, when it was originally applied by the military. The word is derived from the French language, where it denotes the soil, i.e., the original, natural materials found beneath the floor of buildings or the ground if referring to the building of railways⁵⁰⁸. The word consists of two parts, the first being the Latin prefix, "infra," which means "under," and the

⁴⁹⁵ Helam, Al-Jilali. "Ethyl And Intruder In Our Arabic Dictionaries." (1999) The Arabic Tongue: The Arab Organization For Education, Culture And Science - Office For The Coordination Of Arabisation No. 48 : 70-86.

⁴⁹⁶ Thorndike, Edward Lee "The Thorndike-Century Junior Dictionary" (1935).

⁴⁹⁷ Dediu, Dan, Michael Cysouw, Stephen C. Levinson, Andrea Baronchelli, Morten H. Christiansen, William Croft, Nicholas Evans Et Al. "Cultural Evolution Of Language." (2013) In Cultural Evolution: Society, Technology, Language, And Religion. Strüngmann Forum Reports, Vol. 12, Pp. 303-332. MIT Press.

⁴⁹⁸ Mayor, Michael, Ed. "Longman Dictionary Of Contemporary" (2009) English Pearson Education India 2009.

⁴⁹⁹ Sheil, Beau A. "Coping With Complexity" (1983) Office Technology And People 1, No. 4: 295-320.

⁵⁰⁰ Walter, Elizabeth "Cambridge Advanced Learner's Dictionary" (2008) Cambridge University Press.

⁵⁰¹ Ibid.

⁵⁰² Ibid.

⁵⁰³ Ibid.

⁵⁰⁴ Harper, Douglas. "Online Etymology Dictionary Etymonline." (2001).

⁵⁰⁵ Ibid.

⁵⁰⁶ Dictionary, Oxford English "Oxford English Dictionary Simpson" (1989) JA & Weiner, ESC.

⁵⁰⁷ Ibid.

⁵⁰⁸ Carse, Ashley. "Keyword: Infrastructure: How A Humble French Engineering Term Shaped The Modern World." (2016) In Infrastructures And Social Complexity, Pp. 45-57. Routledge.

word ‘structure’⁵⁰⁹. The American Heritage Dictionary⁵¹⁰ defines infrastructure as: ‘1. An underlying base or foundation, especially for an organization or system. 2. The basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions including schools, post offices, and prisons’⁵¹¹.

However, this definition and similar ones are broad and open to interpretation. In fact, what is called an ‘infrastructure’ primarily depends on the context in which the word is used⁵¹². Irrespective of when the word was introduced, the passages above illustrate the main point. Infrastructure was originally an organisational and accounting concept used to differentiate building work that was carried out literally beneath unpaved track or roadbeds, or was otherwise organizationally prior to them, and also surveys, plans, bridges, tunnels, and railroads, from superstructure roads to train stations and other such work⁵¹³. In the context of technology and law, there are many interpretations and concepts relevant to information technology infrastructure. The information technology definition of the term ‘infrastructure’ can be formulated as shared information technology resources, consisting of a technical, physical base of hardware, software, communication technologies, data, core applications, and also the component of human skills and expertise combined to create information technology services that are typically unique to an organization⁵¹⁴. These organisations choose to solidify their information technology infrastructure for the purpose of fostering change⁵¹⁵.

In the legal context, the term ‘infrastructure’ refers to the totality of processes, tools, documents, and other information systems, such as telecommunication networks, the internet,

⁵⁰⁹ Harvey, Penelope, Casper Bruun Jensen, And Atsuro Morita, Eds. “Infrastructures And Social Complexity: A Companion” (2016) Taylor & Francis.

⁵¹⁰ American Heritage Dictionary, And American Heritage Publishing Staff. “The American Heritage Dictionary” (1987) Dell Publishing Company.

⁵¹¹ Ibid.

⁵¹² Moteff, John, And Paul Parfomak. "Critical Infrastructure And Key Assets: Definition And Identification." (2004) Library Of Congress Washington DC Congressional Research Service.

⁵¹³ Harvey, Penelope, Casper Bruun Jensen, And Atsuro Morita, Eds. “Infrastructures And Social Complexity: A Companion” (2016) Taylor & Francis.

⁵¹⁴ Terry Anthony Byrd, Douglas E. Turner. "Measuring The Flexibility Of Information Technology Infrastructure: Exploratory Analysis Of A Construct." (2000) Journal Of Management Information Systems 17, No. 1: 167-208.

⁵¹⁵ Terry Anthony Byrd, Douglas E. Turner. “Measuring The Flexibility Of Information Technology Infrastructure: Exploratory Analysis Of A Construct” (2000) Journal Of Management Information Systems 17, No. 1: 167-208.

and so on, that form the basis and facilitate the daily functioning of a particular legal system⁵¹⁶. Such tools include document management systems, case management systems, decision making systems, and record management systems⁵¹⁷.

Infrastructure, therefore, forms the basis on which the economic system is constructed and includes the assets that enable the provision of vital services supporting economic development and a society's activities⁵¹⁸. Critical infrastructure can be divided into different sectors, for example transport that will include airports, roads and railway lines; social, for instance educational institutions, hospitals, and telecommunications; and public services such as the supply of fuel, gas, and water.

Understanding the infrastructure of information technology

In general, people want to know what is going on and to find solutions to the problems he has encountered, and this can only be accomplished by eliminating doubt, by seeking knowledge, which is the fundamental, external meaning of any individual or object, is linked to information, and reflects what it contains. Consequently, in this case, information technology infrastructure is concerned with privacy issues, but before dealing with them, knowledge about the infrastructure is needed. After the concept of information in the term 'information technology' has been explained, it is important to know how this information is processed and stored, leading to an understanding of the value of information technology. Comprising knowledge and communication, information technology, or IT in the common abbreviation, is technology which has accelerated its growth and has become one of the navigational systems of the modern age, where people who do not know how to deal with technology are considered unlearned, like those who do not know how to read or write⁵¹⁹.

⁵¹⁶ Valverde, Mariana. "Infrastructure: New Trajectories In Law." (2022) Routledge.

⁵¹⁷ Bwalya, Kelvin Joseph, Ed. "Handbook Of Research On E-Government In Emerging Economies: Adoption, E-Participation, And Legal Frameworks: Adoption, E-Participation, And Legal Frameworks" (2012) IGI Global.

⁵¹⁸ Turok, Ivan, And Gordon Mcgranahan. "Urbanization And Economic Growth: The Arguments And Evidence For Africa And Asia." (2013) Environment And Urbanization 25, No. 2: 465-482.

⁵¹⁹ Hanseth, O., and E. Monteiro. "Understanding information infrastructure (Unpublished book)." (2016) Retrieved May 1 (1998).

Information technology architecture is the integrated platform for operating digital networks. This infrastructure includes data centres, servers, computer networks, control devices for databases and any regulation framework⁵²⁰. The information technology infrastructure system comprises not only machines, but also real people who help as service providers. The information technology infrastructure is a collaborative technological platform for consumer and business computing support⁵²¹. The information technology sector is built on long-term information technology infrastructure that is interconnected with external industrial infrastructure such as financial institution payment systems, airline booking systems, and supply chain networks for the automobile industry, as well as public infrastructure such as telephone and internet networks⁵²². The combination of internal and external information technology infrastructures constitutes the information technology infrastructure for the company⁵²³. Via an information technology infrastructure of expertise, ability and accepted norms, technology components are turned into usable common services. The information technology infrastructure service concept is very solid, giving the service provider greater clarity about duties, as more detailed preparation is necessary. Infrastructure resources often include communication network resources, management and provision of broad-scale computing, such as servers or mainframes, joint management of consumer databases, and experience in research and development for utilities⁵²⁴.

The infrastructure is the physical hardware used for connecting computers and users for information technology and the internet⁵²⁵. Transport modes, including telephone lines, cables, satellites, antennas and routers, comprise the networks⁵²⁶. In certain applications, the infrastructure refers to both the hardware and the software that perform the connection process

⁵²⁰ Levis, Philip, Samuel Madden, Joseph Polastre, Robert Szewczyk, Kamin Whitehouse, Alec Woo, David Gay Et Al. Tinyos: "An Operating System For Sensor Networks. In Ambient Intelligence" (2005) Pp. 115-148. Springer, Berlin, Heidelberg.

⁵²¹ Bhardwaj, Sushil, Leena Jain, And Sandeep Jain. "Cloud Computing: A Study Of Infrastructure As A Service (IAAS)". (2010) International Journal Of Engineering And Information Technology 2, No. 1: 60-63.

⁵²² Weill, Peter, And Marianne Broadbent. "Leveraging The New Infrastructure: How Market Leaders Capitalize On Information Technology." (1998) Harvard Business Press.

⁵²³ Brancheau, James C., Brian D. Janz, And James C. Wetherbe. "Key Issues In Information Systems Management: 1994-95 SIM Delphi Results." (1996) MIS Quarterly: 225-242.

⁵²⁴ Buswell, John I. "Providing Real-Time Trading Of Virtual Infrastructure Resources" (2014) U.S. Patent Application 13/601,675, Filed March 6, 2014.

⁵²⁵ Barton, John J., And Vikram Vijaya Raghavan. "Ubiwise, A Ubiquitous Wireless Infrastructure Simulation Environment" (2002) HP Labs.

⁵²⁶ Maral, Gérard, Michel Bousquet, And Zhili Sun. "Satellite Communications Systems: Systems, Techniques And Technology" (2020) John Wiley & Sons.

rather than the computers and other connected devices⁵²⁷. For some information technology consumers, however, the infrastructure is seen as something that facilitates the processing and the flow of information⁵²⁸.

The companies which produce infrastructure devices play an important role in the development of the internet, both in terms of communication sites and places where they can be accessed, and in terms of the quantity of information and transmission speed⁵²⁹. Much information technology infrastructure has been built in order to keep pace with the quick steady growth of technology at the global level⁵³⁰. A later discussion will cover the primary and subsidiary building components for the technical unit to be able to understand what is happening inside this digital environment and why the protection of privacy in this digital world is very important. So, the architecture of information technology is the essential component for an enterprise to operate and maintain its information technology environment⁵³¹. In the currently known facility of the private sector or the latest, continually evolving framework of cloud computing, IT technology can be deployed⁵³². These two basic facilities will be clarified later.

Information infrastructure consists of **hardware, software, network** components, operating systems and data storage that facilitate IT services and solutions⁵³³. All are components. IT infrastructure products are available as software applications for running as downloads, in addition to existing IT services, such as software-defined storage or service provider online solutions, for example infrastructure as service⁵³⁴.

⁵²⁷ Edwards, Nigel, And Christopher I. Dalton. "Virtual Computing Infrastructure" (2014) U.S. Patent 8,719,914, Issued May 6, 2014.

⁵²⁸ Lai, Ivan KW. "The Information Processing Infrastructure For Internet Based Collaboration." (2008) International Journal Of Logistics Systems And Management 4, No. 6: 634-649.

⁵²⁹ Rappaport, Theodore S., Roger R. Skidmore, Veeraraghavan Anantha, And Eric Reifsnider. "System, Method, And Apparatus For Determining And Using The Position Of Wireless Devices Or Infrastructure For Wireless Network Enhancements" (2011) U.S. Patent 8,019,352, Issued September 13, 2011.

⁵³⁰ Schandl, Heinz, Steve Hatfield-Dodds, Thomas Wiedmann, Arne Geschke, Yiyong Cai, James West, David Newth, Tim Baynes, Manfred Lenzen, And Anne Owen. "Decoupling Global Environmental Pressure And Economic Growth: Scenarios For Energy Use, Materials Use And Carbon Emissions." (2016) Journal Of Cleaner Production 132: 45-56.

⁵³¹ Myrick, Conrad B., Harry W. Hixon Jr, Christopher M. Koll, And Ralph L. Whittle Jr. "Structure And Method Of Modeling Integrated Business And Information Technology Frameworks And Architecture In Support Of A Business." (2007) U.S. Patent 7,162,427, Issued January 9, 2007.

⁵³² Ibid.

⁵³³ Levis, Philip, Samuel Madden, Joseph Polastre, Robert Szweczyk, Kamin Whitehouse, Alec Woo, David Gay Et Al. "Tinyos: An Operating System For Sensor Networks." (2005) In Ambient Intelligence, Pp. 115-148. Springer, Berlin, Heidelberg, 2005.

⁵³⁴ Ibid.

First among IT components is the hardware, which includes personal computers, servers, routers, datacentres, switches, and other equipment. The facilities that store, cool, and power a datacentre can also be included. Software is the second component, and applies to business-related technologies, such as web servers, content management systems, and operating systems, such as Linux⁵³⁵. The open-source Linux operating system manages device resources and hardware and links all applications to the physical resources that perform the work⁵³⁶. The third component is the network, i.e., the linked network elements that permit the operation, administration and connectivity of networks with internal and external systems⁵³⁷. This network includes the internet, network enablement, firewalls and protection, and hardware such as routers, switches and cable systems.

Hardware

Before discussing the difference between hardware and software in detail, it will be helpful to illustrate from the computer itself. In various fields, whether in work, entertainment or something else, the machine has become an integral part of our lives⁵³⁸. Nevertheless, despite the awareness taken for granted in recent times about how to use it, there are many who are unaware of its internal components and the differences between them. The discussion can begin with the machine and its components and differentiate between them. The computer is an electronic device capable of obtaining data, modifying it, processing it and converting it into useful, significant information, then storing it in various storage media, whether internal or external. Differing in speed and specifications, computers run on operating systems⁵³⁹. Without these, a computer has no value. From here, the components of a computer are divided into two main parts, namely hardware and software. Computer hardware contains and connects with all

⁵³⁵ Aulds, Charles. "Linux Apache Web Server Administration" (2002) Sybex.

⁵³⁶ Deek, Fadi P., And James AM Mchugh. "Open Source: Technology And Policy" (2007) Cambridge University Press.

⁵³⁷ Leiner, Barry M., Vinton G. Cerf, David D. Clark, Robert E. Kahn, Leonard Kleinrock, Daniel C. Lynch, Jon Postel, Larry G. Roberts, And Stephen Wolff. "A Brief History Of The Internet." (2009) ACM SIGCOMM Computer Communication Review 39, No. 5: 22-31.

⁵³⁸ Dabas, Neetu. "Role Of Computer And Information Technology In Education System." (2018) International Journal Of Engineering And Techniques 4, No. 1: 570-574.

⁵³⁹ Tanenbaum, Andrew S., And Robbert Van Renesse. "Distributed Operating Systems." (1985) ACM Computing Surveys (CSUR) 17, No. 4: 419-470.

the computer's physical components, including electronic circuits⁵⁴⁰, the keyboard⁵⁴¹, mouse⁵⁴², motherboard⁵⁴³, screen⁵⁴⁴, and so on, that are the physical elements.

Among the basic components that can be listed in hardware are the motherboard, which is the device master and carrier, with the central processing unit (CPU), random-access memory, and extension slots⁵⁴⁵. The motherboard is the computer's brain. Additional hardware components are the electrical supply, the electronic integrated drive⁵⁴⁶, card video screen⁵⁴⁷, TV tuner card⁵⁴⁸, vector controls⁵⁴⁹. hard drive⁵⁵⁰, optical drive⁵⁵¹, disc drive⁵⁵², floppy disc duplicator⁵⁵³, disc reader for computer storage forms⁵⁵⁴, D Video⁵⁵⁵, and DVD⁵⁵⁶. Similar input units link the computer to networks.

Computer software

⁵⁴⁰ Narang, Subhash. "Printing Of Electronic Circuits And Components" (2005) U.S. Patent 6,855,378, Issued February 15, 2005.

⁵⁴¹ Robinson, B. Alex, And Michael R. Longe. "Keyboard System With Automatic Correction." (2007) U.S. Patent 7,277,088, Issued October 2, 2007.

⁵⁴² Olson, Lynn T. "Inertial Mouse System" (1988) U.S. Patent 4,787,051, Issued November 22, 1988.

⁵⁴³ Tello, Jose Alberto. "Modified Computer Motherboard Security And Identification System." (2002) U.S. Patent 6,463,537, Issued October 8, 2002.

⁵⁴⁴ Moscovitch, Jerry, And Mark D. Elchuk. "Computer Display Screen System And Adjustable Screen Mount, And Swinging Screens Therefor" (2002) U.S. Patent 6,343,006, Issued January 29, 2002.

⁵⁴⁵ Indrajit, I. K., And A. Alam. "Computer Hardware For Radiologists: Part 2." (2010) Indian Journal Of Radiology And Imaging 20, No. 04: 240-244.

⁵⁴⁶ Hotelling, Steve Porter, Christoph Horst Kraus, Marduke Yousefpor, And Thomas James Wilson. "Single-Chip Touch Controller With Integrated Drive System" (2009) U.S. Patent Application 12/208,334, Filed January 8, 2009.

⁵⁴⁷ Congdon, Bradford B., And Rama U. Reddy. "Network Management Card For Use In A System For Screen Image Capturing" (2003) U.S. Patent 6,556,208, Issued April 29, 2003.

⁵⁴⁸ Yun, Choi-Young. "TV Card And Computer System Having The Same" (2006) U.S. Patent 7,116,376, Issued October 3, 2006. The TV Turner Card Is Over-The-Air (OTA) TV Signals Can Be Received By A TV Tuner And Then Played Back On A Variety Of Electronic Devices.

⁵⁴⁹ Nakajima, Atsushi, And Yaoko Nakagawa. "Computer System Of Virtual Machines Sharing A Vector Processor" (1996) U.S. Patent 5,511,217, Issued April 23, 1996.

⁵⁵⁰ Feng, Weishi. "Secure Digital Content Distribution System And Secure Hard Drive" (2010) U.S. Patent 7,647,507, Issued January 12, 2010.

⁵⁵¹ Gagliardi, Robert M., And Sherman Karp. "Optical Communications" (1976) Wi.

⁵⁵² Branc, Joseph R., Thomas J. Merchant, William L. Miller, And Philip J. Piszczak. "Disc Drive Isolation System." (1987) U.S. Patent 4,685,303, Issued August 11, 1987.

⁵⁵³ Dunstan, Ericson M., William J. Gervais, And S. Barry McClelland. "High Precision Floppy Disc Memory System" (1985) U.S. Patent 4,523,240, Issued June 11, 1985.

⁵⁵⁴ Schmidt, Alfred C., And Robert T. Durst Jr. "Forms Generating And Information Retrieval System" (1990) U.S. Patent 4,903,229, Issued February 20, 1990.

⁵⁵⁵ Bakoglu, Brian, And Parichay Saxena. "Online Simultaneous/Altering-Audio/Video/Voice Data Based Service And Support For Computer Systems" (1999) U.S. Patent 5,983,369, Issued November 9, 1999.

⁵⁵⁶ Chen, Hong-Xi. "Portable DVD Player System For Video/Audio And Computer Systems" (2004) U.S. Patent Application 10/290,878, Filed May 13, 2004.

Computer programme or software is a term used to refer to computer operations performed to resolve mathematical problems or implement statistical operations and, in the event of an error or the termination of a method, to modify these formulas⁵⁵⁷. All application programmes contain software, for example Microsoft Office applications⁵⁵⁸, firmware⁵⁵⁹, middleware⁵⁶⁰, system programmes⁵⁶¹, Software collection and control⁵⁶², web pages⁵⁶³, programmes and video games⁵⁶⁴. Operational software⁵⁶⁵ relies on its own programming languages, such as JavaScript⁵⁶⁶, C⁵⁶⁷ and Plus⁵⁶⁸.

The distinction between hardware and software

There are hardware-dependent software differences, since PCs may run Windows⁵⁶⁹, Linux⁵⁷⁰, or Mac⁵⁷¹ software. The term "hardware" is unneeded in programming languages, notably

⁵⁵⁷ Weimer, Westley, And George C. Necula. "Mining Temporal Specifications For Error Detection." (In Tools And Algorithms For The Construction And Analysis Of Systems: 11th International Conference, TACAS 2005, Held As Part Of The Joint European Conferences On Theory And Practice Of Software, ETAPS 2005, Edinburgh, UK, April 4-8, 2005. Proceedings 11, Pp. 461-476. Springer Berlin Heidelberg, 2005)

⁵⁵⁸ Shmueli, Galit, Nitin R. Patel, And Peter C. Bruce. "Data Mining For Business Intelligence: Concepts, Techniques, And Applications In Microsoft Office Excel With Xlminer" (2011) John Wiley And Sons.

⁵⁵⁹ Marsh, James L., R. Scott Holbrook, And Eugene L. Jung. "System And Method For Updating Firmware" (2006) U.S. Patent 7,055,148, Issued May 30, 2006.

⁵⁶⁰ Zeng, Liangzhao, Boualem Benatallah, Anne HH Ngu, Marlon Dumas, Jayant Kalagnanam, And Henry Chang. "Qos-Aware Middleware For Web Services Composition." (2004) IEEE Transactions On Software Engineering 30, No. 5 (2004): 311-327.

⁵⁶¹ Demicheli, Giovanni, And M. G. Sami, Eds. "Hardware/Software Co-Design." (2013) Vol. 310. Springer Science & Business Media, 2013.

⁵⁶² Shi, Yurong, David Alan Richardson, Russell Clinton Brown, Donald Craig Likes, And Richard Bruce Patty. "System And Software For Data Collection And Process Control In Semiconductor Manufacturing And Method Thereof." (2005) U.S. Patent 6,970,758, Issued November 29, 2005.

⁵⁶³ Arasu, Arvind, And Hector Garcia-Molina. Extracting Structured Data From Web Pages. (In Proceedings Of The 2003 ACM SIGMOD International Conference On Management Of Data, Pp. 337-348. 2003.)

⁵⁶⁴ Newman, James A. "Videogames" (2013) Routledge.

⁵⁶⁵ Basili, Victor, Gianluigi Caldiera, Frank Mcgarry, Rose Pajerski, Gerald Page, And Sharon Waligora. "The Software Engineering Laboratory: An Operational Software Experience Factory" (In Proceedings Of The 14th International Conference On Software Engineering, Pp. 370-381. 1992.)

⁵⁶⁶ Crockford, Douglas. Javascript: "The Good Parts: The Good Parts." (2008) O'Reilly Media, Inc.

⁵⁶⁷ Johnson, James W., Eric H. Oelkers, And Harold C. Helgeson. SUPCRT92: "A Software Package For Calculating The Standard Molal Thermodynamic Properties Of Minerals, Gases, Aqueous Species, And Reactions From 1 To 5000 Bar And 0 To 1000 C." (1992) Computers & Geosciences 18, No. 7 (1992): 899-947.

⁵⁶⁸ Lamouroux, J., H. Tran, A. L. Laraia, R. R. Gamache, L. S. Rothman, I. E. Gordon, And J-M. Hartmann. "Updated Database Plus Software For Line-Mixing In CO2 Infrared Spectra And Their Test Using Laboratory Spectra In The 1.5-2.3 Mm Region." (2010) Journal Of Quantitative Spectroscopy And Radiative Transfer 111, No. 15 (2010): 2321-2331.

⁵⁶⁹ Wilson, Kevin. "About Windows." (2015) In Everyday Computing With Windows 8.1, Pp. 1-4. Apress, Berkeley, CA, 2015.

⁵⁷⁰ Rubini, Alessandro, And Jonathan Corbet. "Linux Device Drivers" (2001) O'Reilly Media, Inc.

⁵⁷¹ Jian, Qiang, Zheng-Hu GONG, Pei-Dong ZHU, And Chun-Mei GUI. "Overview Of MAC Protocols In Wireless Sensor Networks." (2008) Journal Of Software 19, No. 2: 389-403.

JavaScript, as it refers to the tangible, visible components of computers⁵⁷². Software is comprised of programs, such as applications, whereas hardware refers to the tangible, visible components of computers⁵⁷³.

Infrastructure in information technology types

There are two different types of IT infrastructure: one is conventional, and the second is the cloud. **Conventional facilities include data centres, data storage** and other equipment, all of which is managed and operated by an organisation on its own premises⁵⁷⁴. Traditional infrastructure⁵⁷⁵ is typically costly to operate and requires vast quantities of hardware, such as computers, as well as resources and physical space. Thus, a data centre consists of a series of high-speed internet-connected servers, which are either used as complete servers or divided into virtual private servers VPS, sharing hosting accounts or "distributed" reseller hosting⁵⁷⁶. The importance of the data centre, or what is also known as the "computer barn"⁵⁷⁷, is to provide the necessary conditions in which high-speed internet servers and cooling systems can sustain high computer temperatures, along with permanent electrical power and other key factors, including server structures and engineering⁵⁷⁸. The data centre does not have exclusive control of particular corporations or organisations, but government departments, corporations, and individuals are capable of hosting their own data, as well as user data with it, to maintain the

⁵⁷² Kaltenbrunner, Martin, And Ross Bencina. "Reactivation: A Computer-Vision Framework For Table-Based Tangible Interaction." (In Proceedings Of The 1st International Conference On Tangible And Embedded Interaction, Pp. 69-74. 2007.)

⁵⁷³ Crockford, Douglas. Javascript: "The Good Parts: The Good Parts" (2008) O'Reilly Media, Inc."

⁵⁷⁴ Klingert, Sonja, Thomas Schulze, And Christian Bunse. "Green Slas For The Energy-Efficient Management Of Data Centres." (In Proceedings Of The 2nd International Conference On Energy-Efficient Computing And Networking, Pp. 21-30. 2011. Also See Coufal, Hans J., And Demetri Psaltis. "Holographic Data Storage" Edited By Glenn T. Sincerbox. Vol. 8. New York: Springer, 2000.)

⁵⁷⁵ Klingert, Sonja, Thomas Schulze, And Christian Bunse. "Green Slas For The Energy-Efficient Management Of Data Centres." (In Proceedings Of The 2nd International Conference On Energy-Efficient Computing And Networking, Pp. 21-30. 2011.)

⁵⁷⁶ Belousov, Serguei M., Stanislav S. Protassov, And Alexander G. Tormasov. "Virtual Private Server With Enhanced Security" (2008) U.S. Patent 7,461,144, Issued December 2, 2008.

⁵⁷⁷ Bosworth, Kris, David H. Gustafson, Robert P. Hawkins, And BARN Research Group. "The BARN System: Use And Impact Of Adolescent Health Promotion Via Computer." (1994) Computers In Human Behavior 10, No. 4: 467-482.

⁵⁷⁸ Tan, Serhat Orkun, And Hüseyin Demirel. "Performance And Cooling Efficiency Of Thermoelectric Modules On Server Central Processing Unit And Northbridge." (2015) Computers & Electrical Engineering 46: 46-55.

protection and confidentiality of the data⁵⁷⁹. Thus, anyone can build and host their own data if they have the know-how⁵⁸⁰.

Cloud computing information technology infrastructure

Cloud computing involves renting instead of owning IT, and avoids heavy investment in databases, software and facilities. When an entity decides to 'switch to the cloud,' the IT resources are housed offshore in a cloud computing service provider's data centre⁵⁸¹. The provider is responsible for IT management, application, integration and the creation of new user functionality and capabilities. Cloud computing is scalable, versatile, and is easy for clients to use⁵⁸².

There are three⁵⁸³ different types of cloud computing services: infrastructure as a service (IaaS)⁵⁸⁴, platform as a service (PaaS)⁵⁸⁵, and software as a service (SaaS)⁵⁸⁶. All differ in the amount of user management required as well as the level of security provided.

1-Infrastructure as a Service IaaS

In infrastructure as a service (IaaS), the data technology is housed in the cloud service provider's facilities, which deliver these services to the user over the internet⁵⁸⁷. The user does not have to maintain its IT and can easily add more users or processing capabilities if necessary⁵⁸⁸. A cloud provider has many IT users. IaaS is usually configured as a scalable

⁵⁷⁹ Lloyd, Ian. "Information Technology Law" (2020) Oxford University Press, USA.

⁵⁸⁰ Ibid.

⁵⁸¹ Kaufman, Lori M. "Data Security In The World Of Cloud Computing." IEEE Security & Privacy 7, No. 4 (2009): 61-64.

⁵⁸² Almorsy, Mohamed, John Grundy, And Ingo Müller. "An Analysis Of The Cloud Computing Security Problem." (2016) Arxiv Preprint Arxiv:1609.01107.

⁵⁸³ Bhardwaj, Sushil, Leena Jain, And Sandeep Jain. "Cloud Computing: A Study Of Infrastructure As A Service (IAAS)." (2010) International Journal Of Engineering And Information Technology 2, No. 1: 60-63.

⁵⁸⁴ Manvi, Sunilkumar S., And Gopal Krishna Shyam. "Resource Management For Infrastructure As A Service (IaaS) In Cloud Computing: A Survey." (2014) Journal Of Network And Computer Applications 41 : 424-440.

⁵⁸⁵ Beimborn, Daniel, Thomas Miletzki, And Stefan Wenzel. "Platform As A Service (Paas)." (2011) Business & Information Systems Engineering 3, No. 6: 381-384.

⁵⁸⁶ Godse, Manish, And Shrikant Mulik. "An Approach For Selecting Software-As-A-Service (Saas) Product." (In 2009 IEEE International Conference On Cloud Computing, Pp. 155-158. IEEE, 2009.)

⁵⁸⁷ Bhardwaj, Sushil, Leena Jain, And Sandeep Jain. "Cloud Computing: A Study Of Infrastructure As A Service (IAAS)." (2010) International Journal Of Engineering And Information Technology 2, No. 1: 60-63.

⁵⁸⁸ Bhardwaj, Sushil, Leena Jain, And Sandeep Jain. "Cloud Computing: A Study Of Infrastructure As A Service (IAAS)." (2010) International Journal Of Engineering And Information Technology 2, No. 1: 60-63.

infrastructure. However, since public cloud environments are used to store vast quantities of data, they are also the focus of attempts at unauthorised data access⁵⁸⁹.

2-Platform as a Service (PaaS)

Platform as a service PaaS is largely safe from public cloud protection problems. The user has complete access to data centres, security enforcement and control with PaaS⁵⁹⁰.

3-Software as a Service (SaaS)

SaaS is a combination of IaaS and PaaS. Clients use PaaS and IaaS servers to store their data using SaaS computing software⁵⁹¹. The most relevant data can be saved using a PaaS server, while other IaaS servers can be used for more data⁵⁹². Payment information, for example, can be stored on the local server and other non-personally recognisable data can be stored within the PaaS environment⁵⁹³.

Multi-cloud storage and computing devices can be used as part of a single architecture. A user may have recourse to a mix of SaaS, PaaS, and IaaS environments⁵⁹⁴. There are many developments that drive governments, companies and individuals — in all sectors — to make use of the cloud. For most organisations, existing ways of doing business cannot provide the speed and flexibility to build or promote the platform. The tumultuous data revolution resulting from the growing numbers of digital providers is taking the costs and difficulty of data centre storage to new levels, requiring new analytical expertise and resources from IT specialists⁵⁹⁵. Modern cloud technologies allow businesses to address digital age challenges. Organizations

⁵⁸⁹ Serrano, Nicolas, Gorca Gallardo, And Josune Hernantes. "Infrastructure As A Service And Cloud Technologies." (2015) IEEE Software 32, No. 2: 30-36.

⁵⁹⁰ Mcgrath, Michael P., And Matthew Hicks. "Mechanism For Automatic Scaling Of Application Resources In A Multi-Tenant Platform-As-A-Service (Paas) Environment In A Cloud Computing System." (2014) U.S. Patent Application 13/605,563, Filed March 6, 2014.

⁵⁹¹ Kulkarni, Gurudatt, Jayant Gambhir, And Rajnikant Palwe. "Cloud Computing-Software As Service." (2012) International Journal Of Cloud Computing And Services Science 1, No. 1: 11-16.

⁵⁹² Chou, Shih-Wei, And Chun-Hsiung Chiang. "Understanding The Formation Of Software-As-A-Service (Saas) Satisfaction From The Perspective Of Service Quality."(2013) Decision Support Systems 56: 148-155.

⁵⁹³ Rani, Dimpi, And Rajiv Kumar Ranjan. "A Comparative Study Of Saas, Paas And Iaas In Cloud Computing." (2014) International Journal Of Advanced Research In Computer Science And Software Engineering 4, No. 6 (2014).

⁵⁹⁴ Panuganty, Ramesh. "Apparatus And Methods For Managing Applications In Multi-Cloud Environments." (2016) U.S. Patent 9,319,286, Issued April 19, 2016.

⁵⁹⁵ Janssen, Marijn, And Anton Joha. "Challenges For Adopting Cloud-Based Software As A Service (Saas) In The Public Sector." (2011).

are able to adapt rapidly to a dynamic, drastically rapid market environment and do not have to handle their own IT⁵⁹⁶.

Server information technology infrastructure

The server is the basis of IT infrastructure and is thus a machine with special features and specifications⁵⁹⁷. Nevertheless, the server does not differ greatly from standard computers, because it includes nearly all components of a personal computer but differs in that it also has larger components and greater capabilities⁵⁹⁸. Its strengths are the high-speed internet and a permanent power supply, in addition to a powerful cooling system, as the server operates 24⁵⁹⁹ hours a day every day of the year.

The server consists of the following main components⁶⁰⁰: the case or computer box, the central processing unit (CPU)⁶⁰¹, which is like the mind of the server and is responsible for doing most tasks and controlling the server, and random-access memory (RAM)⁶⁰², which is one of the types of storage media and is very fast. In it currently programmes and files in use are stored.

⁵⁹⁶ Kranz, Johann J., André Hanelt, And Lutz M. Kolbe. "Understanding The Influence Of Absorptive Capacity And Ambidexterity On The Process Of Business Model Change—The Case Of On-Premise And Cloud-Computing Software." (2016) *Information Systems Journal* 26, No. 5: 477-517.

⁵⁹⁷ Mishra, Yatish C., And Denoid K. Tucker. "Method And Remote System For Creating A Customized Server Infrastructure In Real Time." (2009) U.S. Patent Application 12/140,968, Filed January 15, 2009.

⁵⁹⁸ Fink, Lior, And Seev Neumann. "Exploring The Perceived Business Value Of The Flexibility Enabled By Information Technology Infrastructure." (2009) *Information & Management* 46, No. 2 (2009): 90-99.

⁵⁹⁹ Sahoo, Ramendra K., Mark S. Squillante, Anand Sivasubramaniam, And Yanyong Zhang. "Failure Data Analysis Of A Large-Scale Heterogeneous Server Environment." (In *International Conference On Dependable Systems And Networks*, 2004, Pp. 772-781. IEEE, 2004.)

⁶⁰⁰ Qiu, Ming. "Server Array Hardware Architecture And System." (2002) U.S. Patent Application 10/038,493, Filed September 5, 2002.

⁶⁰¹ Kuwahara, Kazuyoshi. "Microcomputer Free From Control Of Central Processing Unit (CPU) For Receiving And Writing Instructions Into Memory Independent Of And During Execution Of CPU." (1997) U.S. Patent 5,664,199, Issued September 2, 1997.

⁶⁰² Reed, M. A., J. Chen, A. M. Rawlett, D. W. Price, And J. M. Tour. "Molecular Random-Access Memory Cell." (2001) *Applied Physics Letters* 78, No. 23: 3735-3737.

The server has storage devices⁶⁰³ where files are stored, and which are of two main types — hard disk drives (HDD)⁶⁰⁴ and solid-state drives (SSD)⁶⁰⁵. The cooler⁶⁰⁶ is responsible for cooling the processor and the remaining the server components, and consists of a fan or an integrated system. The power supply⁶⁰⁷ is the unit responsible for supplying all server components with power in the form of ‘electrical current’. The motherboard⁶⁰⁸ is an electronic board that connects all server components to it. Finally, there is the operating system, which is the programme responsible for making the server not just a machine but a responsive device that executes commands⁶⁰⁹. These components are the server's internal components, which vary according to server use. Each component's size and capability differ according to server specifications and uses. Servers require a high-speed internet link and a continuous electrical source⁶¹⁰. The server needs to run constantly, as stopping the server, even for a limited time, would bring all websites to a halt, as well as the software, services and systems on it⁶¹¹. The server is the home or building for websites and electronic resources in different fields and thus provides these sites with a host⁶¹². The server's role is to respond to the site's requests and supply visitors (users) with the data they are looking for⁶¹³.

⁶⁰³ Huang, Yun-Wu, And Philip Shi-Lung Yu. "Method, Apparatus And Program Storage Device For A Client And Adaptive Synchronization And Transformation Server." (2002) U.S. Patent 6,477,543, Issued November 5, 2002.

⁶⁰⁴ Grochowski, Edward. "Emerging Trends In Data Storage On Magnetic Hard Disk Drives. Datatech (September 1998)" (1998) ICG Publishing: 11-16.

⁶⁰⁵ Narayanan, Dushyanth, Eno Thereska, Austin Donnelly, Sameh Elnikety, And Antony Rowstron. "Migrating Server Storage To Ssds: Analysis Of Tradeoffs." (In Proceedings Of The 4th ACM European Conference On Computer Systems, Pp. 145-158. 2009.)

⁶⁰⁶ Chen, Po-Ching. Server And Cooler "Module Arrangement." (2011) U.S. Patent 8,045,328, Issued October 25, 2011.

⁶⁰⁷ Fung, Henry. "Apparatus And Method For Modular Dynamically Power Managed Power Supply And Cooling System For Computer Systems, Server Applications, And Other Electronic Devices." (2002) U.S. Patent Application 09/860,237, Filed January 17, 2002.

⁶⁰⁸ Sun, Zheng-Heng, And Kang Wu. "Motherboard And Server Using The Same." (2013) U.S. Patent 8,456,830, Issued June 4, 2013.

⁶⁰⁹ Liu, Jian, Longlu Xu, Baogen Gu, And Jing Zhang. "A Scalable, High Performance Internet Cluster Server." (In Proceedings Fourth International Conference/Exhibition On High Performance Computing In The Asia-Pacific Region, Vol. 2, Pp. 941-944. IEEE, 2000.)

⁶¹⁰ Yang, Jae-Min, Jong-Geun Kim, And Jong-In Im. "P-IDC: Information Security And Consideration In Building Internet Data Centers For Pervasive Environment." (2007) In Advances In Web And Network Technologies, And Information Management, Pp. 583-592. Springer, Berlin, Heidelberg.

⁶¹¹ Sahoo, Ramendra K., Mark S. Squillante, Anand Sivasubramaniam, And Yanyong Zhang. "Failure Data Analysis Of A Large-Scale Heterogeneous Server Environment." (In International Conference On Dependable Systems And Networks, 2004, Pp. 772-781. IEEE, 2004.)

⁶¹² Bansode, S. Y., And S. M. Pujar. "Cloud Computing And Libraries." (2012) DESIDOC Journal Of Library & Information Technology 32, No. 6: 506-512.

⁶¹³ Wu, Yueping, Jian Zheng, And Yi Du. "Building Of Virtual Server In Computer Laboratory." (In Proceedings Of The International Conference On Information Engineering And Applications (IEA) 2012, Pp. 373-379. Springer, London, 2013.)

Here is a scenario about how a server operates, with a clear description of what happens when a user visits a website. The user places a link or name to the website in a browser and presses 'enter'⁶¹⁴. The browser links the name to the domain name system server (DNS)⁶¹⁵. The DNS server passes it on to the internet protocol browser (IP)⁶¹⁶ of the website host server. The browser contacts the server on which the website is hosted and requests it to add the link to the page⁶¹⁷. The server prepares and sends the page as data packets to the browser, which shows the page sent from the server to the user. This process happens very rapidly⁶¹⁸, depending on the capabilities of the server and the speed at which both server and user link to the internet. The server is the most important factor because it can deal with thousands of users simultaneously⁶¹⁹.

The server can be transformed into a web hosting server⁶²⁰, such as a shared hosting server⁶²¹, split into virtual servers⁶²², and may even be fully leased, when it is known as a full server in the web hosting sector⁶²³. In its default setting⁶²⁴, the one physical server may be divided into more than one server. That is, the one computer can be configured as several servers, which all

⁶¹⁴ Iansiti, Marco, And Gregory L. Richards. "The Information Technology Ecosystem: Structure, Health, And Performance." (2006) *The Antitrust Bulletin* 51, No. 1: 77-110.

⁶¹⁵ Leighton, F. Thomson, And Daniel M. Lewin. "Content Distribution System Using An Alternative Domain Name System (DNS) And Content Servers." (2010) U.S. Patent 7,693,959, Issued April 6, 2010.

⁶¹⁶ Rodwin, Andrew S., Jonathan H. Wenocur, And Michael G. Feinstein. "Remote Access Apparatus And Method Which Allow Dynamic Internet Protocol (IP) Address Management." (1998) U.S. Patent 5,812,819, Issued September 22, 1998.

⁶¹⁷ Draheim, Dirk, And Gerald Weber. "Strongly Typed Server Pages." (In *International Workshop On Next Generation Information Technologies And Systems*, Pp. 29-44. Berlin, Heidelberg: Springer Berlin Heidelberg, 2002.)

⁶¹⁸ Liu, Xue, Lui Sha, Yixin Diao, Steven Froehlich, Joseph L. Hellerstein, And Sujay Parekh. "Online Response Time Optimization Of Apache Web Server." (In *International Workshop On Quality Of Service*, Pp. 461-478. Springer, Berlin, Heidelberg, 2003.)

⁶¹⁹ Konstan, Joseph A., Bradley N. Miller, David Maltz, Jonathan L. Herlocker, Lee R. Gordon, And John Riedl. "Grouplens: Applying Collaborative Filtering To Usenet News." (1997) *Communications Of The ACM* 40, No. 3: 77-87.

⁶²⁰ Rabinovich, Michael, And Amit Aggarwal. "Radar: A Scalable Architecture For A Global Web Hosting Service." (1999) *Computer Networks* 31, No. 11-16: 1545-1561.

⁶²¹ Uргаonkar, Bhuvan, Prashant Shenoy, And Timothy Roscoe. "Resource Overbooking And Application Profiling In Shared Hosting Platforms." (2002) *ACM SIGOPS Operating Systems Review* 36, No. SI: 239-254.

⁶²² Kamath, Sandeep, Josephine Suganthi, Sergey Verzunov, Murali Raja, And Anil Shetty. "Systems And Methods For Load Balancing Via A Plurality Of Virtual Servers Upon Failover Using Metrics From A Backup Virtual Server." (2011) U.S. Patent 8,065,559, Issued November 22, 2011.

⁶²³ Jerman-Blažič, Borka. "Web-Hosting Market Development Status And Its Value As An Indicator Of A Country's E-Readiness." (2008) *Telecommunications Policy* 32, No. 6: 422-435.

⁶²⁴ Kauffman, Steven Victor, Lara Marie Lewis, And Ronald Elliott Parrish. "Method And Apparatus For Dividing, Mapping And Storing Large Digital Objects In A Client/Server Library System." (1999) U.S. Patent 5,857,203, Issued January 5, 1999.

share the same server resources⁶²⁵. Multiple systems can also be connected to each other for cloud hosting⁶²⁶. The user can also convert the server to function as a hosting reseller⁶²⁷. Moreover, some businesses and organisations use the server at their headquarters to provide services to their branches by connecting them all to one data source, an arrangement seen in the telecommunications sector, in banks and other businesses⁶²⁸. The server that normally houses the client database is the main server⁶²⁹. One benefit is that all customer data can only be found in one location so that access and help can be easily protected and managed⁶³⁰. This arrangement also makes changes from one user accessible in real time to all other users⁶³¹.

The main server is housed in a mainframe⁶³², which is a massive, very efficient server with a special character, a special operation method, strict requirements and a very high capacity to process data with the lowest error rate.

However, although the server has special requirements⁶³³, it is not essential, as any ordinary computer can be converted for use as an internet server⁶³⁴. This is accomplished by the installation and connexion of the operating system to the internet and the provision of a

⁶²⁵ Akizawa, Mitsuru, Hirofumi Yamashita, Hisamitsu Kawaguchi, Katsumi Tada, Kanji Kato, Akira Kito, And Hidenori Yamada. "File Server System And File Access Control Method Of The Same." (1996) U.S. Patent 5,548,724, Issued August 20, 1996.

⁶²⁶ Lim, Harold C., Shivnath Babu, Jeffrey S. Chase, And Sujay S. Parekh. "Automated Control In Cloud Computing: Challenges And Opportunities." (In Proceedings Of The 1st Workshop On Automated Control For Datacentres And Clouds, Pp. 13-18. 2009.)

⁶²⁷ Kim, Steven D. Third Party Management Of Computer System Control. (2010) U.S. Patent Application 12/604,687, Filed February 18, 2010.

⁶²⁸ Mulligan, Deirdre, And Ari Schwartz. "Your Place Or Mine? Privacy Concerns And Solutions For Server And Client-Side Storage Of Personal Information." (In Proceedings Of The Tenth Conference On Computers, Freedom And Privacy: Challenging The Assumptions, Pp. 81-84. 2000.)

⁶²⁹ Amsaleg, Laurent, Michael Franklin, And Olivier Gruber. "Efficient Incremental Garbage Collection For Client-Server Object Database Systems." (2000) In Fully Integrated Data Environments, Pp. 427-430. Springer, Berlin, Heidelberg, 2000.

⁶³⁰ Trevisani, Emiliano, And Andrea Vitaletti. "Cell-ID Location Technique, Limits And Benefits: An Experimental Study." (In Sixth IEEE Workshop On Mobile Computing Systems And Applications, Pp. 51-60. IEEE, 2004.)

⁶³¹ Abdulredah, Sarah Haider, And Dheyaa Jasim Kadhim. "New Approaches Of Cloud Services Access Using Tonido Cloud Server For Real-Time Applications." (2020) Journal Of Engineering 26, No. 8: 83-99.

⁶³² Sneed, Harry M. "Encapsulating Legacy Software For Use In Client/Server Systems." (In Proceedings Of WCRE'96: 4rd Working Conference On Reverse Engineering, Pp. 104-119. IEEE, 1996.)

⁶³³ Jiang, Yufei, Jiang Ming, Dinghao Wu, John Yen, Prasenjit Mitra, John I. Messner, And Robert Leicht. "BIM Server Requirements To Support The Energy Efficient Building Lifecycle." (2012) In Computing In Civil Engineering, Pp. 365-372. 2012.

⁶³⁴ Levergood, Thomas Mark, Lawrence C. Stewart, Stephen Jeffrey Morris, Andrew C. Payne, And George Winfield Treese. "Internet Server Access Control And Monitoring Systems." (1998) U.S. Patent 5,708,780, Issued January 13, 1998.

continuous electric power supply⁶³⁵. Computer companies manufacture computer servers that closely imitate ordinary computers, but have the ability to run continuously, stably and without substantial increase in temperature⁶³⁶. The capabilities of the server vary from one version to another and between devices, depending on what they need to do, whether they are hosting websites, databases, or files⁶³⁷. Additionally, if the server is to be used as a web server, it must always be linked to an electronic outlet and the internet⁶³⁸. The existence in one location of a group of servers forms what is known as a data centre⁶³⁹.

Data centre infrastructure technology

The data centre is a physical location that corporations and entities use to store and run essential programmes and applications⁶⁴⁰. Data centre architecture relies on a network of computer hardware, servers, and storage accessories to connect shared applications and services⁶⁴¹. Data centre rooms or buildings consist of internet routers, switches for connection devices, firewall protection applications, storage systems, servers, and application-delivery controllers⁶⁴². Hence, establishing a data centre is not an easy task and is based on data centre server requirements, server room requirements, energy and internet infrastructure, and environmental conditions (low temperatures are required).

In order to build a data centre, it is not enough simply to connect servers to each other, but the data centre must also meet basic requirements and specifications, as well as standards for the

⁶³⁵ Naono, Norihiko, And Tomohisa Ota. "System, Server, Information Terminal Operating System, Middleware, Information Communication Device, Certification Method, And System And Application Software." (2004) U.S. Patent 8,825,738, Issued September 2, 2014.

⁶³⁶ Chai, Hongfeng, Yuemin Qi, Rui Guo, Shuo He, And Wenbin Hu. "Computer Processing System For Realizing Data Upgrade And A Data Upgrading Method." (2012) U.S. Patent 8,191,058, Issued May 29, 2012.

⁶³⁷ Manjure, Samir B., Anthony M. Leibovitz, And Rajesh R. Peddibhotla. "System Uses Test Controller To Match Different Combination Configuration Capabilities Of Servers And Clients And Assign Test Cases For Implementing Distributed Testing." (2004) U.S. Patent 6,804,709, Issued October 12, 2004.

⁶³⁸ Arlitt, Martin F., And Carey L. Williamson. "Web Server Workload Characterization: The Search For Invariants" (1996) ACM SIGMETRICS Performance Evaluation Review 24, No. 1 (1996): 126-137.

⁶³⁹ Pakbaznia, Ehsan, And Massoud Pedram. "Minimizing Data Centre Cooling And Server Power Costs" (In Proceedings Of The 2009 ACM/IEEE International Symposium On Low Power Electronics And Design, Pp. 145-150. 2009.)

⁶⁴⁰ Rogers, Paul. "Data Centre" (2013) U.S. Patent 8,514,572, Issued August 20, 2013.

⁶⁴¹ Shahar, Siti Mariam, N. Mohd Satar, And K. A. Abu Bakar. "The Challenges In Managing Information Technology Shared Services Operations." (2019) International Journal Of Recent Technology And Engineering (IJRTE) 8: 322-328.

⁶⁴² Duraimutharasan, N., And Mr Vijayakumar. "Data Center Physical Security And Sustainable Data Center." (2022) Journal Of Pharmaceutical Negative Results: 4892-4896.

layout of rooms and server services⁶⁴³, enabling the data centre to store and exchange data 24⁶⁴⁴ hours a day, every day of the year, never stopping. Accordingly, these basic requirements and specifications for the development of an effective data centre are among the most important factors⁶⁴⁵: The most critical pillar in the construction of a successful data centre is its location⁶⁴⁶. A further fundamental necessity to maintain the required environment for operating the servers is the protection and security of equipment and staff inside the data centre⁶⁴⁷. The room should be fireproof and the equipment constantly monitored to ensure that incidents do not happen. Internet servers must be of high quality for data centre information networks, with components designed to withstand high temperatures and run continuously without interruption⁶⁴⁸. Connection to a high-speed internet link building or server room is essential to easily access data from the server and display it to users⁶⁴⁹. Finally, a high level of skilled developers for data protection and real-time server monitoring are essential to create a data centre specialising in operations, monitoring, intrusion and security attacks⁶⁵⁰. There are many technological criteria for a data centre, but those listed above are the most critical elements for establishing such a centre⁶⁵¹.

The data centre room specifications for the technical equipment inside it must be constructed in compliance with fundamental standards and server room creation requirements⁶⁵². Because the data centre server components are constantly drawing large amounts of power, the place

⁶⁴³ Panagos, Panos, Marc Van Liedekerke, Arwyn Jones, And Luca Montanarella. "European Soil Data Centre: Response To European Policy Support And Public Data Requirements" (2012) *Land Use Policy* 29, No. 2: 329-338.

⁶⁴⁴ Rogers, Paul. Data Centre. U.S. (2013) Patent 8,514,572, Issued August 20, 2013.

⁶⁴⁵ Fakhim, Babak, M. Behnia, S. W. Armfield, And N. Srinarayana. "Cooling Solutions In An Operational Data Centre: A Case Study." (2011) *Applied Thermal Engineering* 31, No. 14-15 (2011): 2279-2291.

⁶⁴⁶ Daim, Tugrul U., Ashok Bhatla, And Mohammad Mansour. "Site Selection For A Data Centre—A Multi-Criteria Decision-Making Model." (2013) *International Journal Of Sustainable Engineering* 6, No. 1 (2013): 10-22.

⁶⁴⁷ Balodis, Rihards, And Inara Opmane. History Of Data Centre Development. In *Reflections On The History Of Computing*, (2012) Pp. 180-203. Springer, Berlin, Heidelberg, 2012.

⁶⁴⁸ Fakhim, Babak, M. Behnia, S. W. Armfield, And N. Srinarayana. "Cooling Solutions In An Operational Data Centre: A Case Study." (2011) *Applied Thermal Engineering* 31, No. 14-15: 2279-2291.

⁶⁴⁹ Gu, Yunhong, And Robert L. Grossman. "Sector And Sphere: The Design And Implementation Of A High-Performance Data Cloud." (2009) *Philosophical Transactions Of The Royal Society A: Mathematical, Physical And Engineering Sciences* 367, No. 1897: 2429-2445.

⁶⁵⁰ Rennie, Susannah C. "Providing Information On Environmental Change: Data Management, Discovery And Access In The UK Environmental Change Network Data Centre." (2016) *Ecological Indicators* 68: 13-20.

⁶⁵¹ Daim, Tugrul U., Ashok Bhatla, And Mohammad Mansour. "Site Selection For A Data Centre—A Multi-Criteria Decision-Making Model." (2013) *International Journal Of Sustainable Engineering* 6, No. 1: 10-22.

⁶⁵² Al-Sabaawi, Aiman, Hassan M. Ibrahim, Mohammed Abdal Baqee Mahmood Almalallah, Jasmeet Kaur, Khamael AL-Dulaimi, And Amani Zwayen. "Proposal Specifications Of Building Data Centre For Virtual Globalnets." (2019).

must include⁶⁵³ an adequate electrical supply⁶⁵⁴, so that the electrical cables supplying the building have thermal insulation, resistance connexions and torque twice the intensity needed for continuous operations. Electrical emergency connexion systems are necessary — an uninterruptible power supply (UPS) — to prevent server failure in the event of main-line disruption⁶⁵⁵. To ensure server coordination and delivery, the servers in the room or building are arranged and distributed according to four⁶⁵⁶ modules, which are the strongest in the development of layers of data centres⁶⁵⁷. The modules have been developed to make it easy to transfer, manage, upgrade and access all servers and connection quickly⁶⁵⁸. Air conditioning and an adequate cooling system are essential, and the air conditioners must be capable of continuous operation⁶⁵⁹, able to sustain the data centre temperature within the specified range and the number of pieces of equipment used. Room temperature monitoring devices are installed to detect variations in temperature and shut servers down before a problem gets worse⁶⁶⁰.

There are various types of data centre, depending on the needs of the user⁶⁶¹, so that there are major differences among servers according to the programmes and potential features of the data centres used. The first type is the enterprise data centre, which is built to serve one entity

⁶⁵³ Chi, Yong Quiang, Jonathan Summers, Peter Hopton, Keith Deakin, Alan Real, Nik Kapur, And Harvey Thompson. Case Study Of A Data Centre Using Enclosed, Immersed, Direct Liquid-Cooled Servers. (In 2014 Semiconductor Thermal Measurement And Management Symposium (SEMI-THERM), Pp. 164-173. IEEE, 2014.)

⁶⁵⁴ Avgerinou, Maria, Paolo Bertoldi, And Luca Castellazzi. "Trends In Data Centre Energy Consumption Under The European Code Of Conduct For Data Centre Energy Efficiency." (2017) (Energies 10, No. 10: 1470.

⁶⁵⁵ Milad, M., And M. Darwish. Comparison Between Double Conversion Online UPS And Flywheel UPS Technologies In Terms Of Efficiency And Cost In A Medium Data Centre. In 2015 50th International Universities Power Engineering Conference (UPEC), Pp. 1-5. IEEE, 2015.)

⁶⁵⁶ Dubernet, Marie-Lise, Vincent Boudon, J. L. Culhane, M. S. Dimitrijevic, A. Z. Fazliev, Christine Joblin, F. Kupka Et Al. "Virtual Atomic And Molecular Data Centre." (2010) Journal Of Quantitative Spectroscopy And Radiative Transfer 111, No. 15: 2151-2159.

⁶⁵⁷ Ibid.

⁶⁵⁸ Loken, Chris, Daniel Gruner, Leslie Groer, Richard Peltier, Neil Bunn, Michael Craig, Teresa Henriques Et Al. "Scinet: Lessons Learned From Building A Power-Efficient Top-20 System And Data Centre." (2010) In Journal Of Physics-Conference Series, Vol. 256, No. 1, P. 012026. 2010.

⁶⁵⁹ Fakhim, Babak, M. Behnia, S. W. Armfield, And N. Srinarayana. "Cooling Solutions In An Operational Data Centre: A Case Study." (2011) Applied Thermal Engineering 31, No. 14-15: 2279-2291.

⁶⁶⁰ Nama, Gigih Forda, Hanang Priambodo, And Hery Dian Septama. Electricity, Temperature, And Network Utilization Monitoring At University Of Lampung Data Centre Using Low Cost Low Power Single Board Mini Computer. (2014) DRAFT: 184-189.

⁶⁶¹ Allen, FRANK H., S. D. B. M. Bellard, M. D. Brice, BRXAN A. Cartwright, A. Doubleday, H. Higgs, Th Hummelink Et Al. (1979) The Cambridge Crystallographic Data Centre: Computer-Based Search, Retrieval, Analysis And Display Of Information. Acta Crystallographic Section B: Structural Crystallography And Crystal Chemistry 35, No. 10: 2331-2339.

such as a company, bank, or ministry, and establish full connection between all departments, with the greatest share of usage⁶⁶² allocated only to staff and subscribers of the company.

Second is the web hosting provider or managed services data centre, built by web hosting companies and consisting of several internet servers⁶⁶³. These servers are fully engaged by a reseller who splits up and distributes their capabilities through a virtual private server (VPS)⁶⁶⁴ with limited spaces. The servers are marketed for web hosting services to support users who own websites and forums⁶⁶⁵.

Aside from the third type, there is the Web 2.0 data centre servicing Web 2.0 websites, such as blogs, sites that enable users to create free websites, and social networking sites that allow users to connect with data centre's features⁶⁶⁶. These features may be similar to those used in data centre hosting companies, free domain reservation companies, or hosting and domain websites⁶⁶⁷.

The last type comprises the cloud data centres, which offer a technology that transfers the processing and storage capabilities of the cloud computer, a server device that can be accessed via the internet and that converts IT programmes from goods to services⁶⁶⁸. Companies which use it are relieved of the problems associated with maintaining and developing their own IT programmes⁶⁶⁹. The cloud data centre stores its information in the 'cloud'⁶⁷⁰, a virtual space

⁶⁶² Wagner, Joachim. "The Research Potential Of New Types Of Enterprise Data Based On Surveys From Official Statistics In Germany." (2009).

⁶⁶³ Desnoyers, Peter, Timothy Wood, Prashant Shenoy, Rahul Singh, Sangameshwar Patil, And Harrick Vin. "Modellus: Automated Modeling Of Complex Internet Data Center Applications." (2012) ACM Transactions On The Web (TWEB) 6, No. 2: 1-29.

⁶⁶⁴ Francois, Frederic, And Erol Gelenbe. (Optimizing Secure SDN-Enabled Inter-Data Centre Overlay Networks Through Cognitive Routing. In 2016 IEEE 24th International Symposium On Modelling, Analysis And Simulation Of Computer And Telecommunication Systems (MASCOTS), Pp. 283-288. IEEE, 2016.)

⁶⁶⁵ Tighe, Michael, Gaston Keller, Michael Bauer, And Hanan Lutfiyya. "Dcsim: A Data Centre Simulation Tool For Evaluating Dynamic Virtualized Resource Management." (In 2012 8th International Conference On Network And Service Management (Cnsm) And 2012 Workshop On Systems Virtualization Management (Svm), Pp. 385-392. IEEE, 2012.)

⁶⁶⁶ Goodchild, Michael F. "Citizens As Voluntary Sensors: Spatial Data Infrastructure In The World Of Web 2.0." (2007) International Journal Of Spatial Data Infrastructures Research 2, No. 2: 24-32.

⁶⁶⁷ Buyya, Rajkumar, Anton Beloglazov, And Jemal Abawajy. "Energy-Efficient Management Of Data Center Resources For Cloud Computing: A Vision, Architectural Elements, And Open Challenges." (2010) Arxiv Preprint Arxiv:1006.0308.

⁶⁶⁸ Li, Wenhao, Yun Yang, And Dong Yuan. "A Novel Cost-Effective Dynamic Data Replication Strategy For Reliability In Cloud Data Centres." (In 2011 IEEE Ninth International Conference On Dependable, Autonomic And Secure Computing, Pp. 496-502. IEEE, 2011.)

⁶⁶⁹ Wetherell, Margaret, Stephanie Taylor, And Simeon J. Yates, Eds. "Discourse As Data: A Guide For Analysis" (2001) Sage.

⁶⁷⁰ Dupont, Corentin, Thomas Schulze, Giovanni Giuliani, Andrey Somov, And Fabien Hermenier. "An Energy Aware Framework For Virtual Machine Placement In Cloud Federated Data Centres." (In 2012 Third

that ensures continuous, uninterrupted communication with many devices (computers, tablets, smartphones, etc.) when accessed by a code for unlocking the network⁶⁷¹. Access can be made throughout the world as the available technology⁶⁷² advances. Users have benefited immensely from this technology, saving on costs⁶⁷³. Nevertheless, there are various types of data centres built for their own primary purpose.

Network information technology infrastructure

In a network, there are two computers, a group of devices, or hardware and software resources connected to each other via transmitting wires or cables. They can also be connected wirelessly in order to share data and files among themselves⁶⁷⁴. Networks are categorised by how their devices are linked⁶⁷⁵. A wired network is one where linked devices communicate with one another via cables⁶⁷⁶. A wireless network is one where devices within the network are connected wirelessly to each other, i.e., without using typical cables, including braided copper cables, optical fibre, and other cables⁶⁷⁷.

The planet has become a little village⁶⁷⁸, and networks in schools, factories, hospitals, businesses and universities are used almost everywhere. These networks differ according to their types and divisions, depending on the geographical area they cover, in addition to the number of devices they include⁶⁷⁹. Network varieties include first the single user personal area

International Conference On Future Systems: Where Energy, Computing And Communication Meet (E-Energy), Pp. 1-10. IEEE, 2012.)

⁶⁷¹ Zhao, Xiaoxue, Vijay Vusirikala, Bikash Koley, Valey Kamalov, And Tad Hofmeister. "The Prospect Of Inter-Data-Center Optical Networks." (IEEE Communications Magazine 51, No. 9 (2013): 32-38.

⁶⁷² Carroll, Mariana, Alta Van Der Merwe, And Paula Kotze. "Secure Cloud Computing: Benefits, Risks And Controls" In 2011 Information Security For South Africa, Pp. 1-9. IEEE, 2011.)

⁶⁷³ Ibid.

⁶⁷⁴ Lin, Min, Qiang Chen, And Shuicheng Yan. "Network In Network" (2013) Arxiv Preprint Arxiv:1312.4400.

⁶⁷⁵ Bello, Oladayo, And Sherali Zeadally. "Intelligent Device-To-Device Communication In The Internet Of Things." (2014) IEEE Systems Journal 10, No. 3: 1172-1182.

⁶⁷⁶ Bueger, Christian, And Tobias Liebetau. "Protecting Hidden Infrastructure: The Security Politics Of The Global Submarine Data Cable Network." (2021) Contemporary Security Policy 42, No. 3: 391-413.

⁶⁷⁷ Robinson, Jack, Peter Muller, Timothy Noke, Teng Lew Lim, Wallace Glausi, James Cluff, And Larry Fullerton. "Using Internet Content As A Means To Establish Live Social Networks By Linking Internet Users To Each Other Who Are Simultaneously Engaged In The Same And/Or Similar Content." (2012) U.S. Patent 8,117,281, Issued February 14, 2012.

⁶⁷⁸ Castells, Manuel. "Informational, Networks, And The Network Society: A Theoretical Blueprint." (2004) The Network Society: A Cross-Cultural Perspective: 3-45.

⁶⁷⁹ Sahuguet, Arnaud, Rick Hull, Daniel Lieuwen, And Ming Xiong. "Enter Once, Share Everywhere: User Profile Management In Converged Networks." (2003).

network⁶⁸⁰, composed of personal devices such as a computer and printer within a single office⁶⁸¹. Second, a small home or local network⁶⁸² is the simplest form of network, which can be found in each house that has an internet-linked personal or desktop computer. The local or house network covers a small geographical area, making it possible to contain a single company's network or networks, for example if it is restricted to only one building⁶⁸³. Third, the network serving a city is a civil or urban network⁶⁸⁴ that is greater than the home or local area network but smaller than the broad network. It is an intermediate solution for networks for a medium-size area⁶⁸⁵. Fourth, long-distance networks⁶⁸⁶ span a very large geographical zone, including the global internet, and typically encompass entire nations or whole continents and are distinguished by their huge number and complex nature. The global internet is one of the most important examples of this⁶⁸⁷.

The difference between a network and an information technology network is that information technology infrastructure is a wider, more extensive concept as it defines a collection of information technology elements that are vital for the network⁶⁸⁸. Also, the IT network includes physical components, such as hardware, and sometimes also encompasses network or software components⁶⁸⁹. On the other hand, the network infrastructure is considered to be smaller, and a strong network infrastructure supports major IT infrastructure⁶⁹⁰.

⁶⁸⁰ Zimmerman, Thoams Guthrie. "Personal Area Networks: Near-Field Intrabody Communication." (1996) IBM Systems Journal 35, No. 3.4: 609-617.

⁶⁸¹ Molisch, Andreas F., Jeffrey R. Foerster, And Marcus Pendergrass. "Channel Models For Ultrawideband Personal Area Networks." (2003) IEEE Wireless Communications 10, No. 6: 14-21.

⁶⁸² Point-To, Local Area Network Using. "Autonet: A High-Speed, Self-Configuring Local Area Network Using Point-To-Point Links." (1991) IEEE Journal On Selected Areas In Communications 9: 8.

⁶⁸³ Fowler, Henry J., And Will E. Leland. "Local Area Network Characteristics, With Implications For Broadband Network Congestion Management." (1991) IEEE Journal On Selected Areas In Communications 9, No. 7: 1139-1149.

⁶⁸⁴ Afanasyev, Mikhail, Tsuwei Chen, Geoffrey M. Voelker, And Alex C. Snoeren. "Usage Patterns In An Urban Wifi Network." (2010) IEEE/ACM Transactions On Networking 18, No. 5: 1359-1372.

⁶⁸⁵ Farshad, Arsham, Mahesh K. Marina, And Francisco Garcia. Urban Wifi Characterization Via Mobile Crowdsensing. (In 2014 IEEE Network Operations And Management Symposium (NOMS), Pp. 1-9. IEEE, 2014.)

⁶⁸⁶ Bullo, Hadrien, Roger Les Cottrell, And Richard Hughes-Jones. "Evaluation Of Advanced TCP Stacks On Fast Long-Distance Production Networks." (2003) Journal Of Grid Computing 1, No. 4: 345-359.

⁶⁸⁷ Cowie, James H., David M. Nicol, And Andrew T. Ogielski. "Modeling The Global Internet." (1999) Computing In Science & Engineering 1, No. 1: 42-50.

⁶⁸⁸ Chi, Lei, Thiagarajan Ravichandran, And Goce Andreovski. "Information Technology, Network Structure, And Competitive Action." (2010) Information Systems Research 21, No. 3: 543-570.

⁶⁸⁹ Chapman, M., Fabrice Dupuy, And G. Nilsson. "An Overview Of The Telecommunications Information Networking Architecture." (1996) Electronics & Communication Engineering Journal 8, No. 3: 135-141.

⁶⁹⁰ Babu, Vidya, Michael F. Fredrich, And Christopher A. White. "Network Device Information Collection And Change Detection." (2000) U.S. Patent 6,122,639, Issued September 19, 2000.

The advantages of networks and information technology networks are evident⁶⁹¹ because they save time, effort, resources, and offer many solutions to make large distances look very small. An example can be seen in the advantages of connecting multiple devices, such as the printer, in a company where all devices in the network are used, saving energy and money⁶⁹² since networks can make use of dispersed resources, sharing them with all other devices⁶⁹³. Where data is transmitted from one computer to another, the networks save time and effort. A special network file is released so other devices can use the network to access it⁶⁹⁴. Networks also establish a new paradigm consisting of databases that store in a single location, large quantities of data that users may access in specified circumstances⁶⁹⁵. And lastly, networks enable devices to be linked to the internet, so that anyone in the world can use them and search their contents, regardless of the position which, given the spread of computer networks, did not occur⁶⁹⁶.

Cellular network infrastructure technology

A cellular network is a communications network built exclusively to support mobile phones or other devices that are capable of receiving communications transmission from the network⁶⁹⁷. The cellular network enables its subscribers traveling either within or outside their country to establish communication with other subscribers as well as the public network through their mobile devices⁶⁹⁸. Each mobile network splits into a community of cells and each mobile is represented by one or more transceivers⁶⁹⁹. The function of cellular networks has expanded

⁶⁹¹ Demirkol, Ilker, Cem Ersoy, And Ertan Onur. "Wake-Up Receivers For Wireless Sensor Networks: Benefits And Challenges." (2009) IEEE Wireless Communications 16, No. 4: 88-96.

⁶⁹² Jajszczyk, Andrzej. "Automatically Switched Optical Networks: Benefits And Requirements." (2005) IEEE Communications Magazine 43, No. 2: S10-S15.

⁶⁹³ Kovacevic, Milan, And Anthony Acampora. "Benefits Of Wavelength Translation In All-Optical Clear-Channel Networks." (1996) IEEE Journal On Selected Areas In Communications 14, No. 5: 868-880.

⁶⁹⁴ Telgarsky, Matus. "Benefits Of Depth In Neural Networks." (2016) Arxiv Preprint Arxiv:1602.04485.

⁶⁹⁵ Wang, Guohui, TS Eugene Ng, And Anees Shaikh. "Programming Your Network At Run-Time For Big Data Applications. In Proceedings Of The First Workshop On Hot Topics In Software Defined Networks," (2012) Pp. 103-108.

⁶⁹⁶ Hesselink, Lambertus, Dharmarus Rizal, And Eric S. Bjornson. "Access And Control System For Network-Enabled Devices." (2006) U.S. Patent 7,120,692, Issued October 10, 2006.

⁶⁹⁷ Borkowski, Daniel G., Hingsum F. Fung, Hadi F. Habal, Kenneth Chao, Sheng-Roan Kai, And II Robert D. Packard. "Cellular Network-Based Location System" (1996) U.S. Patent 5,519,760, Issued May 21, 1996.

⁶⁹⁸ Mantoro, Teddy, Admir Milišić, And Media A. Ayu. "Online Payment Procedure Involving Mobile Phone Network Infrastructure And Devices." (In 2011 International Conference On Multimedia Computing And Systems, Pp. 1-6. IEEE, 2011.)

⁶⁹⁹ Rost, Peter, Albert Banchs, Ignacio Berberana, Markus Breitbach, Mark Doll, Heinz Droste, Christian Mannweiler, Miguel A. Puente, Konstantinos Samdanis, And Bessem Sayadi. "Mobile Network Architecture Evolution Toward 5G" (2016) IEEE Communications Magazine 54, No. 5: 84-91.

from providing basic telephone service, and now includes data and picture processing, internet access and other modern facilities⁷⁰⁰.

The cellular network layout consists of linking the following key components: a mobile station (MS)⁷⁰¹, a system used for wireless network contact⁷⁰², and a base station (BS)⁷⁰³ consisting of a radio and recipient for the transmitting and receipt of signals to and from cell stations⁷⁰⁴. The mobile switching centre (MSC)⁷⁰⁵ is the backbone of the network and plans and manages calls across the network⁷⁰⁶. Additional necessary components are the base station control (BSC)⁷⁰⁷ to control interactions between base stations and a central mobile transmission centre⁷⁰⁸, and the public telephone network (PSTN)⁷⁰⁹, which represents the network's land area. Cell networks are split into cells, and one or more recipients are represented by each cell⁷¹⁰. Cellular network connectivity is two-way as messages are sent and received from various uplink and downlink frequencies⁷¹¹. The purpose of selecting the cellular structure is to enable the usage of frequencies. When non-contiguous cells are divided at a certain point, the frequencies may be used again, meaning that the scarce radio resources available are used effectively⁷¹².

⁷⁰⁰ Bai, Tianyang, And Robert W. Heath. "Coverage And Rate Analysis For Millimeter-Wave Cellular Networks." (2014) IEEE Transactions On Wireless Communications 14, No. 2: 1100-1114.

⁷⁰¹ Kari, Hannu H. "Controlling Operating States Of A Mobile Station In A Packet Radio System" (2001) U.S. Patent 6,243,579, Issued June 5, 2001.

⁷⁰² Vukicevic, Slobodan, Hynda K. Kleinman, Frank P. Luyten, Anita B. Roberts, Nanette S. Roche, And A. Hari Reddi. "Identification Of Multiple Active Growth Factors In Basement Membrane Matrigel Suggests Caution In Interpretation Of Cellular Activity Related To Extracellular Matrix Components" (1992) Experimental Cell Research 202, No. 1: 1-8.

⁷⁰³ Naguib, Ayman F., Arogyaswami Paulraj, And Thomas Kailath. "Capacity Improvement With Base-Station Antenna Arrays In Cellular CDMA" (1994) IEEE Transactions On Vehicular Technology 43, No. 3: 691-698.

⁷⁰⁴ Marzetta, Thomas L. "Noncooperative Cellular Wireless With Unlimited Numbers Of Base Station Antennas" (2010) IEEE Transactions On Wireless Communications 9, No. 11: 3590-3600.

⁷⁰⁵ Ejzak, Richard Paul. "Communication System Including An Interworking Mobile Switching Centre For Call Termination" (2006) U.S. Patent 6,996,087, Issued February 7, 2006.

⁷⁰⁶ Ibid.

⁷⁰⁷ Sauer, John M., Paul Steinberg, Jeffrey L. Timbs, Joseph Pedziwiatr, Steve Lovette, And Thomas L. Sears. "System Packet-Based Centralized Base Station Controller" (2000) U.S. Patent 6,034,950, Issued March 7, 2000.

⁷⁰⁸ Ibid.

⁷⁰⁹ Petite, Thomas D. "System And Method For Communicating With A Remote Communication Unit Via The Public Switched Telephone Network (PSTN)" (2003) U.S. Patent 6,618,578, Issued September 9, 2003.

⁷¹⁰ Andrews, Jeffrey G., Holger Claussen, Mischa Dohler, Sundeep Rangan, And Mark C. Reed. "Femtocells: Past, Present, And Future." (2012) IEEE Journal On Selected Areas In Communications 30, No. 3: 497-508.

⁷¹¹ Proctor Jr, James A., And Kenneth M. Galney. "Non-Frequency Translating Repeater With Downlink Detection For Uplink And Downlink Synchronization" (2007) U.S. Patent 7,233,771, Issued June 19, 2007.

⁷¹² Poularakis, Konstantinos, George Iosifidis, And Leandros Tassiulas. "Approximation Algorithms For Mobile Data Caching In Small Cell Networks" (2014) IEEE Transactions On Communications 62, No. 10: 3665-3677.

The Nordic mobile telephone (NMT)⁷¹³ system in the 450⁷¹⁴ to 900⁷¹⁵ MHz frequency band⁷¹⁶, the advanced mobile system (AMPS)⁷¹⁷ in the 800⁷¹⁸ to 900⁷¹⁹ MHz frequency band and its European analogue⁷²⁰, and the total access communication system (TACS)⁷²¹, comprise the first wave of cellular networks⁷²². Both these systems are characterised by their dependency on analogue technology⁷²³, the frequency division multiple access (FDMA)⁷²⁴ methodology and the adoption of the frequency reuse concept⁷²⁵. These devices work multiple frequency beams between 160⁷²⁶ and 900⁷²⁷ MHz. As a result of their incompatibility, the adoption of these systems was limited to a single country, except for NMT⁷²⁸. These networks offered mainly telephone coverage in the 1980s⁷²⁹.

The European GSM, IS-95⁷³⁰ and American IS-136⁷³¹ systems and Japanese personal digital cellular PDC⁷³² are among the most common second-generation mobile radio networks. These networks have the benefit of relying solely on emerging technology, multiple frequency

⁷¹³ Lehenkari, Janne, And Reijo Miettinen. "Standardisation In The Construction Of A Large Technological System—The Case Of The Nordic Mobile Telephone System" (2002) Telecommunications Policy 26, No. 3-4 : 109-127.

⁷¹⁴ Ibid.

⁷¹⁵ Ibid.

⁷¹⁶ Hamnerius, Yngve, And Thomas Uddmar. "Microwave Exposure From Mobile Phones And Base Stations In Sweden" (2000) Power 10, No. 6.

⁷¹⁷ Sharma, Tushar, Ramzi Darraji, And Fadhel Ghannouchi. "A Methodology For Implementation Of High-Efficiency Broadband Power Amplifiers With Second-Harmonic Manipulation" (2015) IEEE Transactions On Circuits And Systems II: Express Briefs 63, No. 1: 54-58.

⁷¹⁸ Ibid.

⁷¹⁹ Ibid.

⁷²⁰ Gruber, Harald. "Competition And Innovation: The Diffusion Of Mobile Telecommunications In Central And Eastern Europe" (2001) Information Economics And Policy 13, No. 1: 19-34.

⁷²¹ Altamura, G., S. Toscano, G. Gentilucci, F. Ammirati, A. Castro, C. Pandozi, And M. Satini. "Influence Of Digital And Analogue Cellular Telephones On Implanted Pacemakers" (1997) European Heart Journal 18, No. 10: 1632-1641.

⁷²² Ibid.

⁷²³ Ibid.

⁷²⁴ Caini, Carlo, Gianni Immovilli, And Maria Luisa Merani. "Outage Probability In FDMA/TDMA Mobile Communication Networks" (1997) European Transactions On Telecommunications 5, No. 1: 59-68.

⁷²⁵ Ibid.

⁷²⁶ Ibid.

⁷²⁷ Ibid.

⁷²⁸ Lehenkari, Janne, And Reijo Miettinen. "Standardisation In The Construction Of A Large Technological System—The Case Of The Nordic Mobile Telephone System" (2002) Telecommunications Policy 26, No. 3-4: 109-127.

⁷²⁹ Ibid.

⁷³⁰ Prabhakar, Laishram. "A Comparative Study Of Three TDMA Digital Cellular Mobile Systems (GSM, IS-136 NA-TDMA And PDC) Based On Radio Aspect" (2013) Editorial Preface 4, No. 6.

⁷³¹ Ibid.

⁷³² Ibid.

division connectivity, and time division multiple access (TDMA)⁷³³, and are utilised in numerous countries, broadening the variety of services offered to execute low-speed data transfer⁷³⁴. Owing to strong demand, these networks have had to deal with reduced space and data speed and poorer transmission efficiency than wired communication, as well as issues with frequency preparation and the restricted bandwidth available⁷³⁵.

The mobile phone joins the multimedia age with its third-generation systems⁷³⁶. In addition to cost savings, the integration of information technology enables the development of innovative services⁷³⁷. Owing to the median data transfer speed of 9.6 Kbps in the global mobile communications GSM system⁷³⁸, data services within telecommunications networks have been limited because of increased data traffic demands and the limitations of the internet service available on national networks⁷³⁹. In addition to voice, the International Telecommunication Union (ITU)⁷⁴⁰ and European telecommunications standards institute (ETSI)⁷⁴¹ initiated ambitious global research and development projects, known as Global Mobile Telecommunications 2000 (IMT-2000)⁷⁴², and also the global mobile communications infrastructure⁷⁴³, a universal mobile telecommunications system (UMTS)⁷⁴⁴, at EU level, in order to achieve high-speed data transmission for users⁷⁴⁵. The networks, computers, and

⁷³³ Hamalainen, Jari, Zhi Chun Honkasalo, And Harri Jokinen. "System For Transmitting Packet Data In Digital Cellular Time Division Multiple Access (TDMA) Air Interface" (1997) U.S. Patent 5,640,395, Issued June 17, 1997.

⁷³⁴ Kuo, Jer-Chen, And Gerald A. "Passavant. Multiple Wavelength TDMA Optical Network." (2008) U.S. Patent 7,386,236, Issued June 10, 2008.

⁷³⁵ Heinzelman, Wendi Beth. "Application-Specific Protocol Architectures For Wireless Networks." Phd Diss., (2000) Massachusetts Institute Of Technology.

⁷³⁶ Holma, Harri, And Antti Toskala, Eds. "WCDMA For UMTS: Radio Access For Third Generation Mobile Communications" (2005) John Wiley & Sons.

⁷³⁷ Blogh, Jonathan S., Jonathan Blogh, And Lajos L. Hanzo. "Third-Generation Systems And Intelligent Wireless Networking: Smart Antennas And Adaptive Modulation" (2002) John Wiley & Sons.

⁷³⁸ Woodward, Bryan, Robert SH Istepanian, And C. I. Richards. "Design Of A Telemedicine System Using A Mobile Telephone" (2001) IEEE Transactions On Information Technology In Biomedicine 5, No. 1: 13-15.

⁷³⁹ Ibid.

⁷⁴⁰ Lyall, Francis. International Communications: "The International Telecommunication Union And The Universal Postal Union" (2011) Ashgate Publishing, Ltd.

⁷⁴¹ Virtualization, Network Function. "European Telecommunications Standards Institute (ETSI)" (2013) Industry Specification Group (ISG).

⁷⁴² Gruber, Harald, And Frank Verboven. "The Evolution Of Markets Under Entry And Standards Regulation—The Case Of Global Mobile Telecommunications" (2001) International Journal Of Industrial Organization 19, No. 7: 1189-1212.

⁷⁴³ Siau, Keng, And Zixing Shen. "Mobile Communications And Mobile Services" (2003) International Journal Of Mobile Communications 1, No. 1-2: 3-14.

⁷⁴⁴ Samukic, Antun. "UMTS Universal Mobile Telecommunications System: Development Of Standards For The Third Generation" (1998) IEEE Transactions On Vehicular Technology 47, No. 4: 1099-1104.

⁷⁴⁵ Ibid.

mobile phones that have the capability to access the Internet can all be connected to the Internet from any area that is covered by the mobile communications system⁷⁴⁶. These systems have been allocated new frequency bands of approximately 2 GHz and are based on wideband code division multiple access (WCDMA) technology⁷⁴⁷. On the road to the next phase, technologies known as the second and a half phase (n2.5 G) emerged⁷⁴⁸, offering partial solutions to speed issues and data delivery across mobile networks. The first was the high-speed circuit-switch data (HSCSD) system⁷⁴⁹, allowing a maximum data transmission speed of 57.6 Kbps⁷⁵⁰. Then came the General Packet Radio System (GPRS), which guaranteed IP and X.25 reliability, improved radio resource utilisation and provided speed improvement to 164 kbps⁷⁵¹. Finally, the upgraded GSM enhanced data rate for GSM evolution EDGE data speed devices enabled transfer rates to climb to 384 kbps⁷⁵².

Third-generation technologies focused on the International Transport Association's collection of guidelines using the Global Mobile Transport software IMT-2000⁷⁵³. These technologies enable a larger and more sophisticated spectrum of networks, and with its spectral quality it is distinguished by a broad network capability. These provide extensive coverage of communication systems and internet broadband data transfer, all in a mobile environment⁷⁵⁴. 3G networks are wide field mobile telecommunications networks providing fast bandwidth connexions to internet and video calling facilities, as opposed to IEEE 802.11⁷⁵⁵. IEEE

⁷⁴⁶ Otsu, Toru, Ichiro Okajima, Narumi Umeda, And Yasushi Yamao. "Network Architecture For Mobile Communications Systems Beyond IMT-2000." (2001) IEEE Personal Communications 8, No. 5: 31-37.

⁷⁴⁷ Kim, Jin Young, Duk Kyung Kim, Seong Soo Park, Goon Seop Lee, Si Hoon Ryu, Myung Rae Chang, And Jun Mo Koo. "Perspective Framework On The Fourth-Generation Mobile Communication Systems" (2002) Journal Of Communications And Networks 4, No. 4: 321-335.

⁷⁴⁸ Mishra, Ajay R. "Fundamentals Of Cellular Network Planning And Optimisation: 2G/2.5 G/3G... Evolution To 4G" (2004) John Wiley & Sons.

⁷⁴⁹ Korhonen, Jouni, Olli Aalto, Andrei Gurtov, And H. Lamanen. "Measured Performance Of GSM, HSCSD And GPRS. In ICC 2001" (IEEE International Conference On Communications. Conference Record (Cat. No. 01CH37240), Vol. 5, Pp. 1330-1334. IEEE, 2001.)

⁷⁵⁰ Ibid.

⁷⁵¹ Dunnewijk, Theo, And Staffan Hultén. "A Brief History Of Mobile Communication In Europe" (2007) Telematics And Informatics 24, No. 3 (2007): 164-179.

⁷⁵² Halonen, Timo, Javier Romero, And Juan Melero, Eds. "GSM, GPRS And EDGE Performance: Evolution Towards 3G/UMTS" (2004) John Wiley & Sons.

⁷⁵³ Dahlman, Erik, Bjorn Gudmundson, Mats Nilsson, And A. Skold. "UMTS/IMT-2000 Based On Wideband CDMA" (1998) IEEE Communications Magazine 36, No. 9: 70-80.

⁷⁵⁴ Huber, Josef F., Dirk Weiler, And Hermann Brand. "UMTS, The Mobile Multimedia Vision For IMT 2000: A Focus On Standardization" (2000) IEEE Communications Magazine 38, No. 9: 129-136.

⁷⁵⁵ Benslimane, Abderrahim, Tarik Taleb, And Rajarajan Sivaraj. "Dynamic Clustering-Based Adaptive Mobile Gateway Management In Integrated VANET—3G Heterogeneous Wireless Networks" (2011) IEEE Journal On Selected Areas In Communications 29, No. 3: 559-570.

802.11⁷⁵⁶ networks, however, are narrowband wireless networks, intended primarily for transmitting data.

The term “fourth generation”, or 4G, applies to one of the services of cellular wireless networks⁷⁵⁷. After third-generation or 3G services, 4G services emerged in order to expand the demand for better services⁷⁵⁸. It offers fast service by uploading data, images and concurrent sharing with others to keep pace with the advance of technology⁷⁵⁹. The 4G networks are advanced radio networks that rely on internet protocols for transmitting and receiving data in packets and are distinguished from previous networks in that they often transmit voice data through internet protocols that render them entirely dependent on protocols⁷⁶⁰. This implies the link between cell telephones and stations and the sharing of internet data through air media via these networks⁷⁶¹.

Long-term evolution (LTE) is a form of cell network which is known as a norm for wireless networking, as it improves the velocity and data transmission capacity of various networks⁷⁶². The LTE system provides many benefits, and the following are the key advantages. The system can handle more than one computer and may attach to a single point of entry⁷⁶³. It increases internet calling efficiency using voice over LTE technology⁷⁶⁴. It also improves data processing capacity across the internet by speeding up downloads and reduces information delay⁷⁶⁵.

⁷⁵⁶ Ibid.

⁷⁵⁷ Khan, Afaq H., Mohammed A. Qadeer, Juned A. Ansari, And Sariya Waheed. "4G As A Next Generation Wireless Network." (In 2009 International Conference On Future Computer And Communication, Pp. 334-338. IEEE, 2009.)

⁷⁵⁸ Glisic, Savo, And Juha-Pekka Makela. “Advanced Wireless Networks: 4G Technologies. (In 2006” IEEE Ninth International Symposium On Spread Spectrum Techniques And Applications, Pp. 442-446. IEEE, 2006.)

⁷⁵⁹ Yamada, Takahiko. “Mobile Multimedia Metropolitan Area Network; An Office LAN Extension To The 4G Mobile Network.” (In 11th International Telecommunications Network Strategy And Planning Symposium. NETWORKS 2004,, Pp. 105-110. IEEE, 2004.)

⁷⁶⁰ Ferrag, Mohamed Amine, Leandros Maglaras, Antonios Argyriou, Dimitrios Kosmanos, And Helge Janicke. "Security For 4G And 5G Cellular Networks: A Survey Of Existing Authentication And Privacy-Preserving Schemes." (2018) Journal Of Network And Computer Applications 101: 55-82.

⁷⁶¹ Ibrahim, Jawad. “4G Features” (2002) Bechtel Telecommunications Technical Journal 1, No. 1: 11-14.

⁷⁶² Zaki, Yasir, Liang Zhao, Carmelita Goerg, And Andreas Timm-Giel. “LTE Mobile Network Virtualization. Mobile Networks And Applications” (2011) 16, No. 4: 424-432.

⁷⁶³ Yap, Kok-Kiong, Rob Sherwood, Masayoshi Kobayashi, Te-Yuan Huang, Michael Chan, Nikhil Handigol, Nick Mckeown, And Guru Parulkar. "Blueprint For Introducing Innovation Into Wireless Mobile Networks." (In Proceedings Of The Second ACM SIGCOMM Workshop On Virtualized Infrastructure Systems And Architectures, Pp. 25-32. 2010.)

⁷⁶⁴ Nossenson, Ronit. "Long-Term Evolution Network Architecture." (In 2009 IEEE International Conference On Microwaves, Communications, Antennas And Electronics Systems, Pp. 1-4. IEEE, 2009.)

⁷⁶⁵ Zaki, Yasir. “Future Mobile Communications: LTE Optimization And Mobile Network Virtualization” (2012) Springer Science & Business Media.

5G is an emerging, modern, functional mobile technology. It has been developed to satisfy the immense need for connectivity, high data flow and comprehensive integration with modern applications⁷⁶⁶. Communication networks of the fifth-generation constitute a wireless infrastructure that transmits data more quickly by air from cell towers to phones and other gadgets⁷⁶⁷. The first 5G stream is primarily the 3.5 GHz frequency⁷⁶⁸ and provides a rather similar reach to the new cell networks (3G/4G and WLAN). Many of the current antenna sites will then be re-used for 5G without the need to instal new ones⁷⁶⁹. These smart antennas emit radio waves if the need for connectivity requires them⁷⁷⁰. Since it is directional, it only streams on demand as the stations must link to the network. Experts are exploring the possibilities of utilising this technology in the health sector in remote robotic operations⁷⁷¹, in autonomous vehicles⁷⁷², which need a great deal of data to function on the road, and intelligent infrastructure⁷⁷³, which enables coordination between signals from traffic in the area. This network will play a significant role in improving protection for cars.

In Saudi Arabia, the interest in communications in general began with the founding of the Third Kingdom of Saudi Arabia⁷⁷⁴ headed by the late King Abdul-Aziz Al Saud⁷⁷⁵, who issued orders in 1924⁷⁷⁶ to establish a special directorate for telegraph, mail and telephone. This interest has continued until the present time. Due to the large area of the Kingdom of Saudi Arabia and the

⁷⁶⁶ Hossain, Ekram, And Monowar Hasan. "5G Cellular: Key Enabling Technologies And Research Challenges." (2015) IEEE Instrumentation & Measurement Magazine 18, No. 3: 11-21.

⁷⁶⁷ Rost, Peter, Christian Mannweiler, Diomidis S. Michalopoulos, Cinzia Sartori, Vincenzo Sciancalepore, Nishanth Sastry, Oliver Holland Et Al. "Network Slicing To Enable Scalability And Flexibility In 5G Mobile Networks" (IEEE Communications Magazine 55, No. 5 (2017): 72-79.)

⁷⁶⁸ Abdullah, Mujeeb, Yong-Ling Ban, Kai Kang, Obeng Kwakye Kings Ford Sarkodie, And Ming-Yang Li. "Compact 4-Port MIMO Antenna System For 5G Mobile Terminal" (In 2017 International Applied Computational Electromagnetics Society Symposium-Italy (ACES), Pp. 1-2. IEEE, 2017.)

⁷⁶⁹ Hakiri, Akram, And Pascal Berthou. "Leveraging Sdn For The 5g Networks: Trends, Prospects, And Challenges." (2015) Software Defined Mobile Networks (SDMN) Beyond LTE Network Architecture: 61-80.

⁷⁷⁰ Hong, Wonbin. "Solving The 5G Mobile Antenna Puzzle: Assessing Future Directions For The 5G Mobile Antenna Paradigm Shift" (IEEE Microwave Magazine 18, No. 7 (2017): 86-102.)

⁷⁷¹ Soldani, David, Fabio Fadini, Heikki Rasanen, Jose Duran, Tuomas Niemela, Devaki Chandramouli, Tom Hoglund Et Al. "5G Mobile Systems For Healthcare" (In 2017 IEEE 85th Vehicular Technology Conference (VTC Spring), Pp. 1-5. IEEE, 2017.)

⁷⁷² Zikria, Yousaf Bin, Sung Won Kim, Muhammad Khalil Afzal, Haoxiang Wang, And Mubashir Husain Rehmani. "5G Mobile Services And Scenarios: Challenges And Solutions" (2018): 3626.

⁷⁷³ Hinz, Gereon, Martin Buechel, Frederik Diehl, Malte Schellmann, And Alois Knoll. "Designing A Far-Reaching View For Highway Traffic Scenarios With 5G-Based Intelligent Infrastructure" (2017) In 8. Tagung Fahrerassistenz...

⁷⁷⁴ Vassiliev, Alexei. "The History Of Saudi Arabia" (2013) Saqi.

⁷⁷⁵ McLoughlin, Leslie. "Ibn Saud: Founder Of A Kingdom" (1993) Springer.

⁷⁷⁶ Kingdom Of Saudi Arabia Ministry Of Communications And Information Technology "Brief History"

need to connect cities to each other, the wireless phone network was established to high acclaim in 1952⁷⁷⁷, and in 1984⁷⁷⁸ optical cables were added. In 1987⁷⁷⁹, King Fahd Satellite Telecommunication City⁷⁸⁰ was established, specialising in satellite communications and containing four ground stations to work with satellites. In 1995⁷⁸¹, the mobile phone service was put into operation, in the following year the very-small-aperture terminal VSAT⁷⁸² was commissioned, and fibre-optic cable networks also were established⁷⁸³. Then, in 1997⁷⁸⁴, the government-owned Saudi Telecom Company was approved. In 1999⁷⁸⁵, approval was given to liberalize the internet service provider (ISP) sector, then the Saudi Communications Commission was established in 2001⁷⁸⁶ to regulate the telecommunications sector. In 2005⁷⁸⁷, the mobile phone sector was liberalized, and another commercial operator, Etihad Etisalat (Mobily), was added to this sector⁷⁸⁸. The Kingdom also joined the World Trade Organization⁷⁸⁹ on this date. In 2006⁷⁹⁰ 3G mobile phone services were launched⁷⁹¹, and in 2007⁷⁹² Zain was

⁷⁷⁷ Ibid.

⁷⁷⁸ Ibid.

⁷⁷⁹ Saeed Abdullah Al-Gahtani “An Overview Of Saudi Arabia Telecommunication System 1990” Naval Postgraduate School

⁷⁸⁰ Ibid.

⁷⁸¹ Alasmari, Talal, And Ke Zhang. “Mobile Learning Technology Acceptance In Saudi Arabian Higher Education: An Extended Framework And A Mixed-Method Study” (2019) *Education And Information Technologies* 24, No. 3: 2127-2144.

⁷⁸² Moheb, H., C. Robinson, And J. Kijesky. “Design & Development Of Co-Polarized Ku-Band Ground Terminal System For Very Small Aperture Terminal (VSAT) Application” (In *IEEE Antennas And Propagation Society International Symposium. 1999 Digest. Held In Conjunction With: USNC/URSI National Radio Science Meeting (Cat. No. 99CH37010)*, Vol. 3, Pp. 2158-2161. IEEE, 1999.)

⁷⁸³ Paudel, Subodh, Jagan Nath Shrestha, Fernando J. Neto, Jorge AF Ferreira, And Muna Adhikari. “Optimization Of Hybrid PV/Wind Power System For Remote Telecom Station” (In *2011 International Conference On Power And Energy Systems*, Pp. 1-6. IEEE, 2011.)

⁷⁸⁴ Al-Adaileh, Raid M., And Muawad S. Al-Atawi. “Organizational Culture Impact On Knowledge Exchange: Saudi Telecom Context” (2011) *Journal Of Knowledge Management*.

⁷⁸⁵ Alshahrani, Hamed A. “A Brief History Of The Internet In Saudi Arabia” (2016) *Techtrends* 60, No. 1: 19-20.

⁷⁸⁶ Al-Fakhri, Maher O., Robert A. Cropf, Patrick Kelly, And Gary Higgs. “E-Government In Saudi Arabia: Between Promise And Reality” (2008) *International Journal Of Electronic Government Research (IJEGR)* 4, No. 2: 59-85.

⁷⁸⁷ Alsenaidy, A., And T. A. U. S. E. E. F. Ahmad. “A Review Of Current State M-Government In Saudi Arabia” (2012) *Global Engineers & Technologists Review* 2, No. 5: 5-8.

⁷⁸⁸ Samontaray, Durga Prasad, And Abdulrahman Al-Aali. “Etihad Etisalat (Mobily) 8330” (2016) *Journal Of Competitiveness Studies* 24, No. 1/2: 62.

⁷⁸⁹ Matsushita, Mitsuo, Thomas J. Schoenbaum, Petros C. Mavroidis, And Michael Hahn. “The World Trade Organization: Law, Practice, And Policy” (2015) Oxford University Press.

⁷⁹⁰ Simsim, Mohammed T. “Internet Usage And User Preferences In Saudi Arabia” (2011) *Journal Of King Saud University-Engineering Sciences* 23, No. 2: 101-107.

⁷⁹¹ Korhonen, Juha. “Introduction To 3G Mobile Communications” (2003) Artech House.

⁷⁹² Zia, Adil, And Abdul Razzak Hashmi. “Exploring The Factors Affecting Service Quality Of Zain Mobile Subscribers In Albaha, Saudi Arabia.” (2019) *International Journal Of Innovative Technology And Exploring Engineering (IJITEE)*, ISSN: 2278-3075.

granted the third license to provide mobile services. In 2009⁷⁹³, the Atheeb Telecom Company⁷⁹⁴ began to offer its services, then in 2014⁷⁹⁵ a license was granted to two virtual mobile operators, Virgin⁷⁹⁶ and Lebara⁷⁹⁷. In 2018⁷⁹⁸, the fifth-generation mobile network was built with 4,600 stations⁷⁹⁹.

Due to the speed of electronic development and the strength of the mobile infrastructure in the Kingdom of Saudi Arabia, the number of mobile phone subscribers increased by 2.7%⁸⁰⁰ to 41.3 million⁸⁰¹ subscribers, compared to 40.21⁸⁰² million at the end of 2017⁸⁰³. On the other hand, the number of fixed telephone subscribers declined by 14.3%⁸⁰⁴ during the year 2018⁸⁰⁵, and the number of broadband subscribers declined by 3.6%⁸⁰⁶. At the end of 2018⁸⁰⁷, the

⁷⁹³ Sharma, Raj Bahadur. "Customers Satisfaction In Telecom Sector In Saudi Arabia: An Empirical Investigation" (2014) *European Scientific Journal* 10, No. 13.

⁷⁹⁴ Singh, Arun Kumar, And Samidha Dwivedi Sharma. "Digital Era In The Kingdom Of Saudi Arabia: Novel Strategies Of The Telecom Service Providers Companies" (2020) *Webology* 17, No. 1.

⁷⁹⁵ Alghamdi, A. "The Role Of Market Knowledge In The Adoption Of The Blue Ocean Strategy And Its Impact On Achieving Competitive Advantage: A Study Conducted In The Saudi Telecom Company (STC)" (2016) *Journal Of Marketing And HR* 2, No. 1: 55-84.

⁷⁹⁶ Tutor, My Assignment. "Brief About Saudi Telecom Company (STC)".

⁷⁹⁷ Alharthi, Majed, And Md Mazharul Islam. "How Can Mobile Phone Usage Affect Micro And Small Enterprises' Performance In Saudi Arabia?" *The Electronic Journal Of Information Systems In Developing Countries*: E12157.

⁷⁹⁸ Ikram, M., M. S. Sharawi, Atif Shamim, And A. Sebak. "A Multiband Dual-Standard MIMO Antenna System Based On Monopoles (4G) And Connected Slots (5G) For Future Smart Phones" (2018) *Microwave And Optical Technology Letters* 60, No. 6: 1468-1476.

⁷⁹⁹ Sboui, Lokman, Hakim Ghazzai, Zouheir Rezki, And Mohamed-Slim Alouini. "On Green Cognitive Radio Cellular Networks: Dynamic Spectrum And Operation Management" (2016) *IEEE Access* 4 (2016): 4046-4057.

⁸⁰⁰ Ibid.

⁸⁰¹ Alalwan, Ali Abdallah, Abdullah M. Baabdullah, Nripendra P. Rana, Kuttimani Tamilmani, And Yogesh K. Dwivedi. "Examining Adoption Of Mobile Internet In Saudi Arabia: Extending TAM With Perceived Enjoyment, Innovativeness And Trust" (2018) *Technology In Society* 55: 100-110.

⁸⁰² Zia, Adil, And Abdul Razzak Hashmi. "Exploring The Factors Affecting Service Quality Of Zain Mobile Subscribers In Albaha, Saudi Arabia" (2019) *International Journal Of Innovative Technology And Exploring Engineering (IJITEE)*, ISSN: 2278-3075.

⁸⁰³ Gerpott, Torsten J., Sebastian May, And Gokhan Nas. "The Impact Of Mobile Internet On Mobile Voice Usage: A Two-Level Analysis Of Mobile Communications Customers In A GCC Country" (2017) *Information & Management* 54, No. 7: 958-970.

⁸⁰⁴ Soomro, Yasir, And Ahmed Nafe Al-Sehli. "Determinants Of Customer Churn: An Empirical Study Of Cellular Subscribers From Saudi Arabia" (2020): 1-12.

⁸⁰⁵ Yassin, Mohamad, Mohamed A. Aboulhassan, Samer Lahoud, Marc Ibrahim, Dany Mezher, Bernard Cousin, And Essam A. Sourour. "Survey Of ICIC Techniques In LTE Networks Under Various Mobile Environment Parameters" (2017) *Wireless Networks* 23, No. 2: 403-418.

⁸⁰⁶ Kurdi, Rabea, Fawzia Hersi, Sara Bahagari, Mohammed Kaosar, S. M. Qaisar, And A. Subasi. "A Mobile Fingerprint Authentication In Saudi Arabian Call Centres" (In 2017 International Conference On Electrical And Computing Technologies And Applications (ICECTA), Pp. 1-4. IEEE, 2017.)

⁸⁰⁷ Ibid.

prevalence of internet usage for the age group from 10⁸⁰⁸ to 74⁸⁰⁹ years was 93.3%⁸¹⁰, compared to 94.3%⁸¹¹ in 2017⁸¹².

It is noteworthy that mobile phone infrastructure is considered to be ahead of the traditional landline phone, broadband and fibre services⁸¹³. Mobile phone services are available in a manner compatible with the environment in the Kingdom, and a competitive atmosphere has developed up among service providers⁸¹⁴. This is not the case with land-based broadband services, where competition between service providers is slow and the infrastructure has not kept pace with rapid developments⁸¹⁵. Providers also have difficulty in delivering services to the consumer in an advanced, efficient manner, and this may be one of the reasons that drives consumers to choose mobile phones and data over broadband⁸¹⁶.

Vision 2030⁸¹⁷ is a long-term strategic plan revealed by the government of Saudi Arabia. The plan attempts to simultaneously reduce the nation's dependency on oil and diversify the economy⁸¹⁸. It attempts to promote the growth of a wealthy economy, a thriving society, and an ambitious nation⁸¹⁹. Two criteria require all other industries to make a qualitative and

⁸⁰⁸ Alalwan, Ali Abdallah, Abdullah M. Baabdullah, Nripendra P. Rana, Kuttimani Tamilmani, And Yogesh K. Dwivedi. "Examining Adoption Of Mobile Internet In Saudi Arabia: Extending TAM With Perceived Enjoyment, Innovativeness And Trust" (2018) *Technology In Society* 55: 100-110.

⁸⁰⁹ Ibid.

⁸¹⁰ Baabdullah, Abdullah M., Ali Abdallah Alalwan, Nripendra P. Rana, Hatice Kizgin, And Pushp Patil. "Consumer Use Of Mobile Banking (M-Banking) In Saudi Arabia: Towards An Integrated Model" (2019) *International Journal Of Information Management* 44: 38-52.

⁸¹¹ Alalwan, Ali Abdallah, Abdullah M. Baabdullah, Nripendra P. Rana, Kuttimani Tamilmani, And Yogesh K. Dwivedi. "Examining Adoption Of Mobile Internet In Saudi Arabia: Extending TAM With Perceived Enjoyment, Innovativeness And Trust" (2018) *Technology In Society* 55: 100-110.

⁸¹² Ibid.

⁸¹³ Abdulghani, Hamza Mohammad, Tauseef Ahmad, Mahmood Salah, And Hamza Mohammad Abdulghani. "Current Growth Of Information And Communication Technology In Saudi Arabia" (2014) *Wulfenia J* 21, No. 9: 216-223.

⁸¹⁴ Aina, Yusuf A. "Achieving Smart Sustainable Cities With Geoict Support: The Saudi Evolving Smart Cities" (2017) *Cities* 71: 49-58.

⁸¹⁵ Almalki, Faris A., And Marios C. Angelides. "Considering Near Space Platforms To Close The Coverage Gap In Wireless Communications: The Case Of The Kingdom Of Saudi Arabia." (In 2016 Future Technologies Conference (FTC), Pp. 224-230. IEEE, 2016.)

⁸¹⁶ Baabdullah, Abdullah M., Ali Abdallah Alalwan, Nripendra P. Rana, Hatice Kizgin, And Pushp Patil. "Consumer Use Of Mobile Banking (M-Banking) In Saudi Arabia: Towards An Integrated Model" (2019) *International Journal Of Information Management* 44: 38-52.

⁸¹⁷ Nurunnabi, Mohammad. "Transformation From An Oil-Based Economy To A Knowledge-Based Economy In Saudi Arabia: The Direction Of Saudi Vision 2030." (2017) *Journal Of The Knowledge Economy* 8: 536-564.

⁸¹⁸ Nurunnabi, Mohammad. "Transformation From An Oil-Based Economy To A Knowledge-Based Economy In Saudi Arabia: The Direction Of Saudi Vision 2030" (2017) *Journal Of The Knowledge Economy* 8: 536-564.

⁸¹⁹ Khan, Mehmood Ul Hassan. "Saudi Arabia's Vision 2030." (2016) *Defence Journal* 19, No. 11: 36.

comprehensive leap, one of which is that progress in communications and information technology is one of the vision's most crucial areas⁸²⁰. First, the sector dealing with communications and information technology is the most dynamic sector⁸²¹. The advancement of technology has had a direct impact on the improvement of education, health, the economy, and other aspects of life, eliminating the need for a separate sector⁸²². Rather, technology acts as a catalyst and enabler for other industries to flourish, develop, and accomplish their objectives⁸²³. Technology has become both a driver of progress and an enabler of growth, allowing all industries to accomplish the growth and expansion they seek⁸²⁴. Because of this, it is clear how significant the communications and information technology industry is, not only in terms of the strategic goals it can achieve, but also in terms of the technological, economic, scientific, and practical goals it can achieve⁸²⁵. Consequently, the Kingdom of Saudi Arabia is developing the infrastructure of communications and information technology⁸²⁶, particularly cellular networks and high-speed broadband technologies, to increase the percentage of coverage in and outside cities and improve the quality of communication, through government partnership with the private sector; the government of the Kingdom of Saudi Arabia aims to achieve coverage that exceeds (90% ⁸²⁷of homes are in densely populated areas)⁸²⁸.

Privacy issues and findings on information technology infrastructure

⁸²⁰ Moshashai, Daniel, Andrew M. Leber, And James D. Savage. "Saudi Arabia Plans For Its Economic Future: Vision 2030, The National Transformation Plan And Saudi Fiscal Reform." (2020) British Journal Of Middle Eastern Studies 47, No. 3: 381-401.

⁸²¹ Al Anezi, Faisal Yousif. "Saudi Vision 2030: Sustainable Economic Development Through Iot." (In 2021 10th IEEE International Conference On Communication Systems And Network Technologies (CSNT), Pp. 837-841. IEEE, 2021.)

⁸²² Hassounah, Marwah, Hafsa Raheel, And Mohammed Alhefzi. "Digital Response During The COVID-19 Pandemic In Saudi Arabia." (2020) Journal Of Medical Internet Research 22, No. 9: E19338.

⁸²³ Muzafar, Saira, And N. Z. Jhanjhi. "Success Stories Of ICT Implementation In Saudi Arabia." (2020) In Employing Recent Technologies For Improved Digital Governance, Pp. 151-163. IGI Global.

⁸²⁴ Amirat, Amina, And Makram Zaidi. "Estimating GDP Growth In Saudi Arabia Under The Government's Vision 2030: A Knowledge-Based Economy Approach." (2020) Journal Of The Knowledge Economy 11: 1145-1170.

⁸²⁵ Grand, Stephen, And Katherine Wolff. "Assessing Saudi Vision 2030: A 2020 Review." (2020) Atlantic Council 17.

⁸²⁶ Basahel, Abdullah, And Mohammad Yamin. "Measuring Success Of E-Government Of Saudi Arabia."(2017) International Journal Of Information Technology 9: 287-293.

⁸²⁷ Dahlan, Kinda R., Ahmed A. Badawi, And Ali Megahed. "Perspective Chapter: Data As Currency-On The Impact Of Ict's & Data On The Saudi Economy & Industrial Sector."

⁸²⁸ Alharbi, Awad Saleh. "Challenges In Digital Transformation In Saudi Arabia Obstacles In Paradigm Shift In Saudi Arabia." (In 2019 6th International Conference On Computing For Sustainable Global Development (Indiacom), Pp. 1287-1291. IEEE, 2019.)

Privacy is a term that has a multitude of ramifications for individuals⁸²⁹. The aim for insisting on privacy is that individuals have the right to keep their records and personal ties private, as well as the unquestionable right not to be tracked or to have their details and information released without their permission⁸³⁰. Data protection challenges arising with IT infrastructure are major complex issues, but with compliance guidelines and instructions the likelihood of violating people's privacy is what is being sought⁸³¹.

Whether with traditional datacentres⁸³² and servers⁸³³ or cloud computing⁸³⁴, using any of these services entails questions in relation to privacy and sharing. These issues are not limited to the location of cloud services, where the user should know under which jurisdiction/s the cloud services operate, whether local or offshore⁸³⁵. Some countries have privacy laws that may be similar to or different from those of the country of the user's origin⁸³⁶. Some countries have no privacy legislation at all⁸³⁷. Datacentres, servers and cloud services require routine maintenance, and those who perform this authorized work will have access to subscribers' information and accounts⁸³⁸. Furthermore, the question arises how data centre owners can be confident of contracts with the repair and maintenance company responsible for servicing the datacentres that data will not be exposed⁸³⁹. Will the server and cloud computing service

⁸²⁹ De Montjoye, Yves-Alexandre, César A. Hidalgo, Michel Verleysen, And Vincent D. Blondel. "Unique In The Crowd: The Privacy Bounds Of Human Mobility." (2013) *Scientific Reports* 3, No. 1: 1-5.

⁸³⁰ Chen, Deyan, And Hong Zhao. "Data Security And Privacy Protection Issues In Cloud Computing." (In 2012 International Conference On Computer Science And Electronics Engineering, Vol. 1, Pp. 647-651. IEEE, 2012.)

⁸³¹ Venkatraman, Ramanathan, And Sitalakshmi Venkatraman. "Big Data Infrastructure, Data Visualisation And Challenges." (In Proceedings Of The 3rd International Conference On Big Data And Internet Of Things, Pp. 13-17. 2019.)

⁸³² Hongyou, Li, Wang Jiangyong, Peng Jian, Wang Junfeng, And Liu Tang. "Energy-Aware Scheduling Scheme Using Workload-Aware Consolidation Technique In Cloud Data Centres" (2013) *China Communications* 10, No. 12: 114-124.

⁸³³ Weber, Wolf-Dietrich, Stephen Gold, Pat Helland, Takeshi Shimizu, Thomas Wicki, And Winfried Wilcke. "The Mercury Interconnect Architecture: A Cost-Effective Infrastructure For High-Performance Servers" (In Proceedings Of The 24th Annual International Symposium On Computer Architecture, Pp. 98-107. 1997.)

⁸³⁴ Wu, Jiyi, Lingdi Ping, Xiaoping Ge, Ya Wang, And Jianqing Fu. "Cloud Storage As The Infrastructure Of Cloud Computing" (In 2010 International Conference On Intelligent Computing And Cognitive Informatics, Pp. 380-383. IEEE, 2010.)

⁸³⁵ Pearson, Siani. "Privacy, Security And Trust In Cloud Computing" (2013) Springer London.

⁸³⁶ Miranda Lopez, Erik, Seo Yeon Moon, And Jong Hyuk Park. "Scenario-Based Digital Forensics Challenges In Cloud Computing." (2016) *Symmetry* 8, No. 10: 107.

⁸³⁷ Pearson, Siani, And Azzedine Benameur. "Privacy, Security And Trust Issues Arising From Cloud Computing." (In 2010 IEEE Second International Conference On Cloud Computing Technology And Science, Pp. 693-702. IEEE, 2010.)

⁸³⁸ Kandukuri, Balachandra Reddy, And Atanu Rakshit. "Cloud Security Issues." (In 2009 IEEE International Conference On Services Computing, Pp. 517-520. IEEE, 2009.)

⁸³⁹ Kandukuri, Balachandra Reddy, And Atanu Rakshit. "Cloud Security Issues." (In 2009 IEEE International Conference On Services Computing, Pp. 517-520. IEEE, 2009.)

providers notify the service user if there is theft or tampering with the user's information and files?

By design, in cloud computing⁸⁴⁰ cloud services are left permanently connected to the internet because this offers a way for multiple parties to easily target a particular data breach if the data is not connected to the internet⁸⁴¹. There are concerns over government monitoring of cloud service providers' servers and facilities for purposes of national protection and regulation, and the enforcement by some service providers of municipal authorities' demands, in this way compromising the anonymity of certain data and rendering it accessible to third parties⁸⁴². Cloud computing can be categorised into three essential classifications according to the degree of privacy enjoyed⁸⁴³: the public cloud, where data protection is the key limitation, the private cloud which provides better protection at the expense of losing many of the advantages of the public cloud, and the hybrid cloud which is the best way to protect specified databases without compromising other public cloud services⁸⁴⁴.

Thus, cloud storage can be classified into these three basic classifications depending on the level of privacy afforded⁸⁴⁵. While digital privacy is the primary weakness of the public cloud, the private cloud has more powerful protection, but at the expense of losing many of the advantages of the public cloud, while the hybrid cloud is the method most suitable for companies wishing to protect only their own databases without sacrificing other public cloud services⁸⁴⁶. With the public cloud, computing resources, such as energy, data processing, memory and permanent storage in general can be provided via the internet, and users pay only

⁸⁴⁰ Ryan, Mark D. "Cloud Computing Privacy Concerns On Our Doorstep" (2011) *Communications Of The ACM* 54, No. 1: 36-38.

⁸⁴¹ Chen, Deyan, And Hong Zhao. "Data Security And Privacy Protection Issues In Cloud Computing" (In 2012 International Conference On Computer Science And Electronics Engineering, Vol. 1, Pp. 647-651. IEEE, 2012.)

⁸⁴² Xiao, Zhifeng, And Yang Xiao. "Security And Privacy In Cloud Computing" (2012) *IEEE Communications Surveys & Tutorials* 15, No. 2: 843-859.

⁸⁴³ Takabi, Hassan, James BD Joshi, And Gail-Joon Ahn. "Security And Privacy Challenges In Cloud Computing Environments" (2010) *IEEE Security & Privacy* 8, No. 6: 24-31.

⁸⁴⁴ Zhou, Minqi, Rong Zhang, Wei Xie, Weining Qian, And Aoying Zhou. "Security And Privacy In Cloud Computing: A Survey" (In 2010 Sixth International Conference On Semantics, Knowledge And Grids, Pp. 105-112. IEEE, 2010.)

⁸⁴⁵ Pearson, Siani, And Azzedine Benameur. "Privacy, Security And Trust Issues Arising From Cloud Computing" (In 2010 IEEE Second International Conference On Cloud Computing Technology And Science, Pp. 693-702. IEEE, 2010.)

⁸⁴⁶ Itani, Wassim, Ayman Kayssi, And Ali Chehab. "Privacy As A Service: Privacy-Aware Data Storage And Processing In Cloud Computing Architectures" (In 2009 Eighth IEEE International Conference On Dependable, Autonomic And Secure Computing, Pp. 711-716. IEEE, 2009.)

for the resources they sometimes use⁸⁴⁷. Moreover, the public cloud does not require the installation of any additional programs or hardware⁸⁴⁸. This A type of storage cloud can store data and make it available across hundreds of cloud systems, a situation which raises many doubts and concerns about data sensitivity, especially financial and banking data, the first target for hackers⁸⁴⁹. The private cloud consists of infrastructure and a group of devices similar to those in the public cloud but are internal to the company and are more secure⁸⁵⁰. The private cloud, that is, a group of internal resources that the organization possesses, which can only be used by the organization that installed it, so many the services that form the basis of cloud services are not available to it⁸⁵¹.

Furthermore, threats to the privacy of cloud computing services mean that the service provider's data protection standards do not extend to the cloud service⁸⁵² nor do they cover weak cloud computing infrastructure ⁸⁵³. Data must also be kept discrete and protected from user-to-user mixing, storage must be secure, and the data must be capable of being transferred in a safe manner⁸⁵⁴. Consequently, users must make sure that the datacentres, servers, cloud computing services, repair and maintenance service, and manufacturer parts providers are familiar with and uphold the privacy laws⁸⁵⁵.

The question of protecting data privacy on mobile networks has contributed greatly to raising privacy concerns in the internet era. This thesis focuses on the data privacy of cellular networks and finds that data transmission over these networks presents many risks and negative effects

⁸⁴⁷ Venkatesh, A., And Marraynal S. Eastaff. "A Study Of Data Storage Security Issues In Cloud Computing." (2018) International Journal Of Scientific Research In Computer Science, Engineering And Information Technology 3, No. 1: 1741-1745.

⁸⁴⁸ Zisis, Dimitrios, And Dimitrios Lekkas. "Addressing Cloud Computing Security Issues." (2012) Future Generation Computer Systems 28, No. 3: 583-592.

⁸⁴⁹ Pearson, Siani, Yun Shen, And Miranda Mowbray. "A Privacy Manager For Cloud Computing" (In IEEE International Conference On Cloud Computing, Pp. 90-106. Springer, Berlin, Heidelberg, 2009.)

⁸⁵⁰ Kuyoro, S. O., F. Ibikunle, And O. Awodele. "Cloud Computing Security Issues And Challenges." (2011) International Journal Of Computer Networks (IJCN) 3, No. 5: 247-255.

⁸⁵¹ Zhou, Minqi, Rong Zhang, Wei Xie, Weining Qian, And Aoying Zhou. "Security And Privacy In Cloud Computing: A Survey". (In 2010 Sixth International Conference On Semantics, Knowledge And Grids, Pp. 105-112. IEEE, 2010.)

⁸⁵² Pearson, Siani. "Privacy, Security And Trust In Cloud Computing" (2013) In Privacy And Security For Cloud Computing, Pp. 3-42. Springer, London.

⁸⁵³ Wang, Cong, Qian Wang, Kui Ren, And Wenjing Lou. "Privacy-Preserving Public Auditing For Data Storage Security In Cloud Computing" (In 2010 Proceedings Ieee Infocom, Pp. 1-9. Ieee, 2010.)

⁸⁵⁴ Jansen, Wayne A., And Tim Grance. "Guidelines On Security And Privacy In Public Cloud Computing" (2011).

⁸⁵⁵ Svantesson, Dan, And Roger Clarke. "Privacy And Consumer Risks In Cloud Computing" (2010) Computer Law & Security Review 26, No. 4: 391-397.

for privacy when compared to landlines and broadband⁸⁵⁶. Mobiles or cellular networks⁸⁵⁷ are not built to protect their users' privacy⁸⁵⁸. Thus, mobile phones make the user vulnerable to censorship, especially monitoring the place and location of the user⁸⁵⁹. Many mobile phones do not grant customers the ability to manage their devices as is the case with computers and tablets⁸⁶⁰. With mobile phones, it is difficult to adjust the operating system or carry out any serious check that other people, such as the telephone service provider, are not monitoring the phones⁸⁶¹.

One of the issues resulting in privacy breaches for cell phone users is that the position of the device is defined by the vibrational signals transmitted and obtained by mobile phones⁸⁶². Mobile phones can be monitored via a mobile phone emulator tracking a subscriber's cellular position or learning about their movements by looking at their files, contacts and information⁸⁶³. One concern with cell telephone privacy breaches is wi-fi and Bluetooth⁸⁶⁴ signals leaking user position⁸⁶⁵ through applications and internet searches.

⁸⁵⁶ Askwith, Bob, Madjid Merabti, Qi Shi, And Keith Whiteley. "Achieving User Privacy In Mobile Networks" (In Proceedings 13th Annual Computer Security Applications Conference, Pp. 108-116. IEEE, 1997.)

⁸⁵⁷ Zemlianov, Alex, And Gustavo De Veciana. "Capacity Of Ad Hoc Wireless Networks With Infrastructure Support" (2005) IEEE Journal On Selected Areas In Communications 23, No. 3: 657-667.

⁸⁵⁸ Gong, Xiaowen, Xu Chen, Kai Xing, Dong-Hoon Shin, Mengyuan Zhang, And Junshan Zhang. "Personalized Location Privacy In Mobile Networks: A Social Group Utility Approach" (In 2015 IEEE Conference On Computer Communications (INFOCOM), Pp. 1008-1016. IEEE, 2015.)

⁸⁵⁹ Gong, Xiaowen, Xu Chen, Kai Xing, Dong-Hoon Shin, Mengyuan Zhang, And Junshan Zhang. "From Social Group Utility Maximization To Personalized Location Privacy In Mobile Networks" (2017) IEEE/ACM Transactions On Networking 25, No. 3: 1703-1716.

⁸⁶⁰ Ali, Syed Mubashir. "Challenges And Security Issues In Future IT Infrastructure Components." (2013) International Journal Of Computers & Technology 8, No. 2: 845-847.

⁸⁶¹ Zhang, Kuan, Kan Yang, Xiaohui Liang, Zhou Su, Xuemin Shen, And Henry H. Luo. "Security And Privacy For Mobile Healthcare Networks: From A Quality Of Protection Perspective" (2015) IEEE Wireless Communications 22, No. 4: 104-112.

⁸⁶² Xia, Ning, Han Hee Song, Yong Liao, Marios Iliofotou, Antonio Nucci, Zhi-Li Zhang, And Aleksandar Kuzmanovic. "Mosaic: Quantifying Privacy Leakage In Mobile Networks" (In Proceedings Of The ACM SIGCOMM 2013 Conference On SIGCOMM, Pp. 279-290. 2013.)

⁸⁶³ Liang, Xiaohui, Kuan Zhang, Xuemin Shen, And Xiaodong Lin. "Security And Privacy In Mobile Social Networks: Challenges And Solutions" (2014) IEEE Wireless Communications 21, No. 1: 33-41.

⁸⁶⁴ Ananthanarayanan, Ganesh, And Ion Stoica. "Blue-Fi: Enhancing Wi-Fi Performance Using Bluetooth Signals" (In Proceedings Of The 7th International Conference On Mobile Systems, Applications, And Services, Pp. 249-262. 2009.)

⁸⁶⁵ Nordman, Ian, Tero Alamäki, Marko Vänskä, Norbert Gyorbíró, Casper Gripenberg, And Mikko Tarkiainen. "Method, System, And Apparatus For Providing Services In A Privacy Enabled Mobile And Uicom Environment" (2004) U.S. Patent 6,678,516, Issued January 13, 2004.

In addition, privacy concerns also arise with mobile surveillance by the operator or governments through subscriber identity module (SIM) cards⁸⁶⁶. Mobile service providers⁸⁶⁷ can provide ample details about SIM cards and the devices in which they are used. Either a SIM card, a phone, or both can be registered⁸⁶⁸. Moreover, governments have established strategies to evaluate mobile phone databases, and may use position monitoring tools to find clues and may conclude that several devices belong to one individual⁸⁶⁹.

A variety of methods can be employed to achieve such goals. For instance, a data analyser knows whether two machines work together or if they work in one position even though they may be used at different times⁸⁷⁰. One of the problems relating to privacy is that mobile phones have an ID card⁸⁷¹, the International Mobile Equipment Identity (IMEI)⁸⁷² or International Mobile Subscriber Identity (IMSI)⁸⁷³ card, that determines the identity of the telephone. These cards make possible the ability to know a user's geographic location, phone conditions and history and to intercept calls and mobile data via the mobile network by accessing the mobile phone identity⁸⁷⁴. Many suppose that this only applies to the smartphone, but in fact it applies to all mobile devices that can access the internet through mobile telephone networks, regardless of location and communication method⁸⁷⁵. There are also concerns about declining user privacy

⁸⁶⁶ Aissi, Selim, Sundeep Bajikar, Sameer Abhinkar, Scott Blum, Jane Dashevsky, Abhay Dharmadhikari, Benjamin Matasar, And Mrudula Yelamanchi. "Using A Trusted-Platform-Based Shared-Secret Derivation And WWAN Infrastructure-Based Enrollment To Establish A Secure Local Channel" (2011) U.S. Patent 8,027,472, Issued September 27, 2011.

⁸⁶⁷ Kitiyadisai, Krisana. "Privacy Rights And Protection: Foreign Values In Modern Thai Context" (2005) Ethics And Information Technology 7, No. 1: 17-26.

⁸⁶⁸ Rongyu, He, Zhao Guolei, Chang Chaowen, Xie Hui, Qin Xi, And Qin Zheng. "A PK-SIM Card Based End-To-End Security Framework For SMS." (2009) Computer Standards & Interfaces 31, No. 4: 629-641.

⁸⁶⁹ Ahmed, Syed Ishtiaque, Md Romael Haque, Shion Guha, Md Rashidujjaman Rifat, And Nicola Dell. "Privacy, Security, And Surveillance In The Global South: A Study Of Biometric Mobile SIM Registration In Bangladesh" (In Proceedings Of The 2017 CHI Conference On Human Factors In Computing Systems, Pp. 906-918. 2017.)

⁸⁷⁰ Juels, Ari, David Molnar, And David Wagner. "Security And Privacy Issues In E-Passports" (In First International Conference On Security And Privacy For Emerging Areas In Communications Networks (SECURECOMM'05), Pp. 74-88. IEEE, 2005.)

⁸⁷¹ Kim, Jinyung, Yongho Yoon, Kwangkeun Yi, Junbum Shin, And S. W. R. D. Center. Scandal: "Static Analyser For Detecting Privacy Leaks In Android Applications" (2012) Most 12, No. 110: 1.

⁸⁷² Mann, Christopher, And Artem Starostin. "A Framework For Static Detection Of Privacy Leaks In Android Applications" (In Proceedings Of The 27th Annual ACM Symposium On Applied Computing, Pp. 1457-1462. 2012.)

⁸⁷³ Wetherall, David, David R. Choffnes, Ben Greenstein, Seungyeop Han, Peter Hornyack, Jaeyeon Jung, Stuart E. Schechter, And Xiao Sophia Wang. "Privacy Revelations For Web And Mobile Apps" (2011) In Hotos.

⁸⁷⁴ Dai, Wenyun, Meikang Qiu, Longfei Qiu, Longbin Chen, And Ana Wu. "Who Moved My Data? Privacy Protection In Smartphones" (IEEE Communications Magazine 55, No. 1 (2017): 20-25.)

⁸⁷⁵ Tripp, Omer, And Julia Rubin. "A Bayesian Approach To Privacy Enforcement In Smartphones" (In 23rd {USENIX} Security Symposium ({USENIX} Security 14), Pp. 175-190. 2014.)

because smart devices are meant to continuously connect to the internet and unlike old second generation mobile devices, to be able to transmit data about the user's location via fifth⁸⁷⁶, fourth⁸⁷⁷, and third⁸⁷⁸ generation technology, and thus provide direct, frequent information about the user⁸⁷⁹.

The application provider, the mobile device manufacturer, the mobile operating system provider, and the mobile internet service provider control the user's personal data⁸⁸⁰. For example, when the user sends an e-mail, the device manufacturer, the phone's operating system provider and the phone's internet service provider, the provider of e-mail applications, the e-mail service provider, and the e-mail service provider of the recipient have full knowledge of the user's personal data⁸⁸¹. This scenario does not include data leakage when sending passwords and e-mail content without encryption or the possibility of further access to personal data by local and international law enforcement agencies or unauthorized third parties accessing that personal data, nor does it take into account the additional applications that provide ways to obtain personal data about users⁸⁸².

Moreover, smart phones incorporate a vast variety of different sensors, processors and communication channels, making the privacy consequences of each of the additional sensors and of a particular communication chip challenging for their users to grasp⁸⁸³. With new

⁸⁷⁶ Hussain, Syed Rafiul, Mitziu Echeverria, Omar Chowdhury, Ninghui Li, And Elisa Bertino. "Privacy Attacks To The 4G And 5G Cellular Paging Protocols Using Side Channel Information" (2019) In NDSS, Vol. 19, Pp. 24-27.

⁸⁷⁷ Ferrag, Mohamed Amine, Leandros Maglaras, Antonios Argyriou, Dimitrios Kosmanos, And Helge Janicke. "Security For 4G And 5G Cellular Networks: A Survey Of Existing Authentication And Privacy-Preserving Schemes" (2018) Journal Of Network And Computer Applications 101: 55-82.

⁸⁷⁸ Borgaonkar, Ravishankar, Lucca Hirschi, Shinjo Park, And Altaf Shaik. "New Privacy Threat On 3G, 4G, And Upcoming 5G AKA Protocols" (2019) Proceedings On Privacy Enhancing Technologies, No. 3 (2019): 108-127.

⁸⁷⁹ Singla, Ankush, Syed Rafiul Hussain, Omar Chowdhury, Elisa Bertino, And Ninghui Li. "Protecting The 4G And 5G Cellular Paging Protocols Against Security And Privacy Attacks" (2020) Proceedings On Privacy Enhancing Technologies 2020, No. 1: 126-142.

⁸⁸⁰ Beresford, Alastair R., Andrew Rice, Nicholas Skehin, And Ripduman Sohan. Mockdroid "Trading Privacy For Application Functionality On Smartphones" (2011) In Proceedings Of The 12th Workshop On Mobile Computing Systems And Applications, Pp. 49-54.

⁸⁸¹ Enck, William, Peter Gilbert, Seungyeop Han, Vasant Tendulkar, Byung-Gon Chun, Landon P. Cox, Jaeyeon Jung, Patrick Mcdaniel, And Anmol N. Sheth. Taint Droid: "An Information-Flow Tracking System For Realtime Privacy Monitoring On Smartphones" (2014) ACM Transactions On Computer Systems (TOCS) 32, No. 2: 1-29.

⁸⁸² Liu, Bin, Jialiu Lin, And Norman Sadeh. "Reconciling Mobile App Privacy And Usability On Smartphones: Could User Privacy Profiles Help?" (In Proceedings Of The 23rd International Conference On World Wide Web, Pp. 201-212. 2014.)

⁸⁸³ Zhang, Lichen, Zhipeng Cai, And Xiaoming Wang. Fakemask "A Novel Privacy Preserving Approach For Smartphones" (2016) IEEE Transactions On Network And Service Management 13, No. 2: 335-348.

smartphones, communication is possible via various kinds of mobile networks, such as Code Division Multiple Access (CDMA)⁸⁸⁴, Global System for Mobile Communications (GSM)⁸⁸⁵, High-Speed Uplink Packet Access (HSUPA)⁸⁸⁶, Universal Mobile Telecommunications System (UMTS)⁸⁸⁷, Enhanced Data for Global Evolution (EDGE)⁸⁸⁸, the standard for wireless local area networks 802.11b⁸⁸⁹ and Global Positioning System GPS⁸⁹⁰ global networks, as well as light, proximity, movement, and the sensor. Smartphones also provide a wide range of interactive solutions, such as the gyroscope and various types of microphone⁸⁹¹.

Mobile phone networks were not initially designed to employ ad hoc methods to protect calls against eavesdropping by users⁸⁹², so that anybody who has wireless reception skills can make calls and breach the privacy of others⁸⁹³. Do mobile network providers and cell phone makers then respond adequately by advising the customer that their privacy is being violated? And where user privacy is violated, can technology and service providers deal properly with what has been violated, particularly when it has been violated in multiple instances as in the case,

⁸⁸⁴ Gorra, Andrea. "An Analysis Of The Relationship Between Individuals' Perceptions Of Privacy And Mobile Phone Location Data-A Grounded Theory Study" (2007) Phd Diss., Leeds Metropolitan University.

⁸⁸⁵ Kesdogan, Dogan, Hannes Federrath, Anja Jerichow, And Andreas Pfitzmann. "Location Management Strategies Increasing Privacy In Mobile Communication" (In IFIP International Conference On ICT Systems Security And Privacy Protection, Pp. 39-48. Springer, Boston, MA, 1996.)

⁸⁸⁶ Kovvali, Surya Kumar, And Charles Boyle. "Content Pre-Fetching And CDN Assist Methods In A Wireless Mobile Network" (2014) U.S. Patent 8,799,480, Issued August 5, 2014.

⁸⁸⁷ Stoll, Frank. "The Need For Decentralization And Privacy In Mobile Communications Networks." (1995) Computers And Security 14, No. 6: 527-540.

⁸⁸⁸ He, Ting, Ertugrul Needed Ciftcioglu, Shiqiang Wang, And Kevin S. Chan. "Location Privacy In Mobile Edge Clouds: A Chaff-Based Approach" (2017) IEEE Journal On Selected Areas In Communications 35, No. 11: 2625-2636.

⁸⁸⁹ Stubblefield, Adam, John Ioannidis, And Aviel D. Rubin. "A Key Recovery Attack On The 802.11 B Wired Equivalent Privacy Protocol (WEP)" (2004) ACM Transactions On Information And System Security (TISSEC) 7, No. 2: 319-332.

⁸⁹⁰ Cheng, Reynold, Yu Zhang, Elisa Bertino, And Sunil Prabhakar. "Preserving User Location Privacy In Mobile Data Management Infrastructures" (In International Workshop On Privacy Enhancing Technologies, Pp. 393-412. Springer, Berlin, Heidelberg, 2006.)

⁸⁹¹ Torres, Natalia., Wagner, Ben., Hawtin, Dixie., Puddephatt, Andrew., Mendel, Toby. "Global Survey On Internet Privacy And Freedom Of Expression" (2012) France: United Nations Educational, Scientific, And Cultural Organization.

⁸⁹² Balebako, Rebecca, Pedro G. Leon, Hazim Almuhammedi, Patrick Gage Kelley, Jonathan Mugan, Alessandro Acquisti, Lorrie Faith Cranor, And Norman Sadeh. "Nudging Users Towards Privacy On Mobile Devices" (In Proc. CHI 2011 Workshop On Persuasion, Nudge, Influence And Coercion, Pp. 193-201. 2011.)

⁸⁹³ Keith, Mark J., Jeffrey S. Babb, And Paul Benjamin Lowry. "A Longitudinal Study Of Information Privacy On Mobile Devices" (In 2014 47th Hawaii International Conference On System Sciences, Pp. 3149-3158. IEEE, 2014.)

for example, of cell phone towers, routers, servers, service providers, accompanying software, government technical files, and cell phone manufacturers⁸⁹⁴?

One cause for concern is that signals from cellular telephones, tablets and watches can be intercepted as they correspond with the mobile system⁸⁹⁵. A message can be captured using either a radio access system or a central system⁸⁹⁶. Signal capture is by far the most severe risk to information owned by clients⁸⁹⁷. Hackers can utilise a device they control virtually (e.g., an individual's phone) to access the information on the system, and make calls, access content, open applications, exchange contacts, or track the owner of the device⁸⁹⁸. The US Congress⁸⁹⁹ passed the US Patriot Act⁹⁰⁰, which allows the government to intercept cell data, including contacts, messages and web history⁹⁰¹. With the cooperation of the mobile provider, the US government can retrieve complete correspondence from telephones that is transmitted to previously protected interstate and remote interchanges⁹⁰². The Act changed who could approve electronic reconnaissance and how wide the net could be cast⁹⁰³.

⁸⁹⁴ Spensky, Chad, Jeffrey Stewart, Arkady Yerukhimovich, Richard Shay, Ari Trachtenberg, Rick Housley, And Robert K. Cunningham. Sok: "Privacy On Mobile Devices—It's Complicated" (2016) Proceedings On Privacy Enhancing Technologies 2016, No. 3: 96-116.

⁸⁹⁵ Shklovski, Irina, Scott D. Mainwaring, Halla Hrund Skúladóttir, And Höskuldur Borgthorsson. "Leakiness And Creepiness In App Space: Perceptions Of Privacy And Mobile App Use" (In Proceedings Of The SIGCHI Conference On Human Factors In Computing Systems, Pp. 2347-2356. 2014.)

⁸⁹⁶ Williams, Meredydd, Jason RC Nurse, And Sadie Creese. "(Smart) Watch Out! Encouraging Privacy-Protective Behaviour Through Interactive Games" (2019) International Journal Of Human-Computer Studies 132: 121-13

⁸⁹⁷ Udoh, Emmanuel Sebastian, And Abdulwahab Alkharashi. "Privacy Risk Awareness And The Behaviour Of Smartwatch Users: A Case Study Of Indiana University Students" (In 2016 Future Technologies Conference (FTC), Pp. 926-931. IEEE, 2016.)

⁸⁹⁸ Ching, Ke Wan, And Manmeet Mahinderjit Singh. "Wearable Technology Devices Security And Privacy Vulnerability Analysis" (2016) International Journal Of Network Security & Its Applications 8, No. 3: 19-30.

⁸⁹⁹ Solove, Daniel J. Understanding Privacy. (2008).

⁹⁰⁰ Rackow, Sharon H. "How The USA Patriot Act Will Permit Governmental Infringement Upon The Privacy Of Americans In The Name Of" Intelligence" Investigations" (2002) University Of Pennsylvania Law Review 150, No. 5: 1651-1696.

⁹⁰¹ Balebako, Rebecca, Pedro Leon, Richard Shay, Blase Ur, Yang Wang, And L. Cranor. Measuring "The Effectiveness Of Privacy Tools For Limiting Behavioural Advertising" (2012) Web.

⁹⁰² Beigi, Ghazaleh, Ruo Cheng Guo, Alexander Nou, Yanchao Zhang, And Huan Liu. "Protecting User Privacy: An Approach For Untraceable Web Browsing History And Unambiguous User Profiles" (In Proceedings Of The Twelfth ACM International Conference On Web Search And Data Mining, Pp. 213-221. 2019.)

⁹⁰³ Rackow, Sharon H. "How The USA Patriot Act Will Permit Governmental Infringement Upon The Privacy Of Americans In The Name Of" (2002) Intelligence' Investigations" University Of Pennsylvania Law Review 150, No. 5: 1651-1696.

Finally, the various privacy laws governing data apply to the location of the server and the service given⁹⁰⁴. For example, European law⁹⁰⁵ applies consumers in New Zealand since they use an application in the European framework and the server website in Europe. Another example is that when mobile network data are transmitted between any service provider, whether telephone or internet, the legislation of the visited country applies⁹⁰⁶.

Conclusion

The infrastructure of technology and information technology is advancing swiftly, resulting in the development of numerous beneficial hardware, software, and applications designed to simplify life for users with the necessary technology. However, this evolution may have encroached upon privacy, ushering in a new era of privacy invasion by diminishing control over personal data, which could lead to significant consequences stemming from access to data privacy⁹⁰⁷. Contemporary technology encompasses an increasing array of advances and complexities, potentially posing issues for legal professionals. To comprehend the infrastructure of technology and information technology and the significant impact of technology on personal data privacy. This chapter has illustrated the significance of IT infrastructure both in general and specifically concerning information technology and the associated legal terminology. It has also delineated the various forms of information technology infrastructure in significant depth. Additionally, the chapter delineates pertinent privacy concerns and discoveries related to information technology infrastructure.

The scope of technology is very broad, since it affects all that people do on a daily basis, regardless of their personal interests. Technology can be defined as an information branch that relies on creativity, the use of modern technological means, and the link between these and

⁹⁰⁴ Asuquo, Philip, Haitham Cruickshank, Jeremy Morley, Chibueze P. Anyigor Ogah, Ao Lei, Waleed Hathal, Shihan Bao, And Zhili Sun. "Security And Privacy In Location-Based Services For Vehicular And Mobile Communications: An Overview, Challenges, And Countermeasures" (2018) IEEE Internet Of Things Journal 5, No. 6: 4778-4802.

⁹⁰⁵ Voss, W. Gregory. "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) The Business Lawyer 72, No. 1: 221-234.

⁹⁰⁶ Rotenberg, Julian. "Privacy Before Trade: Assessing The WTO-Consistency Of Privacy-Based Cross-Border Data Flows Restrictions" (2020) SSRN 3615807.

⁹⁰⁷ Islam, Rashedul, Rofiqul Islam, And Tohidul Mazumder. "Mobile Application And Its Global Impact." (2010) International Journal Of Engineering & Technology 10, No. 6: 72-78. Also see Jeroen van den Hoven, Martijn Blaauw, Wolter Pieters, and Martijn Warnier "Privacy and Information Technology" Stanford Encyclopedia of Philosophy, First published Thu Nov 20, 2014; substantive revision Fri Oct 4, (2024)

daily life, society and the environment⁹⁰⁸. Accordingly, technology is highly relevant in everyone's life, facilitating communication between people, and ultimately making the planet look like a small town. This is the result of the technical means and approaches that people use to develop and encourage communication among themselves⁹⁰⁹. Technology contributes substantially to obtaining, collecting and thus improving information, which is why there is an immense revolution in research and intelligence that will advance human life by making innovations in diverse fields of operation. Technology has helped overcome numerous human issues, particularly nowadays because of the rapid growth in the amount of knowledge accumulated, which is why contact between people is facilitated⁹¹⁰. As a result of modern technological means, human lives have changed and time and money has been saved. Furthermore, regulations, requirements and laws in all fields safeguard the public, such as when driving a vehicle, for example. The infrastructure for technology, IT, and technological applications is governed by specific rules and regulations that safeguard privacy and practice, regardless of the context in which technologies are employed, including education, health, finance, travel, communication, electronic services, and others⁹¹¹.

In recent years, as governments and related institutions have transitioned to complete digitisation, technology has become increasingly vital to their performance and sustainability⁹¹². Several nations have deployed cutting-edge technologies that can keep up with the lightning-fast pace of the internet age in response to the pandemic's spread⁹¹³. Since health and environmental conditions influenced how countries used and developed technology, it took a giant leap forward by adopting various technological projects to directly assist countries in their digital transformation and to create a better technological and informational existence⁹¹⁴. It is exciting to observe how technology has advanced to satisfy this requirement in recent

⁹⁰⁸ Mccarthy, John, And Peter Wright. "Technology As Experience" (2004) *Interactions* 11, No. 5: 42-43.

⁹⁰⁹ Legris, Paul, John Ingham, And Pierre Collerette. "Why Do People Use Information Technology? A Critical Review Of The Technology Acceptance Model" (2003) *Information & Management* 40, No. 3: 191-204.

⁹¹⁰ Inhorn, Marcia C. "Right To Assisted Reproductive Technology: Overcoming Infertility In Low-Resource Countries." (2009) *International Journal Of Gynecology & Obstetrics* 106, No. 2:172-174.

⁹¹¹ Xu, Heng, Tamara Dinev, Jeff Smith, And Paul Hart. "Information Privacy Concerns: Linking Individual Perceptions With Institutional Privacy Assurances." (2011) *Journal Of The Association For Information Systems* 12, No. 12: 1.

⁹¹² Li, Changzhi, Julie Cummings, Jeffrey Lam, Eric Graves, And Wenhsing Wu. "Radar Remote Monitoring Of Vital Signs." (*IEEE Microwave Magazine* 10, No. 1 (2009): 47-56.)

⁹¹³ George, Gerard, Karim Lakhani, And Phanish Puranam. "What Has Changed? The Impact Of Covid Pandemic On The Technology And Innovation Management Research Agenda." (2020) *Journal Of Management Studies*.

⁹¹⁴ Wang, Qiang, Min Su, Min Zhang, And Rongrong Li. "Integrating Digital Technologies And Public Health To Fight Covid-19 Pandemic: Key Technologies, Applications, Challenges And Outlook Of Digital Healthcare." (2021) *International Journal Of Environmental Research And Public Health* 18, No. 11: 6053.

years. Virtual communication, e-learning, "artificial intelligence," the "Internet of Things," and e-commerce are just a few of the industries that have benefited greatly technology advancements in recent years⁹¹⁵. All these technologies have been around for some time, but their quick acceptance has been startling. Normally, implementing a new practise takes years, but this acceptance of the changes has taken place over a period of months. Digital communication has emerged as a crucial aspect of our daily lives⁹¹⁶.

Health policy was revised in response to the epidemic, with advances like telemedicine and the use of robots becoming increasingly important in the fight against the virus⁹¹⁷. The fifth-generation (5G)⁹¹⁸ cellular network is used for remote, real-time communication between patients, paramedics, and medical professionals, and is one of its technological applications. Numerous shifts have occurred throughout the world's healthcare system as a direct result of the pandemic. In addition, video conferencing, language learning apps, e-learning platforms and software, and virtual instruction have all played a role in helping schools adjust to digital distance learning throughout the pandemic⁹¹⁹. As a result of the need to reduce the spread of the virus through personal contact, the business world embraced the concept of "contactless transactions," with technologies like contactless payment, express shopping (cashier-free), and biometric check-in for travel becoming increasingly commonplace. In addition, many companies chose to replace their human workers with AI systems throughout the outbreak⁹²⁰. The role of artificial intelligence (AI) in business will change from that of a technology enabler to that of a technology driver in the near future⁹²¹. Since all the aforementioned technological

⁹¹⁵ Secundo, Giustina, SM Riad Shams, And Francesco Nucci. "Digital Technologies And Collective Intelligence For Healthcare Ecosystem: Optimizing Internet Of Things Adoption For Pandemic Management." (2021) *Journal Of Business Research* 131: 563-572.

⁹¹⁶ Whitelaw, Sera, Mamas A. Mamas, Eric Topol, And Harriette GC Van Spall. "Applications Of Digital Technology In COVID-19 Pandemic Planning And Response." (2020) *The Lancet Digital Health* 2, No. 8: E435-E440.

⁹¹⁷ Bahl, Shashi, Ravi Pratap Singh, Mohd Javaid, Ibrahim Haleem Khan, Raju Vaishya, And Rajiv Suman. "Telemedicine Technologies For Confronting COVID-19 Pandemic: A Review." (2020) *Journal Of Industrial Integration And Management* 5, No. 04: 547-561.

⁹¹⁸ Siriwardhana, Yushan, Gürkan Gür, Mika Ylianttila, And Madhusanka Liyanage. "The Role Of 5G For Digital Healthcare Against COVID-19 Pandemic: Opportunities And Challenges." (2021) *Ict Express* 7, No. 2: 244-252.

⁹¹⁹ Lynch, Maggie. "E-Learning During A Global Pandemic." (2020) *Asian Journal Of Distance Education* 15, No. 1: 189-195.

⁹²⁰ Semuels, Alana. "Millions Of Americans Have Lost Jobs In The Pandemic—And Robots And Ai Are Replacing Them Faster Than Ever." (2020) *Time Magazine*.

⁹²¹ Haenlein, Michael, And Andreas Kaplan. "A Brief History Of Artificial Intelligence: On The Past, Present, And Future Of Artificial Intelligence." (2019) *California Management Review* 61, No. 4: 5-14.

developments were developed with the long-term future in mind, they can be thought of as founding components of the technological and scientific infrastructure. Thus, the rapid pace at which these infrastructures and technologies are evolving makes it even more important that privacy be given the same level of priority.

Chapter Three: National Regulation of Privacy: Illustration from Various Treaties and Jurisdictions

Introduction

The utilisation of information and communication technologies presents significant opportunities for the acquisition and manipulation of data, particularly with regards to personal information. This enables the identification and analysis of data, as well as the comprehension of individuals' backgrounds, customs, and preferences⁹²².

These technological advancements utilise various tools commonly used in daily life, including smartphones, computers, telephones, cameras, medical equipment, and geolocation devices⁹²³. Consequently, individuals have become a significant source of national and international intelligence, as vast amounts of personal data are transmitted through the network as social networks continue to expand⁹²⁴. The increasing likelihood of personal and international data being utilised beyond established frameworks represents a burgeoning actuality. The preservation of individual privileges and liberties against potential threats that compromise their safety and dignity necessitates the implementation of regulatory and procedural safeguards⁹²⁵. The preservation of personal data protection necessitates the implementation of regulatory, institutional, and legal frameworks within this particular context. The prioritisation of privacy is a fundamental aspect in enhancing trust in cyberspace, fostering the growth of the digital economy, safeguarding both individuals and the economy on the internet, and averting

⁹²² Kilovaty, Ido. "Legally Cognizable Manipulation." (2019) Berkeley Tech. LJ 34: 449.

⁹²³ Attri, J. P., R. Khetarpal, V. Chatrath, And J. Kaur. "Concerns About Usage Of Smartphones In Operating Room And Critical Care Scenario." (2016) Saudi Journal Of Anaesthesia 10, No. 1: 87.

⁹²⁴ Prier, Jarred. "Commanding The Trend: Social Media As Information Warfare." (2020) In Information Warfare In The Age Of Cyber Conflict, Pp. 88-113. Routledge.

⁹²⁵ Fernback, Jan, And Zizi Papacharissi. "Online Privacy As Legal Safeguard: The Relationship Among Consumer, Online Portal, And Privacy Policies." (2007) New Media & Society 9, No. 5: 715-734.

the potential misuse of technological advancements as a tool for subjugating individuals through informatics, thereby jeopardising their rights and freedoms⁹²⁶.

Taking into account these factors, regulations pertaining to privacy across borders have been implemented in over 89⁹²⁷ nations spanning Asia, Africa, Europe, Latin America, and the Caribbean. The majority of these nations have instituted a governmental entity tasked with ensuring the enforcement of relevant legislation, as required. These entities monitor adherence to legal mandates with the objective of enhancing their economies through the utilisation of information and communication technologies⁹²⁸. Additionally, they endeavour to ensure the safeguarding of personal data within a legal and regulatory structure that upholds the rights and dignity of individuals⁹²⁹.

The present chapter aims to examine diverse transnational regulations with the objective of providing Saudi Arabian regulators with a comprehensive understanding of the most effective approach, either stringent or lenient, to be adopted by the country, the specific practises that need to be restricted, and the strategies to be employed in enforcing privacy regulations. The researcher seeks legislation from both developed and developing legal frameworks. This chapter aims to demonstrate the methodologies employed by the United States and the European Union in relation to safeguarding personal data privacy, as evidenced in international charters and treaties. This chapter will illustrate the principles utilised in safeguarding data privacy in various countries, including the United Arab Emirates, Argentina, the United Kingdom, and New Zealand.

An Exposition of the Regulations Governing International Data Protection

⁹²⁶ Teoh, Chooi Shi, And Ahmad Kamil Mahmood. "National Cyber Security Strategies For Digital Economy." (In 2017 International Conference On Research And Innovation In Information Systems (ICRIIS), Pp. 1-6. IEEE, 2017.)

⁹²⁷ Graham Greenleaf "Global Data Privacy Laws: 89 Countries And Accelerating" (2012) University Of South Wales, Faculty Of Law.

⁹²⁸ Ibid.

⁹²⁹ Ibid.

The contemporary economic and informal interconnections have given rise to novel variables that necessitate the consideration of personal data protection stakeholders⁹³⁰. It is imperative to establish empirical frameworks and laws that are in conformity with these emerging variables⁹³¹. Various factors include foreign electronic transactions, such as money transfers, national identities, and recordings. The transfer of private information between distinct international jurisdictions is a variable that is subject to regulation in some cases, while in others, it is not prohibited⁹³². The safeguarding of privacy necessitates adherence to both domestic and international legal frameworks and agreements, as elaborated in the ensuing discourse.

International charters and treaties for the protection of privacy

In the realm of modern international relations, both on a global and regional scale, international privacy organisations have emerged as a significant and efficacious mechanism for promoting international collaboration across diverse sectors, preserving international concord and stability, and cultivating the growth and advancement of the international community⁹³³. International privacy organisations are separate from national laws, international regulations, and organisations⁹³⁴. In contrast to these entities, international systems implement a set of legal provisions that primarily govern a specific matter, such as the management of the private sector. Simultaneously, they uphold all essential regulations to guarantee that the recipients safeguard their populace, community, institutions, and nations⁹³⁵. Over the course of several decades, a consortium of international organisations and their associated contractual agreements, which specialise in safeguarding privacy, have demonstrated notable efficacy in their collaborative efforts⁹³⁶. The aforementioned items are as follows.

⁹³⁰ Huth, Dominik, Anne Faber, And Florian Matthes. "Towards An Understanding Of Stakeholders And Dependencies In The EU GDPR." (2018) Proceedings Of The MKWI 2018: 338-344.

⁹³¹ Li, Yuan. "Empirical Studies On Online Information Privacy Concerns: Literature Review And An Integrative Framework" (2011) Communications Of The Association For Information Systems 28, No. 1: 28.

⁹³² North, Cara. "The Exclusion Of Privacy Matters From The Judgments Convention." (2020) Netherlands International Law Review 67, No. 1: 33-48.

⁹³³ Bygrave, Lee A. "Privacy And Data Protection In An International Perspective." (2010) Scandinavian Studies In Law 56, No. 8: 165-200.

⁹³⁴ De Hert, Paul, And Vagelis Papakonstantinou. "Three Scenarios For International Governance Of Data Privacy: Towards An International Data Privacy Organization, Preferably A UN Agency." (2013) ISJLP 9: 271.

⁹³⁵ Ibid.

⁹³⁶ Ibid.

*United Nations*⁹³⁷. Through Article 12⁹³⁸ of the Universal Declaration of Human Rights and Article 17⁹³⁹ of the International Covenant on Civil and Political Rights, the UN and the European Union have been at the forefront for a long time, but not always uniformly or at the same time. In Article 12⁹⁴⁰ of the UN resolution on privacy, however, the general concept should be appropriate since it covers all private industries⁹⁴¹. Nevertheless, although the definition of data protection may be clear, there are no distinguishing criteria dealing with privacy in public spaces. The insistence on anonymity, however, may clash with global digital technology issues, as internet anonymity is tightly restricted⁹⁴². Seeking to implement a scheme guarding against eavesdropping and the recording of conversations, Article 17⁹⁴³ deals with the protection of correspondence and messages although certain countries have claimed that contact is not a violation of privacy or of so-called metadata or communications records⁹⁴⁴. This dispute has nevertheless not been a compelling concern to the United Nations, since the material and communication data relate to usage histories, including user identification, credit card numbers, history of internet surfing, map and model of devices used, and geolocation identification for physical travel⁹⁴⁵. People are not aware of the intent or scope of such processing, but are aware of the nature of data monitoring, so that data protection in the era of advanced surveillance and large data mining is of great importance⁹⁴⁶.

⁹³⁷ Gareis, Sven Bernhard *The United Nations* Palgrave Macmillan, 2012. The UN Was Founded In 1945 As An International Organisation. It Now Consists Of 193 Nations. The UN 'S Mission And Work Are Driven By Its Founding Charter Aims And Values.

⁹³⁸ UN General Assembly, "Universal Declaration Of Human Rights UN General Assembly 302" (1948) No. 2.

⁹³⁹ Joseph, Sarah, And Melissa Castan "The International Covenant On Civil And Political Rights: Cases Materials, And Commentary" (2013) Oxford University Press.

⁹⁴⁰ Woods, Lorna. "The Right To Privacy." (2018) *Contemporary Human Rights Challenges: The Universal Declaration Of Human Rights And Its Continuing Relevance*.

⁹⁴¹ J. Cannataci, "Report Of The Special Rapporteur On The Right To Privacy A/HRC/31/64" (2016) New York, United Nations, Paras. 24–26.

⁹⁴² Lorna Woods "Digital Privacy And Article 12 Of The Universal Declaration Of Human Rights 2019", Wiley Online Library.

⁹⁴³ B. Emmerson, "Report On Mass Digital Surveillance And Article 17" (2014) New York, United Nations, 2014, Para. 58.

⁹⁴⁴ UN Human "Rights Committee (HRC) CCPR General Comment No. 16: Article 17 (Right To Privacy), The Right To Respect Of Privacy, Family, Home And Correspondence, And Protection Of Honour And Reputation" 8 April 1988

⁹⁴⁵ Greenleaf, Graham. "The UN Special Rapporteur: Advancing A Global Privacy Treaty?." (2015).

⁹⁴⁶ Rotenberg, Marc Urgent Mandate, "Unhurried Response: An Evaluation Of The UN Special Rapporteur On The Right To Privacy Eur" (2017) *Data Prot. L. Rev.* 3: 47.

The *International Labour Organization*⁹⁴⁷ has made comparatively small, though not negligible, political contributions and has established a code of practice to offer guidelines for protecting the personal details of employees⁹⁴⁸. These include protecting job applicants' personal details, maintaining staff and consumers' personal protection in the collection and processing of personal details⁹⁴⁹. The code of practice has little binding power and only offers guidelines. It cannot override municipal rules or international and other agreed principles. Data protection is therefore required to address any use of employees' individual details⁹⁵⁰.

*OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data*⁹⁵¹

Over the last few decades, with the growth of e-commerce and technical knowledge, it was not expected that the requirements of individual privacy would lead to threats, particularly because of the rapid sharing of identifying details⁹⁵². This development has had a beneficial effect on individuals and cultures and arose as the flow of knowledge across boundaries has become more commercial, political and social⁹⁵³. It also brought about a structural shift in the market climate and in data processing technologies, such as expanding data sharing across the internet, encouraging individuals' direct engagement in data flow across boundaries, shifting regional positions, and resulting in increased threats to individual privacy⁹⁵⁴. Privacy and cross-border data flow are also governed by personal data protection regulations but require a wider measure

⁹⁴⁷ Rodgers, G., Lee, E., Swepston, L. And Van Daele, J “The International Labour Organization And The Quest For Social Justice 1919-2009”: In 1919, Following A Devastating War, The International Labour Organization ILO Was Created With The Idea That Only Universal Peace Can Be Built On The Basis Of Social Justice.

⁹⁴⁸ International Labour Organisation “Protecting Of Worker’s Personal Data 1997”, 92-2-110329-3[ISBN]

⁹⁴⁹ Ibid.

⁹⁵⁰ Simitis, Spiros “From The General Rules On Data Protection To A Specific Regulation Of The Use Of Employee Data: Policies And Constraints Of The European Union Comp” (1997) Lab. L. & Pol’y J. 19: 351.

⁹⁵¹ Kuner, Christopher “Regulation Of Transborder Data Flows Under Data Protection And Privacy Law” (Past, Present, And Future (October 1, 2010). TILT Law & Technology Working Paper No. 016/2010, Tilburg Law School Research Paper No. 016/2010.)

⁹⁵² Organisation For Economic Co-Operation And Development. OECD Guidelines On The Protection Of Privacy And Transborder Flows Of Personal Data. OECD Publishing, 2002.

⁹⁵³ Regard Having. “Recommendation Of The Council Concerning Guidelines Governing The Protection Of Privacy And Transborder Flows Of Personal Data” (2013)

⁹⁵⁴ Ibid.

of local and global supervision⁹⁵⁵. Over 60⁹⁵⁶ countries have introduced data flow or privacy regulations that control data flow across boundaries. Many of these countries have adopted the OECD Guideline and also follow one or more international or local data privacy regulations⁹⁵⁷.

*Global Privacy Assembly*⁹⁵⁸. Formerly known as the International Conference of Data Protection and Privacy Commissioners, this body holds a yearly conference for researchers, interested individuals and specialists from around the world to address topics of shared concern, potential problems and how to work together to identify options for possible changes⁹⁵⁹.

Data privacy authorities, governmental agencies, businesses, and scholars from all countries can participate in this setting to protect international personal information⁹⁶⁰. The Global Privacy Assembly appoints international privacy commissioners and connects privacy forces⁹⁶¹. In addition, it provides members of the assembly with a choice of adopted non-binding resolutions and also issues statements related to privacy protections⁹⁶².

*International Working Group on Data Protection in Telecommunications*⁹⁶³. The IWGDPT was founded on the initiative of the Berlin Data Protection Commissioner in 1983⁹⁶⁴, who now heads the group in collaboration with the International Conference of Data Protection and

⁹⁵⁵ Lesieur, François. "Regulating Cross-Border Data Flows And Privacy In The Networked Digital Environment And Global Knowledge Economy." (2012) *International Data Privacy Law* 2, No. 2: 93.

⁹⁵⁶ Kuner, Christopher "Regulation Of Transborder Data Flows Under Data Protection And Privacy Law" (Past, Present, And Future (October 1, 2010) TILT Law & Technology Working Paper No. 016/2010, Tilburg Law School Research Paper No. 016/2010.)

⁹⁵⁷ Ibid.

⁹⁵⁸ Corley, Morgan A "The Need For An International Convention On Data Privacy: Taking A Cue From The CISG Brook" (2015) *J. Int'l L.* 41: 721.

⁹⁵⁹ Banisar, David, And Simon Davies. "Global Trends In Privacy Protection: An International Survey Of Privacy, Data Protection, And Surveillance Laws And Developments." (1999) *J. Marshall J. Computer & Info. L.* 18: 1.

⁹⁶⁰ Schwartz, Paul M., And Karl-Nikolaus Peifer. "Transatlantic Data Privacy Law." (2017) *Geo. LJ* 106 : 115.

⁹⁶¹ Greenleaf, Graham. "Sheherezade And The 101 Data Privacy Laws: Origins, Significance And Global Trajectories." (2014) *JL Inf. & Sci.* 23: 4.

⁹⁶² Naonori Kato, Yoichiro Itakura, Yosuke Murakami "A Report On International Conference Of Data Protection & Privacy Commissioners 2017 KDDI Research" (2018) Inc. Hikari Law Office / RIKEN AIP Center KDDI Research, Inc.

⁹⁶³ Reidenberg, Joel R "Resolving Conflicting International Data Privacy Rules In Cyberspace" (2000) *Stanford Law Review*: 1315-1371.

⁹⁶⁴ Dix, Alexander "The International Working Group On Data Protection In Telecommunications: Contributions To Transnational Privacy Enforcement In Enforcing Privacy" (2016) Pp. 183-193. Springer, Cham.

Privacy Commissioners⁹⁶⁵. A key contribution of the organisation is to have established standards, recommendations, and guidance for data authorities and analysts, while simultaneously offering an international, unique, and broad-based information-exchange forum, contributing to collaborative, and concerted regulatory action against various internet companies⁹⁶⁶.

The *Asia Pacific Economic Cooperation*⁹⁶⁷ has asserted itself in recent years as a potentially powerful policy broker in the region. The organisation began developing principles for establishing privacy standards among 21 countries of Asia Pacific Economic Cooperation members⁹⁶⁸. Requirements include handling data export restriction problems⁹⁶⁹. The purpose in establishing privacy requirements is to promote economic knowledge sharing and to encourage countries to improve their laws in view of the present situation, where there is little privacy protection among certain organisation member states⁹⁷⁰. The plan to establish a privacy scheme may be seen as risky, but at the same time it has possible social and economic advantages, and a beneficial outcome can also be obtained to preserve privacy⁹⁷¹.

Apart from these organisations, there is a wide variety of bodies and interest groups that advocate specific policies on privacy in an international context⁹⁷². Some firmly advocate stronger regulation of the privacy of personal data. Regional groupings of national data protection agencies, such as the *Privacy Commissions*⁹⁷³, or *Data Protection Commissions*⁹⁷⁴

⁹⁶⁵ Dix, Alexander. "The International Working Group On Data Protection In Telecommunications: Contributions To Transnational Privacy Enforcement." (2016) *Enforcing Privacy: Regulatory, Legal And Technological Approaches*: 183-193.

⁹⁶⁶ Garstka, Hansjuergen. "The International Working Group On Data Protection In Telecommunications: Common Positions Adopted On Selected Emerging Global Issues." (In 21st International Conference On Privacy And Personal Data Protection. 1999.)

⁹⁶⁷ Funabashi Yoichi *Asia Pacific Fusion: "Japan's Role In APEC"* (1995) Peterson Institute Press: All Books.

⁹⁶⁸ Solove, Daniel J "Understanding Privacy" (2008).

⁹⁶⁹ Ibid.

⁹⁷⁰ Bisley, Nick. *Asia-Pacific Economic Cooperation*. London: Routledge, 2012.

⁹⁷¹ Greenleaf, Graham "The APEC Privacy Initiative: 'OECD Lite 'For The Asia-Pacific?.'" (2004) *Privacy Laws & Business* 71: 16-18.

⁹⁷² De Hert, Paul, And Vagelis Papakonstantinou. "Three Scenarios For International Governance Of Data Privacy: Towards An International Data Privacy Organization, Preferably A UN Agency." (2013) *ISJLP* 9: 271.

⁹⁷³ Westin, Alan F "Social And Political Dimensions Of Privacy" (2003) *Journal Of Social Issues* 59, No. 2: 431-453.

⁹⁷⁴ The Official Name United Kingdom For The Protection Of Public Information Rights In Compliance With The Data Protection Law 1998, The 2018 Office Of The Information Commission. Another Example From Singapore: On 2 January 2013, The PDPC Was Set Up To Administer And Apply The 2012 Personal Data Protection Act (PDPA). In Order To Foster A Confidential Atmosphere Between Companies And Customers,

and the like, are the leading public sector bodies. These organisations can lead the way to protecting privacy in government and the private sector by carrying out relevant study, investigating the nature and impact of technology on privacy, and by finding a way to apply new privacy regulations⁹⁷⁵.

These organisations or workgroups are mentioned and protected⁹⁷⁶ by the Data Protection Working Party set up under Article 29⁹⁷⁷ of the EU, in their directives, the International Working Group on Data Protection and Telecommunications, and the Asia-Pacific Privacy Authorities. Of these, the workgroup mentioned in Article 29⁹⁷⁸ was the most important in shaping the transitional policy.

Overall, through their priorities and declarations, the above organisations have shown that they have a strong commitment to privacy by means of education, knowledge, research, and proposed domestic and international regulations to protect the privacy of data and individuals from cellular networks⁹⁷⁹. In addition, the overall goals of these organisations state that information technology can be used for the protection of privacy by means of conventional privacy protection and data from cellular networks⁹⁸⁰. In order not to be left out at the international level and to enhance future Saudi privacy regulation, Saudi Arabia can take the initiative to become a signatory of the above-mentioned international laws or establish its own regulations concerning privacy⁹⁸¹. Hence, history shows that the main formal normative foundation for principles of data privacy is to be found in important international declarations

And To Contribute To A Thriving Singapore Economy, The Human Data Protection Committee Promotes And Enforces Protection Of Personal Data. Personal Data Protection Commission 2018.

⁹⁷⁵ Ibid. (Bennet, 1992)

⁹⁷⁶ Schwartz, Paul M European Data Protection Law And Restrictions On International Data Flows Iowa L. Rev. 80 (1994): 471.

⁹⁷⁷ Article 29 Working Party Means An Official Data Protection Adviser To The European Commission, And Assists In Implementing Harmonised Data Protection Policies In The EU Member States, A Short Name Of The Data Protection Working Party Formed In Article 29 Of Directive 95/46 / EC. The Working Group Shall Consist Of: Members Of Member States ' National Supervisory Authorities; The European Data Protection Expert Representative (EDPS); The European Commission Representative. European Data Protection Supervisor Www.Edps.Europa.Eu February 2018.

⁹⁷⁸ El Emam, Khaled, And Cecilia Álvarez "A Critical Appraisal Of The Article 29 Working Party Opinion 05/2014 On Data Anonymization Techniques International Data Privacy Law 5", No. 1 (2015): 73-87.

⁹⁷⁹ Mundie, Craig. "Privacy Pragmatism; Focus On Data Use, Not Data Collection." (2014) Foreign Aff. 93: 28.

⁹⁸⁰ Ibid.

⁹⁸¹ Elmaghraby, Adel S. "Security And Privacy In The Smart City." (In 6th Ajman International Urban Planning Conference AIUPC, Vol. 6, Pp. 1-9. 2013.)

and treaties on basic human rights. Important are the Universal Declaration of Human Rights⁹⁸², the International Covenant on Civil and Political Rights⁹⁸³ as well as certain regional human rights treaties, such as the European Convention on Human Rights⁹⁸⁴ and Fundamental Freedoms⁹⁸⁵. However, the most influential agreements on personal data protection in the past forty years⁹⁸⁶ are the Convention for the Protection of Individuals with regards to the automatic processing of personal data⁹⁸⁷, the Organisation for Economic Co-operation and Development⁹⁸⁸ Guidelines governing the protection of privacy and transborder flows of personal data and the EU directive on data protection, all of which are agreements emanating from the Council of Europe⁹⁸⁹, the Organisation for Economic Co-operation and Development, and the EU.

⁹⁸² Morsink, Johannes “The Universal Declaration Of Human Rights: Origins, Drafting, And Intent” (1999) University Of Pennsylvania Press. The Declaration Of 10 December 1948 (General Assembly Resolution 217 A) Declared The UN General Assembly In Paris To Be The Joint Standard For Achievement For All Nations, Drafted By Delegates With Various Legal And Cultural Back Groups From All Regions Of The World.

⁹⁸³ Joseph, Sarah, And Melissa Castan. “The International Covenant On Civil And Political Rights: Cases, Materials, And Commentary” Oxford University Press, 2013. The UN High Commissioner For Human Rights (OHCHR) Represents The Devotion Of The World To Universal Human Dignity Principles. The International Community Has A Special Mandate To Uphold And Protect All Human Rights. The Office Of The High Commissioner For Human Rights (HCCR) Is The Key Offices Of The United Nations Appointed To Promote And Uphold Human Rights For Everyone. They Provide A Forum To Recognise, Highlight And Establish Answers To The Problem Of Human Rights Today And Are The Key Focus Of Research, Education, Public Information And Advocacy Activities In The UN System.

⁹⁸⁴ Harris, David John, Michael O'Boyle, Ed Bates, And Carla Buckley. Harris, O'Boyle & Warbrick: “Law Of The European Convention On Human Rights” (2014) Oxford University Press, USA.

⁹⁸⁵ Jacqué, Jean Paul. “Accession Of The European Union To The European Convention On Human Rights And Fundamental Freedoms” (2011) The Common Market L. Rev. 48: 995. European Treaty Series - No. 5, Convention For The Protection Of Human Rights And Fundamental Freedoms As Amended By Protocols No. 11 And No. 14 * Rome, 4.XI.1950.

⁹⁸⁶ De l'Europe, Conseil. “Convention For The Protection Of Individuals With Regard To Automatic Processing Of Personal Data” (1981) Vol. 108. Council Of Europe.

⁹⁸⁷ Simitis, Spiros. “From The Market To The Polis: The EU Directive On The Protection Of Personal Data Iowa L” (1994) Rev. 80: The Agreement Is The First Binding International Treaty To Safeguard Individuals Against Violence Which Can Accompany Personal Information Gathering And Processing And Which Aims To Concurrently Control The Transfer Of Personal Information Across Boundaries. It Would Not Enable The Compilation Of "Sensitive" Data About A Person's Ethnicity, Ideology, Fitness, Faith, Sexual Life, Criminal History Etc. To Be Assured, Without Adequate Legal Protections. This Would Not Mean The Collecting And Processing Of Personal Data. The Convention Therefore Provides The Right Of The Citizen To Recognise That He Or She Receives Information And, If Appropriate, To Get It Rectified. Even Where Primitive Priorities (E.G. State Protection, Safety, Etc.) Are At Risk Will Rights Be Limited As Provided For In This Convention. The Convention Often Puts Certain Limitations On Transboundary Transfers Of Personal Details To States In Which Legislation Offers No Equal Protection.

⁹⁸⁸ OECD, Towards Green Growth. “The Organisation For Economic Co-Operation And Development” (1960) OEEC.

⁹⁸⁹ The European Council Promotes Freedom Of Expression, Freedom Of Assembly, Equality, Cybersecurity, And Minority Protection. It Also Introduced Campaigns On Problems Such As Child Care, Hatred Online And Roma Rights, The Biggest Minority In Europe. The European Council Assists Member States In Combating

In recent years, the development of policy in the field of privacy has been supported by comparatively official organisations. For example, the World Bank began to observe data privacy on 28 January 1981, when the first legally binding International Agreement on Privacy and knowledge privacy was concluded⁹⁹⁰. This landmark was intended to raise awareness of the importance of data privacy for the World Bank, its members and culture and constitutes a milestone because, as described in Chapter one of this thesis, the understanding of the word ‘privacy’ is not new⁹⁹¹. The concept of privacy evolved years before the development of modern technology, but the idea and meaning of privacy have changed with time and especially with the rise of the internet, due to various factors explained in Chapter one⁹⁹². The protection of data collected, stored, shared, and used by various private groups is not different from the protection of data used in the public sector, but the amount of new data collected, used, and shared is vast and has never been achievable before⁹⁹³. Thus, the privacy regulations implemented by the World Bank are a hallmark because they emphasise the management and protection of personal data and in this way offer an international example of respecting the privacy of personal data⁹⁹⁴.

International Privacy Rights Jurisdictions

With the efforts of various countries to ensure the protection of personal data, an international framework on privacy was developed for how to use, collect, and store the data of the individual⁹⁹⁵. Although this framework concentrated on the principles established by large organisations, its structure was hammered out in the 1970s and 1980s by a small group of

Corruption And Terrorism And Introducing Appropriate Judicial Reforms. Its Constitutional Advisory Council, Known As The Venice Tribunal, Offers Country-Wide Legal Advice. The Council Of Europe 2018.

⁹⁹⁰ Ethiopis Tafara “The Importance Of Protecting ‘Privacy’ In The Age Of Digital Data 2020”, World Bank.

⁹⁹¹ Friedewald, Michael, And Ronald J. Pohoryles. "Technology And Privacy." (2013) Innovation: The European Journal Of Social Science Research 26, No. 1-2: 1-6.

⁹⁹² See Chapter One Of This Thesis Notion Of Privacy P21.

⁹⁹³ Wu, Xindong, Xingquan Zhu, Gong-Qing Wu, And Wei Ding. "Data Mining With Big Data." (2013) IEEE Transactions On Knowledge And Data Engineering 26, No. 1: 97-107.

⁹⁹⁴ Sharma, Siona. "Digital Development: An Interpretive Policy Analysis Of Privacy And Social Inclusion In World Bank Technology Projects." (2020) Phd Diss.

⁹⁹⁵ Altwicker, Tilmann. "Transnationalizing Rights: International Human Rights Law In Cross-Border Contexts." (2018) European Journal Of International Law 29, No. 2: 581-606.

individuals who, both on their own and working together, combined their unique experience in the field with sustained persuasive power⁹⁹⁶.

The USA and European Union

European privacy legislation offers a precedent that those involved in the global privacy environment can adopt, and the history of this legislation can serve as the basis for a variety of other global interactions, either by completely reproducing the legislation or by taking what fits local laws in each country⁹⁹⁷. In American law, legislation is often general, applying to many local regulations. Thus, the description of both structures would be as follows⁹⁹⁸.

The US and the EU have committed themselves to safeguarding sensitive records, including electronic data, relating to human privacy rights⁹⁹⁹. However, in terms of privacy ties and economic factors, data protection and privacy issues have long been a central concern in the United States and the EU¹⁰⁰⁰. Their approach to data privacy and data protection is focused on inherent gaps between the US and the EU¹⁰⁰¹. In the United States, for instance, the European Commission's approach to gathering and advancing personal data is permissible, unless it is dangerous or specifically restricted by US legislation¹⁰⁰². In Europe, on the other hand, it is illegal to process personal details unless clear legal justification requires it¹⁰⁰³.

Over the last century, controversy has arisen between the US and the European Union concerning the safeguarding of privacy and sensitive details. The key impetus for the debate

⁹⁹⁶ James B. Rule, G. W. Greenleaf "Global Privacy Protection": (2010) The First Generation Edward Elgar Publishing.

⁹⁹⁷ Kuner, Christopher. "The European Commission's Proposed Data Protection Regulation: A Copernican Revolution In European Data Protection Law." (2012) Bloomberg BNA Privacy And Security Law Report (2012) February 6, No. 2012: 1-15.

⁹⁹⁸ Nelson, Caleb. "The Persistence Of General Law." (2006) Columbia Law Review: 503-568.

⁹⁹⁹ Hiller, Janine, Matthew S. McMullen, Wade M. Chumney, And David L. Baumer. "Privacy And Security In The Implementation Of Health Information Technology (Electronic Health Records): US And EU Compared." (2011) BUJ Sci. & Tech. L. 17: 1.

¹⁰⁰⁰ Schwartz, Paul M. "The EU-US Privacy Collision: A Turn To Institutions And Procedures." (2012) Harv. L. Rev. 126: 1966.

¹⁰⁰¹ Ibid.

¹⁰⁰² European Commission "Collecting & Processing Personal Data: What Is Legal?" (2018).

¹⁰⁰³ Tourkochuriti, Ioanna. "The Snowden Revelations, The Transatlantic Trade And Investment Partnership And The Divide Between US-EU In Data Privacy Protection UALR L"(2013) Rev. 36: 161.

was the 1995 EU implementation of a data protection directive¹⁰⁰⁴. The directive established a cap on the movement of eligible personal data from the EU to non-EU countries lacking proper personal data protection¹⁰⁰⁵. For certain Europeans, this appeared to be an example to the rest of the world of the way European laws and policies function to the detriment of legitimate business interests. Concerns about this situation were expressed stridently in the USA¹⁰⁰⁶.

US federal offices reported that the ban affected up to USD120¹⁰⁰⁷ billion in exchange, even more than in the previous trans-Atlantic trade dispute¹⁰⁰⁸. The disagreement between the US and the EU was not easily resolved, since each side thought the other had better terms, but both sides sat in the trans-Atlantic privacy policy meeting following prolonged talks between the US and Europe¹⁰⁰⁹.

The highlighted tension between Europe and the United States may seem strange. This is because in the past international initiatives to protect privacy and personal data have resulted in considerable cooperation between countries¹⁰¹⁰. Efforts of this kind have yielded legally and politically binding agreements for many nation-states. The trans-Atlantic dispute in the wake of the adoption of the EU directive¹⁰¹¹ was finally amended in the form of the Safe Harbour Scheme¹⁰¹².

¹⁰⁰⁴Directive, E. U. "95/46/EC Of The European Parliament And Of The Council Of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And On The Free Movement Of Such Data" Official Journal Of The EC 23, No. 6 (1995).

¹⁰⁰⁵ Tikkinen-Piri, Christina, Anna Rohunen, And Jouni Markkula. "EU General Data Protection Regulation: Changes And Implications For Personal Data Collecting Companies." (2018) *Computer Law & Security Review* 34, No. 1: 134-153.

¹⁰⁰⁶ Schwartz, Paul M., And Karl-Nikolaus Peifer. "Transatlantic Data Privacy Law." (2017) *Geo. LJ* 106: 115.

¹⁰⁰⁷ Heisenberg Dorothee "Negotiating Privacy: The European Union, The United States, And Personal Data Protection Boulder" (2005) CO: Lynne Rienner Publishers.

¹⁰⁰⁸ Ibid.

¹⁰⁰⁹ Deckelboim, Sherri J "Consumer Privacy On An International Scale: Conflicting Viewpoints Underlying The EU-US Privacy Shield Framework And How The Framework Will Impact Privacy Advocates, National Security, And Businesses Geo" (2016) *J. Int'l L.* 48: 263.

¹⁰¹⁰ Newman, Abraham. "Protectors Of Privacy: Regulating Personal Data In The Global Economy" (2008) Cornell University Press.

¹⁰¹¹ Craig, Paul, And Gráinne De Búrca. "EU Law" (2003) Oxford: Oxford University Press. A Directive Is A Statutory Act That Lays Out An Agenda To Be Fulfilled By All EU Countries. But It Is Up To Each Nation To Formulate Its Own Policies For How These Targets Should Be Accomplished.

¹⁰¹² Farrell Henry "Constructing The International Foundations Of E-Commerce—The EU-US Safe Harbour Arrangement International Organization" (2003) *57.2*: 277-306.

EU Safe Harbour

The Safe Harbour Framework for Europe aims to guarantee the protection and confidentiality of correspondence and personal data as basic human rights, as enshrined in Articles 7¹⁰¹³ and 8¹⁰¹⁴ of the 2000¹⁰¹⁵ EU Charter of Fundamental Rights¹⁰¹⁶. To make it binding on all European Union citizens and members of the 2007¹⁰¹⁷ Lisbon Treaty that also came into force in 2009¹⁰¹⁸. The Lisbon Treaty requires the European Council to analyse the European Union's potential, or not functioning, declaration¹⁰¹⁹. The mechanism leading to the Lisbon Treaty resulted from the disappointing outcome of two referendums on the Constitutional Treaty, on which the European Council agreed to reflect for two additional years¹⁰²⁰.

Nevertheless, the EU has demonstrated resolve learned from experience, acquiring informed opinions on data protection, and adding to calls from the general population and their politicians for tight data privacy regulation¹⁰²¹. The EU has decided on data protection directives to fix various national data protection laws and to create a robust EU structure, in line with the general view of various institutions throughout the EU¹⁰²². For member states that preserve or communicate personal information, the EU Framework Programme has been developed¹⁰²³. In all sectors within the EU, data protection directives govern the collection and use of European citizens' information¹⁰²⁴. Member states are responsible for national legislation to enforce the directive. Personal data directives were intended to facilitate information transfer

¹⁰¹³ OJEC, "Charter Of Fundamental Rights Of The European Union (2000/C 364/01)." (2000) Official Journal Of The European Communities 22.

¹⁰¹⁴ *Ibid.*

¹⁰¹⁵ *Ibid.*

¹⁰¹⁶ *Ibid.*

¹⁰¹⁷ Treaty, Lisbon. "Treaty Of Lisbon Amending The Treaty On European Union And The Treaty Establishing The European Community." (2007) Official Journal Of The European Union, December 17.

¹⁰¹⁸ Church, Clive H., And David Phinnemore. "Understanding The Treaty Of Lisbon." (2010) Romanian J. Eur. Aff. 10: 5.

¹⁰¹⁹ Sieberson, Stephen C. "The Treaty Of Lisbon And Its Impact On The European Union's Democratic Deficit." (2007) Colum. J. Eur. L. 14: 445.

¹⁰²⁰ Roberta Panizza "Fact Sheets On The European Union 2018", European Parliament.

¹⁰²¹ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

¹⁰²² Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹⁰²³ Tikkinen-Piri, Christina, Anna Rohunen, And Jouni Markkula. "EU General Data Protection Regulation: Changes And Implications For Personal Data Collecting Companies." (2018) Computer Law & Security Review 34, No. 1: 134-153.

¹⁰²⁴ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

within the EU, strengthen the European Union, and promote the development of an internal knowledge economy¹⁰²⁵.

However, if one of the member states wishes to pass on personal data to a country outside the EU, the Personal Data Guideline contains relevant regulations if the European Commission agrees that the outside country has suitable data protection standards¹⁰²⁶. The middle of the defence is calculated according to all circumstances relating to the transfer of data, particularly the quality of the data, the nature and duration of the planned processing operations, the countries of the data's origin and destination, and the regulations, rules and privacy measures of the countries concerned¹⁰²⁷.

The US Commerce Department, ruling for the US-Europe relationship, has released principles that the European Commission has approved¹⁰²⁸. However, the Commission has agreed to restrict to the degree appropriate for the requirements of national protection, public interest, or law enforcement in a superficial sense¹⁰²⁹.

EU Personal Data Directives

The European Commission has ruled that personal data directives extend to all the various entities operating in the EU, public or private, including members of US companies¹⁰³⁰. These directives cover the collection of all personal data, both manually and automatically¹⁰³¹. Available databases, such as telephone directory listings, are no exception. Only confidential, personal household usage details are omitted. Data can only be collected and used for simple,

¹⁰²⁵ Directive, E. U. "95/46/EC Of The European Parliament And Of The Council Of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And On The Free Movement Of Such Data." Official Journal Of The EC 23, No. 6 (1995).

¹⁰²⁶ Manny, Carter. "Recent Controversy Surrounding The EU-US Safe Harbor Data Protection Regime." (2014) *Bus. L. Rev.* 47: 33.

¹⁰²⁷ Data Protection Directive, At Art. 25 And 26. Directive, Council. "31/EC Of 26 April 1999 On The Landfill Of Waste." (1999) Official Journal L 182.16: 07.

¹⁰²⁸ Bradford, Anu. "The Brussels Effect." (2012) *Nw. UL Rev.* 107: 1.

¹⁰²⁹ Martin A. Weiss, Kristin Archick "US-EU Data Privacy: From Safe Harbour To Privacy Shield" (2016) Congressional Research Service.

¹⁰³⁰ Boban, Marija. "Protection Of Personal Data And Public And Private Sector Provisions In The Implementation Of The General EU Directive On Personal Data (GDPR)." (2018) *Economic And Social Development: Book Of Proceedings*: 161-169.

¹⁰³¹ Albrecht, Jan Philipp. "How The GDPR Will Change The World." (2016) *Eur. Data Prot. L. Rev.* 2: 287.

specific, and legitimate purposes under data protection regulations¹⁰³². Protection and cohesion must be guaranteed¹⁰³³. People may look up their privacy and repair errors as well as seek corrective action and compensation, where necessary¹⁰³⁴. Data transmission to third parties can occur only under equally strict conditions¹⁰³⁵. Stricter guidelines apply when collecting confidential data, such as information related to race, ethnicity, social, political, or moral beliefs, and health conditions¹⁰³⁶.

Data Protection Office

The Data Protection Directive requires the establishment in each of the member states of a data protection agency¹⁰³⁷, the registration of databases, and sometimes approval of directives on data protection before organisations or businesses can commence data processing¹⁰³⁸. This office aims to ensure the protection and maintenance of the Data Personal Directive by various public or private entities. Some EU countries have strengthened the 1995¹⁰³⁹ data protection directive through such regulatory mechanisms as the 2002¹⁰⁴⁰ Directive on E-Privacy Communications.

The Data Protection Directive seems to be the EU's most effective data protection mechanism. For widespread internet use to take account of data management changes, the latest regulation package, and a proposal for the modernisation of the Data Protection Directives were adopted by the European Commission in 2012¹⁰⁴¹.

¹⁰³² Ibid.

¹⁰³³ Ibid.

¹⁰³⁴ Steinhoff, Lena, And Kelly D. Martin. "Putting Data Privacy Regulation Into Action: The Differential Capabilities Of Service Frontline Interfaces." (2023) *Journal Of Service Research* 26, No. 3: 330-350.

¹⁰³⁵ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) *Information & Communications Technology Law* 28, No. 1: 65-98.

¹⁰³⁶ Andrew, Jane, And Max Baker. "The General Data Protection Regulation In The Age Of Surveillance Capitalism." (2021) *Journal Of Business Ethics* 168: 565-578.

¹⁰³⁷ Ibid.

¹⁰³⁸ Lambert, Paul. *The Data Protection Officer: Profession, Rules, And Role*. CRC Press, 2016.

¹⁰³⁹ Parliament, E. "Directive 95/46/EC Of The European Parliament And Of The Council Of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And On The Free Movement Of Such Data" *Official Journal Of The European Communities*, Number L 281 (1995): 31-50.

¹⁰⁴⁰ Parliament, E. "Directive 2002/58/EC Of The European Parliament And Of The Council Of 12 July 2002 Concerning The Processing Of Personal Data And The Protection Of Privacy In The Electronic Communications Sector, Off." *JL* 201, 31.7. 2002, At 37.(Directive On Privacy And Electronic Communications) (2002).

¹⁰⁴¹ De Hert, Paul, And Vagelis Papakonstantinou. "The Proposed Data Protection Regulation Replacing Directive 95/46/EC: A Sound System For The Protection Of Individuals" (2012) *Computer Law & Security*

Data Processing Principles (US-EU Privacy Shield Principles)

Notice¹⁰⁴²

An organisation should notify individuals of the reasons for collecting and using information, how the organisation can be approached with questions or complaints, and the ways in which the data may be revealed to third parties¹⁰⁴³.

Choice¹⁰⁴⁴

An organisation must give individuals the right to choose (a) (opt-out) to disclose their private information to other parties or (b) to allow their information to be used for purposes inconsistent with or after the individual has obtained or authorised the purpose(s)¹⁰⁴⁵. Individuals must expressly decline to send their personal data to third parties at any time or for a reason other than the purpose for which it was originally collected or later accepted¹⁰⁴⁶. Sensitive data includes information on medical or health conditions, ethnic or racial background, political preferences, religious or moral beliefs, involvement in workers' unions, or information on the individual's sex life¹⁰⁴⁷.

Onward Transfer¹⁰⁴⁸

Organisations must apply the Note and Preference Rules when passing knowledge to third parties¹⁰⁴⁹. The same degree of protection for privacy must be provided to third parties acting

Review 28, No. 2: 130-142. Proposal For A European Parliament And Council Regulation On The Privacy Of Individuals In Collection And Free Transfer Of Personal Data 2012.

¹⁰⁴² Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbour To Privacy Shield." (2016).

¹⁰⁴³ Ibid.

¹⁰⁴⁴ Voss, W. Gregory. "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) *The Business Lawyer* 72, No. 1: 221-234.

¹⁰⁴⁵ Ibid.

¹⁰⁴⁶ Fefer, Rachel F., And Kristin Archick. "US-EU PRIVACY SHIELD." (2021) *Current Politics And Economics Of Europe* 32, No. 2/3: 263-269.

¹⁰⁴⁷ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹⁰⁴⁸ Voss, W. Gregory. "The Future Of Transatlantic Data Flows: Privacy Shield Or Bust?" (2016) *Journal Of Internet Law* 19, No. 11: 1.

¹⁰⁴⁹ Ibid.

as members either by agreeing to Safe Harbour, in accordance with this Directive, or by entering an equal protection contract¹⁰⁵⁰.

Security¹⁰⁵¹

Organisations creating, managing, using, or sharing personal data must be vigilant to safeguard against loss, misuse and incorrect entry, disclosure, alteration, and destruction of the credibility of information¹⁰⁵². For the purposes to be included, private details must be sufficient. To ensure the reliability, completeness, and timeliness of the results, an organisation should take reasonable steps¹⁰⁵³.

Access¹⁰⁵⁴

Individuals must retain access to their own personal details which are kept by an agency and must be allowed to edit, modify, or remove information if it is unreliable, even where the responsibility or cost entails threats to individual protection or when other people's rights are violated¹⁰⁵⁵. Moreover, the Safe Harbour principles can be restricted to the degree required for national protection, public interest, or compliance needs¹⁰⁵⁶.

Enforcement¹⁰⁵⁷

¹⁰⁵⁰ Minssen, Timo, Claudia Seitz, Mateo Aboy, And Marcelo Corrales Compagnucci. "The EU-US Privacy Shield Regime For Cross-Border Transfers Of Personal Data Under The GDPR: What Are The Legal Challenges And How Might These Affect Cloud-Based Technologies, Big Data, And AI In The Medical Sector?." (2020) EPLR 4: 34.

¹⁰⁵¹ Deckelboim, Sherri J. "Consumer Privacy On An International Scale: Conflicting Viewpoints Underlying The EU-US Privacy Shield Framework And How The Framework Will Impact Privacy Advocates" (2016) National Security, And Businesses. *Geo. J. Int'l L.* 48: 263.

¹⁰⁵² Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) *Information & Communications Technology Law* 28, No. 1: 65-98.

¹⁰⁵³ *Ibid.*

¹⁰⁵⁴ Sotto, Lisa J., And Christopher D. Hydak. "The EU-US Privacy Shield: A How-To Guide." (2016) *Law360* : 1-4.

¹⁰⁵⁵ *Ibid.*

¹⁰⁵⁶ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹⁰⁵⁷ Tracol, Xavier "EU-US Privacy Shield: The Saga Continues" (2016) *Computer Law & Security Review* 32, No. 5: 775-777.

Efficient protection of privacy must provide enforcement monitoring procedures, widely available and inexpensive autonomous redress procedures where there is non-compliance and should include remedial action within an organisation if they do not comply with the principles¹⁰⁵⁸. Sanctions must be reasonably strict to enforce adherence. Safe Harbour is available to every US company subject to Federal Trade Commission¹⁰⁵⁹ rules that impose several consumer rights laws. Although US businesses still engage in deceptive practice, the Federal Trade Commission has reiterated its determination to investigate any alleged infringements by the jurisdictions of EU member states¹⁰⁶⁰. It requires both private and federal trade commissions to uphold the Safe Harbour Arrangement that has implemented unequal and disappointing practice regulations¹⁰⁶¹. The private sector has many means of enforcement, including verification, and arbitration of conflicts and solutions¹⁰⁶². Failure to adhere would contribute to the demolition of the Safe Harbour framework¹⁰⁶³. In the past, the Federal Trade Commission has penalised several businesses that did not follow the Safe Harbour rules¹⁰⁶⁴.

In 2013¹⁰⁶⁵, the EU-US Safe Harbour negotiations began to revisit the deal, owing to European concerns over US data privacy and safety requirements. For example, individual European privacy advocates believed that the Safe Harbour arrangement contained substantial data security gaps¹⁰⁶⁶. Many US businesses made misleading statements over the years that they were subject to Safe Harbour and had not ultimately implemented its policies, since annual enforcement reviews were not required, and they believed they need not conform. Within the first 13¹⁰⁶⁷ years of the agreement's lifetime, the Federal Trade Commission listed only ten firms¹⁰⁶⁸.

¹⁰⁵⁸ Voss, W. Gregory. "The Future Of Transatlantic Data Flows: Privacy Shield Or Bust?." (2016) *Journal Of Internet Law* 19, No. 11: 1.

¹⁰⁵⁹ Busch, Andreas. "From Safe Harbour To The Rough Sea: Privacy Disputes Across The Atlantic." *Scripted* 3 (2006): 304.

¹⁰⁶⁰ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹⁰⁶¹ *Ibid.*

¹⁰⁶² *Ibid.*

¹⁰⁶³ *Ibid.*

¹⁰⁶⁴ *Ibid.*

¹⁰⁶⁵ Yakovleva, Svetlana, And Kristina Irion. "The Best Of Both Worlds-Free Trade In Services And EU Law On Privacy And Data Protection" (2016) *Eur. Data Prot. L. Rev.* 2: 191.

¹⁰⁶⁶ *Ibid.*

¹⁰⁶⁷ Nikolaj Nielsen "Hundreds Of US Companies Make False Data Protection Claims Euobserver.Com"(2014) October 8, 2013; FTC's Response To Alleged Safe Harbour Violations Could Change Enforcement Standards, Lawyers Say Warren's Washington Internet Daily, August 15, 2014.

¹⁰⁶⁸ *Ibid.*

Furthermore, last century, when the internet was in its infancy, Safe Harbour was long overdue for re-evaluation¹⁰⁶⁹. Besides, several US firms, such as Google¹⁰⁷⁰ and Microsoft¹⁰⁷¹, were potentially engaged in US tracking operations, which would have been in breach of the US-EU Protection Agreement should the allegations be correct¹⁰⁷². European parliamentarians, therefore, demanded that the European Commission revoke the Safe Harbour deal¹⁰⁷³. The European Commission's reply was negative since the suspension would harm the needs of European businesses and the transatlantic economy¹⁰⁷⁴.

However, the European Commission decided to review Safe Harbour issues which however, have weakened the work towards a safer arrangement¹⁰⁷⁵. The scores were broad priorities: increased accountability, remedial redress, enhanced compliance, and access to data exchanged under Safe Harbour by US authorities¹⁰⁷⁶. During the EU-US phase of talks, national security exemptions from the Safe Harbour deal and EU requests to guarantee restricted access to Safe Harbour's data for federal safety purposes supposedly became key stumbling issues.¹⁰⁷⁷

New Safe Harbour Agreement

The US and the EU settled on the current, strengthened Safe Harbour Arrangement and declared three major goals in the meantime for the handling of US-EU data flows¹⁰⁷⁸:

¹⁰⁶⁹ Ibid.

¹⁰⁷⁰ Ghemawat, Sanjay, Howard Gobioff, And Shun-Tak Leung. "The Google File System" (In Proceedings Of The Nineteenth ACM Symposium On Operating Systems Principles, Pp. 29-43. 2003.)

¹⁰⁷¹ Lin, Tsung-Yi, Michael Maire, Serge Belongie, James Hays, Pietro Perona, Deva Ramanan, Piotr Dollár, And C. Lawrence Zitnick. "Microsoft Coco: Common Objects In Context In European Conference On Computer Vision" (2014) Pp. 740-755. Springer, Cham.

¹⁰⁷² Ibid.

¹⁰⁷³ Ibid.

¹⁰⁷⁴ Voss, W. Gregory. "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting." (2016) The Business Lawyer 72, No. 1: 221-234.

¹⁰⁷⁵ Ibid.

¹⁰⁷⁶ European Commission, "European Commission Calls On The US To Restore Trust In EU-US Data Flows," Press Prelesee, November 27, 2013, [Http://europa.eu/rapid/press-release_IP-13-1166_en.htm](http://europa.eu/rapid/press-release_IP-13-1166_en.htm); Also See Communication From The Commission To The European Parliament And The Council On The Functioning Of The Safe Harbour From The Perspective Of EU Citizens And Companies Established In The EU, November 27, 2013.

¹⁰⁷⁷ Weiss, Martin A., And Kristin Archick. US-EU Data Privacy: From Safe Harbour To Privacy Shield. (2016).

¹⁰⁷⁸ European Commission – "Press Release EU Commission And United States Agree On New Framework For Transatlantic Data Flows: EU-US Privacy Shield" (2016) Strasbourg, 2 February.

- ***Businesses managing European data and strict compliance criteria***

US businesses seeking to procure sensitive records from Europe must fulfil substantial obligations as regards the collection and security of personal details¹⁰⁷⁹. The Department of Commerce oversees corporations, publishes their obligations, and regulate them under US legislation in the United States¹⁰⁸⁰. Federal Committee on Trad¹⁰⁸¹e. Furthermore, every organisation managing European human resources data must agree to comply with European D.P.A. decisions.

- ***US government access, specific protections, and disclosure commitments***

The United States addressed the EU for the first time, providing documented assurances concerning the unique limitations, safeguards and supervisory mechanisms for access to police departments and federal agencies. Exemptions can only be extended to the degree required and proportionate¹⁰⁸². The United States has prohibited unjustified mass surveillance of private information transmitted to the United States under the current agreement¹⁰⁸³. An ongoing joint evaluation may be conducted periodically to track the functioning of the deal, including the question of federal security access¹⁰⁸⁴. The European Commission and the US Commerce Department will perform the report and invite US and European Data Security Agencies as well as global intelligence experts¹⁰⁸⁵.

- ***Effective security of the interests of EU people with numerous remedy options***

Anyone who believes that their information has been misused according to the new agreement will have a choice of recourses¹⁰⁸⁶. Firms have time limits to respond to complaints¹⁰⁸⁷. The Department of Trade and the Federal Trade Commission can refer grievances to European

¹⁰⁷⁹ Peras, Dijana. "Guidelines For GDPR Compliant Consent And Data Management Model In ICT Businesses." (In Central European Conference On Information And Intelligent Systems, Pp. 113-121. Faculty Of Organization And Informatics Varazdin, 2018.)

¹⁰⁸⁰ Ibid.

¹⁰⁸¹ Ibid.

¹⁰⁸² Hintze, Mike. "Privacy Statements Under The GDPR." (2018) Seattle UL Rev. 42: 1129.

¹⁰⁸³ Ibid.

¹⁰⁸⁴ Ibid.

¹⁰⁸⁵ Ibid.

¹⁰⁸⁶ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

¹⁰⁸⁷ Ibid.

DPA. Alternative conflict arbitration would still be free. A new ombudsperson would be appointed for allegations of possible access by national security authorities¹⁰⁸⁸.

In 2015¹⁰⁸⁹, the European Court of Justice ruled that the Safe Harbour Agreement on the transition of European personal information to the US was no longer automatically valid and effective. The reason for this decision was the concern shared by the Court and other organisations, and which was reflected both in the US and in the EU in many cases of state monitoring of electronic communications¹⁰⁹⁰.

Supersession

The dissolution of the US-EU Safe Harbour deal was one of a series of events affecting the implementation of European laws for personal data protection¹⁰⁹¹. According to the Data Privacy Guideline¹⁰⁹² on the Privacy of Personal Data Collection¹⁰⁹³ and Free Data flow between the EU and the US, the European Union has developed the most robust personal data security scheme in the world¹⁰⁹⁴.

Privacy Shield Principles

Introduction

The European Data Protection Directive¹⁰⁹⁵, which was implemented in 1995¹⁰⁹⁶, established a framework for managing personal data. This framework includes provisions for informing individuals about the receipt and collection of their data, as well as the disclosure of such data

¹⁰⁸⁸ Ibid.

¹⁰⁸⁹ Court Of Justice Of The European Union The Court Of Justice Declares That The Commission's US Safe Harbour Decision Is Invalid Judgment In Case C-362/14 Maximilian Schrems V Data Protection Commissioner.

¹⁰⁹⁰ Ibid.

¹⁰⁹¹ Jackson, Gabriel. "All Quiet On The Domestic Front The Household Exemption, Private And Public Spheres, And Social Media: The Third Theater Of The Privacy Wars." (2014) Phd Diss., Columbia University.

¹⁰⁹² Schwartz, Paul M. "The EU-US Privacy Collision: A Turn To Institutions And Procedures." (2012) Harv. L. Rev. 126: 1966.

¹⁰⁹³ Cate, Fred H. "The EU Data Protection Directive, Information Privacy, And The Public Interest." (1994) Iowa L. Rev. 80: 431.

¹⁰⁹⁴ Ibid.

¹⁰⁹⁵ Directive, E. U. "95/46/EC Of The European Parliament And Of The Council Of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And On The Free Movement Of Such Data." Official Journal Of The EC 23, No. 6 (1995).

¹⁰⁹⁶ Ibid.

to third parties¹⁰⁹⁷. In 2016, this directive was updated to reflect contemporary concerns regarding data privacy¹⁰⁹⁸. The transmission of data for commercial purposes is contingent upon the consent of the customer, who may elect to either opt in or opt out¹⁰⁹⁹. It is feasible to opt-out at any stage, either during the process of selecting information or at a later time¹¹⁰⁰. During that particular year, the prior collaborative system between the United States and the European Union for the purpose of collecting and utilising data had achieved an elevated level of excellence¹¹⁰¹. This was accomplished through the implementation of a novel arrangement, which superseded the Safe Harbour framework¹¹⁰².

Under the Safe Harbour Agreement, as determined by the Court of Justice of the European Union¹¹⁰³, businesses were authorised to transfer data of European Union citizens to the United States, subject to specified conditions, as part of the new deal¹¹⁰⁴. The swift passage of time and heightened sense of unease have brought to the fore a noteworthy development in July of 2016¹¹⁰⁵. Specifically, a novel agreement has emerged that surpasses the scope of Safe Harbour. The recently established accord is commonly referred to as the Privacy Shield¹¹⁰⁶. The Department of Commerce¹¹⁰⁷ has delineated a set of criteria for this agreement¹¹⁰⁸, which includes supplementary benchmarks¹¹⁰⁹ that collectively foster, endorse, and enhance international commerce as per the regulations outlined in 15 USC § 1512¹¹¹⁰.

¹⁰⁹⁷ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹⁰⁹⁸ Tihomir Katulić, Goran Vojković "From Safe Harbour To European Data Protection Reform" (2016) University Of Zagreb.

¹⁰⁹⁹ Ibid.

¹¹⁰⁰ Ibid.

¹¹⁰¹ Voss, W. Gregory. "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting." (2016) *The Business Lawyer* 72, No. 1: 221-234.

¹¹⁰² Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹¹⁰³ O'Meara, Noreen. "A More Secure Europe Of Rights? The European Court Of Human Rights, The Court Of Justice Of The European Union And EU Accession To The ECHR." (2011) *German Law Journal* 12, No. 10: 1813-1832.

¹¹⁰⁴ Linn, Emily. "A Look Into The Data Privacy Crystal Ball: A Survey Of Possible Outcomes For The EU-US Privacy Shield Agreement." (2017) *Vand. J. Transnat'l L.* 50: 1311.

¹¹⁰⁵ Voss, W. Gregory "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) *The Business Lawyer* 72, No. 1: 221-234.

¹¹⁰⁶ Deckelboim, Sherri J. "Consumer Privacy On An International Scale: Conflicting Viewpoints Underlying The EU-US Privacy Shield Framework And How The Framework Will Impact Privacy Advocates, National Security, And Businesses" (2016) *Geo. J. Int'l L.* 48: 263.

¹¹⁰⁷ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbour To Privacy Shield" (2016).

¹¹⁰⁸ Voss, W. Gregory "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) *The Business Lawyer* 72, No. 1: 221-234.

¹¹⁰⁹ Ibid.

¹¹¹⁰ United States. Dept. Of The Treasury. Bureau Of Statistics, United States. Dept. Of Commerce, Labour. Bureau Of Statistics, United States. Bureau Of Foreign, Domestic Commerce, United States. Bureau Of The

In consultation with the European Commission¹¹¹¹, the laws were created with the aim of promoting cooperation between United States and European Union companies and other stakeholders¹¹¹².

The rules and their supplements are only for application to companies in the United States who are subject to the Privacy Shield because they have obtained private information from the European Union and thereby have taken advantage of the European Commission's decision on adequacy¹¹¹³. Nevertheless, the Standards should not be interpreted as affecting the application in member states of national regulations implementing Directives 95/46 / E.C., the Directive on the collection of personal details¹¹¹⁴. The Rules do not restrict duties concerning privacy otherwise in compliance with US law. Therefore, there are seven principles¹¹¹⁵, as follows.

Notice

Organisations can include thirteen enumerated data collection activities, such as the kinds of personal data the agency gathers and how it utilises the data to inform specific EU data topics¹¹¹⁶.

Choice

Census, And US Census Bureau. "Statistical Abstract Of The United States Vol" (2009) 128. US Government Printing Office. Code § 1512 - Powers And Duties Of Department.

¹¹¹¹ The Commission Is Divided Into Policy Divisions, Known As General Directorates (Gds), Responsible For The Numerous Policy Fields. Dgs Are Designing, Enforcing And Managing EU Strategies, Regulations And Services For Financing. Service Branches Often Discuss Complex Logistical Problems. Executive Departments Oversee The Commission's Activities.

¹¹¹² Bender, David. "Having Mishandled Safe Harbor, Will The CJEU Do Better With Privacy Shield? A US Perspective." (2016) International Data Privacy Law 6, No. 2: 117.

¹¹¹³ Terpan, Fabien. "EU-US Data Transfer From Safe Harbour To Privacy Shield: Back To Square One?." (2019) European Papers-A Journal On Law And Integration 2018, No. 3: 1045-1059.

¹¹¹⁴ Tracol, Xavier. "EU-US Privacy Shield: The Saga Continues." (2016) Computer Law & Security Review 32, No. 5: 775-777.

¹¹¹⁵ Voss, W. Gregory "European Union Data Privacy Law Reform: General Data Protection Regulation, Privacy Shield, And The Right To Delisting" (2016) The Business Lawyer 72, No. 1: 221-234.

¹¹¹⁶ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

Companies shall give people the right to remove their data from the collection phase and to not be reported to other parties, except a) agents or b) for reasons materially separate from or ultimately approved for the reasons for which the data is obtained initially¹¹¹⁷.

Accountability for Onward Transfer

Businesses must enter into written arrangements with third parties to which personally identifying data obtained from the EU have been transmitted and businesses shall provide particular provisions for the data¹¹¹⁸.

Security

Organisations must take appropriate, effective steps to avoid destruction, abuse and unwanted entry, divulcation, modification and disposition of private data¹¹¹⁹.

Data Integrity and Purpose Limitation

An entity shall (a) restrict retrieving personal information to what is necessary for specific processing; (b) take adequate, appropriate precautions to ensure that private details are accurate and precise, full and current with its intended use; and (c) hold the personal information only to the degree that it supports the function of critical care¹¹²⁰.

Access

Companies shall provide affected EU persons access to their details and they shall be entitled to correct, alter or remove that information, if it is erroneous or stored in breach of the Database Shield¹¹²¹.

¹¹¹⁷ Ibid.

¹¹¹⁸ Ibid.

¹¹¹⁹ Ibid.

¹¹²⁰ Fefer, Rachel F., And Kristin Archick. "US-EU PRIVACY SHIELD." (2021) Current Politics And Economics Of Europe 32, No. 2/3: 263-269.

¹¹²¹ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

Recourse, Enforcement and Liability

Companies must introduce comprehensive processes to maintain conformity with the privacy umbrella, including impartial grievance recourse processes and privacy verification procedures¹¹²².

Additional Concepts

There are sixteen supplemental concepts¹¹²³:

1. Sensitive data, 2. The exception of journalism, 3. Subsequent responsibility, 4. Due diligence and audit results, 5. The position of the data protection agencies, 6. Certification of yourself, 7. Verification, 8. Access; 9. Information on human capital, 10. Compulsory transfer contracts, 11. Resolution and compliance of disputes, 12. Option – Opt-out timing, 13. Travel details information, 14. Health and pharmacy goods, 15. Official documents and information accessible to the official, 16. Public Authority Access Requests.

All of the seven generally agreed data security standards are obligatory, together with the additional seventeen similar binding standards, which clarify and extend the first seven¹¹²⁴. Thus these 23 Privacy Shield Standards lay down a series of criteria covering the usage and handling of EU personal data by participating organisations, as well as regulations concerning access and remedial processes which must be provided by participants to EU individuals¹¹²⁵. When an agency has openly agreed to the Privacy Shield Standards, these are applied under US law¹¹²⁶.

Article 29 Working Party Opinion

¹¹²² Voss, W. Gregory “The Future Of Transatlantic Data Flows: Privacy Shield Or Bust” (2016) Journal Of Internet Law 19, No. 11: 1.

¹¹²³ Ibid.

¹¹²⁴ Deckelboim, Sherri J. "Consumer Privacy On An International Scale: Conflicting Viewpoints Underlying The EU-US Privacy Shield Framework And How The Framework Will Impact Privacy Advocates, National Security, And Businesses." (2016) Geo. J. Int'l L. 48: 263.

¹¹²⁵ Ibid.

¹¹²⁶ Ibid.

After signing the Privacy Shield deal, the Article 29 Working Group¹¹²⁷ checked and released its opinion on the Security Objectives and the Allocations Framework Plan¹¹²⁸.

The view of the Article 29 Working Group¹¹²⁹ acknowledged that Safe Harbour had greatly changed. However, the Privacy Protection Agreement expressed strong reservations about the commercial and national protection issues. For example:

1. Once data is no longer needed for the purpose for which it was obtained, organisations have no clear duty to remove it¹¹³⁰,
2. There is inadequate protection for the forward transmitting of data to a third party¹¹³¹,
3. Mechanisms for unnecessarily complex redress¹¹³²,
4. Assurances by US officials within the framework of public authority monitoring, that entry to mass data is subject to adequate restrictions, but that encryption and monitoring are not adequate¹¹³³,

¹¹²⁷ Purtova, Nadezhda. "The Law Of Everything. Broad Concept Of Personal Data And Future Of EU Data Protection Law" (2018) *Innovation And Technology* 10, No. 1: 40-81.

¹¹²⁸ The Defence Preference And Allocation Scheme (DPAS) Is Used To Provide Preference To Homeland Defence Contracts / Order In The US Supply Chain In Order To Fulfil War, Nuclear, Home Protection, Disaster Preparedness And Critical Infrastructure Needs. Also, DPAS May Be Used To Provide Foreign Countries With Strategic Or Critical Infrastructure Assistance. Title I Of The 1950 Defense Development Act , As Amended, Provides For The President To Recommend Preferential Approval And Execution Of Contracts Or Orders For Certain Designated National Defence And Energy Projects (Other Than Work Contracts), As Well As The Inclusion Of Materials And Resources And Faculties In A Way That Simplifies Some Approved Programmes. Via Executive Order 13603, The Ministry Of Commerce May Enforce Certain Targets And Criteria For Industrial Capital Allocation. According To DPAS (15 CFR Section 700), The Office Of Industry And Safety Administers This Jurisdiction. Trafficking Shall Have Jurisdiction Over Contracts Or Orders Required Or Relevant For National Defence, In Compliance With The DPAS And Provisions Of The Military Construction Act And Executive Order 13603, The Departments Of Military, Energy And Homeland Security And The Administrator For General Services. Trade May Also Allow A Case-By - Case Application Of Preferential Scores To Contracts Or Requests From Other Government Departments, Foreign Governments, Owners, And Suppliers. These Statements Must First Be Decided By Military, Domestic Security Or Energy Ministries If Required Or Sufficient To Support National Defence. Renn, Gregory A. "How Will The United States Government Implement The Energy Prioritization And Allocation Provisions Of The Defence Production Act Of 1950". Army Coll Carlisle Barracks,1989.

¹¹²⁹ Quintel, Teresa. "Article 29 Data Protection Working Party Opinion On The Law Enforcement Directive." (2018) *Eur. Data Prot. L. Rev.* 4: 104.

¹¹³⁰ Sotto, Lisa J., And Christopher D. Hydak. "The EU-US Privacy Shield: A How-To Guide." (2016) *Law360*: 1-4.

¹¹³¹ *Ibid.*

¹¹³² *Ibid.*

¹¹³³ El Emam, Khaled, And Cecilia Alvarez. "A Critical Appraisal Of The Article 29 Working Party Opinion 05/2014 On Data Anonymization Techniques." (2015) *International Data Privacy Law* 5, No. 1 : 73-87.

5. In consideration of the structured EU implementation of the current General Data Protection Legislation¹¹³⁴, the Privacy Shield should include requirements allowing it to conform later this year to the higher data protection level of General Data Protection¹¹³⁵.

The United States, on the other hand, has stated that while they have made every effort to ascertain the Working Group's opinion, they find it frustrating¹¹³⁶. However, the Working Group's statement is not binding and some experts commented that, should the Commission ask for an adequacy decision without prior consultation with the Working Group, the Privacy Shield adequacy decision could be contested in the European Security Preferences and Allocation framework before the Court of Justice of the European Union¹¹³⁷.

In comparison, others say that the Federal Code of Practice¹¹³⁸ could often hinder the Privacy Arrangement. Recently, the US Supreme Court¹¹³⁹ has updated the rules on the authorisation by federal judges for the search and capture of electronic media outside their own districts where technical means mask the physical position of the records¹¹⁴⁰. The United States

¹¹³⁴ After Four Years Of Preparation And Discussion, On 14 April 2016 The GDPR Was Officially Accepted By The EU Parliament. Compliance Date: 25 May 2018-After Which Non-Compliant Firms Are Subjected To Severe Sanctions. Directive 95/46 / EC On Data Security Supplements General Data Protection Law (GDPR). The Goal Was To Harmonise Data Protection Laws In Europe, Safeguard And Strengthen The Privacy Of All EU Citizens And To Change How Regional Authorities Deal With Data Protection. Nyrén, Olof, Magnus Stenbeck, And Henrik Grönberg. "The European Parliament Proposal For The New EU General Data Protection Regulation May Severely Restrict European Epidemiological Research" *European Journal Of Epidemiology* 29, No. 4 (2014): 227-230.

¹¹³⁵ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbour To Privacy Shield" (2016).

¹¹³⁶ Sotto, Lisa J., And Christopher D. Hydak. "The EU-US Privacy Shield: A How-To Guide." (2016) *Law360*: 1-4.

¹¹³⁷ *Ibid.*

¹¹³⁸ The Criminal Procedure Statutory Acts Are Legislative Rules Regulating Civil Cases In US Courts Of Appeal And General Courts. Land. Government. Government. There Are Also Principles Of Legal Procedure Regulating Federal Civil Practise. The Admission And Use Of Proof In Criminal Trials (As Well As In Civil Proceedings) Shall Be Regulated By The Laws Of Evidence. Richards, Rebecca T., Jeanne C. Chambers, And Christopher Ross. "Use Of Native Plants On Federal Lands: Policy And Practice" *Rangeland Ecology & Management/Journal Of Range Management Archives* 51, No. 6 (1998): 625-632.

¹¹³⁹ "Fair Justice In Rule.. The Court Shall Be The Supreme Court Of All Situations And Conflicts Arising Out Of The Constitution And The Laws Of The United States. The Court Is The Only Arbitrator Of The Law, To Ensure That The American People Have Equal Assurances Of Justice. In All Instances And All Disagreements Arising Out Of The Constitution And The United States Rules, The Court Shall Be Liable Of All The Arbitration And The Arbitration Of The Rule. Abramson, Leslie W. "Clarifying Fair Play And Substantial Justice: How The Courts Apply The Supreme Court Standard For Personal Jurisdiction" *Hastings Const. LQ* 18 (1990): 44

¹¹⁴⁰ Senator Ron Wyden, Wyden, Paul And Bipartisan Senators "Call On Congress To Stop Massive Expansion Of Government Surveillance And Hacking Power" *May* (2016).

Congress¹¹⁴¹ may take a position on this by opposing, approving no action, or postponing the law under the Regulations Enabling Act¹¹⁴².

Notes on EU GDPR 2018

It is important to note the updated European Law General Data Protection Regulation¹¹⁴³, which was implemented in May 2018¹¹⁴⁴. The updated legislation focuses on ensuring that consumers identify, understand and agree to the data they collect¹¹⁴⁵. Under the updated regulations, organisations must be transparent and precise about their collection and use of personal data, such as an individual's whole name, address, location information, or an IP address that controls web use and mobile applications¹¹⁴⁶. The updated GDPR intends to prevent abuse of the EU citizens' personal data, so businesses must explain the purpose for data collection and whether it can be used to build databases of people's behaviours and habits¹¹⁴⁷. In addition, customers would have access to the data-collecting providers, the right to correct incorrect details, and to restrict the use of algorithmic decisions and more¹¹⁴⁸. Consequently, organisations must adjust internally in order to build strategies to protect the personal information of users by continually reviewing risks, developing decision-making processes, taking care of the kinds of data listed, and not collecting or making use of personal data without

¹¹⁴¹ Canon, David T. "Actors, Athletes, And Astronauts: Political Amateurs In The United States Congress" (1990) University Of Chicago Press. The Congress Sits In Washington , D.C. In The United States Capitol. Senators And Delegates Are Both Elected By Popular Voting, But A Government Nomination Will Replace Empty Positions In The Senate. There Are 535 People Voting In Congress: 435 Delegates And 100 Senators.

¹¹⁴² Holt, Daniel. "From Conformity To Uniformity: The Rules Enabling Act Of 1934 And The Rise Of Federal Judicial Authority" (2012) The Federal Lawyer: 48-51.

¹¹⁴³ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

¹¹⁴⁴ Daly, Angela. "Neo-Liberal Business-As-Usual Or Post-Surveillance Capitalism With European Characteristics? The EU's General Data Protection Regulation In A Multi-Polar Internet." (2020) The EU's General Data Protection Regulation In A Multi-Polar Internet (July 19, 2020).

¹¹⁴⁵ Tikkinen-Piri, Christina, Anna Rohunen, And Jouni Markkula. "EU General Data Protection Regulation: Changes And Implications For Personal Data Collecting Companies." (2018) Computer Law & Security Review 34, No. 1: 134-153.

¹¹⁴⁶ Mondschein, Christopher F., And Cosimo Monda. "The EU's General Data Protection Regulation (GDPR) In A Research Context" (2019) In Fundamentals Of Clinical Data Science, Pp. 55-71. Springer, Cham.

¹¹⁴⁷ Ibid.

¹¹⁴⁸ Blacklaws, Christina. "Algorithms: Transparency And Accountability." (2018) Philosophical Transactions Of The Royal Society A: Mathematical, Physical And Engineering Sciences 376, No. 2128: 20170351.

prior user permission except when hiring an employee¹¹⁴⁹. Data protection officers must be appointed to create data protection policies, work on compliance with legislation by the organization and ensure that an emergency plan exists to alert the authorities concerned when any data breach occurs¹¹⁵⁰.

In addition, the updated GDPR covers people in the 28¹¹⁵¹ European Union member states if data processing happens through banks, trackers, social media and more. Unless the parents or legal guardians approve, the current legislation forbids businesses from collecting personal details for children under the age of 16¹¹⁵². Users can request the deletion of images posted by minors and notify search engines and other websites that use such images of the need for deletion¹¹⁵³. When user data stored with them is exposed to piracy, the law requires businesses to report to the competent authorities within 72¹¹⁵⁴ hours the extent of the violation and the estimated number of users affected by the infringement and must also alert users affected by the infringement to take precautions¹¹⁵⁵.

Furthermore, the new law specifies the sharing of responsibilities among companies that deal with user data¹¹⁵⁶. In the first category are companies that control user data and determine how to process it and its purpose (data controllers), and in the second are companies that process

¹¹⁴⁹ Lopes, Isabel Maria, Teresa Guarda, And Pedro Oliveira. "How ISO 27001 Can Help Achieve GDPR Compliance." (In 2019 14th Iberian Conference On Information Systems And Technologies (CISTI), Pp. 1-6. IEEE, 2019.)

¹¹⁵⁰ Poritskiy, Nazar, Flávio Oliveira, And Fernando Almeida. "The Benefits And Challenges Of General Data Protection Regulation For The Information Technology Sector." (2019) Digital Policy, Regulation And Governance.

¹¹⁵¹ Tikkinen-Piri, Christina, Anna Rohunen, And Jouni Markkula. "EU General Data Protection Regulation: Changes And Implications For Personal Data Collecting Companies." (2018) Computer Law & Security Review 34, No. 1: 134-153.

¹¹⁵² Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

¹¹⁵³ Lopes, Isabel Maria, Teresa Guarda, And Pedro Oliveira. "How ISO 27001 Can Help Achieve GDPR Compliance." (In 2019 14th Iberian Conference On Information Systems And Technologies (CISTI), Pp. 1-6. IEEE, 2019.)

¹¹⁵⁴ Kuner, Christopher. "International Organizations And The EU General Data Protection Regulation: Exploring The Interaction Between EU Law And International Law" (2019) International Organizations Law Review 16, No. 1: 158-191.

¹¹⁵⁵ Dabrowski, Adrian, Georg Merzdovnik, Johanna Ullrich, Gerald Sendera, And Edgar Weippl. "Measuring Cookies And Web Privacy In A Post-Gdpr World" (In International Conference On Passive And Active Network Measurement, Pp. 258-270. Springer, Cham, 2019.)

¹¹⁵⁶ Dove, Edward S. "The EU General Data Protection Regulation: Implications For International Scientific Research In The Digital Era." (2018) Journal Of Law, Medicine & Ethics 46, No. 4 : 1013-1030.

data only as an auxiliary party (data processors)¹¹⁵⁷. Additionally, the new law prevents users from disclosing their race¹¹⁵⁸. The law sets tougher standards for the collection of "sensitive data", such as race, religion, politics and sexual orientation¹¹⁵⁹. Moreover, the new law encourages users to monitor their own information and data instead of leaving the corporations with the last word in this area¹¹⁶⁰. The aim is to produce an environment of customer confidence that reflects financial benefit. The new GDPR imposes fines on infringers¹¹⁶¹.

Certainly, some have criticised the law and opposed it, and the European Union has exaggerated its influence, as some feared that technology firms have used this law to impose a fixed price on EU users¹¹⁶². Potential loopholes are present in the legislation, for example enabling businesses, for restricted purposes, to process personal data without permission, including to advance the "legitimate interests" of a company by such means as "direct marketing" via email, or web advertising¹¹⁶³. While most of the rights laid down in the new GDPR have already been defined by the European Union, they have not been enforced¹¹⁶⁴. The regulations now allow for the protection of personal data when developing electronic goods or services¹¹⁶⁵. In order to prevent piracy, the regulations provide guidelines for companies in this respect from the start of the development and preparing for their goods, such as the disposal of consumer data if it is not necessary or their processing is not completed. If the organisation fails to enforce this provision, a penalty will be levied¹¹⁶⁶.

¹¹⁵⁷ Spagnuolo, Dayana, Ana Ferreira, And Gabriele Lenzini. "Accomplishing Transparency Within The General Data Protection Regulation." (In ICISSP, Pp. 114-125. 2019.)

¹¹⁵⁸ Shala, Arif, And Albulene Grajcevcic. "Digital Competencies Among Student Populations In Kosovo: The Impact Of Inclusion, Socioeconomic Status, Ethnicity And Type Of Residence." (2018) *Education And Information Technologies* 23, No. 3: 1203-1218.

¹¹⁵⁹ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) *Information & Communications Technology Law* 28, No. 1: 65-98.

¹¹⁶⁰ *Ibid.*

¹¹⁶¹ Team, IT Governance Privacy. "EU General Data Protection Regulation (GDPR)—An Implementation And Compliance Guide" (2020) IT Governance Ltd.

¹¹⁶² Martens, Bertin. "The Importance Of Data Access Regimes For Artificial Intelligence And Machine Learning." (2018).

¹¹⁶³ Shastri, Supreeth, Melissa Wasserman, And Vijay Chidambaram. "The Seven Sins Of Personal-Data Processing Systems Under {GDPR} In 11th {USENIX} Workshop On Hot Topics In Cloud Computing" (2019) (*Hotcloud* 19).

¹¹⁶⁴ *Ibid.*

¹¹⁶⁵ *Ibid.*

¹¹⁶⁶ Kalyanpur, Nikhil, And Abraham L. Newman. "The MNC-Coalition Paradox: Issue Salience, Foreign Firms And The General Data Protection Regulation." (2019) *JCMS: Journal Of Common Market Studies* 57, No. 3: 448-467.

The challenges to amend the GDPR include the lack of clarification¹¹⁶⁷. For instance, the GDPR contains broad principles which may not always fit the way in which data are processed today¹¹⁶⁸. For example, the Regulation requires that businesses accept liability by limiting data collection and processing to only what is required for a particular purpose and prohibiting other uses¹¹⁶⁹. But essential and useful sectors, such as the auto driving sector and others which operate deliberately on a vast amount of data to train computer systems, are not defined in the Regulation¹¹⁷⁰. Confusion as to how businesses treat a violation, and the competent authorities are further difficulties¹¹⁷¹. The exercise of user rights and what their boundaries are lack clarification. The training of data personnel should commence with the planning and training of company staff under the user rights law, determining which practices are permitted or not permitted in data processing and which data are accessible and in what circumstances¹¹⁷². And finally, to provide the resources needed to protect data, organisations will need to create new budgets¹¹⁷³.

Privacy Laws in the USA

In the United States, the privacy of information is comprehensively supported but unlike in the EU, there is no unified framework concerning this privacy and protection¹¹⁷⁴. Many then regard US privacy regulations as a hodgepodge¹¹⁷⁵ of state and federal laws¹¹⁷⁶. The distinction between federal and state laws is that federal regulations are established at the national level and extend

¹¹⁶⁷ Polanco, Cassandra. "Trimming The Fat: The GDPR As A Model For Cleaning Up Our Data Usage." (2020) *Touro L. Rev.* 36: 603.

¹¹⁶⁸ Shabani, Mahsa, And Pascal Borry. "Rules For Processing Genetic Data For Research Purposes In View Of The New EU General Data Protection Regulation." (2018) *European Journal Of Human Genetics* 26, No. 2: 149-156.

¹¹⁶⁹ *Ibid.*

¹¹⁷⁰ Daly, Angela. "Neo-Liberal Business-As-Usual Or Post-Surveillance Capitalism With European Characteristics? The EU's General Data Protection Regulation In A Multi-Polar Internet" (2020) *The EU's General Data Protection Regulation In A Multi-Polar Internet* (July 19, 2020).

¹¹⁷¹ *Ibid.*

¹¹⁷² *Ibid.*

¹¹⁷³ Hörnle, Julia. "Juggling More Than Three Balls At Once: Multilevel Jurisdictional Challenges In EU Data Protection Regulation" (2019) *International Journal Of Law And Information Technology* 27, No. 2: 142-170.

¹¹⁷⁴ Esteve, Asunción. "The Business Of Personal Data: Google, Facebook, And Privacy Issues In The EU And The USA." (2017) *International Data Privacy Law* 7, No. 1: 36-47.

¹¹⁷⁵ Wexler, Rachel. "Artificial Reproductive Technology And Gendered Notions Of Parenthood After Obergefell: Analysing The Legal Assumptions That Shaped The Baby M Case And The Hodgepodge Nature Of Current Surrogacy Law." (2018) *Tul. JL & Sexuality* 27: 1.

¹¹⁷⁶ Smith, Robert E. "Compilation Of State And Federal Privacy Laws 1981". *Privacy Journal*, 1981.

to all whole US territory¹¹⁷⁷. The US Constitution provides the foundation of federal policy by setting out government roles and obligations and protecting every citizen's constitutional rights¹¹⁷⁸. State law is the law in any independent US state which is valid in every particular country state¹¹⁷⁹. State legislation is accessible to tourists, corporations, companies, and people in that state. Where federal and state legislation clash, state law can be resolved. State law gives people more rights than federal law, but that does not imply limiting the rights of US citizens¹¹⁸⁰. For example, questions arise whether private information managed by the national government contributes to the implementation of the US Data Protection Act 1974¹¹⁸¹, and the Electronic Communications Privacy Act of 1986¹¹⁸². And there are instances from the past where federal prohibitions on telephone wiretapping have been applied to cover computer electronic data transfer¹¹⁸³. In the US, furthermore, federal consumer protection legislation is largely industry-specific and differs by industry, with rules covering financial data processing and dissemination, and health data¹¹⁸⁴. The US has since introduced a series of information privacy and data security regulations across the years¹¹⁸⁵.

US Federal Laws

In comparison, data privacy policies in the United States often differ and conflict with each other¹¹⁸⁶. There are several standards established by trade associations and government bodies, who are parties to auto-regulatory standards, which have no legal effect and are called 'best practice.' These self-regulatory systems are accountable for and incorporate elements that

¹¹⁷⁷ Esteve, Asunción. "The Business Of Personal Data: Google, Facebook, And Privacy Issues In The EU And The USA." (2017) *International Data Privacy Law* 7, No. 1: 36-47.

¹¹⁷⁸ *Ibid.*

¹¹⁷⁹ *Ibid.*

¹¹⁸⁰ Hart, Henry M "The Relations Between State And Federal Law" (1954) *Columbia Law Review* 54, No. 4: 489-542.

¹¹⁸¹ Murray, Patrick J "The Adequacy Standard Under Directive 95/46/EC: Does US Data Protection Meet This Standard" (1997) *Fordham Int'l LJ* 21: 932.

¹¹⁸² Mulligan, Deirdre K. "Reasonable Expectations In Electronic Communications: A Critical Perspective On The Electronic Communications Privacy Act *Geo. Wash. L. Rev.* 72 (2003)": 1557. This Act Deals With "Strong" Telephone Lines Monitoring Of Calls, Without Referring To Machine And Other Automated And Mobile Correspondence. Several Regulatory Documents Later Enacted, Including The US PATRIOT Act, Explain And Amend The ECPA In Order To Maintain Pace With Emerging Communication Technology And Practices, Including The Relaxation Of Law Enforcement Limitations On Access To Recorded Communication In Certain Situations.

¹¹⁸³ *Ibid.*

¹¹⁸⁴ *Ibid.*

¹¹⁸⁵ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbour To Privacy Shield (2016)".

¹¹⁸⁶ Roche, Patricia A., And George J. Annas. "Protecting Genetic Privacy." (2001) *Nature Reviews Genetics* 2, No. 5: 392-396.

regulators use as a mechanism for compliance¹¹⁸⁷. There are also a number of federal privacy regulations covering the storage and use of personal details¹¹⁸⁸. Some of these regulations refer to types of information, for example economic or health, or to electronic correspondence¹¹⁸⁹. Other regulations refer to activities that use private information, such as email marketing and company e-mails¹¹⁹⁰. Furthermore, there are comprehensive customer protection regulations which have not been used by themselves to prohibit unfair or misleading conduct concerning personal data distribution and safety protocols¹¹⁹¹

Example of federal laws

In 2016¹¹⁹², Congress passed the Judicial Redress Act¹¹⁹³, which grants residents of particular allied countries (notably EU member states) the ability to obtain remedy for privacy breaches in US courts where their sensitive information is passed on to law enforcement agencies¹¹⁹⁴. In addition to the aforementioned, there are state regulations governing protection and compliance relating to the misuse of personal records, as well as legally unenforceable recommendations provided by business associations¹¹⁹⁵. However, these recommendations are called best practice, and include such items as smartphone, credit card, and internet advertising.

- The Controlling the Assault of Non-Solicited Pornography and Marketing Act (CAN-SPAM Act) (15 USC. §§7701-7713 and 18 USC. §1037)¹¹⁹⁶ and The Telephone Consumer Protection Act (47 USC. §227 et seq.)¹¹⁹⁷ These legislate e-mail address collection and usage, and contact information collection.

¹¹⁸⁷ Solove, Daniel J. "Introduction: Privacy Self-Management And The Consent Dilemma." (2012) Harv. L. Rev. 126: 1880.

¹¹⁸⁸ Ibid.

¹¹⁸⁹ Shilpi Chakravarty "Now You Need Warrants To Access Location Data In US, Rules SC June 2018" Geospatial Media & Communication.

¹¹⁹⁰ Hornung, Meir S. "Think Before You Type: A Look At Email Privacy In The Workplace." (2005) Fordham J. Corp. & Fin. L. 11: 115.

¹¹⁹¹ Ibid.

¹¹⁹² Hasbrouck, Edward "The Limits Of The US Judicial Redress Act Privacy Laws And Business" (2016) 114: 21-23.

¹¹⁹³ Ibid.

¹¹⁹⁴ Shilpi Chakravarty "Now You Need Warrants To Access Location Data In US, Rules SC June 2018 Geospatial" Media & Communication.

¹¹⁹⁵ Weiss, Martin A., And Kristin Archick. "US-EU Data Privacy: From Safe Harbor To Privacy Shield." (2016).

¹¹⁹⁶ Ibid.

¹¹⁹⁷ Miller, Hilary B., And Robert R. "Biggerstaff Application Of The Telephone Consumer Protection Act To Intrastate Telemarketing Calls And Faxes" (1999) Fed. Comm. LJ 52: 667.

- The Electronic Communications Privacy Act (18 USC. §2510)¹¹⁹⁸ and the Computer Fraud and Abuse Act (18 USC. §1030)¹¹⁹⁹.
- The Fair Credit Reporting Act (15 USC. §1681)¹²⁰⁰ (and the Fair and Accurate Credit Transactions Act (Pub. L. No. 108-159)¹²⁰¹ which amended the Fair Credit Reporting Act)¹²⁰².
- The Federal Trade Commission Act (15 USC. §§41-58) (F.T.C. Act)¹²⁰³.
- The Financial Services Modernization Act (Gramm-Leach-Bliley Act (GLBA) (15 USC. §§6801-6827)¹²⁰⁴ helps to regulate financial data gathering, use and disclosure. There are also several privacy rules¹²⁰⁵ enacted by national financial institution agencies, the Safeguards Rule¹²⁰⁶, Disposal Rule¹²⁰⁷, and Red Flags Rule¹²⁰⁸ issued by the Federal Trade Commission¹²⁰⁹ which cover financial information protection and disposal.

¹¹⁹⁸ Mulligan, Deirdre K. "Reasonable Expectations In Electronic Communications: A Critical Perspective On The Electronic Communications Privacy Act" *Geo. Wash. L. Rev.* (2003) 72: 1557.

¹¹⁹⁹ Kerr, Orin S. "Vagueness Challenges To The Computer Fraud And Abuse Act." (2009) *Minn. L. Rev.* 94: 1561.

¹²⁰⁰ Act, Fair Credit Reporting. USC § 1681 Et Seq "In Senate And House Of Representatives Of The United States Of America In Congress Assembled" Vol. 15, No. 31, Pp. 468-482. 15.

¹²⁰¹ *Ibid.*

¹²⁰² *Ibid.*

¹²⁰³ Song, Bing "Competition Policy In A Transitional Economy: The Case Of China" (1995) *Stan. J. Int'l L.* 31 : 387.

¹²⁰⁴ Hoover, J. Nicholas. "Compliance In The Ether: Cloud Computing, Data Security And Business Regulation" (2013) *J. Bus. & Tech. L.* 8: 255.

¹²⁰⁵ Gostin, Lawrence O., Laura A. Levit, And Sharyl J. Nass, Eds. "Beyond The HIPAA Privacy Rule" (2009) *Enhancing Privacy, Improving Health Through Research.* National Academies Press. The HIPAA Privacy Rule. The Regulation Sets National Guidelines To Secure Consumer Health Reports And Other Sensitive Health Documents, And Extends Online To Health Insurers, Health Benefits Clearinghouses And Health Care Providers.

¹²⁰⁶ Federal Trade Commission. "Financial Institutions And Customer Information: Complying With The Safeguards Rule Retrieved December 1 (2006)": 2006. The Safeguards Rule Requires FTC Financial Entities To Provide Measures In Order To Protect Consumer Records. Companies Protected By The Regulation Often Create Their Own Protections And Take Action To Ensure The Affiliates And Service Providers Secure Consumer Details At The Discretion. Commission On Federal Exchange. www.ftc.gov

¹²⁰⁷ Business, Non-Instructional. "Subject: Disposal Of Consumer Report Information And Records" (2006) Policy: 4580. The Disposal Rule, Officially Recognised As The Disposal Of Consumer Report Information And Records Rule Allows Those Individuals Who Have Details On Customer Reports For Commercial Reasons To Dispose Of It Appropriately By Taking Appropriate Steps To Secure It From Unauthorised Entry. Federal Trade Commission www.ftc.gov

¹²⁰⁸ Toporoff, Steven. "The "Red Flags" Rule: What Health Care Providers Need To Know About Complying With New Requirements For Fighting Identity Theft." (2009) FTC Bureau Of Consumer Protection. The Red Flags Rule Allows Organisations To Develop A Written Proactive Identity Fraud Policy To Help Them Recognise Certain "Red Flags" That Are Applicable To Everyday Operations Suggesting Identity Theft. The Rule Therefore Takes Measures To Deter And Minimise The Crime. www.ispartnersllc.com

¹²⁰⁹ Weingast, Barry R., And Mark J. Moran. "Bureaucratic Discretion Or Congressional Control? Regulatory Policymaking By The Federal Trade Commission." (1983) *Journal Of Political Economy* 91, No. 5: 765-800.

• The Health Insurance Portability and Accountability Act (HIPAA) (42 USC. §1301 et seq.)¹²¹⁰ controls health records. It can be widely circulated to care providers, system administrators, hospitals and other entities gathering patient information¹²¹¹. The Standards for Privacy of Individually Identifiable Health Information (HIPAA Privacy Rule) (45 C.F.R. Parts 160 and 164)¹²¹² apply to the collection and use of protected health information (PHI). The Security Standards for the Protection of Electronic Protected Health Information (HIPAA Security Rule) (45 C.F.R. 160 and 164)¹²¹³ provides guidelines for patient information protection. The Standards for Electronic Transactions (HIPAA Transactions Rule) (45 C.F.R. 160 and 162)¹²¹⁴ apply to the electronic transmission of medical data. These HIPAA rules were revised in early 2013¹²¹⁵ under the HIPAA Omnibus Rule¹²¹⁶.

• The HIPAA Omnibus Rule¹²¹⁷ also revised the Security Breach Notification Rule (45 C.F.R. Part 164)¹²¹⁸

State Laws

Moreover, numerous pieces of legislation¹²¹⁹ at the state level limit the collection and utilisation of private information and raise the number of checks per year. Certain state laws pre-empt federal legislation, such as nationwide regulations on private electronic mail and the exchange

¹²¹⁰ Nosowsky, Rachel, And Thomas J. Giordano The Health Insurance Portability And Accountability Act Of 1996 (HIPAA) Privacy Rule: Implications For Clinical Research *Annu. Rev. Med.* 57 (2006): 575-590.

¹²¹¹ *Ibid.*

¹²¹² US Department Of Health And Human Services. "Protecting Personal Health Information In Research: Understanding The HIPAA Privacy Rule." Washington, DC: Author (2003).

¹²¹³ Karasz, Hilary N., Amy Eiden, And Sharon Bogan. "Text Messaging To Communicate With Public Health Audiences: How The HIPAA Security Rule Affects Practice." *American Journal Of Public Health* 103, No. 4 (2013): 617-622.

¹²¹⁴ Dwyer III, Samuel J., Alfred C. Weaver, And Kristen Knight Hughes. "Health Insurance Portability And Accountability Act." (2004) *Security Issues In The Digital Medical Enterprise* 72, No. 2: 9-18.

¹²¹⁵ Rothstein, Mark A. "HIPAA Privacy Rule 2.0: Currents In Contemporary Bioethics." (2013) *The Journal Of Law, Medicine & Ethics* 41, No. 2: 525-528.

¹²¹⁶ Goldstein, Melissa M., And William F. Pewen. "The HIPAA Omnibus Rule: Implications For Public Health Policy And Practice." (2013) *Public Health Reports* 128, No. 6: 554-558. On January 25, 2013, The HIPAA Omnibus Rule Last Amendments To The HIPAA Privacy And Protection Rule Have Been Released In The Federal Registry. The Omnibus Rule Has Made Amendments To The Genetic Material Non-Discrimination Legislation (GINA), Compliance Guidelines On Infringements. The Omnibus Rule Of 2013 Does Not Cover Provisions On Disclosure Accounts, Limited Clarification Required, And The Allocation Of Monetary Fines To Affected Persons.

¹²¹⁷ *Ibid.*

¹²¹⁸ Notification, Hubert H. Humphrey. "Office Of The Secretary 45 CFR Parts 160 And 164." (2009).

¹²¹⁹ Phelps, Joseph, Glen Nowak, And Elizabeth Ferrell. "Privacy Concerns And Consumer Willingness To Provide Personal Information." (2000) *Journal Of Public Policy & Marketing* 19, No. 1: 27-41.

of e-mail addresses, and federal legislation on privacy does not pre-empt government legislation on health records, for example¹²²⁰. The state leads the way in California's privacy era¹²²¹. The country has legislated various privacy laws, some of which have yet to achieve any effect at the national level, for instance, the California Civil Code §1798.82¹²²². California was the first state legislature to pass a law on disclosure of security violations¹²²³. The law requires any individual or organisation owning or licencing electronic information, including personal data, to notify all individuals in California of any violation of system protection¹²²⁴ if their private details were received without encryption by an unauthorised person. Both US states, however, have followed California on the need to report security violations concerning personal details¹²²⁵. Proposed new regulations and reforms attributable to technological threats are as follows:

The California Electronic Communications Privacy Act (S.B. 178)¹²²⁶. This restricts the right of federal officials to seek computer records for law enforcement purposes¹²²⁷. The California Security Breach Notification Law¹²²⁸ and the California statute, Civil Code §1798.81.5¹²²⁹, encourage companies to encrypt Californians' personal records and allows companies to use protections to maintain the integrity of their personal details¹²³⁰.

Data Protection Regulations in the United Arab Emirates

¹²²⁰ Ibid.

¹²²¹ Gerstein, Robert S. "California's Constitutional Right To Privacy: The Development Of The Protection Of Private Life." (1981) Hastings Const. LQ 9: 385.

¹²²² Genova, Gina L. "The Anywhere Office= Anywhere Liability." (2010) Business Communication Quarterly 73, No. 1: 119-126.

¹²²³ Determann, Lothar. "Letter Re California Consumer Privacy Law Corrections." (2019).

¹²²⁴ George Cachis Florida Privacy Law Adds Breach Notification And Strengthens Compliance Sept 2016.

¹²²⁵ Acquisti, Alessandro, Allan Friedman, And Rahul Telang. "Is There A Cost To Privacy Breaches? An Event Study." (2006) ICIS 2006 Proceedings: 94.

¹²²⁶ Freiwald, Susan. "At The Privacy Vanguard: California's Electronic Communications Privacy Act (Calecpa)." (2018) Berkeley Tech. LJ 33: 131.

¹²²⁷ Ibid.

¹²²⁸ Winn, Jane K. "Are Better Security Breach Notification Laws Possible." (2009) Berkeley Tech. LJ 24: 1133.

¹²²⁹ Silverman, David L. "Data Security Breaches: The State Of Notification Laws." (2007) Intellectual Property & Technology Law Journal 19, No. 7: 5.

¹²³⁰ Ibid.

In the United Arab Emirates, one of the Gulf states¹²³¹, there are no national data privacy laws or central data protection legislation, but there is a variety of state legislation dealing with data protection and privacy¹²³². Institutions and businesses in the UAE that use personal data must comply with the General Data Protection Rule (GDPR)¹²³³ introduced in May 2018¹²³⁴. Article 31¹²³⁵ of the UAE Constitution¹²³⁶ ensures anonymity and contact rights by mail, writing messages, or "other means of communication." Article 378¹²³⁷ of the 1987¹²³⁸ Penal Code specifies that disclosing individual details pertaining to life or a family situation are a criminal offence punishable by incarceration as well as a financial penalty¹²³⁹. Furthermore, the 2012¹²⁴⁰ UAE Cybercrime Legislation provides penalties for certain specific hacking and data privacy abuses.

The Telecommunications Regulatory Authority (TRA)¹²⁴¹ governs electronic and industrial transactions and there are many TRA data privacy rules, including the electronic transactions¹²⁴², trade, and customer protection regulations.

¹²³¹ Al-Yousif, Yousif Khalifa. "Exports And Economic Growth: Some Empirical Evidence From The Arab Gulf Countries." (1997) *Applied Economics* 29, No. 6: 693-697.

¹²³² Sarabdeen, Jawahitha, And Immanuel Azaad Moonesar. "Privacy Protection Laws And Public Perception Of Data Privacy: The Case Of Dubai E-Health Care Services." (2018) *Benchmarking: An International Journal* 25, No. 6: 1883-1902.

¹²³³ Team, IT Governance Privacy EU General Data Protection Regulation (GDPR)–An Implementation And Compliance Guide IT Governance Ltd, 2020.

¹²³⁴ *Ibid.*

¹²³⁵ Baker, Lori, And Julie Beeton. Dubai International Financial Centre's Updated Data Protection Law-Part 1: Developing A Modern, Global Law In A UAE Financial Free Zone *Journal Of Data Protection & Privacy* 3, No. 2 (2020): 161-171.

¹²³⁶ "The Concept Of Non-Retroactivity Of Law," (2018) *Court Uncourt* 5, No. 9: 30

¹²³⁷ Margarida Narciso "The Law Surrounding Eavesdropping, And Privacy *Court Uncourt* 3" (2016) No. 1: 6-7-8-9

¹²³⁸ Thacker, Sunil, And Rekha Panchal "Extension Of Time" (2016) *Ct. Uncourt* 8- 3: 9.

¹²³⁹ Duffy, Matt J. "Media Law In The United Arab Emirates." (2018) *Media Law In The United Arab Emirates*: 1-142.

¹²⁴⁰ Younies, Hassan, And Tareq Na "Effect Of Cybercrime Laws On Protecting Citizens And Businesses In The United Arab Emirates (UAE)" (2020) *Journal Of Financial Crime*.

¹²⁴¹ Alraeesi Albalooshi, Sultan Ahmed, And Mohammad Habibur Rahman. "Proactive Approach To The Deployment Of 5G Technology: Insights From The UAE" (2019).

¹²⁴² Al Enizi, Ziad Kh, And Suhaib Walid Sharaiyra. "Online Sales Contracts: A Study Of The UAE Law" (2019) *Journal Of Legal, Ethical And Regulatory Issues* 22, No. 3: 1-10.

The 2006¹²⁴³ Electronic Transactions and Commerce Legislation refers to electronic information, papers, and signatures relating to electronic transactions and exchange¹²⁴⁴. The legislation does not extend to transactions and personal matters, including engagement, divorce, and wills. The legislation aims at preserving the privacy of citizens engaging in electronic communications, promoting and enabling electronic communication and communication through secure electronic documents, minimising electronic communication fraud, and setting uniform guidelines, regulations and requirements for the authentication and privacy of electronic correspondence. Article 1.3¹²⁴⁵ of the 2017¹²⁴⁶ Customer Privacy Code of Practice¹²⁴⁷ sets out rules to secure telecom subscribers' confidential details in the UAE¹²⁴⁸. Licensees must ensure the security of subscribers' confidential details and seek their permission before releasing it¹²⁴⁹. Subscriber data is defined as any personal information relevant to a specific subscriber that includes name, address, banking details, card details, information on service usage, call logs, message logs and any information deriving from the subscriber's use of the telecom services, account status, the history of payments and credit rating¹²⁵⁰.

¹²⁴³ Aljneibi, Khaled "The Scope Of Electronic Transactions And Electronic Evidence In The Courts Of The United Arab Emirates" (2014) *Digital Evidence & Elec. Signature L. Rev.* 11: 37.

¹²⁴⁴ Baker, Lori, And Julie Beeton. "Dubai International Financial Centre's Updated Data Protection Law-Part 1: Developing A Modern, Global Law In A UAE Financial Free Zone." (2020) *Journal Of Data Protection & Privacy* 3, No. 2: 161-171.

¹²⁴⁵ Alqudah, Mutasim Ahmad "Consumer Protection In Mobile Payments In The UAE: The Current State Of Play, Challenges And The Way Ahead" (2018) *Information & Communications Technology Law* 27, No. 2: 166-184.

¹²⁴⁶ *Ibid.*

¹²⁴⁷ *Ibid.*

¹²⁴⁸ *Ibid.*

¹²⁴⁹ *Ibid.*

¹²⁵⁰ Baker, Lori, And Julie Beeton. "Dubai International Financial Centre's Updated Data Protection Law-Part 1: Developing A Modern, Global Law In A UAE Financial Free Zone." (2020) *Journal Of Data Protection & Privacy* 3, No. 2: 161-171.

Dubai Healthcare City¹²⁵¹ and the Dubai International Financial Centre¹²⁵² are both based in the Dubai¹²⁵³ economic zone and they both have adopted their own privacy codes¹²⁵⁴, based on the 1995¹²⁵⁵ EU Directive on Data Protection and the 1998¹²⁵⁶ U.K. Data Protection Act.

Data Protection Regulations in Argentina:

Data privacy is essential to understanding new legal developments in privacy protection¹²⁵⁷:

The aim of the Protection Act¹²⁵⁸ is to maintain absolute protection, honour, and access to the details that may be documented concerning those individuals in compliance with the requirements of Section 43¹²⁵⁹, third paragraph, in the form of personal information recorded in the archives, registers, banks or other electronic means of data collection, either public or private for the purpose of supplying reports¹²⁶⁰. The rules of this Act also extend to data affecting legal persons to the relevant degree. In no circumstances shall journalistic outlets or libraries be compromised¹²⁶¹.

¹²⁵¹ Woodman, Josef Patients “Beyond Borders Dubai Healthcare City” (2011) Edition Vol. 1. Healthy Travel Media.

¹²⁵² Carballo, Alejandro. "The Law Of The Dubai International Financial Centre: Common Law Oasis Or Mirage Within The UAE?." (2007) Arab Law Quarterly 21, No. 1: 91-104.

¹²⁵³ Ibid.

¹²⁵⁴ Baker, Lori, And Julie Beeton. “Dubai International Financial Centre’s Updated Data Protection Law-Part 1: Developing A Modern, Global Law In A UAE Financial Free Zone” (2020) Journal Of Data Protection & Privacy 3, No. 2: 161-171.

¹²⁵⁵ Directive, E. U. "95/46/EC Of The European Parliament And Of The Council Of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And On The Free Movement Of Such Data." Official Journal Of The EC 23, No. 6 (1995).

¹²⁵⁶ Bainbridge, David, And Graham Pearce “The UK Data Protection Act 1998—Data Subjects' Rights” (1998) Computer Law & Security Review 14, No. 6: 401-406.

¹²⁵⁷ Ibid. In Addition, The Right To Privacy Of Personal Information Is Laid Down In Section 43 Of The Argentine National Constitution (Constitution). There Is A Legal Justification For The Current Argentine Data Protection Act (ADPR) And A: Personal Data Protection Act 25 326 (PDPL). • Decree 1558/2001 Of The DP. Decree 1558/2001. Legislature. Data Protection In Argentina: Summary Maximiliano De Auro And Inés De Achaval Estudio Beccar Varela, In Spanish, The National Directorate Of Personal Data Protection (NDPDP, For Example). Sagués, Néstor Pedro, And Keith S. Rosenn. An Introduction And Commentary To The Reform Of The Argentine National Constitution. The University Of Miami Inter-American Law Review (1996): 41-68.

¹²⁵⁸ Bellochio, Lucía. "Access To Public Information In Argentina With Particular Reference To Personal And Institutional Data Protection." A&C-Revista De Direito Administrativo & Constitucional 16, No. 65 (2017).

¹²⁵⁹ Aberastury, Pedro, And Estela B. Sacristán. "Argentina: Enforcement And Effectiveness Of Consumer Law." In Enforcement And Effectiveness Of Consumer Law, Pp. 49-73. Springer, Cham, 2018.

¹²⁶⁰ Ibid.

¹²⁶¹ Ibid.

Data Protection Act in the UK

The utilisation of private information by private organizations, public agencies, and private businesses is governed by the Data Protection Act of 2018¹²⁶². The implementation of the General Data Protection Regulation in the European Union¹²⁶³ is being carried out through the enactment of the Data Protection Act 2018¹²⁶⁴, a legislative measure that was ratified in the year 2018.

Individuals who handle sensitive data are obligated to adhere to a rigorous set of regulations referred to as the "data protection principles."¹²⁶⁵ Ensuring the integrity, legality, and transparency of data utilisation is a matter of paramount significance¹²⁶⁶. Moreover, it is imperative to utilise it solely for the designated and defined purposes, while ensuring adequacy, relevance, and limitation to the necessary extent¹²⁶⁷. Data should be promptly updated upon request and not retained beyond necessary duration¹²⁶⁸. In addition, it is of the utmost importance to deal with the data in a way that ensures appropriate security¹²⁶⁹. The aforementioned should encompass measures to safeguard against unauthorised or illicit processing, unauthorised access, loss, destruction, or impairment.

Stringent legal measures have been implemented to protect information that is deemed more delicate, such as an individual's political affiliation, religious convictions, trade union membership, race or ethnicity, genetic data, biometric data (when utilised for identification purposes), sexual orientation, or health status¹²⁷⁰. Instances of such data encompass: racial identity, ethnic background, political orientation, and religious convictions.

¹²⁶² PART, IV. "Data Protection Act, 2018." (2018).

¹²⁶³ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

¹²⁶⁴ PART, IV. "Data Protection Act, 2018." (2018).

¹²⁶⁵ Cornock, Marc. "General Data Protection Regulation (GDPR) And Implications For Research." (2018) Maturitas 111: A1-A2.

¹²⁶⁶ Ibid.

¹²⁶⁷ Ibid.

¹²⁶⁸ Chico, Victoria. "The Impact Of The General Data Protection Regulation On Health Research." (2018) British Medical Bulletin 128, No. 1: 109-118.

¹²⁶⁹ Ibid.

¹²⁷⁰ Ibid.

Adherence to prescribed regulations is imperative to safeguard the privacy of individual data pertaining to unlawful offences and verdict¹²⁷¹.

The Data Protection Act of 2018¹²⁷² has established the right of individuals to access their personal information held by both governmental and non-governmental entities. The aforementioned statement concerns the entitlement of individuals to have knowledge regarding the utilisation of their personal data. In addition, it is within the rights of individuals to acquire access to their personal data, seek correction of any inaccurate information, demand erasure of their data, and halt or limit the processing of their data¹²⁷³. The concept of data portability refers to the ability of individuals to transfer their personal data from one service provider to another¹²⁷⁴.

Under certain circumstances, individuals possess the entitlement to express their disagreement regarding the management of their personal data¹²⁷⁵. Furthermore, it is crucial to recognise that individuals possess certain rights when a company uses their personal data. Automated decision-making processes and profiling techniques are utilised to anticipate an individual's conduct or preferences¹²⁷⁶.

Data protection Regulations in New Zealand

Privacy Act of 2020

New Zealand has adopted the Privacy Act 2020¹²⁷⁷. The Privacy Act of 2020¹²⁷⁸ differs little from the New Zealand Privacy Act of 1993¹²⁷⁹, which was abolished in December 2020¹²⁸⁰;

¹²⁷¹ Ibid.

¹²⁷² Phillips, Benjamin. "UK Further Education Sector Journey To Compliance With The General Data Protection Regulation And The Data Protection Act 2018." (2021) Computer Law & Security Review 42: 105586.

¹²⁷³ Ibid.

¹²⁷⁴ Ibid.

¹²⁷⁵ Ibid.

¹²⁷⁶ United Kingdom Of Great Britain And Northern Ireland Data Protection Act 2018 2018 C. 12 < Legislation.Gov.Uk>

¹²⁷⁷ Stewart, Blair, And Paul Roth. "Privacy And Data Protection Law In New Zealand." (2022) Privacy And Data Protection Law In New Zealand: 1-312.

¹²⁷⁸ Ibid.

¹²⁷⁹ Campbell, Mark, And Anna Forsyth. "Damages For Emotional Distress Under The Privacy Act." (2020) New Zealand Law Review 2020, No. 1: 1-33.

¹²⁸⁰ Ibid.

hence, both of these Acts will be discussed in this chapter. The Privacy Act of 2020¹²⁸¹ expands the Privacy Commissioner's authority to ensure that businesses and organisations comply with their duties¹²⁸². The two most important new authorities under the Act are access directives and compliance notices. Additionally, the measure introduces additional offences with possible enhanced penalties¹²⁸³.

While the Privacy Act of 2020¹²⁸⁴ was enacted to reflect changes in the economy and society, it is also adaptable to the technological environment currently in existence. Amending the Act to make privacy breaches reportable requires businesses and organisations to notify the Privacy Commission if a privacy breach has caused or is likely to cause substantial harm. The Compliance Notices in Privacy Act of 2020¹²⁸⁵ was enhanced by the Act, granting the commissioner more authority to order enterprises to comply with the requirements of the Act or discontinue operations¹²⁸⁶. In addition, the Privacy Commissioner will have or has decision-making jurisdiction over information access-related complaints¹²⁸⁷. This will expedite the determination of access requests governed by the Act's binding rulings¹²⁸⁸. In addition, a New Zealand corporation or organisation may only disclose a person's personal information to a foreign organisation if that organisation provides the same degree of protection as New Zealand, or if the individual has been properly informed and consented to the disclosure¹²⁸⁹. The Privacy Act also has extraterritorial effect, allowing an organisation or foreign firm to be deemed conducting business in New Zealand for the purposes of privacy obligations even if it does not have a physical presence there¹²⁹⁰. The Act has created new criminal offenses, such as misleading a corporation or organisation by impersonating someone or pretending to function in their position of power to get access to or to have their personal information changed or destroyed¹²⁹¹. In addition, knowing that a request for personal information has been made is a

¹²⁸¹ Ibid.

¹²⁸² Ibid.

¹²⁸³ Pearson, Erika, And Esther Jaspers. "Domestic Internet Of Things: Aotearoa New Zealanders' Privacy Concerns And Behaviours." (2020).

¹²⁸⁴ Stewart, Blair, And Paul Roth. "Privacy And Data Protection Law In New Zealand." (2022) Privacy And Data Protection Law In New Zealand: 1-312.

¹²⁸⁵ Ibid.

¹²⁸⁶ Ibid. See Privacy Act 2020

¹²⁸⁷ Ibid. See Privacy Act 2020

¹²⁸⁸ Ibid.

¹²⁸⁹ Anderson, Christine. "Privacy Matters." (2021) EG 14: 41.

¹²⁹⁰ Ibid.

¹²⁹¹ Cheer, Ursula. "Media Law." New Zealand Law Review 2020, No. 3 (2020): 459-491.

prerequisite for the criminal offence of destroying a document containing such information. The maximum criminal penalty in each case is a fine of up to \$10,000¹²⁹².

A privacy breach is defined by the Privacy Act of 2020¹²⁹³ as the disclosure, alteration, loss, or destruction of personal information, or the unauthorised or accidental access to personal information. For instance, a corporation or entity must notify the Privacy Commission if a privacy violation has caused or is likely to cause considerable harm to an individual. In addition, if a privacy breach that requires notification occurs, the company or organisation must notify the affected parties¹²⁹⁴.

The 2020¹²⁹⁵ Privacy Act includes a new information privacy principle, Principle 13¹²⁹⁶, which restricts the communication of personal information to receivers outside of New Zealand. Transmitting personal information across international borders constitutes cross-border disclosure. First, the purpose of Principle 13¹²⁹⁷ is to ensure that personal data sent outside is safeguarded by privacy regulations comparable to New Zealand's. Now, enterprises and organisations must ensure that any personal information they provide to foreign entities is adequately protected¹²⁹⁸. Prior to making a cross-border disclosure, businesses and organisations must be able to demonstrate that they have performed the necessary due diligence¹²⁹⁹. Second, according to Principle 2¹³⁰⁰, personal information should only be collected directly from the subject. By requesting information from the individual being sought, it is presumed that they are aware of the matter and has some control over it¹³⁰¹. Thirdly, Principle 3¹³⁰² stipulates that businesses must be transparent and truthful about the techniques they employ to gather data and the reasons for doing so. Fourth, Principle 4¹³⁰³ states information

¹²⁹² Dong, Yao. "Privacy Act 2020." (2020) *Te Mata Koi: Auckland University Law Review* 26: 334-345.

¹²⁹³ New Zealand Legislation "Privacy Act 2020"

¹²⁹⁴ New Zealand Privacy Commission "Privacy Act 2020"

¹²⁹⁵ New Zealand Legislation "Privacy Act 2020"

¹²⁹⁶ New Zealand Privacy Commission "Privacy Principles"

¹²⁹⁷ *Ibid.*

¹²⁹⁸ *Ibid.*

¹²⁹⁹ Johnson, Lewis. "Pacific Data Insecurity." (2021) *New Zealand International Review* 46, No. 3: 18-22.

¹³⁰⁰ Commissioner, Privacy. "Information Privacy Principles (Ipps)(1-13)." (2022).

¹³⁰¹ Stewart, Blair, And Paul Roth. "Privacy And Data Protection Law In New Zealand." (2022) *Privacy And Data Protection Law In New Zealand*: 1-312.

¹³⁰² New Zealand Privacy Commission "Privacy Principles"

¹³⁰³ *Ibid.*

about an individual must be collected in a lawful, fair, and reasonable manner given the circumstances¹³⁰⁴. Fifth, in accordance with Principle 5¹³⁰⁵, businesses must take appropriate measures to protect customer data from accidental or malicious destruction, alteration, or disclosure. Sixth, individuals must be able to request access to their own data, per Principle 6¹³⁰⁶. Seventh, in accordance with Principle 7¹³⁰⁷, individuals have the legal right to request that groups and corporations correct erroneous information about them that they believe has been gathered¹³⁰⁸. Eighth, Principle 8¹³⁰⁹ states that before to using or disclosing any personal information, an organisation must ensure that it is accurate, current, complete, relevant, and not misleading. The ninth¹³¹⁰ principle specifies that a company should erase personal data as soon as it is no longer needed for the legitimate purposes for which it was collected. Tenth, according to Principle 10¹³¹¹, businesses must restrict the use of personal data to the original intent for which it was gathered, with several exceptions. Eleventh, Principle 11 states that an organisation may only use and disclose personal information for the purposes for which it was originally collected¹³¹². Disclosure may also be permissible for other reasons, such as serving a directly linked purpose or with the individual's consent¹³¹³. The requirements for disclosing personal information to recipients outside of New Zealand are outlined in Principle 12¹³¹⁴. The Privacy Act of 2020 introduces a new principle with the addition of principle 12¹³¹⁵. The thirteenth principle¹³¹⁶ bans the use of personal identification numbers and other identifying information. According to the principle, an organisation may only assign unique identifiers to individuals when doing so is necessary for the fulfilment of its responsibilities. Unique identifiers, such as numbers, references, or other types of identification, that an organisation assigns to a person to uniquely identify that person within the organisation¹³¹⁷. Examples

¹³⁰⁴ Ibid.

¹³⁰⁵ Ibid.

¹³⁰⁶ Ibid.

¹³⁰⁷ Ibid.

¹³⁰⁸ Stewart, Blair, And Paul Roth. "Privacy And Data Protection Law In New Zealand." (2022) Privacy And Data Protection Law In New Zealand: 1-312.

¹³⁰⁹ Ibid.

¹³¹⁰ Ibid.

¹³¹¹ Ibid.

¹³¹² Ibid.

¹³¹³ Ibid.

¹³¹⁴ New Zealand Privacy Commission "Privacy Principles"

¹³¹⁵ Ibid.

¹³¹⁶ Ibid.

¹³¹⁷ Ibid.

include the numbers found on a driver's license, Inland Revenue Department, national health identity card, and passport¹³¹⁸.

General Data Protection Regulation and the Privacy Act 2020

The 2020¹³¹⁹ Privacy Act replicates, for the most part, the strategy and core concepts that were defined in the General Data Protection Regulation that was passed by the European Union¹³²⁰. There is a chance that the GDPR will apply to New Zealand organizations, even if they do not operate in EU nations¹³²¹. The GDPR will also apply to non-EU companies who advertise to EU consumers or track the behaviour of EU citizens while conducting business with them¹³²². The GDPR may apply to a company if any of the following conditions are met: the company accepts European currency; the company regularly sells goods or services to EU residents; the company provides data processing services to businesses that are established in the EU; the company has websites that are available in European languages, allowing customers to purchase products in that language¹³²³. Even though the General Data Protection Regulation of the EU only applies to New Zealand companies that conduct business within the EU or that process the personal data of EU citizens, the regulation, how it has been applied by data protection authorities, and how it has been interpreted in EU case law may still provide persuasive guidance to New Zealand courts and authorities, particularly the Privacy Commissioner¹³²⁴.

The Privacy Act of 2020 is primarily intended to protect individuals to protect their right to the privacy of their personal information¹³²⁵. The Privacy Act of 2020 also specifies the General Information Privacy Principles concerning the collection, use, and dissemination of personal information kept by agencies (i.e., data controllers and data processors), as well as staff access

¹³¹⁸ Ibid.

¹³¹⁹ New Zealand Legislation "Privacy Act 2020.

¹³²⁰ Voigt, Paul, And Axel Von Dem Bussche. "The Eu General Data Protection Regulation (Gdpr)." (2017) A Practical Guide, 1st Ed., Cham: Springer International Publishing 10, No. 3152676: 10-5555.

¹³²¹ Dong, Yao. "'Privacy Act 2020'." (2020) Te Mata Koi: Auckland University Law Review 26: 332.

¹³²² New Zealand Privacy Commission "How Do I Comply With The GDPR?"

¹³²³ Ibid.

¹³²⁴ Dizon, Michael Anthony C., And Philip James Mchugh. "Encryption Laws And Regulations In One Of The Five Eyes: The Case Of New Zealand." (2022) Information & Communications Technology Law 31, No. 2: P 233.

¹³²⁵ Ibid.

to validate and amend information stored by an agency¹³²⁶. Moreover, the integrity and confidentiality criteria of the General Data Protection Regulation of the European Union's General Data Protection Regulation are equivalent to the storage and security of personal data¹³²⁷. In essence, this idea requires an agency to take all reasonable means to safeguard and ensure the security of the information it controls. One must determine what is reasonable based on the sensitivity or secrecy of the circumstance. What data is involved and what safeguards may have been put in place to secure that data? The agency must consistently create and maintain appropriate security measures for its data¹³²⁸.

The distinction between Privacy Act of 2020 and Privacy Act of 1993

Although there are not many variations between the two Privacy Acts, there have been some modest changes made, including the implementation of a new information privacy principle¹³²⁹. Under the Privacy Act of 2020¹³³⁰, agencies will be permitted to utilise a few additional reasons for denial when responding to Principle 6¹³³¹ access requests. In addition, the Privacy Commission now possesses certain additional regulatory authorities, such as the capacity to issue compliance notices, access decisions and directions, as well as the right to halt an investigation into a complaint on certain newly established grounds¹³³².

The most major modifications to the Privacy Act in 2020 are as follows: Applying the law more broadly to New Zealand and applying the information privacy principle to external agencies, which handles the sharing of personal information overseas, as well as the breach reporting system and compliance notification mechanism for resolving violations¹³³³; An agency fraud is a unique crime¹³³⁴. Accessing or deleting a person's personal information with

¹³²⁶ Ibid.

¹³²⁷ New Zealand Privacy Commission "Transitioning From Privacy Act 1993 To Privacy Act 2020".

¹³²⁸ Dizon, Michael Anthony C., And Philip James Mchugh. "Encryption Laws And Regulations In One Of The Five Eyes: The Case Of New Zealand." (2022) Information & Communications Technology Law 31, No. 2: P 233.

¹³²⁹ Jones, Craig, Anna Mcdowell, Vince Galvin, And Dorothy Adams. "Building On Aotearoa New Zealand's Integrated Data Infrastructure." (2022) Harvard Data Science Review 4, No. 2.

¹³³⁰ New Zealand Privacy Commission "Transitioning From Privacy Act 1993 To Privacy Act 2020".

¹³³¹ Ibid.

¹³³² Ibid.

¹³³³ Bartlett, Matt. "Beyond Privacy: Protecting Data Interests In The Age Of Artificial Intelligence." (2021) Law, Technology And Humans 3, No. 1: 96-108.

¹³³⁴ Dong, Yao. "'Privacy Act 2020'." (2020) Te Mata Koi: Auckland University Law Review 26: 334-332.

knowledge that it has been requested. These updates illustrate the motives for the changes, which include keeping pace with New Zealand's economy and technology.

The memorandum concludes that the Privacy Act of 2020¹³³⁵ provides necessary privacy reforms that align with the current state of the economy and technology. However, while the Privacy Act of 2020¹³³⁶ addresses certain gaps left by the Privacy Act of 1993¹³³⁷, additional and continuous efforts are needed to enhance privacy protection. Using an academic approach, this paper aims to argue the extent to which the Privacy Act of 2020¹³³⁸ will consider the diverse levels of privacy importance among different ethnic and cultural groups in New Zealand. The Privacy Act of 2020¹³³⁹, while demonstrating a willingness to adhere to global privacy standards, does not impose an obligation on the entity collecting personal information to appraise the concerned individual in the event of information being obtained from a source other than the individual¹³⁴⁰. Certain submissions pertaining to the evaluation of the Privacy Act of 2020¹³⁴¹ have contended that notification dissemination may result in erroneous delivery to an unintended recipient. Furthermore, the Privacy Act of 2020's¹³⁴² refusal to endorse the idea of expanding the accessibility of personal information management to the general public does not promote transparency among entities responsible for managing such information¹³⁴³. The Law Commission expressed opposition towards the incorporation of an openness principle¹³⁴⁴. The feasibility of small firms adopting a privacy policy was found to be low, and establishing a standard for agencies to adhere to was deemed to be a challenging task¹³⁴⁵.

Privacy Act of 1993

¹³³⁵ Kukutai, Tahu, And Donna Cormack. "“Pushing The Space”: Data Sovereignty And Self-Determination In Aotearoa NZ." (2020) In *Indigenous Data Sovereignty And Policy*, Pp. 21-35. Routledge.

¹³³⁶ *Ibid.*

¹³³⁷ Stewart, Blair, And Paul Roth. "Privacy And Data Protection Law In New Zealand." (2022) *Privacy And Data Protection Law In New Zealand*: 1-312.

¹³³⁸ Donaldson, A. E. "New Zealand Emergency Nurses Knowledge About Forensic Science And Its Application To Practice." (2020) *International Emergency Nursing* 53: 100854.

¹³³⁹ *Ibid.*

¹³⁴⁰ *Ibid.*

¹³⁴¹ *Ibid.*

¹³⁴² O'Connor, Helen, W. John Hopkins, And David Johnston. "For The Greater Good? Data And Disasters In A Post-COVID World." (2021) *Journal Of The Royal Society Of New Zealand* 51, No. Sup1: S214-S231.

¹³⁴³ *Ibid.*

¹³⁴⁴ *Ibid.*

¹³⁴⁵ *Ibid.*

New Zealand data protection is set out in the comprehensive Privacy Act 1993¹³⁴⁶ framework and in its Information Privacy Principles. The Act labels as “personal information¹³⁴⁷” any data that may contain valuable information identifying individuals in New Zealand. The Act offers instructions for organisations on how personal details should be obtained, divulged, processed, utilised, accessed and maintained¹³⁴⁸. In addition, the Act requires the Data Control Commissioner to publish standards of conduct modifying the application of the Act to such organisations, sectors, operations or forms of personal records¹³⁴⁹. The Office of the Commissioners has the task of outlining their perception of sensitive information, and directs the application of the Privacy Act, data protection codes and standards¹³⁵⁰. This Act mentions details such as titles, telephone numbers, email addresses, and further observations about recognising a person¹³⁵¹.

Where information such as the above seems to be in the public domain, the inclusion of an open dataset is appropriate. For example, the Marriage Celebrant¹³⁵² dataset provides the contact information of these individuals, but this information is freely accessible and already widely available elsewhere¹³⁵³.

Moreover, the Privacy Act 1993¹³⁵⁴ covers personal information about individuals, government agencies or businesses in New Zealand or in the Cloud Service¹³⁵⁵, which includes documents, photos, phones, mobile networks, and computerised systems. Thus, personal information can

¹³⁴⁶ Howells, John M. "The Privacy Act Of 1993: A New Zealand Perspective." (1995) *Comp. Lab. LJ* 17: 107.

¹³⁴⁷ Rose, Ellen A. "An Examination Of The Concern For Information Privacy In The New Zealand Regulatory Context." (2006) *Information & Management* 43, No. 3: 322-335.

¹³⁴⁸ *Ibid.*

¹³⁴⁹ *Ibid.*

¹³⁵⁰ *Ibid.*

¹³⁵¹ Wright, David, And Paul De Hert, Eds. "Privacy Impact Assessment" (2011) Vol. 6. Springer Science & Business Media.

¹³⁵² Marriage Celebrants Who May Make Weddings And Civil Unions Lawfully. Ceremonies Can Take Place According To The Practices, Rituals, Religious And Cultural Beliefs Of The Couple. Celebrants From Different Approved Groups Would Have Their Different Models And Procedures. New Zealand Government Internal Affairs "Marriage and Civil Union Celebrants: A Guide To The Role Of Celebrants In New Zealand" (2020)

¹³⁵³ Wright, David, And Paul De Hert, Eds. "Privacy Impact Assessment" (2011) Vol. 6. Springer Science & Business Media.

¹³⁵⁴ Howells, John M. "The Privacy Act Of 1993: A New Zealand Perspective." (1995) *Comp. Lab. LJ* 17: 107.

¹³⁵⁵ Bhardwaj, Sushil, Leena Jain, And Sandeep Jain. "Cloud Computing: A Study Of Infrastructure As A Service (IAAS)." (2010) *International Journal Of Engineering And Information Technology* 2, No. 1: 60-63.

be any piece of information that can be used for identifying an individual, such as names, financial and health details, contact details, and purchase records¹³⁵⁶.

"It could be personal details, even though their name does not show. The concern is whether it is fair to distinguish anyone from the details. It doesn't have to be 'hidden' or 'important' either - it just has to be about them. Personal records may not necessarily be records about corporate processes or strategies, proprietary secrets, and aggregate reports that cannot distinguish persons. It can be classified or sensitive to industry, but it can also cover it. Any elements of this guide will offer a glimpse on how you will get there. However, the Protection Act does not extend."¹³⁵⁷

Information Privacy Principles I.P.P.s

The Privacy Act 1993 includes 12¹³⁵⁸ standards that relate to data in New Zealand: the object of personal data collection, confidential knowledge source, selection of topic knowledge, manner in which sensitive information is gathered, confidential information preservation and access, right to personal data, sensitive knowledge correction, accuracy of personal details to be verified before usage, organisation not to retain personal details longer than needed, restrictions on the usage of personal details, restrictions on sensitive knowledge disclosure, and single IDs¹³⁵⁹.

Code of Practice

There is a code of practice currently applied to the Privacy Act, issued and administered by the Privacy Commissioner's Office, which includes:

¹³⁵⁶ Wright, David, And Paul De Hert, Eds. "Privacy Impact Assessment." (2011) Vol. 6. Springer Science & Business Media.

¹³⁵⁷ Ibid.

¹³⁵⁸ Howells, John M. "The Privacy Act Of 1993: A New Zealand Perspective" (1995) Comp. Lab. LJ 17: 107.

¹³⁵⁹ Haines, Rodney. "The Office And Functions Of New Zealand's Privacy Commissioner" (1996) Government Information Quarterly 13, No. 3: 255-274.

Telecommunications information privacy code, health information privacy code, credit reporting privacy code, justice sector unique identifier code, superannuation schemes unique identifier code, and civil defence national emergencies (information sharing) code¹³⁶⁰. The Privacy Commissioner has the right to enact and prosecute any acts that seem to be implicit in an individual's privacy and that could be carried out in the form of a report to the Commissioner or under the initiative of the Commissioner¹³⁶¹. The Privacy Act further defines the corporation as any individual or corporation, whether corporate or environmental, in the public or private sectors¹³⁶².

Bill of Privacy

The Privacy Act 1993¹³⁶³ has been replaced by a revised Bill of Privacy¹³⁶⁴ which was sent to Parliament¹³⁶⁵ by the Ministry of Justice in 2018¹³⁶⁶. The implementation of the Privacy Act can be attributed to the growth and rapid development of the internet and digital economy, which has changed government and companies, as well as the use of personal information¹³⁶⁷. The

¹³⁶⁰ Neame, Roderick. "Privacy And Security Issues In A Wide Area Health Communications Network" (1996) *International Journal Of Bio-Medical Computing* 43, No. 1-2 : 123-127.

¹³⁶¹ *Ibid.*

¹³⁶² Hall, Cedric, And Charlotte Fitzgerald. "Student Summative Evaluation Of Teaching: Code Of Practice" (1995) *Assessment & Evaluation In Higher Education* 20, No. 3: 307-311.

¹³⁶³ Crawford, Aaron, Raymond Harbridge, And Pat Walsh. "Privacy In The Workplace: The Effects Of The Privacy Act 1993 On Employment Practices In New Zealand." (1995) *Labour & Industry: A Journal Of The Social And Economic Relations Of Work* 6, No. 3: 51-72.

¹³⁶⁴ Corrado, Edward M. "Libraries And Protecting Patron Privacy" (2020) *Technical Services Quarterly* 37, No. 1: 44-54.

¹³⁶⁵ Beattie, Andrew. "Officers Of Parliament: The New Zealand Model." (2006) *Australasian Parliamentary Review* 21, No. 1: 143-56. Parliament Of New Zealand: Parliament Is Split Into Two Sections, The Sovereign (The Governor General Who Serves The Queen In New Zealand) And The House Of Representatives Composed Of Elected Representatives And Lists Of Legislative Representatives. The Parliament 'S Task Is To: Serve The Citizens, Create Laws Regulating The Land, Examine (Challenging And Asking Question) The Actions Of The Government, And Authorise The Supply And Allocation Of Public Funds To The Government.

¹³⁶⁶ Campbell, Mark, And Anna Forsyth. "Damages For Emotional Distress Under The Privacy Act." (2020) *New Zealand Law Review* 2020, No. 1: 1-33.

¹³⁶⁷ *Ibid.*

vast flow of data has brought some benefits but has also created new issues with individual data protection. The Bill¹³⁶⁸ seeks to make amendments to the Privacy Act 1993¹³⁶⁹ and achieves this by the full replacement of the legislation.

The main reforms in the Bill's proposals are to give more power to the Privacy Commissioner, define new offences, compliance notices, and increased fines, as well as the mandatory reporting of privacy breaches. Furthermore, the Bill deals with territorial scope¹³⁷⁰, decisions on access requests, and overseas transfers¹³⁷¹.

The proposed Bill¹³⁷² describes how information is gathered or retained and measures taken by New Zealand entities or by people living in New Zealand. It also covers any practices, such as the compilation or management of personal details by overseas agencies controlling enterprises in New Zealand¹³⁷³. In addition, contains personal data obtained by persons present in New Zealand but not citizens of the nation¹³⁷⁴. For transactions abroad, the Bill¹³⁷⁵ requires sensitive details to be revealed to an international individual or organisation in such cases as the following:

"a disclosure is **approved** by the person or entity involved after it has been specifically told that the international person or agency will not be compelled to protect information in a way which overall provides for comparable protections under the Act;

- the foreign individual or entity does **business** in New Zealand and, on fairgrounds, the divulger claims that the foreign person or entity has the details under the Act;
- for legitimate purposes, the discloser assumes that the international person or organisation is entitled to privacy regulations that offer **similar protections** overall to those set out in the Act;

¹³⁶⁸ Edwards, John. "Protecting Privacy In An Un-Private World" (2019) Public Sector 42, No. 4: 9.

¹³⁶⁹ Toy, Alan, And Gehan Gunasekara. "Is There A Better Option Than The Data Transfer Model To Protect Data Privacy." (2019) UNSWLJ 42: 719.

¹³⁷⁰ Campbell, Mark, And Anna Forsyth. "Damages For Emotional Distress Under The Privacy Act" (2020) New Zealand Law Review 2020, No. 1: 1-33.

¹³⁷¹ Hing, Miranda. "Driving Into Trouble?: Civil Liability And Privacy Issues With Autonomous Vehicles In New Zealand. Te Mata Koi" (2019) Auckland University Law Review 25: 199.

¹³⁷² Kenner, Lucy. "Fundamental Rights And Private Litigants: The New Zealand Bill Of Rights Act 1990 In Private Common Law Disputes" (1990) Victoria University Of Wellington Legal Research Paper, Student/Alumni Paper 24.

¹³⁷³ *Ibid.*

¹³⁷⁴ Corrado, Edward M. "Libraries And Protecting Patron Privacy" (2020) Technical Services Quarterly 37, No. 1: 44-54.

¹³⁷⁵ Smith, David. "The Citizen And The Automated State: Exploring The Implications Of Algorithmic Decision-Making In The New Zealand Public Sector". (2020).

- for legitimate purposes, the divulger assumes that a foreign citizen or individual is **subject to the data protection laws** of a nation or to an enforceable regime as set out in rules defined under the Act;
- for legitimate purposes, the **discloser feels that it is appropriate** for a foreign individual or agency to secure information in a manner that typically offers equivalent assurances to those set out in the Act."¹³⁷⁶

If the purpose is to move data to a cloud storage service or another foreign processor, whether the processor would need the details for its own reasons, the disclosure of the data will not be considered¹³⁷⁷. Moreover, the Bill states that the Data Protection Commissioner and other individuals concerned must be told about any breach of privacy that has caused or is likely to cause serious damage to the individual¹³⁷⁸. Agencies must determine whether a privacy infringement will inflict substantial injury¹³⁷⁹ and will consider whether any intervention by the Organization was taken to mitigate the possibility of damage following the violation, and will also assess the sensitivity to personal information, the extent of damage to the people concerned, the individual or organisation who received personal details or could receive it as a consequence of the infringement (if known), if a protection measure safeguards sensitive information, and all other issues of relevance¹³⁸⁰.

The Commissioner¹³⁸¹ must be told of a notifiable violation of privacy as soon as possible by the agencies. However, under certain cases the notice may be postponed where the organisation finds it appropriate to wait because notice or public alerts can pose a greater danger to personal information protection kept by the organisation and these threats are greater than the advantages of advising the entity involved¹³⁸². Furthermore, reputation protection is not a good

¹³⁷⁶ Mann, Monique, Angela Daly, And Adam Molnar. "Regulatory Arbitrage And Transnational Surveillance: Australia's Extraterritorial Assistance To Access Encrypted Communications" (2020) Internet Policy Review 9, No. 3: 1-20.

¹³⁷⁷ Ibid.

¹³⁷⁸ Ibid.

¹³⁷⁹ Butler, Des. "Drones And Invasions Of Privacy: An International Comparison Of Legal Responses." (2019) UNSWLJ 42: 1039.

¹³⁸⁰ Campbell, Mark, And Anna Forsyth. "Damages For Emotional Distress Under The Privacy Act" (2020) New Zealand Law Review 2020, No. 1: 1-33.

¹³⁸¹ Mclachlan, Scott. "Predicted By Orwell: A Discourse On The Gradual Shift In Electronic Surveillance Law." (2020) Arxiv Preprint Arxiv:2004.11594.

¹³⁸² Ibid.

excuse for delaying notice¹³⁸³. The agent will report the infringement if it is basically unfair to report a person or community of individuals impacted¹³⁸⁴.

However, since the Bill¹³⁸⁵ considers the entity to be liable for warning individuals about a notifiable infringement, the contracting providers engaged in data processing should be informed that all details relevant to a reportable breach known to an agent have been detected by an agent¹³⁸⁶.

Conclusion

The present study offers a thorough analysis of privacy laws at the global level, encompassing both public and private legislation across various countries. Additionally, it elucidates the treaties and commissions worldwide that are dedicated to safeguarding privacy. Saudi Arabia has the opportunity to derive insights from the privacy-related encounters of diverse nations. By doing so, it can develop legal frameworks that are intended to safeguard its populace from potential harm. The implementation of data protection measures in Saudi Arabia is expected to offer novel and lucid benefits, effectively addressing the most critical compliance concerns across various legal domains. Ensuring the preservation of the nation's privacy infrastructure necessitates the avoidance of disproportionate actions. Adherence to Saudi Arabian data regulations is often beneficial for the facilitation of data transmission. Furthermore, in the event of a data breach akin to the one safeguarded against in the recently implemented EU data protection measures and the New Zealand Privacy Act 2020, the newly established Saudi personal data protection regulations will need to consider the notification process. This is because Saudi consumers are inundated with a significant number of unsolicited marketing or fraudulent messages on an annual basis, which are often transmitted directly to their cellular devices without their explicit consent¹³⁸⁷

¹³⁸³ Ibid.

¹³⁸⁴ Ibid.

¹³⁸⁵ ONYI-OGELLE, Obioma Helen, And Collins NWOBODO. "A Comparative Disclosure Of The Collective Rights Of Prisoners In Nigeria, South Africa, India And New Zealand" (2020) African Journal Of Law And Human Rights 4, No. 1.

¹³⁸⁶ Stats, N. Z. "Creating The 2018 Census Dataset By Combining Administrative Data And Census Forms Data: Our Privacy Impact Assessment." (2019).

¹³⁸⁷ Osho, Oluwafemi, Victor Legbo Yisa, And Olasunkanmi Yusuf Ogunleke. "Mobile Spamming In Nigeria: An Empirical Survey." (In 2015 International Conference On Cyberspace (CYBER-Abuja), Pp. 150-159. IEEE, 2015.)

Chapter Four: Legal Culture and Privacy in the Kingdom of Saudi Arabia

Introduction

Chapter four aims to examine the legislation from chapter three in conjunction with the legislation of the Kingdom of Saudi Arabia, with the objective of identifying missing practices, which will then be addressed in chapter five through the implementation of draft legislation. The term "culture," while sometimes linked to an individual's race or ethnic identity, encompasses a wider array of concepts¹³⁸⁸. It is important to consider that an individual's association with a particular culture is adaptable and can be modified due to exposure to new experiences or cognitive processes¹³⁸⁹. It is vital to recognise that individuals are affiliated with various cultural subcategories¹³⁹⁰. The ever-changing and evolving nature of culture makes it a fascinating component of the human experience¹³⁹¹.

Various aspects of human existence, including gender, socioeconomic status, cognitive and physical capabilities, play a significant role in shaping and developing unique cultural identities¹³⁹². The correlation among age, spiritual practices, and faith serves as an illustration. The process of identifying an individual based on a solitary cultural trait is challenging, and the aforementioned elements collectively contribute to the phenomenon referred to as cultural diversity¹³⁹³. The unique and complex psychological experiences of individuals contribute to the formation of cultural history¹³⁹⁴, resulting in distinctive characteristics that differentiate them from others who share the same cultural background. This elucidates the reasons why

¹³⁸⁸ Friedman, Lawrence M. "Legal Culture And Social Development." (1969) *Law And Society Review*: 29-44.

¹³⁸⁹ Silbey, Susan S. "Legal Culture And Cultures Of Legality." Silbey, Susan S. *Legal Culture And Cultures Of Legality*. Routledge Handbook Of Cultural Sociology. Routledge (2018): 426-435.

¹³⁹⁰ Nelken, David. "Using The Concept Of Legal Culture." (2017) In *Legal Theory And The Social Sciences*, Pp. 279-303. Routledge.

¹³⁹¹ Schein, Edgar H. "What Is Culture." (1991) Newbury Park, CA: Sage: 243-253.

¹³⁹² Rutherford, Jonathan. "Identity: Community, Culture, Difference." (1990) Lawrence & Wishart.

¹³⁹³ Rodriguez, Jeanette, And Ted Fortier. *Cultural Memory: Resistance, Faith, And Identity*. (2007) University Of Texas Press.

¹³⁹⁴ Coll, Cynthia Garcia, And Katherine Magnuson. "The Psychological Experience Of Immigration: A Developmental Perspective." (2012) In *The New Immigration*, Pp. 119-148. Routledge.

individuals belonging to the identical cultural or familial background may exhibit a wide range of personalities, traits, and preferences¹³⁹⁵.

There exist similarities between cultural customs and practises¹³⁹⁶. Geography comprises three fundamental components, namely, location, nation, and natural resources. This study examines the societal expectations and norms surrounding gender roles, as well as the dynamics of intergenerational relationships, including interactions with elderly relatives and younger members¹³⁹⁷. Political institutions encompass a variety of entities such as legal frameworks, societal norms, governing bodies, and associations that facilitate the establishment and enforcement of laws, the advancement of communal well-being, and the cultivation of harmonious relationships¹³⁹⁸. Apart from the necessities of water, air, and soil, there is also a requirement for fundamental amenities such as casual and formal attire, as well as architectural and construction materials. Cultures are accountable for the creation of tools, and other related artefacts¹³⁹⁹. Illustrative instances encompass religious customs, ceremonial events marking significant life transitions (e.g., birth and death), orally transmitted folklore, and the perceptions of community constituents towards the intangible¹⁴⁰⁰. The economic system encompasses various components, including production, distribution, consumption, employment, trade, and currency¹⁴⁰¹. Formal and informal education are means through which individuals acquire knowledge, values, and life skills¹⁴⁰². The culture of a group encompasses its cognitive processes, affective states, behavioural dispositions, and ideological convictions¹⁴⁰³. Some characteristics, such as culture, are acquired through education.

¹³⁹⁵ Gallagher, Michael Paul. "Clashing Symbols: An Introduction To Faith And Culture." (2003) Paulist Press.

¹³⁹⁶ Paris, Django. "Culturally Sustaining Pedagogy: A Needed Change In Stance, Terminology, And Practice." (2012) Educational Researcher 41, No. 3: 93-97.

¹³⁹⁷ Friedman, Lawrence M. "Legal Culture And Social Development." (1969) Law And Society Review: 29-44.

¹³⁹⁸ Rosen, Lawrence. "Law As Culture." (2017) In Law As Culture. Princeton University Press.

¹³⁹⁹ Blake, Janet. "On Defining The Cultural Heritage." (2000) International & Comparative Law Quarterly 49, No. 1: 61-85.

¹⁴⁰⁰ Stefano, Michelle L., Peter Davis, And Gerard Corsane, Eds. "Safeguarding Intangible Cultural Heritage" (2014) Vol. 8. Boydell & Brewer Ltd.

¹⁴⁰¹ Onkvisit, Sak, And John Shaw. "International Marketing: Strategy And Theory" (2009) Routledge.

¹⁴⁰² Eraut*, Michael. "Informal Learning In The Workplace." (2004) Studies In Continuing Education 26, No. 2: 247-273.

¹⁴⁰³ Bandura, Albert. "Social Cognitive Theory: An Agentic Perspective." (1999) Asian Journal Of Social Psychology 2, No. 1: 21-41.

Furthermore, individuals possess the ability to voluntarily transition between various cultural contexts and assimilate novel customs, ideologies, and principles¹⁴⁰⁴.

Consequently, the emergence of "legal culture" has transpired due to the promotion of laws and regulations to the status of fundamental principles that individuals must adhere to, and as integral components of the customs and traditions of diverse societies¹⁴⁰⁵. Legal culture encompasses not only the regulations necessary for the implementation of various types of laws, including those pertaining to economics, society, politics, and administration, but also encompasses a range of knowledge, methodologies, and subject matter¹⁴⁰⁶. The comprehensive regulation and governance of all facets of life by the law contributes to the promotion of inclusivity within legal culture. In addition to familiarity with the legal system's culture, proficiency in comprehending other cultures is not deemed necessary¹⁴⁰⁷. However, it is not mandatory to possess knowledge of diverse cultures. Consequently, if legal authorities inquire, individuals may be unable to justify their deficiency in legal expertise¹⁴⁰⁸.

Thus, it is imperative that individuals adhere to the established standards of legal culture. This comprehension not only elucidates an individual's entitlements and duties pursuant to them, but also the anticipated conduct in consideration of said obligations¹⁴⁰⁹. It is not mandatory for individuals to possess expertise in all domains of law, as this duty falls under the purview of judges, legal professionals, and experts in the field¹⁴¹⁰. Professionals in the legal field are required to possess a thorough understanding of the fundamental principles of law, which are grounded in the utilisation of logical reasoning and compelling legal discourse¹⁴¹¹. The concepts, widely perceived as being of universal applicability and stemming from customary law, are integrated into all forms of legislation and statutory provisions. The norms in question

¹⁴⁰⁴ Shiraev, Eric B., And David A. Levy. "Cross-Cultural Psychology: Critical Thinking And Contemporary" (2020) Applications. Routledge.

¹⁴⁰⁵ Merry, Sally Engle. "What Is Legal Culture-An Anthropological Perspective." (2010) *J. Comp. L.* 5: 40.

¹⁴⁰⁶ Friedman, Lawrence M. "Is There A Modern Legal Culture?." (1994) *Ratio Juris* 7, No. 2: 117-131.

¹⁴⁰⁷ Silbey, Susan S. "Legal Culture And Cultures Of Legality." Silbey, Susan S." *Legal Culture And Cultures Of Legality.*" (2018) *Routledge Handbook Of Cultural Sociology.* Routledge: 426-435.

¹⁴⁰⁸ Tor, Phillip B., And Bruce D. Sales. "A Social Science Perspective On The Law Of Guardianship: Directions For Improving The Process And Practice." (1994) *Law & PSYCHOL. Rev.* 18: 1.

¹⁴⁰⁹ Klare, Karl E. "Legal Culture And Transformative Constitutionalism." (1998) *South African Journal On Human Rights* 14, No. 1: 146-188.

¹⁴¹⁰ Halliday, Terence C. "Beyond Monopoly: Lawyers, State Crises, And Professional Empowerment." (1987) University Of Chicago Press.

¹⁴¹¹ Maccormick, Neil. "Rhetoric And The Rule Of Law: A Theory Of Legal Reasoning." (2005) OUP Oxford.

are derived from the principles of common law. However, in the absence of legal regulations, individuals' lives would lack equilibrium.

The legal system in the Kingdom of Saudi Arabia is founded on a combination of Sharia Law and Islamic jurisprudence, as well as codified Law¹⁴¹². The legal framework of Saudi Arabia is predominantly rooted in Sharia law, with a notable emphasis on upholding the sanctity of personal privacy¹⁴¹³. Any infringement upon this right is strictly forbidden, except in specific and exceptional circumstances¹⁴¹⁴. Various statutes and regulations contain supplementary provisions concerning the protection and confidentiality of personal information¹⁴¹⁵. The enquiry concerns the sufficiency and effectiveness of the current privacy protections offered by Sharia law, Islamic legal principles, and regulations in Saudi Arabia. It is imperative to identify the requisite measures for fortifying the information privacy framework in case of inadequacy. This is especially applicable in the realm of digital technology. Hence, the aim of this chapter is to provide a comprehensive introduction to Sharia law and to illustrate its approach towards matters pertaining to personal privacy using illustrative instances. The present chapter will provide a comprehensive analysis of the legal culture and the historical background pertaining to the drafting of the Statute of Governance of the Kingdom of Saudi Arabia, thereby culminating in a holistic understanding of the subject matter.

Sharia Law in Brief

Definition

¹⁴¹² Esmaeili, Hossein. "On A Slow Boat Towards The Rule Of Law: The Nature Of Law In The Saudi Arabia Legal System." (2009) *Ariz. J. Int'l & Comp. L.* 26: 1.

¹⁴¹³ Alotaibi, Hajed A. "The Challenges Of Execution Of Islamic Criminal Law In Developing Muslim Countries: An Analysis Based On Islamic Principles And Existing Legal System." (2021) *Cogent Social Sciences* 7, No. 1: 1925413.

¹⁴¹⁴ Baderin, Mashood A. "A Comparative Analysis Of The Right To A Fair Trial And Due Process Under International Human Rights Law And Saudi Arabian Domestic Law." (2006) *The International Journal Of Human Rights* 10, No. 3: 241-284.

¹⁴¹⁵ Abokhodair, Norah, Sofiane Abbar, Sarah Vieweg, And Yelena Mejova. "Privacy And Social Media Use In The Arabian Gulf: Saudi Arabian & Qatari Traditional Values In The Digital World." (2017) *The Journal Of Web Science* 3.

Within the Arabic language, the term sharia may denote a point of origin, a direct path, or a flowing body of water intended for consumption¹⁴¹⁶. The term "sharia" in Arabic vocabulary pertains to the legal system that has been ordained by the Almighty God¹⁴¹⁷ (Allah¹⁴¹⁸) for His followers, as per the decrees that were conveyed by one of His prophets¹⁴¹⁹. Whether these verdicts were related to matters of faith or practical regulations for adherence, they are considered within the scope of sharia law¹⁴²⁰. Incorporating the term "Islam" into the term "Sharia" would yield the subsequent interpretation of Sharia: the edicts that were divinely disclosed to the esteemed prophet Muhammad¹⁴²¹, irrespective of their ethical, pragmatic, or theological nature¹⁴²².

The term "Sharia" encompasses the regulations, edicts, and restrictions that were established by the Divine Being for the welfare of His devout adherents¹⁴²³. The Islamic religion has established laws, decrees, and prohibitions that clearly delineate permissible and impermissible actions. As per the tenets of Sharia, it is incumbent upon Muslims¹⁴²⁴ to adhere to Sharia's spiritual guidance irrespective of their place of residence, and individuals residing in regions where Islam is the dominant religion are obligated to comply with the regulations and limitations prescribed by Sharia law¹⁴²⁵. Sharia governs the dynamic relationships that arise

¹⁴¹⁶ The Prophet's Sunnah, The Second Source Of Islamic Legislation And Its Position In Terms Of Protest And Action. Usmani, Muhammad Taqi. "The authority of Sunnah" (2009) Kitab Bhavan.

¹⁴¹⁷ According To The Beliefs Of The Three Abrahamic Faiths (Christians, Jews, And Muslims), The One Who Made Everything And Rules Over Humanity: Definition Of God From The Cambridge Academic Content Dictionary © Cambridge University Press

¹⁴¹⁸ Allah Is The Islamic And Arabic Name For God: Definition Of Allah From The Cambridge Academic Content Dictionary © Cambridge University Press

¹⁴¹⁹ The Prophet's Sunnah, The Second Source Of Islamic Legislation And Its Position In Terms Of Protest And Action. Usmani, Muhammad Taqi. "The Authority of Sunnah" (2009) Kitab Bhavan.

¹⁴²⁰ Al-Mu'jam Al-Wasat Book Bab Al-Shin Modern Comprehensive Library, Page 479

¹⁴²¹ Muslims Hold Prophet Muhammad In High Esteem As The Most Significant Figure In Their Faith And Emulate His Conduct As A Model For Their Daily Conduct. Subsequent Muslim Generations Have Engaged In The Study Of The Historical Account Of His Life, Undergone Specialised Training To Attain Expertise In This Area, And Continued To Transmit His Reported Statements And Actions. On The Contrary, Envisioning The Potential For The Prophet Muhammad To Assume A Prompt And Poignant Role In The Lives Of Individual Adherents As They Progress In Their Religious Convictions Is Not A Complex Notion.

¹⁴²² Ishaq Bin Abdullah Al-Saadi Studies In The Excellence Of The Islamic Nation And The Position Of Orientalists On It Ministry Of Endowments And Islamic Affairs, Qatar Edition: First, 1434 AH - 2013 AD Number Of Parts: 2

¹⁴²³ Janin, Hunt, And André Kahlmeyer. "Islamic Law: The Sharia From Muhammad's Time To The Present" (2015) Mcfarland.

¹⁴²⁴ The Word Muslim Refers To An Individual, Whereas The Word Islam Refers To The Faith.

¹⁴²⁵ Gulam H. "The Application Of Shariah (Islamic Law) In Some Different Countries And Its Implications." (2016) Journal Syariah. ;24(2).

among diverse social and economic entities¹⁴²⁶. The Sharia law, an integral element of the governmental administrative system, functions as a structure for the classification, arrangement, and management of all facets of societal existence within the nation¹⁴²⁷.

The concepts of "Sharia" and "religion" are synonymous as they both pertain to divine mandates that are both of a religious and legal nature, being prescribed and documented in written form¹⁴²⁸. The set of laws that were communicated to the followers of God through the words of the Messengers are commonly referred to as Sharia¹⁴²⁹. The Islamic faith is characterised by the concept of surrendering oneself to the divine will, having faith in one's heart, and engaging in righteous deeds through one's actions¹⁴³⁰. The term "faith" can also be legally defined as the acceptance of the existence of a deity, coupled with the observance of God's commandments and avoidance of transgressions¹⁴³¹.

Religion is a highly impactful element of each individual's character, encompassing their cognitive processes, behaviours, and social interactions with both themselves and their immediate surroundings¹⁴³². The term "religion" has its origins in the Latin word "religio," which connotes a state of good faith¹⁴³³. This implies that an individual has embraced and subscribed to a particular system of beliefs or denomination and is committed to adhering to its tenets and relying on its guidance¹⁴³⁴. In the legal parlance of Islamic jurisprudence, religion is defined as an act of surrender and submission to the Almighty, with a focus on monotheism and exclusive devotion to God in speech, action, and creed, in accordance with the teachings

¹⁴²⁶ Thalib, Prawitra. "Distinction Of Characteristics Sharia And Fiqh On Islamic Law." (2018) *Yuridika* 33, No. 3: 439-452.

¹⁴²⁷ Latifa R, Hidayat K, Sodiq "A. Commentary On Place Spirituality: An Islamic Perspective." (2019) *Archive For The Psychology Of Religion*. Mar;41(1):38-42.

¹⁴²⁸ Purwanto, Muhammad Roy, Supriadi Supriadi, Sularno Sularno, And Fitriani Rokhimah. "The Implementation Of Maqasid Al-Sharia Values In Economic Transactions Of The Java Community." (2022) *Kne Social Sciences*: 120-129.

¹⁴²⁹ Esposito, John L. "The Straight Path" (1998) Oxford UP.

¹⁴³⁰ Ahmad, Farizah, Mazanah Binti Muhammad, And Amini Amir Abdullah. "Religion And Spirituality In Coping With Advanced Breast Cancer: Perspectives From Malaysian Muslim Women." (2011) *Journal Of Religion And Health* 50: 36-45.

¹⁴³¹ Al-Faruqi, Ismail Raji. "Al Tawhid: Its Implications On Thought And Life." (1992) No. 4. IIIT.

¹⁴³² Essoo, Nittin, And Sally Dibb. "Religious Influences On Shopping Behaviour: An Exploratory Study." (2004) *Journal Of Marketing Management* 20, No. 7-8: 683-712.

¹⁴³³ van Klinken, G., "Revolution, Religion, and Connectedness" Greetings from Australia. My name is Gerry van Klinken. The word "Religion" today means an institutionalized system of religious attitudes, beliefs, and practices. The Indonesian word "Agama" means something similar—an external set of doctrines.

¹⁴³⁴ Ibid.

of Prophet Muhammad as enshrined in the Sharia, pertaining to beliefs and legal rulings¹⁴³⁵. In relation to the concept of religion, it can be defined as a collection of principles and beliefs that a community or society follows in terms of their faith or conduct¹⁴³⁶. In conjunction with all other facets of existence, it is imperative to adhere to etiquette, legal statutes, directives, and restrictions¹⁴³⁷. In the context of secular discourse, the term "religion" is often regarded as an antiquated expression with historical roots. Religion has historically held a prominent position in the development of nations¹⁴³⁸. However, in contemporary times, secular nations have emerged victorious over religion with the assistance of scientific advancements and the accumulation of human knowledge¹⁴³⁹. Consequently, religion has become increasingly removed from social and political positions of power.

The primary origin of Sharia law

The origin of each rule's binding force can be traced to either human or divine establishment. The sources of law refer to the legal evidence utilised to make decisions and to which Sharia law refers when necessary¹⁴⁴⁰. In other words, it is the origin from which Sharia law derives its judgements. These sources are commonly cited during emergency situations or disasters¹⁴⁴¹. The sources under consideration are categorised into primary and secondary sources. The primary sources comprise of the holy Qur'an and the Sunnah, while the secondary sources consist of consensus and analogy¹⁴⁴². The primary sources in Islamic theology are commonly acknowledged to be the holy Qur'an and the Sunnah¹⁴⁴³.

¹⁴³⁵ Aziz, Azlisham Abdul, Mohd Nor Mamat, Daud Mohamed Salleh, Syarifah Fadylawaty Syed Abdullah, And Mohd Norazmi Nordin. "An Analysis Of Systematic Literature Review On The Development Of Islamic Oriented Instruments." (2021) Journal Of Contemporary Issues In Business And Government Vol 27, No. 1.

¹⁴³⁶ Al-Astewani, Amin. "To Open Or Close? COVID-19, Mosques And The Role Of Religious Authority Within The British Muslim Community: A Socio-Legal Analysis." (2020) Religions 12, No. 1: 11.

¹⁴³⁷ Ibid.

¹⁴³⁸ Vincent, Carol. "Civic Virtue And Values Teaching In A 'Post-Secular'world." (2018) Theory And Research In Education 16, No. 2: 226-243.

¹⁴³⁹ Ibid.

¹⁴⁴⁰ Gamal Moursi Badr, "Islamic Law: Its Relation To Other Legal Systems American" (1978) Journal Of Comparative Law 26, No. 2 Spring: 187-198

¹⁴⁴¹ Bhat SU. "Concept Of Ethics In Islam: A Conceptual Study In The Light Of Qur'an And Sunnah. Al-Qasemi" (2017) Journal Of Islamic Studies;2(1):145-54.

¹⁴⁴² Quran, I. "Where Did Islamic Law Come From?."

¹⁴⁴³ AS, Khan. "Some Scientific Facets Of Qur'an And Sunnah [Of The Prophet Muhammad, Peace Be Upon Him] In The Field Of Medicine." (1994): 7-10.

The Holy Qur'an

The Holy Qur'an is considered by Muslims as their fundamental governing document, providing a comprehensive educational programme for their daily existence¹⁴⁴⁴. The notion of a divine order safeguards against any potential deviation or distortion from its initial state¹⁴⁴⁵. The text in question is commonly recognised as a sacred scripture, having been disclosed to the Islamic prophet Muhammad through divine intervention¹⁴⁴⁶. The ultimate instalment of the Seal of the Messengers has been disclosed through its linguistic and contextual import¹⁴⁴⁷. The term "Mushaf" denotes the Islamic scripture known as the Qur'an, and it is commonly employed to denote the compilation that contains the written form of the Qur'anic text¹⁴⁴⁸. Muslims persistently engage in reading the Qur'an, reflecting on its teachings, and implementing them in their routine existence as they consider it to be the fundamental aspect of their faith¹⁴⁴⁹. Muslims hold the belief that the acquisition of knowledge related to the Qur'an, including the memorisation of its verses, is a crucial scientific discipline¹⁴⁵⁰. Muslims hold the Qur'an in exceptionally high regard due to its status as Islam's perpetual miracle¹⁴⁵¹. Consequently, individuals are required to undergo etiquette instruction, acquire knowledge through reading, and subsequently implement the learned principles¹⁴⁵². The Qur'anic language, including its individual words and letters, is highly valued for its auditory and visual qualities, as well as its physical manifestation on various surfaces¹⁴⁵³. The Qur'an was not

¹⁴⁴⁴ Khan, L. Ali. "The Qur'an And The Constitution" (2010) Tul. L. Rev. 85: 161.

¹⁴⁴⁵ Nasier, Gamal Abdel. "The Effect Of Interest In Al- Qur'an And Arabic Language Ability Towards The Achievement Of Tahfizh Al-Qur'an." (2018) Al-Hayat: Journal Of Islamic Education 2, No. 2: 240-254.

¹⁴⁴⁶ Farooq, Mohammad Omar. "The Farewell Sermon Of Prophet Muhammad: An Analytical Review." (2018) Islam And Civilizational Renewal 9, No. 3: 322-342.

¹⁴⁴⁷ Bobzin, Hartmut. "The Seal Of The Prophets": Towards An Understanding Of Muhammad'S Prophethood."(2009) In The Qur'an In Context, Pp. 565-584. Brill.

¹⁴⁴⁸ Harianto, Budi, And Syafril Syafril. "Summary Islamic Ethics In Business Management, Evidence In North Sumatra." (2022) Journal Of Management And Business Innovations 4, No. 2: 32-39.

¹⁴⁴⁹ Haddad, Yvonne Yazbeck. "Chapter 1. The Quest For Peace In Submission: Reflections On The Journey Of American Women Converts To Islam." (2006) In Women Embracing Islam: Gender And Conversion In The West, Pp. 17-47. University Of Texas Press.

¹⁴⁵⁰ Abukari, Abdulai. "Education Of Women In Islam: A Critical Islamic Interpretation Of The Quran." (2014) Religious Education 109, No. 1: 4-23.

¹⁴⁵¹ Shah, Syed Hyder Raza, Sehar Naveed, And Abdul Ghaffar Madani. "Motivation For Reading The Holy Qur'an With And Without Translation." (2022) International Journal Of Islamic Thought And Humanities 1, No. 2: 66-78.

¹⁴⁵² Aghaei, Sina. Review And Critique "The Opinions Of Commentators About The Scientific Miracle Solb And Taraeb"(2022) In The Holy Qur'an. Science And Religion Studies 12, No. 2.

¹⁴⁵³ Nasier, Gamal Abdel. "The Effect Of Interest In Al- Qur'an And Arabic Language Ability Towards The Achievement Of Tahfizh Al-Qur'an" (2018) Al-Hayat: Journal Of Islamic Education 2, No. 2: 240-254.

disclosed to the Prophet Muhammad in its entirety in a single instance, but rather, it was gradually revealed to him over a period of twenty-three years with the aim of fortifying his heart¹⁴⁵⁴. The segment of the Qur'an in possession of the individual is subsequently entrusted to Gabriel, and the Qur'an is retained in the memories of the Companions until their decision to document the Qur'an following the demise of the prophet Muhammad¹⁴⁵⁵.

The Qur'an was disclosed in both verbal and semantic forms in a lucid Arabic vernacular¹⁴⁵⁶. It was subsequently conveyed to adherents through a line of succession originating from a cohort of companions who received it from the Prophet Muhammad¹⁴⁵⁷. This chain of transmission comprised a multitude of individuals hailing from diverse regions, whose involvement in any form of wrongdoing is highly improbable owing to their vast numbers and geographical dispersion¹⁴⁵⁸. The Holy Qur'an possesses unique characteristics that set it apart from other literary works¹⁴⁵⁹. These features can be enumerated as follows: The Qur'an was disclosed in a unique Arabic dialect with clear semantics. It is believed that the consecutive approach is more beneficial in terms of ensuring certainty and conclusive knowledge¹⁴⁶⁰. It has been validated throughout all phases of collecting the Qur'an until it was received in its entirety without any alterations¹⁴⁶¹. A notable feature of the Qur'an is its derivation of the name " Qur'an " and its significance directly from the divine entity, rather than from the Prophet Muhammad, who served as the messenger of God. The Qur'an has remained unchanged since its initial revelation, despite the passage of time, the rise of civilizations, the advancement of technology, and the evolution of various modes of communication¹⁴⁶². Arab intellectuals have encountered a challenge in replicating it, as it surpasses rather than merely exceeds their capabilities. The

¹⁴⁵⁴ Mohammed Inaz, Ilyas Mohammed. "Introduction To The Methodologies For Study Of The Qur'an: Some Preliminary Observations" (2019).

¹⁴⁵⁵ Al Qur'an, Thekriat, Ziad Bataineh, Abdel-Hameed Al-Mistarehi, Abdulhakeem Okour, Othman Beni Yonis, Adi Khassawneh, Rana Abuawwad, And Anood Al Qura'an. "Quality Of Life Among Patients On Levothyroxine: A Cross-Sectional Study." (2020) *Annals Of Medicine And Surgery* 60 : 182-187.

¹⁴⁵⁶ Guellil, Imane, Houda Saâdane, Faical Azouaou, Billel Gueni, And Damien Nouvel. "Arabic Natural Language Processing: An Overview." (2021) *Journal Of King Saud University-Computer And Information Sciences* 33, No. 5: 497-507.

¹⁴⁵⁷ Faizal, P. R. M., A. A. M. Ridhwan, And A. W. Kalsom. "The Entrepreneurs Characteristic From Al-Quran And Al-Hadis." (2013) *International Journal Of Trade, Economics And Finance (IJTEF)*.

¹⁴⁵⁸ Zainol, Nur Zainatul Nadra, Latifah Abdul Majid, And Mohd Faizulamri Md Saad. "An Overview On Hermeneutics Method Application To The Qur'an By Muslim Thinkers." (2018) *International Journal Of Engineering And Technology* 7, No. 4.9: 167-70.

¹⁴⁵⁹ Turner, Colin. "Islam: The Basics." (2011) Routledge.

¹⁴⁶⁰ Waines, David. "An Introduction To Islam." (2003) Cambridge University Press.

¹⁴⁶¹ Tayyeh, Huda Kadhim, Mohammed Salih Mahdi, And AS Ahmed AL-Jumaili. "Novel Steganography Scheme Using Arabic Text Features In Holy Qur'an." (2019) *Int. J. Electr. Comput. Eng* 9, No. 3: 1910.

¹⁴⁶² Power, Bernie. "The Textual History Of The Qur'an." (2014) *ANZTLA Ejournal* 13: 19-25.

techniques employed for its depiction and expression are noteworthy and distinctive. The Qur'an exhibits a comprehensive and preventative nature, while also possessing a wealth of rhetorical elements¹⁴⁶³.

This assertion provides evidence for the widespread transmission of the Qur'an to diverse populations¹⁴⁶⁴. The Qur'an is regarded as the cornerstone of religion and a robust tether to God that individuals are instructed to adhere to¹⁴⁶⁵.

The Qur'an provides a framework of legal principles that underpin various facets of societal structures¹⁴⁶⁶. The components encompassed within this domain include the legal system, contracts, civil rights, families, criminal law, and security¹⁴⁶⁷. The Qur'an espouses a framework of justice that encompasses various principles, such as impartiality, equity, witness, parity, and divine sovereignty¹⁴⁶⁸. The Qur'an unequivocally prohibits the act of breaching a contract or pledge and emphasises the importance of fulfilling commitments and covenants as a means of upholding the sanctity of one's relationship with the divine¹⁴⁶⁹. This assertion holds validity not solely in the realm of personal affairs such as matrimony and its associated facets, but also in the domain of business dealings encompassing procurement, vending, financing, and analogous transactions¹⁴⁷⁰. Various entities such as individuals, groups, states, organizations, and corporations have the ability to engage in diverse forms of interactions with each other¹⁴⁷¹. This concept can be extended to encompass all aspects that require belief, including an individual's relationship with their divine deity¹⁴⁷². In the realm of civil rights, the

¹⁴⁶³ Tajabadi, Farzaneh, And Marzieh Pourmohammad. "The Usage Of Commissive Speech Act In The Qur'an." (2022) *Journal Of Interdisciplinary Qur'anic Studies* Vol 1, No. 2: 43-64.

¹⁴⁶⁴ Al-Fayad, Ali Kadhum Manhy. "The Hypocrites Features In The Holy Qur'an (An Analytical Study)." (2021) *Journal Of Imam Al-Kadhum University College* 5, No. 2.

¹⁴⁶⁵ Al Fārūqī, Lois. "Qur'an Reciters In Competition In Kuala Lumpur." (1987) *Ethnomusicolog*: 221-228.

¹⁴⁶⁶ Raza, Mohsin, Fouzia Batool, Sada Hussain Alvi, Farhad Ahmad Bhatti, Ghulam Safoora, And Ghous Uddin Khan. "Legal Status Of Surrogacy In Islam (A Critical Analysis In View Of Jurisprudence Ruling)." (2022) *Webology (ISSN: 1735-188X)* 19, No. 3.

¹⁴⁶⁷ Siddique, Babar Ali, M. Zahid, R. Rana, And M. Azeem. "Islamic Justice System With Special Reference To Human Rights." (2019) *Journal Of Social Sciences And Humanity Studies* 5, No. 5: 1-7.

¹⁴⁶⁸ Khan, Muhammad, Jung-Han Bae, Seok-Beom Choi, And Nag-Hyeon Han. "Good Faith Principles In Islamic Contract Law: A Comparative Study With Western Contract Law." (2019) *Journal Of International Trade & Commerce* 15, No. 6: 143-159.

¹⁴⁶⁹ Asman, Asman, Marilang Marilang, And Kurniati Kurniati. "Existence Of Marriage Agreements In Islam Development Studies In The Community Of Malay Border Indonesia-Malaysia." (2021) *Jurnal Ilmiah Al-Syir'ah* 19, No. 1: 16-29.

¹⁴⁷⁰ Saeed, Abdullah. "The Qur'an: An Introduction." (2008) Routledge.

¹⁴⁷¹ Lewis, Mervyn K. "13. Principles Of Islamic Corporate Governance." (2014) *Handbook On Islam And Economic Life*: 243.

¹⁴⁷² Oxford "The Qur'an." (2005) OUP Oxford.

Qur'an mandates the avoidance of usury, speculation, and contractual ambiguity¹⁴⁷³. Additionally, it emphasises the virtues of honesty, trustworthiness, humility, parental compassion, forgiveness, and gratitude¹⁴⁷⁴. Furthermore, it includes the expression of gratitude. The Qur'an places great emphasis on the societal institution of the family, highlighting the importance of showing respect towards it¹⁴⁷⁵. It asserts that the family serves as the foundation of society and plays a crucial role in maintaining its cohesion¹⁴⁷⁶. The Qur'an granted women a range of rights that were previously unknown to humanity¹⁴⁷⁷. The aforementioned rights encompass the proscription of the custom of regarding women as a form of inheritance and the act of subjecting women to enslavement. Offenses such as theft, adultery, and slander have the capacity to result in imprisonment as a penalty but may be subject to pardon under specific circumstances¹⁴⁷⁸. The Qur'an prioritises addressing concerns pertaining to safeguarding by emphasising the importance of alleviating anxieties and promoting harmony within the society¹⁴⁷⁹. Moreover, the text provided an exposition of the ethical principles governing security and societal stability. Subsequently, it delved into the ethical considerations surrounding warfare and the treatment of prisoners¹⁴⁸⁰.

The Sunnah

The term "Sunnah" encompasses all of the utterances, actions, and narrations that are attributed to the revered Islamic figure, Prophet Muhammad¹⁴⁸¹. In certain academic contexts, it is

¹⁴⁷³ Ibid.

¹⁴⁷⁴ Bin-Tahir, Saidna Zulfiqar, Muhammad Amri, Andi Mukarramah Nagauleng, Amirah Diniaty, And Ibnu Hajar. "The Social Media Use For Digital Natives: Parenting Model Of Muslim Cleric Families." (2019) International Journal Of Scientific & Technology Research 8, No. 11: 2871-2874.

¹⁴⁷⁵ Momtazeri, Zahra, Seyyed Mohammad Mousavi Bojnordi, And Seyyed Mohammad Sadeq Mousavi. "A Study On Reasons Of Confession In Qur'an And Civil Rights." (2020) Quarterly Sabzevaran Fadak 11, No. 44: 191-207.

¹⁴⁷⁶ Ahmad, Khurshid. "Family Life In Islam." (1974) Islamic Foundation.

¹⁴⁷⁷ Hasoomi, Tahereh. "Women's Religious Insight Using The Verses Of The Holy Qur'an On The Subject Of Women, Family And Marriage." (2022) Political Sociology Of Iran.

¹⁴⁷⁸ Khaerunisa, Farah Edhar. "Adultery In The Perspective Of Islamic Religious Law And Positive Law In The Indonesian Community." (2021) HUNafa: Jurnal Studia Islamika 18, No. 2: 158-174.

¹⁴⁷⁹ Sahibzada, Habib Elahi. "The Holy Prophet (SAW) As An Embodiment Of Peace—An Analysis Of Extracts From The Text Of Al- Qur'an And Sunnah." (2018) Rahat-UI-Quloob: 01-08.

¹⁴⁸⁰ Williams, Ryan J., And Alison Liebling. "Faith Provision, Institutional Power, And Meaning Among Muslim Prisoners In Two English High-Security Prisons." (2018) Finding Freedom In Confinement: The Role Of Religion In Prison Life: 269-291.

¹⁴⁸¹ Salleh, Norsaleha Mohd, Abur Hamdi Usman, Rosni Wazir, Lilly Suzana Hj Shamsu, And Nurul Ain Burhanuddin. "Living Sunnah Menurut Fazlur Rahman: Satu Sorotan Literatur Secara Sistemik: Living Sunnah According To Fazlur Rahman: A Systematic Literature Review." (2020) Al-Burhān: Journal Of Qur'an And Sunnah Studies 4, No. 1: 127-141.

alternatively denoted as the "path of life" or the "true path"¹⁴⁸²". The Sunnah is considered a fundamental component of divine revelation and is regarded as a primary source of guidance, alongside the Qur'an¹⁴⁸³. The prophetic Sunnah is linked to the Qur'an as it is regarded as a manifestation of the Qur'anic teachings in various contexts¹⁴⁸⁴. For example, it concurs with the teachings of the Qur'an while also placing limitations on its universality or disseminating it to a wider audience, whether through a personal connection or otherwise¹⁴⁸⁵. Furthermore, it is in concurrence with the teachings presented in the Qur'an¹⁴⁸⁶. The Prophetic Sunnah attained a significant level of importance due to the absence of a detailed mention of a particular law in the Almighty God's Book, which was found in the Sunnah of the Prophet¹⁴⁸⁷. The Prophetic Sunnah offers a comprehensive elucidation of various universal principles, including the procedures for purification and prayer, as well as the corresponding regulations associated with each of these rituals¹⁴⁸⁸. Muslims have historically regarded the Sunnah of the Prophet as a fundamental component of Islam, serving as a framework for establishing legal principles and their application¹⁴⁸⁹. As per the perspective of Muslim scholars, both contemporary and historical, an individual who disputes this notion and fails to acknowledge it as a valid argument has strayed from the trajectory that culminates in deliverance¹⁴⁹⁰. The Sunnah is widely acknowledged by Muslim scholars¹⁴⁹¹ as the secondary basis of Islamic jurisprudence

¹⁴⁸² Başaran, Serkan. "The Companions' Understanding Of Sunnah: The Example Of 'Abd Allāh Ibn Mas'ūd." (2018) *Ilahiyat Studies* 9, No. 1: 73-112.

¹⁴⁸³ Qazi, Tahir Masood, And Asma Zia. "The Objectives Of Protecting Forests In The Light Of Qur'an And Sunnah." (2019) *Abha'th* 4, No. 13: 102.

¹⁴⁸⁴ Fisher, Karen E., Salah Falioun, Eiad Yafi, And Khadijah S. Khan. "Co-Designing With The Iman In A Haram Digital World: Drawing On The Qur'an And Sunnah To Support People's Privacy And Information Practices." (2020) In *Islamichci, CHI 2020, Arab Islamic HCI Workshop*, Pp. 25-30.

¹⁴⁸⁵ Sahibzada, Habib Elahi. "The Holy Prophet (SAW) As An Embodiment Of Peace—An Analysis Of Extracts From The Text Of Al- Qur'an And Sunnah." (2018) *Rahat-Ul-Quloob*: 01-08.

¹⁴⁸⁶ Khan, Aqeel Ahmad, And Masood Nadeem. "ENGLISH-2 Development Of Islamic Counseling Protocol For Pakistani Muslim Adults To Manage Their Mental Health Problems." (2021) *Al-Aijaz Research Journal Of Islamic Studies & Humanities* 5, No. 1: 13-21.

¹⁴⁸⁷ Othman, Azam, Surayya Abu Bakar, And Ahmad Faizuddin. "Jama'ah And Collegial Model In Educational Institutions: Lessons And Principles Learned From Qur'an And Sunnah." (2018) *Al-Shajarah: Journal Of The International Institute Of Islamic Thought And Civilization (ISTAC)*: 99-116.

¹⁴⁸⁸ Samad, Telsy Fratama Dewi. "The Role Of Islamic Economic System In Tackling Various Economic Issues." (2021) *Maqrizi: Journal Of Economics And Islamic Economics* 1, No. 2: 14-23.

¹⁴⁸⁹ Jalal, Ismael Mohammed, And Fadhil Mahmood Qadir. "General Rules For Peace In The Sunnah: A Collection And Study." (2022) *Islamic Sciences Journal* 13, No. 4 Part 1.

¹⁴⁹⁰ Al-Rafdi, Saad Obaid. "Returning The Favor: Its Practices In The Sunnah And Portraits From The Lives Of The Companions Of The Prophet." (2021) *Journal Of Legal, Ethical And Regulatory Issues* 24: 1-12.

¹⁴⁹¹ Hassan, Rabie Ibrahim Mohamed, Shehata Hafez Mohamed El Sheikh, Abdul Ghani Bin Md Din, Abdelsattar Abdelwahab Ayoub, And Yousefa Baker El-Ebiary. "The Sunnah Of Leave (Abandoning): Its Concept, Its Regulations, And Its Authenticity." (2021) *Elementary Education Online* 20, No. 5: 6235-6235.

following the Qur'an¹⁴⁹². The Sunnah comprises the verbal and procedural aspects of Islamic tradition, and serves as a complement to the Qur'anic text, encompassing both its universal and unconditional aspects¹⁴⁹³. Scholars posit that the Qur'an and the Sunnah exhibit a complementary relationship as they are both considered divine revelations from God¹⁴⁹⁴. Moreover, the Sunnah constitutes a manifestation of the Qur'an in its entirety, encompassing both universal and unconditional aspects¹⁴⁹⁵.

The Sunnah is comprised of three distinct elements, namely "the speech of the prophet," "the act of the prophet," and "the practise tacitly accepted by the prophet."¹⁴⁹⁶

The verbal communication of the prophet encompasses the prohibitions, orders, and news that constitute a legal ruling¹⁴⁹⁷. The corpus of the Prophet's verbal communication encompasses all of the utterances conveyed by the Messenger that possess the legal status of legislation, which were delivered on diverse occasions¹⁴⁹⁸. The sayings of the Prophet hold significance as a source of legislation, provided they are utilised to elucidate legal rulings or legislation¹⁴⁹⁹. However, if the Prophet's statements pertain to worldly matters that are not germane to legislation and lack specificity in that regard, such as pollination of date palms, they do not qualify as a source of legislation and should not be employed as such¹⁵⁰⁰.

¹⁴⁹² Nasution1a, Khoiruddin, Noryamin Aini, And Muhammad Helmy Hakim. "Comply With The Marriage Act Same With Comply With The Qur'an And Sunnah Of Prophet Muhammad PBUH." (2020).

¹⁴⁹³ Thalib, Prawitra, Faizal Kurniawan, And Mohamad Nur Kholiq. "The Application Of Qur'anic Interpretation, Of Sunnah And Ijtihad As The Source Of Islamic Law." (2020) *Rechtidee Jurnal Hukum* 15, No. 2: 193-206.

¹⁴⁹⁴ Mohamed Fathy, Mohamed Abdelgelil, Hassan Ahmad Fauzi, And Hassan Azizul. "The Relationship Of Qur'anic Qiraat And Sunnah." (2020) *TEST Engineering & Management* 83, No. 1: 2997-3000.

¹⁴⁹⁵ Maleki, Mohammad, Zahra Ebne Ali, And Zahra Kalhor. "The Relationship Between Ethics And Mysticism." (2018) *Journal Of Islamic Denominations* 5, No. 9: 57-68.

¹⁴⁹⁶ Hasin, Hanaffie. "Disagreement On The Rules Of Proposition Related To Sunnah Al Nabawiah And Its Implementation And Effect In Sunnah Fiqh: A Comparative Study Between The Al Syafii And Al Hanbali Schools." (2021) *Jurnal Al-Sirat* 2, No. 19: 215-248.

¹⁴⁹⁷ Aqili, Farida Mohammed Alli, And Fatma Ibrahim Ali Radwan. "Orientalists On The Authenticity Of Sunnah: A Descriptive And Digital Critical Study." (2020) *Palarch's Journal Of Archaeology Of Egypt/Egyptology* 17, No. 9: 3986-3998.

¹⁴⁹⁸ Thalib, Prawitra, Faizal Kurniawan, And Mohamad Nur Kholiq. "The Application Of Qur'anic Interpretation, Of Sunnah And Ijtihad As The Source Of Islamic Law." (2020) *Rechtidee Jurnal Hukum* 15, No. 2: 193-206.

¹⁴⁹⁹ Kamali, Muhammad Hashim. "Source, Nature And Objectives Of Shari'ah." (1989) *Islamic Quarterly* 33, No. 4: 215.

¹⁵⁰⁰ Kutluay, İbrahim. "The Relationship Between The Sunnah And The Waḥy And Its Effects On The Authority Of Sunnah According To Some Contemporary Scholars." (2019) *Dokuz Eylül Üniversitesi İlahiyat Fakültesi Dergisi* 49: 7-47.

The actions performed by the Messenger, encompassing the procedures for prayer and the execution of the Hajj pilgrimage¹⁵⁰¹, are commonly denoted as the prophetic practise¹⁵⁰². The actions of consuming food, beverages, and engaging in rest do not impose any legal obligations on individuals and are not regarded as a legal code¹⁵⁰³. This represents an objective to strive towards, however, it does not impose any obligations on individuals. Additional facets of his existence do not comprise statutory provisions.

The accepted practise by the prophet, which involved his silence regarding the denial of a word or deed in his possession, implies permissibility due to his tacit approval¹⁵⁰⁴.

The classification of Sunnah terminology is based on the transmission order from the Messenger to his companions and followers, and is divided into three categories: Mutawatir¹⁵⁰⁵, denoting sequential transmission, Famous¹⁵⁰⁶, and Ahad¹⁵⁰⁷, denoting singular transmission.

The mutawatir Sunnah refers to a type of narration that involves three or more narrators, rendering it highly unlikely for them to collude in perpetrating a fraudulent account¹⁵⁰⁸. The Arabic language's tawatur language can be understood as a sequence of two elements. Specifically, it pertains to the report of a group of individuals whose cooperation renders falsehood impossible¹⁵⁰⁹. The aforementioned statement pertains to the concept of mutawatir, wherein the narrators utilised varying word choices while maintaining a comparable lexicon¹⁵¹⁰.

¹⁵⁰¹ The Act Of Performing The Hajj Involves Going On A Pilgrimage To Makkah Al Mukarramah In The Kingdom Of Saudi Arabia. The Hajj Is Defined As The Act Of Travelling To A Particular Location At A Particular Time With The Goal Of Carrying Out The Hajj. Aldossari, Mae, Abdullah Aljoudi, and David Celentano. "Health issues in the Hajj pilgrimage: a literature review." (2019) *East Mediterr Health J* 25, no. 10: 744-753.

¹⁵⁰² Mudawam, Syafaul. "The Uṣūl Al-Fiqh Approach On The Understanding Of Islamic Law In Contemporary Era: Source And Contextualization." (2021) *Asy-Syir'ah: Jurnal Ilmu Syari'ah Dan Hukum* 55, No. 2: 315-334.

¹⁵⁰³ Khan, Nasir Ali, And Iqra Maheen. "Analyzing Communication And Presentation Skills Of Holy Prophet (PBUH) In The Light Of Qur'ān And Sunnah: A Linguistic Survey." (2020) *Iḥyā' al'ulūm-Journal Of Department Of Qur'an O Sunnah* 20, No. 01.

¹⁵⁰⁴ The Book Of Fundamentals Of Da'wah - Al-Madinah University P254

¹⁵⁰⁵ Shammam, Fatima Kazem. "Hadeeth Mutawatir (Authentic Hadith)." (2020) *Multicultural Education* 6, No. 3.

¹⁵⁰⁶ Syafi'i, Imam, And Subairi Subairi. "Epistemology Of Hadith In Syafi'iyah And It's Effect In Istimbāt Al-Ahkām." (2022) *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi, Dan Keagamaan* 9, No. 1.

¹⁵⁰⁷ Khan, Aftab. "The Last Book Or Books-4 The Hadith And Sunnah." (2020) *Defence Journal* 22, No. 12: 31.

¹⁵⁰⁸ Supriyadi, Tedi, J. Julia, Ani Nur Aeni, And Elan Sumarna. "Action Research In Hadith Literacy: A Reflection Of Hadith Learning In The Digital Age." (2020) *International Journal Of Learning, Teaching And Educational Research* 19, No. 5: 99-124.

¹⁵⁰⁹ Mohamed Fathy, Mohamed Abdelgelil, Hassan Ahmad Fauzi, And Hassan Azizul. "The Relationship Of Quranic Qiraat And Sunnah." (2020) *TEST Engineering & Management* 83, No. 1: 2997-3000.

¹⁵¹⁰ Ibid.

In contrast, the tawatur is an oral tradition that entails the unanimous agreement of narrators regarding the verbatim transmission of its contents¹⁵¹¹. The Mutawatir al-Sunnah is conclusive evidence that affirms the necessary and indisputable knowledge, along with the potency of the Qur'anic supplication, and it is imperative to adhere to it¹⁵¹². The evidence presented, namely the chain of transmission, leads to a conclusive conclusion¹⁵¹³.

The widely recognised Sunnah, referred to as the renowned mashowr in Arabic, was not consistently observed¹⁵¹⁴. The Sunnah was transmitted by the Messenger based on the testimony of several companions who did not attain the level of tawatur (i.e., one or two) ¹⁵¹⁵. Subsequently, it underwent a significant expansion during the era of the Companions, their successors, and the followers of their successors. This statement pertains to the regulations of the Prophet's Sunnah, encompassing both substantiated evidence and speculative elements¹⁵¹⁶.

The singular term 'Ahad' in the Arabic language holds significant importance as it surpasses the threshold of mutawatir. Although it may not be the most widely recognised Sunna, it is based on a genuine belief that it is accurate and imperative to adhere to¹⁵¹⁷. However, there is variation in the degree of involvement that scholars have with it. The term "Sunnah" refers to the collection of practises and sayings that were transmitted from the Prophet Ahad and subsequently passed down through the generations of his followers¹⁵¹⁸. These practises and sayings were transmitted through a limited number of sources, known as the mutawatir limit, and comprise a vast majority of the hadiths¹⁵¹⁹. The prevailing view among legal experts is that the presumption of authenticity is upheld, although there are varying criteria used to support

¹⁵¹¹ Ibid.

¹⁵¹² Ibid.

¹⁵¹³ Eshmatovich, Kholmurotov Asadulla. "A Comparative Analysis Of The Study Of Hadith Science In The Hadith Schools Of Mawarounnahr And Al-Azhar." (2021) *Texas Journal Of Multidisciplinary Studies* 1, No. 1: 178-180.

¹⁵¹⁴ Shammam, Fatima Kazem. "Hadeeth Mutawatir (Authentic Hadith)" (2020) *Multicultural Education* 6, No. 3.

¹⁵¹⁵ Abdullah, Muhammad. "A Pedagogical Framework For Teacher Discourse And Practice In Islamic Schools." (2018) In *Islamic Schooling In The West*, Pp. 195-226. Palgrave Macmillan, Cham.

¹⁵¹⁶ Tottoli, Roberto. "Gautier HA Juynboll, Hadith And Hadith-Related Technical Terminology: Khabar In Western Studies And Early Islamic Literature." (2020) In *Islam At 250*, Pp. 325-354. Brill.

¹⁵¹⁷ Khan, Aftab. "The Last Book Or Books-4 The Hadith And Sunnah." (2020) *Defence Journal* 22, No. 12: 31.

¹⁵¹⁸ Hureri, Muhammad Akram. "Critical Analysis Of Waheed Al-Zaman's Methodology In His Book "Asrār Al-Lughā" To Write "Ghareeb Al-Hadith"." (2019) *HADIS* 9, No. 18: 224-234.

¹⁵¹⁹ Padela, Aasim I. "The Essential Dimensions Of Health According To The Maqasid Al-Shari'ah Frameworks Of Abu Ishaq Al-Shatibi And Jamal-Al-Din- 'Atiyah." (2018) *IJUM Medical Journal Malaysia* 17, No. 1.

this and to draw inferences about judgements. As a result, the conclusions reached may be either presumptive or conclusive¹⁵²⁰.

The Sunnah is the term used to refer to the hadith that were transmitted by the Prophet. The aforementioned hadith can be classified into four distinct categories, namely: authentic, good, weak, and fabricated¹⁵²¹. In the event that there are no inconsistencies or other factors that may be construed as problematic in the transmission chain of a hadith, its transmission lines are deemed to be credible¹⁵²². This particular hadith has achieved the status of authenticity in its own right and does not necessitate supplementary corroboration from external sources¹⁵²³. Irrespective of the quantity of narrators present, an authentic hadith serves as a persuasive discourse that motivates individuals towards undertaking certain actions¹⁵²⁴. The concept of a "good hadith" pertains to a narration whose chain of transmission is linked to the transmission of justice, albeit with a relatively lower degree of accuracy¹⁵²⁵. Such a narration does not achieve the ideal level of narration that is free from any anomalies or unnecessary rationalisations. It is imperative to provide a fitting response when confronted with a compelling hadith¹⁵²⁶. In contrast, a hadith that is deemed weak may manifest in different forms, including but not limited to being problematic or peculiar¹⁵²⁷. The term "deficient hadith" pertains to a narration attributed to the Prophet Muhammad that lacks one or more of the criteria that qualify a hadith as authentic or reliable¹⁵²⁸. This type of hadith can manifest in diverse manners. If an inaccurate statement is ascribed to the Prophet, his Companions, or his Followers, it is considered a falsified hadith, regardless of whether it originated from a proverb or an illustration¹⁵²⁹.

¹⁵²⁰ Khan, Aftab. "The Last Book Or Books-4 The Hadith And Sunnah." (2020) Defence Journal 22, No. 12: 31.

¹⁵²¹ Lee, Robert D. "Overcoming Tradition And Modernity: The Search For Islamic Authenticity" (2018) Routledge.

¹⁵²² Supriyadi, Tedi, J. Julia, Ani Nur Aeni, And Elan Sumarna. "Action Research In Hadith Literacy: A Reflection Of Hadith Learning In The Digital Age." (2020) International Journal Of Learning, Teaching And Educational Research 19, No. 5: 99-124.

¹⁵²³ Mohamed, Emad, And Raheem Sarwar. "Linguistic Features Evaluation For Hadith Authenticity Through Automatic Machine Learning." (2022) Digital Scholarship In The Humanities 37, No. 3: 830-843.

¹⁵²⁴ Usmani, Muhammad Taqi. "The Authority Of Sunnah." (2009) Kitab Bhavan.

¹⁵²⁵ Al-Samarraie, Bakir Mahmood Alaw Mahdi, And Taha Khaled Mohamed Arab. "The Impact Of The Sunnah On Clarifying The Perspectives Of Believers Towards Their Prophets." (2022) Journal Of Tikrit University For The Humanities 29, No. (2022) (2) العدد (7) الجزء.

¹⁵²⁶ Hamdeh, Emad. "Salafism And Traditionalism: Scholarly Authority In Modern Islam." (2021) Cambridge University Press.

¹⁵²⁷ Kamali, M. H. "MEGA LECTURE." (1991).

¹⁵²⁸ Khan, Aftab. "The Last Book Or Books-4 The Hadith And Sunnah." (2020) Defence Journal 22, No. 12: 31.

¹⁵²⁹ Muhammad Bin Saleh Bin Muhammad Al-Uthaymeen Publisher: Library Of Science, Cairo Edition: First, 1415 AH - 1994 AD Number Of Parts: 1, P9.

The significance of the Sunnah in the contents of the Qur'an

The authenticity of the Prophet's Sunnah and its applicability as evidence for legal rulings and as a fundamental source of Islamic jurisprudence that must be adhered to for its validity is a matter that is widely accepted without dispute¹⁵³⁰. The Prophetic Sunnah holds a position as a source of legislation, albeit secondary to the Qur'an¹⁵³¹. The reason for this is that the Qur'an serves as the fundamental basis of Sharia Law and Islamic jurisprudence¹⁵³². The conscientious individual is engaged in a quest to locate the answer to a particular enquiry within the text of the Qur'an¹⁵³³. The Prophetic Sunnah occupies a crucial place in Islamic jurisprudence¹⁵³⁴. The Prophetic Sunnah serves to elucidate the Holy Qur'an and explicate its uncertainties¹⁵³⁵. While the Qur'an establishes overarching principles and guidelines for legislation and jurisprudence, the Prophetic Sunnah is dedicated to elaborating upon these principles, elucidating their foundations, and distinguishing particulars from universals¹⁵³⁶. To put it differently, the Prophetic Sunnah has focused on elucidating the Qur'anic uncertainties¹⁵³⁷. Hence, it is imperative to incorporate the Sunnah in conjunction with the Sacred Qur'an to fully realise the potential of religion, as the Shariah in isolation cannot attain its maximum efficacy¹⁵³⁸. Due to the presence of both ambiguous and problematic texts in the Qur'an, which require clarification and interpretation, it is not feasible to rely solely on the Qur'an for a comprehensive

¹⁵³⁰ Aziz, Azniwati Abdul, Mohamed Akhiruddin Ibrahim, Mohammad Hikmat Shaker, And Azlina Mohamed Nor. "Teaching Technique Of Islamic Studies In Higher Learning Institutions For Non-Arabic Speakers: Experience Of Faculty Of Qur'anic And Sunnah Studies And Tamhidi Centre, Universiti Sains Islam Malaysia." (2016) Universal Journal Of Educational Research 4, No. 4: 755-760.

¹⁵³¹ Marafi, Najebah. "The Intertwined Conflict: The Difference Between Culture And Religion." (2012) Xlibris Corporation.

¹⁵³² Agbaje, Rafiu, Chek Zaini Hassan, Norlelawati Arifin, And Asma Abdul Rahman. "Sensory Preference And Mineral Contents Of Cereal Bars Made From Glutinous Rice Flakes And Sunnah Foods." (2014) IOSR Journal Of Environmental Science, Toxicology And Food Technology 8, No. 12: 26-31.

¹⁵³³ Duderija, Adis. "Toward A Methodology Of Understanding The Nature And Scope Of The Concept Of Sunnah." (2007) Arab LQ 21: 269.

¹⁵³⁴ Al-Qaradawi, Yusuf. "Approaching The Sunnah: Comprehension And Controversy." (2007) International Institute Of Islamic Thought (IIIT).

¹⁵³⁵ Khan, Muhammad Rasool, Aatur Rahman, And Najm Ul Hasan. "The Prophetic Physiognomy In The Implementation Of Sharia Commandments In The Light Of Qur'an And Sunnah (A Research Analysis): الفراسة النبوية في تنفيذ الأحكام الشرعية في ضوء القرآن و السنة دراسة تحليلية." Acta-Islamica 9, No. 1 (2021): 201-218.

¹⁵³⁶ Rafique, Muhammad Omer. "Analysis Of Legal Stratagems Cases In The Quran And Sunnah." (2021) Jurnal Al-Turath; Vol 6, No. 2.

¹⁵³⁷ Rahman, Fazlur. "Sunnah And Hadith." (1962) Islamic Studies 1, No. 2 (1962): 1-36.

¹⁵³⁸ Mohamed Fathy, Mohamed Abdelgelil. "العلاقة بين المقاصد الشرعية والاجتهاد في ضوء القرآن والسنة." The Relationship Between The Purposes Of Sharia And Juristic Deduction In View Of The Qur'an And Sunnah." (2019) Journal Of Islamic Studies And Thought For Specialized Researches 5, No. 1: 124-140.

understanding of Sharia and its associated details and rulings¹⁵³⁹. The presence of both broad and ambiguous passages requiring elucidation, as well as challenging passages necessitating interpretation, can be attributed to the Qur'an¹⁵⁴⁰. The Sunnah, which refers to the actions and sayings of the Prophet, is considered essential for the effective implementation of the precepts outlined in the Qur'an¹⁵⁴¹. The text asserts that the legal verdicts derived from the Sunnah of the Prophet are essentially derived from and rooted in the Qur'anic sources, as God has referred to them in His Book¹⁵⁴². Thus, adhering to these verdicts is tantamount to adhering to the Qur'an, while disregarding them is equivalent to disregarding the Qur'an¹⁵⁴³. The reason for this is that the individuals in question were referenced in the sacred text of God.

Consensus

The third primary basis of Islamic law is consensus, which is derived from the Qur'an and the Sunnah of the Prophet¹⁵⁴⁴. Consensus refers to the collective agreement and resolute decision to undertake a specific course of action¹⁵⁴⁵. The concept of consensus in Islam refers to the gathering of learned scholars to engage in discourse regarding a particular matter, and subsequently reaching a unanimous decision on the issue subsequent to the passing of the Prophet¹⁵⁴⁶. Given the circumstances, it is unsuitable for consensus to arise from the populace at large; instead, it should be derived from individuals possessing a thorough comprehension of Islamic theology and Sharia law¹⁵⁴⁷. The consensus is grounded on Islamic principles of logic, law, custom, and language, and it retains its validity even in the post-Messenger era¹⁵⁴⁸.

¹⁵³⁹ ÖZŞENEL, Mehmet. "Al-Sarakhsî S View Of Hadith And Sunnah With Reference To His Usûl Al-Sarakhsî." *Al-Sarakhsî, Usul Al-Sarakhsî, Methodology Of Islamic Law, Hadith, Sunnah*. 33.

¹⁵⁴⁰ Vaid, Mobeen. "The Study Quran." (2015) *Islamic Sciences* 13, No. 2: 105.

¹⁵⁴¹ *Ibid.*

¹⁵⁴² Oxford "The Qur'an" (2005) OUP Oxford.

¹⁵⁴³ Razvi, N. A. S. I. R. A. "Saudi Arabia Is A Sovereign Arab Islamic State With Islam As Its Religion. The Law Is Based On The Holy Qur'an And Sunnah (Sharia Law). The Qur'an Itself Is Considered The Constitution Of The Country And Provides Ethical Values And Guidance. However, A Basic System Of Government That Stipulated The Government's Rights And Responsibilities' Was Introduced In 1993. The Saudi Kingdom Is One Of The Most Obstinate Systems In The World Where" Opposition Movements Are."

¹⁵⁴⁴ Reinhart, A. Kevin. "Islamic Law As Islamic Ethics." (1983) *The Journal Of Religious Ethics*: 186-203.

¹⁵⁴⁵ Hourani, George F. "The Basis Of Authority Of Consensus In Sunnite Islam." (1964) *Studia Islamica* 21: 13-60.

¹⁵⁴⁶ Ansari, Zafar Ishaq. "Islamic Juristic Terminology Before Şāfi'ī: A Semantic Analysis With Special Reference To Kūfa." (1972) *Arabica* 19, No. 3: 255-300.

¹⁵⁴⁷ Ahmed, Abdel-Rahman Yousri. "Methodological Approach To Islamic Economics: Its Philosophy, Theoretical Construction And Applicability." (2002) *Theoretical Foundations Of Islamic Economics*: 20.

¹⁵⁴⁸ Sharif, Adnan. "Organ Donation And Islam—Challenges And Opportunities." (2012) *Transplantation* 94, No. 5: 442-446.

Furthermore, there exists a lack of consensus regarding issues governed by the Qur'an and the Sunnah of the Prophet¹⁵⁴⁹. The concept of consensus extends beyond the historical era of the Messenger and is not restricted solely to the Companions or Successors¹⁵⁵⁰. Henceforth, the notion of consensus connotes the involvement of individuals possessing legal proficiency, wherein their engagement entails verbal and behavioural expressions, or the implicit indication of their agreement or abstention¹⁵⁵¹. Individuals who possess a comprehensive understanding of Sharia and are capable of deducing legal rulings based on their knowledge¹⁵⁵². Throughout the course of the Prophet's life, a consensus was not reached. Islamic religious scholars are providing their perspective on a situation that lacks a conclusive ruling under Sharia law¹⁵⁵³. In cases where there is a lack of legal guidance from the Qur'an and the Sunnah of the Prophet, the consensus of the community is sought for resolution¹⁵⁵⁴.

The concept of consensus can be classified into two distinct categories¹⁵⁵⁵: definitive and speculative¹⁵⁵⁶. The definitive outcome refers to the necessary occurrence resulting from the actions of a nation¹⁵⁵⁷. The term "speculative" refers to information that is inferred through the process of tracking and extrapolation¹⁵⁵⁸. The conditions for consensus: Consensus is subject to certain conditions, namely, it must be established through a rigorous process of verification, either by virtue of its widespread acceptance among scholars or by means of its transmission through a reliable and knowledgeable source¹⁵⁵⁹. And it should not be preceded by a stable

¹⁵⁴⁹ Lewis, Mervyn K. "Principles Of Islamic Corporate Governance." (2014) In Handbook On Islam And Economic Life. Edward Elgar Publishing.

¹⁵⁵⁰ Hodge, David R., And Aneesah Nadir. "Moving Toward Culturally Competent Practice With Muslims: Modifying Cognitive Therapy With Islamic Tenets" (2008) Social Work 53, No. 1: 31-41.

¹⁵⁵¹ El-Gamal, Mahmoud A. "Islamic Finance: Law, Economics, And Practice" (2006) Cambridge University Press.

¹⁵⁵² Khan, Feisal. "How 'Islamic' is Islamic Banking?." (2010) Journal Of Economic Behavior & Organization 76, No. 3: 805-820.

¹⁵⁵³ Zysow, Aron. "The Economy Of Certainty: An Introduction To The Typology Of Islamic Legal Theory." (2014) Vol. 2. ISD LLC.

¹⁵⁵⁴ Masud, Muhammad Khalid. "Ikhtilaf Al-Fuqaha: Diversity In Fiqh As A Social Construction." (2009) Wanted: Equality And Justice In The Muslim Family: 65-93.

¹⁵⁵⁵ Shabana, Ayman. "Foundations Of The Consensus Against Surrogacy Arrangements In Islamic Law." (2012) Islamic Law And Society 22, No. 1-2: 82-113.

¹⁵⁵⁶ MUAFI, Muafi, Erlina Diamastuti, And Argo Pambudi. "Service Innovation Strategic Consensus: A Lesson From The Islamic Banking Industry In Indonesia." (2020) The Journal Of Asian Finance, Economics And Business 7, No. 11: 401-411.

¹⁵⁵⁷ Ali, Abdullah Bin Hamid. "Scholarly Consensus: Ijma ': Between Use And Misuse." (2010) Journal Of Islamic Law And Culture 12, No. 2: 92-113.

¹⁵⁵⁸ Soğukoğlu, Fehmi. "The Possibility Of Classifying The Subjects Of Aqīdah With Regard To Certainty From The Perspective Of Ahl Al-Sunnah." (2023).

¹⁵⁵⁹ Borna, Ali Muhammad, And Azam Hamedani. "Different Types Of Divorces And Their Conditions From The View Points Of Islamic Doctrines."

disagreement. In the absence of a preceding agreement, there is a lack of consensus¹⁵⁶⁰. The validity of proverbs and aphorisms persists despite the mortality of their originators¹⁵⁶¹. The achievement of consensus does not entail the elimination of prior disagreement, but rather serves as a means of averting the emergence of future disagreement¹⁵⁶².

Analogy

The fourth pillar of Islamic law is analogy, which is derived from the Qur'an, the Sunnah, and consensus, the first three pillars. Analogy connotes both reverence and parity as a clear consequence.

The term "analogy¹⁵⁶³" refers to a legal concept wherein a ruling is made in a case that was not specifically requested but is based on the same principles as a previous ruling that was overturned¹⁵⁶⁴. The subject matter addressed in this appendix pertains to the legal concept of analogy, whereby a text is not deemed necessary and is intended to be appended to the measure¹⁵⁶⁵. The ruling contained within the measure's text is referred to as the original ruling, while the issue related to the attachment of the text is known as the branch. The rationale for the enforcement of a regulation is commonly denoted as both the measure and the justification¹⁵⁶⁶.

For instance, in cases when something must be decided based on the law but has never been explored in length in other sources, judges may employ analogy, reasoning, and precedent case

¹⁵⁶⁰ Naeem, Muhammad. "Developing The Antecedents Of Social Influence For Internet Banking Adoption Through Social Networking Platforms: Evidence From Conventional And Islamic Banks." (2020) *Asia Pacific Journal Of Marketing And Logistics* 33, No. 1: 185-204.

¹⁵⁶¹ Sharif, Mian Mohammad. "A History Of Muslim Philosophy." Wiesbaden: Otto Harrosowitz (1960).

¹⁵⁶² Hassan, Dr. "Globalized World And The Facilitative Role Of Modern Media And Sources Of Communication In The Process Of Ijtihad & Ijma" *عملية الاجتهاد ومصادر الاتصال في عمليّة الاجتهاد والحديث في وسائل الإعلام الحديثة ومصادر الاتصال في عملية الاجتهاد والإجماع*. Available At SSRN 3622466 (2019).

¹⁵⁶³ Murata, Sachiko. *The Tao Of Islam: A Sourcebook On Gender Relationships In Islamic Thought*. Suny Press, 1992.

¹⁵⁶⁴ Wegner, Judith Romney. "Islamic And Talmudic Jurisprudence: The Four Roots Of Islamic Law And Their Talmudic Counterparts." (1982) *The American Journal Of Legal History* 26, No. 1: 25-71.

¹⁵⁶⁵ Sowa, John F., And Arun K. Majumdar. "Analogical Reasoning." (2003) In *International Conference On Conceptual Structures*, Pp. 16-36. Springer, Berlin, Heidelberg.

¹⁵⁶⁶ Hammad, Nazih. "Compensation For An Obligation To Sell Currency In The Future (Hedging)." (2006) *Chi. J. Int'l L.* 7: 521.

law to create new case law¹⁵⁶⁷. This phenomenon may arise when a decision needs to be rendered on a subject matter that has not been comprehensively addressed in existing literature¹⁵⁶⁸. This assertion is generally valid when a comprehensive theoretical framework can be employed to elucidate current occurrences or personal encounters¹⁵⁶⁹. Islamic scholars have interpreted the Prophet Muhammad's instruction to "do not harm yourselves or others" as a prohibition on smoking, following the findings of contemporary scientific research which have established the detrimental effects of tobacco use on human health¹⁵⁷⁰. The jurist has the ability to obtain norms of interpretation from various presumptions and principles, including but not limited to preference, unrestricted interest, the presumption of continuity, and legal maxims, in addition to the primary sources¹⁵⁷¹. In this subject, both hermeneutic and deductive principles are viewed as being of the utmost importance.

Muslim scholars may sometimes utilise the technique of analogy to substantiate their concepts¹⁵⁷². This phenomenon can be attributed to the constraints inherent in the texts of revelation, as well as the recurring nature of the events described therein¹⁵⁷³. Analogy is widely recognised as a valid form of evidence in Islamic jurisprudence and is regarded as one of the sources of rulings by numerous experts in the field¹⁵⁷⁴. The prevailing consensus among scholars is that analogy is a valid and viable approach.

Islamic Jurisprudence (Fiqh)

¹⁵⁶⁷ Rahman, Mohammad Mushfequr. "Everything About The Shariah Law" (2020).

¹⁵⁶⁸ El-Rouayheb, Khaled "Theology And Logic"(2016) Oxford University Press.

¹⁵⁶⁹ El Azayem, Gamal Abou, And Zari Hedayat-Diba. "The Psychological Aspects Of Islam: Basic Principles Of Islam And Their Psychological Corollary." (1994) The International Journal For The Psychology Of Religion 4, No. 1: 41-50.

¹⁵⁷⁰ Martínez, Cristina, Carlos Méndez, María Sánchez, And José María Martínez-Sánchez. "Attitudes Of Students Of A Health Sciences University Towards The Extension Of Smoke-Free Policies At The University Campuses Of Barcelona (Spain)." (2017) Gaceta Sanitaria 31: 132-138.

¹⁵⁷¹ Hassan, Dr' "قياس بطور اسلوب اجتهاد ايک جائزہ (قياس طريقة الاجتهاد: نظرة عامة)" (2020) "العروج مجله تحقيق-جلد 4 Ijtihad.

¹⁵⁷² Babgi, Amani. "Legal Issues In End-Of-Life Care: Perspectives From Saudi Arabia And United States." (2009) American Journal Of Hospice And Palliative Medicine® 26, No. 2: 119-127.

¹⁵⁷³ Alatas, Syed Farid. "Reflections On The Idea Of Islamic Social Science." (1987) Alatas, SF. Reflections On The Idea Of Islamic Social Science. Comparative Civilizations Review (17) : 60-86.

¹⁵⁷⁴ Riaz, Umair, Musafar Khan, And Naimat Khan. "An Islamic Banking Perspective On Consumers' Perception In Pakistan." (2017) Qualitative Research In Financial Markets.

The study and analysis of the conduct of devout Muslims who strive to adhere to legal regulations is the focal point and extent of Islamic jurisprudence, commonly referred to as Fiqh (the English equivalent of Islamic law)¹⁵⁷⁵. The subject of investigation pertains to the pragmatic legal decisions that are applicable to the actions of responsible individuals in all aspects of their daily existence¹⁵⁷⁶. The term "jurisprudence" denotes the capacity to understand and interpret the intended meaning of a given communication¹⁵⁷⁷. The term "Fiqh" in Arabic refers to the comprehension of practical legal verdicts that have been established through extensive evidence¹⁵⁷⁸. This term is also utilised to denote Islamic jurisprudence¹⁵⁷⁹. Fiqh refers to the comprehension of practical legal rulings that have been established¹⁵⁸⁰. Jurisprudence is a field of study that focuses on the examination of legal judgements¹⁵⁸¹. Certain judgements depict a circumstance as opposed to a requirement or a selection, whereas others indicate a solicitation for an activity or an alternative instead of a directive, and still others convey a state of affairs rather than a mandate or a preference¹⁵⁸². Certain decisions entail both a solicitation and an unambiguous directive. Islamic jurisprudence is based on the interpretations of sharia, which is considered to be the immutable and flawless set of regulations that are comprehensible only to God¹⁵⁸³. Proficiency in Arabic language, comprehensive understanding of legal theory, and profound familiarity with the Qur'an and Sunnah are essential prerequisites for accurate interpretation of sharia¹⁵⁸⁴. Acquiring knowledge of Islamic jurisprudence may constitute a personal obligation for the responsible individual, akin to the acquisition of any other knowledge that is deemed necessary for the fulfilment of one's duties¹⁵⁸⁵.

¹⁵⁷⁵ Motzki, Harald. "The Origins Of Islamic Jurisprudence: Meccan Fiqh Before The Classical Schools." (2002).

¹⁵⁷⁶ Kamali, Mohammad Hashim. "Principles Of Islamic Jurisprudence" (1991) Cambridge: Islamic Texts Society.

¹⁵⁷⁷ Saleem, Muhammad Yusuf. "Methods And Methodologies In Fiqh And Islamic Economics." (2008).

¹⁵⁷⁸ Sa'idzadeh, Sayyid Mohsen. "Fiqh And Fiqahat." (2001) UCLA J. Islamic & Near EL 1: 239.

¹⁵⁷⁹ Al-Qaradawi, Yusuf. "Fiqh Al-Zakah." (1973) Mu' Assasat Al Risalah Publishers, 2nd Printing Beirut (In Arabic).

¹⁵⁸⁰ Crow, Karim Douglas. ("International Workshop: Being Muslim In The World, Everyday Ethics And Cultures Of Adab:(Islamabad, 23-24 May 2012)." ICR Journal 4, No. 1 (2013): 157-158.)

¹⁵⁸¹ Weiss, Bernard G. The Search For God's Law: Islamic Jurisprudence In The Writings Of Sayf Al-Din Al-Amidi. International Institute Of Islamic Thought (IIIT), 2010.

¹⁵⁸² Fodhil, Muhammad, And Farhan Dwi Fathurrozi. "Understanding Fiqh Material Through The Study Book Of Fathul Qorib." (2021) Scholar: Social And Literature Study In Education 1, No. 3: 198-203.

¹⁵⁸³ Ramli, M. A. "Postmodernism Approach In Islamic Jurisprudence (Fiqh)." (2013) Middle East Journal Of Scientific Research 13, No. 1: 33-40.

¹⁵⁸⁴ Sa'idzadeh, Sayyid Mohsen. "Fiqh And Fiqahat." (2001) UCLA J. Islamic & Near EL 1: 239.

¹⁵⁸⁵ Motzki, Harald. "The Origins Of Islamic Jurisprudence: Meccan Fiqh Before The Classical Schools." (2002).

On the contrary, the tenets of legal theory, commonly referred to as Usul al-Fiqh¹⁵⁸⁶ in the Arabic language because the evidence presented indicates this within the context of the complete sentence, rather than with respect to particular details¹⁵⁸⁷. The relationship between Islamic jurisprudence and the principles of jurisprudence lies in the former's emphasis on utilising evidence to derive practical legal rulings¹⁵⁸⁸. Regarding the principles of jurisprudence, their concern pertains to the entirety of the evidence and its significance in relation to legal decisions¹⁵⁸⁹. The field of Jurisprudence is a distinct academic discipline that has been formulated by experts in the field of assets¹⁵⁹⁰. It is founded on linguistic, legal, and rational principles. According to these scholars, it can be defined as a comprehensive set of regulations that facilitate the derivation of practical legal judgements from detailed evidence¹⁵⁹¹. The principles of jurisprudence are a fundamental component of this autonomous field of study. This field of expertise pertains to the examination of legal evidence and its hierarchies, legal verdicts and their classifications, semantics and methods of deduction, abrogation and abrogated principles, contradiction and evaluation, legislative objectives, and conditions of diligence (ijtihad), among other topics¹⁵⁹². The field of Islamic jurisprudence is commonly known as the "science of branches" as it originated from the fundamental principles of jurisprudence¹⁵⁹³. It is imperative to note that Islamic jurisprudence and the principles of jurisprudence are interrelated concepts. Stated differently, the adherence to the principles of jurisprudence is a necessary condition for the existence of jurisprudence concerning the truth¹⁵⁹⁴. The discipline of jurisprudence serves as a guiding force for jurists, preventing them from straying into unfounded deductions or revelations¹⁵⁹⁵. The inclusion of the first component

¹⁵⁸⁶ Hallaq, Wael B. "A History Of Islamic Legal Theories: An Introduction To Sunni Usul Al-Fiqh" (1999) Cambridge University Press.

¹⁵⁸⁷ Al Alwani, Taha Jabir. "Usul Al Fiqh Al Islam, Source Methodology In Islamic Jurisprudence." (1990).

¹⁵⁸⁸ Hannan, Shah Abdul. "USUL AL FIQH." (1999).

¹⁵⁸⁹ Al-Azmeh, Aziz. "Islamic Legal Theory And The Appropriation Of Reality." (2013) In Islamic Law, Pp. 250-265. Routledge.

¹⁵⁹⁰ Hasan, Ahmad. "Analogical Reasoning In Islamic Jurisprudence: A Study Of The Juridical Principle Of Qiyas." (1994) Adam Publishers.

¹⁵⁹¹ Temel, Ahmet. "The Missing Link In The History Of Islamic Legal Theory: The Development Of Usul Al-Fiqh Between Al-Shafi'i And Al-Jassas During The 3rd/9th And Early 4th/10th Centuries." (2014) Phd Diss., UC Santa Barbara.

¹⁵⁹² Al-Battat, Nesersalih. "Contemporary Critical Trends In The Usuli Thought." (2015) Adab Al-Kufa 1, No. 25.

¹⁵⁹³ Al Alwani, Taha Jabir. "Usul Al Fiqh Al Islam, Source Methodology In Islamic Jurisprudence." (1990) Herndon Virginia.

¹⁵⁹⁴ Baderin, Mashood. "Understanding Islamic Law In Theory And Practice." (2009) Legal Information Management 9, No. 3: 186-190.

¹⁵⁹⁵ Parray, Tauseef Ahmad. "The Legal Methodology Of "Fiqh Al-Aqalliyat" And Its Critics: An Analytical Study" (2012) Journal Of Muslim Minority Affairs 32, No. 1: 88-107.

implies the necessity of the second component. This statement suggests that the field of jurisprudence principles is a crucial and foundational area of study that is indispensable. The centrality of law lies in its ability to elucidate the objectives of the legal system and to provide guidance for judicial decisions¹⁵⁹⁶. Without it, the process of deducing rulings would lack a solid foundation, rendering it unsound¹⁵⁹⁷.

The field of Islamic jurisprudence can be classified into two distinct categories, namely interpersonal relations jurisprudence and jurisprudence governing worship¹⁵⁹⁸. The concept that pertains to God is a legal system of worship, while the concept that pertains to individuals is a legal system of social interactions¹⁵⁹⁹. The Fiqh is organised into distinct chapters within the broader field of Islamic jurisprudence, with the aim of presenting its rulings¹⁶⁰⁰. Jurisprudence is a field of study that encompasses and relates to all facets of human existence¹⁶⁰¹. The study of the legal principles and theories related to religious worship. In addition to the prerequisites of purity, purification, and prayer, the practise also encompasses fasting, Zakat¹⁶⁰², and the Hajj¹⁶⁰³. The legal framework governing interpersonal relations. Interpersonal relationships involve a multitude of contracts that individuals encounter in their practical dealings¹⁶⁰⁴. These contracts may include sale contracts, leases, agency agreements, guarantees, loans, mortgages, trade and industry agreements, peace agreements, company contracts, contracting agreements, farming agreements, watering agreements, provisions of ownership, and associated rights such

¹⁵⁹⁶ Rashid, Mohsin Jalal. "The Footnote Of The Scholar Abdul Rahman Al-Penjawni On Collecting Mosques And Explaining It To The Local By The Scholar Abdul Rahman Ibn Mulla Mohammed Ibn Mulla Tahir Al-Penjawni Died In: 1319 AH School:(Absolute And Restricted) Study And Observation." (2021) Journal Of Islamic Science College 1, No. 66.

¹⁵⁹⁷ طه حماد مخلف الجنابي "Being Wrong In Diligence Of Islamic Fundamentalists." (2009) College Of Basic Education Researches Journal 8, No. 3.

¹⁵⁹⁸ Muslehuddin, Mohammad. "Islamic Jurisprudence And The Rule Of Necessity And Need." (1973) Islamic Studies 12, No. 2: 103-120.

¹⁵⁹⁹ "The Basis Of The Obligation In Islamic Jurisprudence: A Study In The Basis Of The Obligation In Islamic Jurisprudence Inferential Study". Kufa Arts Journal, 52 No.1-18: (2022) ج 2.

¹⁶⁰⁰ عبدالرحمن سعد محمد السند. "الترجيح الفقهي مفهومه وضوابطه في الفقه الإسلامي And السند، عبدالرحمن سعد محمد السند. Jurisprudential Weighting, Its Concept And Its Controls In Islamic Jurisprudence الإسلامية كلية الدراسات الإسلامية No. 4 (2021): 549-608. والعربية للنبات بالإسكندرية 37.

¹⁶⁰¹ March, Andrew. "Sources Of Moral Obligation To Non-Muslims In The" (2009) Jurisprudence Of Muslim Minorities"(Fiqh Al-Aqalliyyāt) Discourse." Islamic Law And Society 16, No. 1: 34-94.

¹⁶⁰² Zakat Is The Third Pillar Of Islam. It Is The Practise Of A Wealthy Person Donating Money To Those In Need On An Annual Basis In Accordance With The Stipulations Laid Out In Sharia.

¹⁶⁰³ The Hajj Is Considered To Be The Fifth And Most Important Pillar Of Islam. One Is Required To Make The Journey To Makkah Al-Mukarramah During A Particular Time Frame In Order To Carry Out The Hajj Ritual In Line With The Laws That Have Been Set By The Sharia. Even Though It Is A Once-A-Year Ceremony, The Hajj Is A Religious Obligation That Must Be Fulfilled At Least Once In A Person's Lifetime.

¹⁶⁰⁴ The Law Portal An Introduction To The Study Of Islamic Law October 2020

as pre-emption and easement¹⁶⁰⁵. Furthermore, the topic pertains to individual status, encompassing regulations pertaining to succession and the distribution of assets in accordance with Islamic Sharia law¹⁶⁰⁶. The regulations pertain to the legal aspects of matrimony, separation, and nullification¹⁶⁰⁷. Furthermore, it tackles supplementary provisions and challenges, such as child custody, nursing, and alimony¹⁶⁰⁸. Punishments: The text delves into the concept of retribution, which pertains to the punishments that are divinely ordained by God and referred to as "Hudud" in the Arabic language¹⁶⁰⁹. Additionally, it explores the intricacies of these punishments and any relevant Islamic Sharia regulations¹⁶¹⁰.

Islamic jurisprudence refers to the comprehensive system of knowledge that establishes the fundamental principles governing the state, as well as the nature of the relationship between the governing authority and the governed populace¹⁶¹¹. The organisation of administrative power management, which encompasses the regulation of public services and administrative duties within the state, is structured in accordance with Islamic jurisprudence¹⁶¹². Islamic law established the basis for criminal law and delineates the requisite protocols for pursuing, examining, and penalising each transgression¹⁶¹³. The foundation of criminal law consists of the various statutes that have been codified to protect the lives and property of individuals. The field of foreign affairs in Islamic law pertains to the regulations that dictate the conduct of a state in its dealings with other governments in both times of conflict and peace, including the negotiation and implementation of agreements and treaties¹⁶¹⁴. This area is referred to as "Sir

¹⁶⁰⁵ Ramli, M. A. "Postmodernism Approach In Islamic Jurisprudence (Fiqh)." (2013) Middle East Journal Of Scientific Research 13, No. 1: 33-40.

¹⁶⁰⁶ Haque, Munawar, N. Djeghi, Fatmir Mehdi Shehu, And Kabuye Uthman Sulaiman. Ethics And Fiqh For Everyday Life: An Islamic Perspective. (2010) IIUM Press.

¹⁶⁰⁷ Jenkins, Willis. "Islamic Law And Environmental Ethics: How Jurisprudence (Usul Al-Fiqh) Mobilizes Practical Reform." (2005) Worldviews: Global Religions, Culture, And Ecology 9, No. 3: 338-364.

¹⁶⁰⁸ Mavani, Hamid. "The Case For Secularity In Islam." (2011) Journal Of Islamic Law And Culture 13, No. 1: 34-46.

¹⁶⁰⁹ Okon, Etim E. "Hudud Punishments In Islamic Criminal Law." (2014) European Scientific Journal 10, No. 14.

¹⁶¹⁰ Mukhtar, Sohaib. "In Defense Of The Codification Of The Islamic Law Of Hudud Into The Law Of Pakistan." (2016) International Review Of Law 2016, No. 2: 11.

¹⁶¹¹ Kamali, Mohammad Hashim. "Principles Of Islamic Jurisprudence" (1991) Cambridge: Islamic Texts Society.

¹⁶¹² Motzki, Harald. "The Origins Of Islamic Jurisprudence: Meccan Fiqh Before The Classical Schools." (2002).

¹⁶¹³ Peters, Rudolph. "Crime And Punishment In Islamic Law: Theory And Practice From The Sixteenth To The Twenty-First Century." (2005) No. 2. Cambridge University Press.

¹⁶¹⁴ Sanad, Najati Sayyid Ahmad, And Office International De Justice Criminelle. "The Theory Of Crime And Criminal Responsibility In Islamic Law: Shari'a. Chicago, IL." (1991) Office Of International Criminal Justice,

and Maghazi" in Arabic¹⁶¹⁵. Furthermore, the establishment of the contemporary monetary system can be attributed to Islamic jurisprudence, a collection of rulings that delineates the appropriate management of a state's financial matters. The topic has been deliberated by jurists in various contexts within Islamic legal scriptures¹⁶¹⁶. These contexts include discussions on zakat, precious metals, state income, and the treasury, among others¹⁶¹⁷. Within the realm of public finance, Islamic jurisprudence serves to govern not only the financial transactions between the government and its citizens, but also the economic relationships between those who possess wealth and those who do not¹⁶¹⁸. The responsibility of managing the resources of the State and determining their allocation is also attributed to it.

It is imperative to gain familiarity and knowledge of the terms Fatwa¹⁶¹⁹, Mufti, and Qadi, as they hold significant importance in Islamic jurisprudence¹⁶²⁰. Therefore, it is essential to provide clarification on these terms. The Fatwa, which is an Islamic legal opinion expressed in Arabic, constitutes a legal verdict that is disclosed to the individual who posed the enquiry¹⁶²¹. Moreover, there are instances where the Fatwa may be issued proactively, without prompting from the inquirer, with the aim of elucidating the ruling pertaining to a calamity or an impending event, so as to rectify people's speech, conduct, and other circumstances¹⁶²². The term "Mufti" refers to an Islamic legal expert who possesses the necessary qualifications to provide a non-binding legal opinion¹⁶²³. The Mufti is an individual who offers resolutions to Islamic legal matters and possesses expertise in both the comprehensive and intricate aspects

¹⁶¹⁵ Alatawi, R. "Abū ‘Abdullāh Muḥammad B. ‘Umar Al-Wāqidī’s Historiography Of The Prophet Muhammad’s Military Expeditions (A Critical Study Of The Methododology With Special Focus On Al-Wāqidī’s Kitāb Al-Maghāzī)." (2020).

¹⁶¹⁶ Delorenzo, Yusuf Talal, And Michael JT Mcmillen. "Law And Islamic Finance: An Interactive Analysis." (2007) *Islamic Finance: The Regulatory Challenge* 136.

¹⁶¹⁷ El-Gamal, Mahmoud A. "An Economic Explication Of The Prohibition Of Riba In Classical Islamic Jurisprudence."(2000) In *Proceedings Of The Third Harvard University Forum On Islamic Finance*, Pp. 31-44. Cambridge: Center For Middle Eastern Studies, Harvard University.

¹⁶¹⁸ Grais, Wafik, And Matteo Pellegrini. "Corporate Governance In Institutions Offering Islamic Financial Services: Issues And Options." (2006).

¹⁶¹⁹ Hossain, Mozaffar. "The Story Of Fatwa." (2002) *Interventions* 4, No. 2: 237-242.

¹⁶²⁰ Rahman, Shahid, And Muhammad Iqbal. "Unfolding Parallel Reasoning In Islamic Jurisprudence: Epistemic And Dialectical Meaning In Abū Ishāq Al-Shīrāzī’s System Of Co-Relational Inferences Of The Occasioning Factor." (2018) *Arabic Sciences And Philosophy* 28, No. 1: 67-132.

¹⁶²¹ Ibrahim, Badruddin, Mahmad Arifin, And Siti Zainab Abd Rashid. "The Role Of Fatwa And Mufti In Contemporary Muslim Society." (2015) *Pertanika Journal Of Social Sciences & Humanities* 23.

¹⁶²² Ibrahim, Badruddin, Mahmad Arifin, And Siti Zainab Abd Rashid. "The Role Of Fatwa And Mufti In Contemporary Muslim Society." (2015) *Pertanika Journal Of Social Sciences & Humanities* 23.

¹⁶²³ Razi12, N. "Fatwa As A Non-State Legal System: A Critical Analysis From The Perspective Of Pakistani Society." (2014) *Journal Of Islamic Studies*, 2(4), Pp.7-18.

of the Qur'an and Sunnah¹⁶²⁴. The Mufti who represents the Prophet and carries out official duties on behalf of God must possess a comprehension of Islamic jurisprudence, as well as a rich knowledge of Islam, an ability to substantiate rulings with evidence, and a deep understanding of human life and behaviour¹⁶²⁵. The act of issuing religious fatwas by an individual who lacks a deep understanding and expertise in their religion's fundamental sources, namely the Qur'an and Sunnah, is deemed unacceptable¹⁶²⁶.

The term "Qadi" is utilised in the Arabic language to refer to a judge. Thus, a Judge is an individual who resolves disputes between two or more parties in compliance with legal regulations¹⁶²⁷. The presence of justice has been a fundamental aspect of every known civilisation throughout history. The Sharia recognises the importance of establishing a mechanism for resolving conflicts between individuals, facilitating the separation of disputing parties, administering justice to the wronged, and deterring those who commit acts of oppression¹⁶²⁸. Hence, the Islamic jurisprudential framework is primarily accountable for resolving disputes between individuals in accordance with the principles of Islamic law¹⁶²⁹. Furthermore, the judge assumes the role of a mediator in resolving disputes and serves as the primary pillar of the Islamic legal system¹⁶³⁰. According to Sharia law, it is necessary for the judge to possess a sound state of mind, have attained mental maturity, and have undergone puberty¹⁶³¹.

The subsequent measure involves initiating legal proceedings, which encompasses three discrete phases and serves as the mechanism through which an individual contests the legal claim of another with the expectation that the presiding judge will render a verdict in their

¹⁶²⁴ Irawan, Ibnu, Jayusman Jayusman, And Agus Hermanto. "Fatwa Contribution To The Development Of Islamic Law (Study Of The Fatwa Institute Of Saudi Arabia)." (2019) *Fitrah: Jurnal Kajian Ilmu-Ilmu Keislaman* 5, No. 2: 181-206.

¹⁶²⁵ Mehmood, Muhammad Ifzal, Siddiq Ali Chishti, And Muhammad Junaid Mughal. "Islamic Concept Of Fatwa, Practice Of Fatwa In Malaysia And Pakistan: The Relevance Of Malaysian Fatwa Model For Legal System Of Pakistan." (2015) *International Research Journal Of Social Sciences* 4, No. 9: 46-51.

¹⁶²⁶ Mccloud, Aminah Beverly, And Irshad Abdal-Haqq. "Understanding Islamic Law: From Classical To Contemporary." (2006) Rowman Altamira.

¹⁶²⁷ Powers, David S. "On Judicial Review In Islamic Law." (1992) *Law And Society Review*: 315-341.

¹⁶²⁸ Abdel Karim Zidan, "The Judicial System In Islam" (1989) Beirut: Al-Resala Foundation, 2nd Edition, P. 5.

¹⁶²⁹ Ibid.

¹⁶³⁰ Muhammad Farouk Al Nabhani, "The Judicial System In Islam" (1972) Riyadh: Islamic Solidarity.

¹⁶³¹ Abd Al-Fattah Abu Ghuddah, *Qisas "From The History Of The Judiciary In Islam"*(1969) Kuwait: Islamic Awareness, P. 58, P. 65.

favour¹⁶³². The litigant, commonly referred to as the plaintiff, initiates legal proceedings before a judicial authority with the aim of reclaiming their entitlement. In legal proceedings, the recipient of a judgement, whether an individual or a collective entity, is referred to as the defendant¹⁶³³. It is imperative for the defendant to be physically present during the issuance of the judgement to ensure its validity¹⁶³⁴. The claimant may be either the plaintiff themselves or the legal entitlement that the plaintiff seeks to assert through the litigation.

The final element in the legal process is the court's verdict, which is issued subsequent to the judge's consideration of the contentions, proof, and justifications put forth by the opposing parties¹⁶³⁵. In this phase of the legal process, the defendant will be either convicted or acquitted, and the presiding judge will determine the entitlement of the divine, the servant, or both to the verdict.

An approach to discerning the distinctiveness of Sharia in comparison to other legal systems is to contemplate the three fundamental principles upon which it is founded¹⁶³⁶. The following are some of the constituents implicated:

The Sharia is considered the fundamental basis of law due to the belief that God is the ultimate authority in legislation¹⁶³⁷. It is the responsibility of individuals to implement Sharia voluntarily and without the use of coercion¹⁶³⁸. The judge's role is limited to elucidating and uncovering God's laws¹⁶³⁹. The legal framework is founded on the principles of Sharia¹⁶⁴⁰. The Islamic

¹⁶³² Vogel, Frank E. "Islamic Law And The Legal System Of Saudi: Studies Of Saudi Arabia." (2000) Vol. 8. Brill.

¹⁶³³ Rashid, Syed Khalid. "Peculiarities And Religious Underlining Of ADR In Islamic Law." (2008) In *Mediation In The Asia Pacific: Constraints And Challenges Organised By Harun M. Hashim Law Centre, IIUM & Asia Pacific Mediation Forum, Australia Venue: IIUM, Kuala Lumpur*, Pp. 16-18.

¹⁶³⁴ Rahami, Mohsen. "Islamic Restorative Traditions And Their Reflections In The Post Revolutionary Criminal Justice System Of Iran." (2007) *European Journal Of Crime, Criminal Law And Criminal Justice* 15, No. 2: 227-248.

¹⁶³⁵ Vikør, Knut S. "Between God And The Sultan: A History Of Islamic Law" (2005) Oxford University Press, USA.

¹⁶³⁶ Al-Nabhan, Muhammad Farouq, And Kathyryne Lydiatt. "The Islamic View Of The Legislative Role Of The State." (1986) *Arab Law Quarterly*: 557-561.

¹⁶³⁷ Stiles, Erin. "An Islamic Court In Context: An Ethnographic Study Of Judicial Reasoning" (2009) Springer.

¹⁶³⁸ Abdel Karim Zidan, "The Judicial System In Islam, Beirut" (1989) Al-Resala Foundation, 2nd Edition, P. 5.

¹⁶³⁹ Ibid.

¹⁶⁴⁰ Rosidah, Zaidah Nur. "Limitation Of Application Of Sharia Principles In Sharia Economic Dispute Resolution In Religious Courts." (2020) *Journal Of Morality And Legal Culture* 1, No. 1: 24-31.

judicial system is known for its impartiality towards individuals, regardless of their socioeconomic status, gender, race, or personal reputation¹⁶⁴¹. As a result, it is widely regarded as a symbol of justice and equality. Sharia law encompasses a wide range of regulations that pertain to various facets of life, such as family affairs, governance, conflict resolution, contractual agreements, and arbitration. The Islamic legal system is characterised by its unity, which is considered a crucial feature¹⁶⁴². When an individual is summoned before the Islamic legal system, they are not confronted with a system that has multiple jurisdictions and distinct sources¹⁶⁴³. Instead, they are presented with a system that has a single jurisdiction and uniform procedures for action and evidence¹⁶⁴⁴. The applicability of law is limited to matters of life and does not extend to topics of worship, as the source of law is transcendent and sovereign, yet its jurisdiction is restricted to regulating affairs pertaining to life¹⁶⁴⁵. This implies that its applicability is limited to non-worship related matters¹⁶⁴⁶.

Over the course of time, Sharia law experts have implemented safeguards to guarantee that the legal system effectively dispenses justice to the populace¹⁶⁴⁷. Several jurisprudential standards, such as the principle that "The right is not extinguished by the passage of time," have been incorporated into the legal system to guarantee impartiality and fairness in the pursuit of justice for litigants¹⁶⁴⁸. According to the statement, the proprietors of rights possess the ability to pursue legal recourse for the recovery of their rights at any given moment¹⁶⁴⁹. In summary, the concept of maintaining judicial autonomy from other branches of government is crucial in ensuring impartiality, as relying solely on these fundamental principles and structures would

¹⁶⁴¹ Abd Al-Fattah Abu Ghuddah, Qisas "From The History Of The Judiciary In Islam" (1969) Kuwait: Islamic Awareness, P. 58, P. 65.

¹⁶⁴² Muhammad Farouk Al Nabhani, "The Judicial System In Islam" (1972) Riyadh: Islamic Solidarity.

¹⁶⁴³ Badr, Gamal Moursi. "Islamic Law: Its Relation To Other Legal Systems." (1977) Am. J. Comp. L. 26: 187. Weiss, Bernard G. "The Search For God's Law: Islamic Jurisprudence In The Writings Of Sayf Al-Din Al-Amidi." (2010) International Institute Of Islamic Thought (IIIT).

¹⁶⁴⁴ Abdel Karim Zidan, "The Judicial System In Islam" (1989) Beirut: Al-Resala Foundation, 2nd Edition, P. 5.

¹⁶⁴⁵ Dr: Ibrahim Rahmani "The Role Of The Judiciary" (2020) In Achieving Social Security.

¹⁶⁴⁶ Fatima Hafez "The Judicial System In Islam: Its Components, Characteristics And Guarantees Of Justice" (2020).

¹⁶⁴⁷ Van Eijk, Esther. "Sharia And National Law In Saudi Arabia." Sharia Incorporated: A Comparative Overview Of The Legal Systems Of Twelve Muslim Countries In Past And Present (2010): 139-180.

¹⁶⁴⁸ Muhammad Farouk Al Nabhani, "The Judicial System In Islam, Riyadh" (1972) Islamic Solidarity.

¹⁶⁴⁹ Abd Al-Fattah Abu Ghuddah, Qisas "From The History Of The Judiciary In Islam" (1969) Kuwait: Islamic Awareness, P. 58, P. 65.

not have been sufficient to achieve this objective¹⁶⁵⁰. There are two possible interpretations of the concept of judicial independence.

The independence of the judicial system is derived from the judge's autonomy¹⁶⁵¹, which is not explicitly stipulated in legal frameworks. This autonomy serves to dissociate the judiciary from the judge's personal inclinations, which may impede the administration of justice¹⁶⁵². The aforementioned encompasses the judge's uprightness in his individual, ethical, and spiritual attributes, as well as his exemption from apprehension and necessity¹⁶⁵³. The impartiality of judges is crucial in ensuring that their decisions are not swayed by personal biases. This is why the judiciary is mandated to maintain internal independence¹⁶⁵⁴. The judge's decision is derived from his own logical deductions, which are influenced by his adherence to the tenets and regulations of Sharia. The concept of external independence pertains to the prevention of non-judicial influence on judges. This encompasses functional independence, which allows judges to perform their judicial duties without any external interference, and self-independence, which entails granting the judiciary its distinct authority that is independent of other authorities¹⁶⁵⁵. The two aforementioned facets of autonomy are subsumed within the overarching construct of external independence. The concept of external independence encompasses both of these dimensions of independence and regards them as its fundamental components.

The intersection of Sharia Law and privacy

The findings of the current investigation indicate that the resources utilised in the construction of Sharia law can be bifurcated into two discrete classifications, specifically primary sources and secondary sources. This section aims to explicate the significance of protecting one's

¹⁶⁵⁰ Fatima Hafez "The Judicial System In Islam: Its Components, Characteristics And Guarantees Of Justice" (2020)

¹⁶⁵¹ Abdel Karim Zidan, "The Judicial System In Islam, Beirut:" (1989) Al-Resala Foundation, 2nd Edition, P. 5.

¹⁶⁵² Ibid.

¹⁶⁵³ MD. Zakir Hossain "Nature And Tends Of Islamic Judicial System: A Comparative Study" (2018) Volume, Issue 12.

¹⁶⁵⁴ Ibid.

¹⁶⁵⁵ Afridawati, Afridawati. "History, Typology, And Implementation Of Islamic Law In Indonesia: Combination Of Sharia And Fiqh Or The Result Of Historical Evolution?." (2021) In Al-Risalah: Forum Kajian Hukum Dan Sosial Kemasyarakatan, Vol. 21, No. 1, Pp. 33-47.

privacy in compliance with Sharia law. The Qur'an, Sunnah, and Islamic jurisprudence will be cited as references, subject to their availability.

The significance of privacy in the legal system of Sharia is rooted in the fact that it was originally revealed in Arabic¹⁶⁵⁶. Therefore, it is imperative to comprehend the concept of privacy in the Arabic language and the underlying reasons for its importance¹⁶⁵⁷. Comprehensive understanding of the Sharia should encompass a rationale for the significant emphasis placed on the entitlement to privacy¹⁶⁵⁸. The Arabic language encompasses a range of connotations associated with the concept of privacy, which may vary depending on the specific context in which it is employed. In the Arabic language, there exists a noun that can be interpreted as "privacy" and conveys an equivalent definition to the corresponding English term¹⁶⁵⁹. The term commonly rendered in English as "private" or "private messages," when translated from Arabic, connotes "confidential information."¹⁶⁶⁰ The Arabic term "a person's privacy" is commonly understood to connote a distinct significance that sets it apart from other topics¹⁶⁶¹. This phrase is directly translated to mean "this topic has a private meaning," and is often associated with the notion of an individual's personal affairs¹⁶⁶².

Conversely, with regards to the concept of privacy in Arabic, several phrases may be utilised interchangeably as they possess synonymous connotations¹⁶⁶³. These definitions are commonly employed within the language. The subsequent discourse presents an exemplification of one of the aforementioned definitions. As per convention, the concept of privacy is often used interchangeably with that of secrecy¹⁶⁶⁴. As per the convention, privacy is deemed to be a singular characteristic that is mutually exclusive with any other attribute and cannot coexist

¹⁶⁵⁶ Hassan, Isyaku. "Developing Language Proficiency For Academic Purposes: A Study Of Sharia Law Students In Malaysia." (2020) *International Journal Of Scientific & Technology Research* 9, No. 03.

¹⁶⁵⁷ Almebrad, Abdulaziz. "The Sufficiency Of Information Privacy Protection In Saudi Arabia." (2018).

¹⁶⁵⁸ Almubarak, Hameed Hussain, Mohamed Khairallah Khouja, And Ahmed Jedidi. "Security And Privacy Recommendation Of Mobile App For Arabic Speaking." (2022) *International Journal Of Electrical & Computer Engineering* (2088-8708) 12, No. 5.

¹⁶⁵⁹ Othman, Zulkeplee, Rosemary Aird, And Laurie Buys. "Privacy, Modesty, Hospitality, And The Design Of Muslim Homes: A Literature Review." (2015) *Frontiers Of Architectural Research* 4, No. 1: 12-23.

¹⁶⁶⁰ Sadiqi, Fatima. "Gender In Arabic." (2006) *The Brill Encyclopedia Of Linguistics* 2: 642-650.

¹⁶⁶¹ Youssef, Jacqueline, And Frank P. Deane. "Factors Influencing Mental-Health Help-Seeking In Arabic-Speaking Communities In Sydney, Australia." (2006) *Mental Health, Religion & Culture* 9, No. 1: 43-66.

¹⁶⁶² Musa, Ahmad S., And David J. Pevalin. "An Arabic Version Of The Spiritual Well-Being Scale." (2012) *International Journal For The Psychology Of Religion* 22, No. 2: 119-134.

¹⁶⁶³ Al-Mawrid Qāmūs Anklizi-Arabi

¹⁶⁶⁴ Warren, Carol, And Barbara Laslett. "Privacy And Secrecy: A Conceptual Comparison." (1977) *Journal Of Social Issues* 33, No. 3: 43-51.

with it¹⁶⁶⁵. As a result, the concept of privacy cannot coexist with any other characteristic¹⁶⁶⁶. Privacy is a distinct characteristic that pertains exclusively to an individual entity or item. One of the prerequisites for a comprehensive understanding of Sharia law is possessing a proficient mastery of the Arabic language and its associated lexicon¹⁶⁶⁷. This is a direct outcome of the nature of the subject matter.

The term "Sharia" pertains to a collection of regulations that are derived from the Qur'an, the Sunnah, and the jurisprudence that has been formulated by Muslim scholars, also known as jurists¹⁶⁶⁸. The term "sharia" denotes the legal provisions stipulated in a textual source, whereas the term "jurisprudence" pertains to the legal verdicts that have been derived through the process of *ijtihad*, which involves meticulous enquiry into the legal provisions in accordance with the law¹⁶⁶⁹. The Islamic legal system is founded upon religious principles that afford the right to privacy with reverence and sanctity¹⁶⁷⁰. This serves as a secure assurance for the preservation of this right. The Islamic legal system's fundamental principles are derived from religious values¹⁶⁷¹. The limitations imposed by the religious aspect serve as restrictive measures that stem from Sharia law, thereby guaranteeing the unfettered and comprehensive exercise of these rights without any flaws. Moreover, they ensure that these rights are enforced through their religious character¹⁶⁷². This approach fosters inclusivity and universality of rights, while also reinforcing their legal authority and strong adherence to Islamic law¹⁶⁷³. Thus, what is the scholarly perspective on the concept of privacy as it pertains to the Qur'an, Sunnah, and Jurists?

¹⁶⁶⁵ Abokhodair, Norah, And Sarah Vieweg. "Privacy & Social Media In The Context Of The Arab Gulf." (In Proceedings Of The 2016 ACM Conference On Designing Interactive Systems, Pp. 672-683. 2016.)

¹⁶⁶⁶ Hermalin, Benjamin E., And Michael L. Katz. "Privacy, Property Rights And Efficiency: The Economics Of Privacy As Secrecy." (2006) *Quantitative Marketing And Economics* 4, No. 3: 209-239.

¹⁶⁶⁷ Vogel, Frank E. "Islamic Law And The Legal System Of Saudi: Studies Of Saudi Arabia." (2000) Vol. 8. Brill.

¹⁶⁶⁸ Thalib, Prawitra. "Distinction Of Characteristics Sharia And Fiqh On Islamic Law." (2018) *Yuridika* 33, No. 3: 439-452.

¹⁶⁶⁹ Taman, Salma. "The Concept Of Corporate Social Responsibility In Islamic Law." (2011) *Ind. Int'l & Comp. L. Rev.* 21: 481.

¹⁶⁷⁰ Hayat 1, Muhammad Aslam. "Privacy And Islam: From The Qur'an To Data Protection In Pakistan." (2007) *Information & Communications Technology Law* 16, No. 2: 137-148.

¹⁶⁷¹ Badr, Gamal Moursi. "Islamic Law: Its Relation To Other Legal Systems." (1977) *Am. J. Comp. L.* 26: 187.

¹⁶⁷² *Ibid.*

¹⁶⁷³ *Ibid.*

The Qur'anic discourse highlights the significance of safeguarding personal information and underscores the inviolability of an individual's entitlement to privacy¹⁶⁷⁴. The Qur'an explicitly prohibits the act of eavesdropping as it constitutes a blatant infringement upon individuals' entitlement to privacy¹⁶⁷⁵. According to the divine scripture, God Almighty has advised the believers to refrain from making excessive negative assumptions.

This is mentioned in verse 49:12. “.It is true that making assumptions can be considered a mistake or a wrongdoing. Abstain from engaging in espionage or slanderous talk about one another. Would anyone be willing to consume the deceased flesh of their sibling? One would harbour a strong dislike towards it. The exhortation to fear Allah is a reminder of the importance of being conscious of one's actions and their consequences. It is emphasised that Allah is both accepting of repentance and merciful, highlighting the opportunity for individuals to seek forgiveness and redemption...¹⁶⁷⁶”

Furthermore, the Qur'an delineates limits for domestic privacy predicated on the utterances of the Divine. (58-357) The Qur'anic verse instructs the believers to require those under their possession and those who have not yet attained puberty to “...seek permission before entering at three specific times of the day: before the dawn prayer, during the midday rest period, and after the night prayer. There are three types of privacy available to an individual. There is no culpability attributed to either you or them beyond the specified time periods, as they are in constant rotation among all individuals within the group. This passage elucidates how Allah provides clarity regarding the verses and highlights His omniscience and wisdom...¹⁶⁷⁷”

Moreover, it is stated in religious texts that invading one's privacy through snooping is considered to be a severe transgression. Therefore, religious doctrine imposes certain limitations on entering private residences in order to safeguard their sacredness. (27-352) The Qur'anic verse instructs the believers to refrain from entering houses that do not belong to them without “...first seeking permission and greeting the occupants. That option may be optimal for you, as it could potentially serve as a helpful reminder...¹⁶⁷⁸”

According to the Qur'an, it is stated by the Almighty that the conduct of humans towards the privacy of others is governed by the Qur'an. (24:28) If an individual does not encounter anyone within the premises, it is advised to refrain from entering until explicit permission has been

¹⁶⁷⁴ Abokhodair, Norah, And Sarah Vieweg. "Privacy & Social Media In The Context Of The Arab Gulf." (In Proceedings Of The 2016 ACM Conference On Designing Interactive Systems, Pp. 672-683. 2016.)

¹⁶⁷⁵ Abokhodair, Norah, Sofiane Abbar, Sarah Vieweg, And Yelena Mejova. "Privacy And Social Media Use In The Arabian Gulf: Saudi Arabian & Qatari Traditional Values In The Digital World." (2017) The Journal Of Web Science 3.

¹⁶⁷⁶ Qur'an Surah Al Hujurat 12 (QS 49: 12).

¹⁶⁷⁷ Qur'an Surah An-Nūr 18 (QS 64: 357).

¹⁶⁷⁸ Qur'an Surah An-Nur 18 (QS 64-354).

granted¹⁶⁷⁹. In the event that one is instructed to return, it is advisable to comply and return, as it is deemed to be a more pristine course of action. The statement "...And Allah is Knowing of what you do..." implies that Allah possesses knowledge of the actions undertaken by individuals¹⁶⁸⁰.

The Qur'an alludes to the importance of respecting the privacy of others in interpersonal interactions, specifically in the context of backbiting, which is regarded as a violation of personal boundaries. The divine entity, known as God Almighty, admonished individuals with the following statement: "...And do not pursue that of which you have no knowledge..." as recorded in verse 17:36. Undoubtedly, one will be held accountable for their faculties of hearing, vision, and emotional perception, as stated in the following verse: "...Verily, regarding these faculties, one will be subject to questioning..¹⁶⁸¹."

Furthermore, one aspect that can be interpreted as a demonstration of privacy is the statement of God Almighty as mentioned in verse 5-101 of the Holy Qur'an, which advises believers not to "...enquire about matters that may cause them distress if revealed...¹⁶⁸²". In the event that enquiries are made regarding them during the revelation of the Qur'an, they shall be elucidated. The statement suggests that Allah has granted forgiveness for previous transgressions and is characterised by qualities of mercy and patience.

Moreover, the act of peeping is explicitly prohibited in the Qur'an as it constitutes a breach of privacy and infringes upon the rights of others. According to the scripture (40-19), "...it is stated that God possesses knowledge of the deceptive nature of appearances and the hidden thoughts of individuals...¹⁶⁸³". Moreover, the act of intruding upon the personal space of individuals through the creation of false derogatory remarks and the disregard for their inherent worth, integrity, and essence constitutes a transgression against fundamental human entitlements. According to the Qur'anic verse (6-108), "...it is advised to refrain from insulting the deities that are worshipped by others besides Allah. This is because such an act may lead to the other party insulting Allah out of hostility and ignorance...¹⁶⁸⁴". Therefore, the guidelines are provided to ensure that the actions

¹⁶⁷⁹ Qur'an Surah An-Nur 18 (QS 24-28)

¹⁶⁸⁰ Ibid.

¹⁶⁸¹ Qur'an Surah Al Isra 36 (QS 17-36).

¹⁶⁸² Qur'an Surah Al Ma'idah 5 (QS 5-101).

¹⁶⁸³ Qur'an Surah Al-Mā'idah (QS 5-101).

¹⁶⁸⁴ Qur'an Surah Ghafir (QS 40-19).

of each community are satisfactory. Subsequently, the ultimate destination of individuals is towards their Lord, and He will provide them with an account of their past actions¹⁶⁸⁵.

The Prophetic Sunnah, considered as a fundamental source of Islamic jurisprudence, contains several allusions to the notion of individual privacy throughout its entirety. Moreover, the Prophetic Sunnah is regarded as a fundamental basis of Islamic jurisprudence¹⁶⁸⁶. The emergence of the Prophetic Sunnah can be traced back to the precise moment in history, 1400¹⁶⁸⁷ years ago, when the Messenger was commissioned to disseminate his message to the masses. The Prophetic Sunnah contains a diverse array of laws, instructions, and teachings. One of the fundamental rights that individuals possess is the entitlement to their own personal space and privacy. The delivery of the Prophetic Sunnah encompasses a diverse range of methods¹⁶⁸⁸. The safeguarding of personal privacy, including that of individuals, groups, religions, and sects, was a significant aspect of the Prophet's Sunnah¹⁶⁸⁹. This was done to protect the privacy of others, and it is imperative that this practise be upheld as a mandatory obligation. Consequently, the Sharia law conforms to the paradigm established by Prophet Muhammad through the Sunnah¹⁶⁹⁰. As an illustration, the Prophet made a statement emphasising the virtue of a believer's Islam in abstaining from matters that are irrelevant to them, stating: "...It is from the excellence of (a believer's) Islam that he should shun that which is of no concern to him..."¹⁶⁹¹

The Prophet's Sunnah elucidates that encroaching upon the personal lives of others constitutes an infringement upon their individuality and a transgression of their entitlement to privacy¹⁶⁹².

¹⁶⁸⁵ Ibid As A Translation.

¹⁶⁸⁶ Sutriyono, Sutriyono, Muhammad Rodham Robbina, And Meksianis Zadrak Ndi. "The Effects Of Wet Cupping Therapy In Blood Pressure, Glucose, Uric Acid And Total Cholesterol Levels." (2019) *Biology, Medicine, & Natural Product Chemistry* 8, No. 2: 33-36.

¹⁶⁸⁷ Fisher, Karen E., Salah Falioun, Eiad Yafi, And Khadijah S. Khan. "Co-Designing With The Iman In A Haram Digital World: Drawing On The Qur'an And Sunnah To Support People's Privacy And Information Practices." (2020) In *Islamic, CHI 2020, Arab Islamic HCI Workshop*, Pp. 25-30.

¹⁶⁸⁸ Kamali, Mohammad H. "Fundamental Rights Of The Individual: An Analysis Of Haqq (Right) In Islamic Law." (1993) *American Journal Of Islam And Society* 10, No. 3: 340-366.

¹⁶⁸⁹ Hayat 1, Muhammad Aslam. "Privacy And Islam: From The Quran To Data Protection In Pakistan." (2007) *Information & Communications Technology Law* 16, No. 2: 137-148.

¹⁶⁹⁰ Seddon, Mohammad Siddique. "Engaging With Young Muslims: Some Paradigms From The Qur'an And Sunnah." (2012) *Muslim Youth: Challenges, Opportunities And Expectations*. London: Continuum International Publishing Group: 248-269.

¹⁶⁹¹ Riyad As-Salihin 67 Introduction, Hadith 67

¹⁶⁹² Sherwani, Ms Mariam. "The Right To Privacy Under International Law And Islamic Law: A Comparative Legal Analysis." (2018) *Kardan Journal Of Social Sciences And Humanities* 1, No. 1: 30-48.

Consequently, it became necessary for individuals to uphold the principle of respecting each other's privacy rights, and for the community to collaborate in cultivating this mutual respect. Furthermore, the Sunnah exemplified by the Prophet elucidates that encroaching upon the personal matters of others constitutes a violation of their autonomy¹⁶⁹³. In addition, the Sunnah's teachings have provided a set of guidelines for exhibiting utmost respect towards the privacy of individuals within their households and kinships. According to the Prophet's purported statement, "The Messenger of Allah mounted the Minbar and proclaimed in a loud voice: 'O individuals who have professed Islam verbally but not in their hearts! ¹⁶⁹⁴". It is imperative to refrain from causing harm to individuals who identify as Muslim, as well as abstaining from using derogatory language towards them and engaging in espionage with the intention of revealing their confidential information¹⁶⁹⁵. The act of revealing the confidential information of a fellow Muslim is condemned in Islamic teachings¹⁶⁹⁶. It is believed that Allah will publicly disclose the secrets of the individual who engages in such behaviour, regardless of their location¹⁶⁹⁷. Nafi' reported that Ibn 'Umar once gazed upon the Ka'bah and expressed, "What entity holds greater reverence and sanctity than you?¹⁶⁹⁸" According to the Islamic faith, Allah considers the honour of a believer to be more sacred than that of others. This is supported by the following statement: "And the believer's honour is more sacred to Allah than yours. ¹⁶⁹⁹" Furthermore, the Prophetic Sunnah has established a prohibition on unauthorised entry into the residence of another individual, mandating that permission must be obtained prior to doing so¹⁷⁰⁰. According to the Sunnah, if an individual looks into someone's house without their permission, it is permissible for the occupants to cause the offender to lose their eyesight¹⁷⁰¹.

¹⁶⁹³ Husin, Wan Norhasniah Wan, And Wan Norhasniah. "Work Ethics From The Islamic Perspective In Malaysia." (2012) *European Journal Of Social Sciences* 29, No. 1: 51-60.

¹⁶⁹⁴ Hayat 1, Muhammad Aslam. "Privacy And Islam: From The Qur'an To Data Protection In Pakistan." (2007) *Information & Communications Technology Law* 16, No. 2: 137-148.

¹⁶⁹⁵ Alahmad, Ghiath, And Kris Dierickx. "What Do Islamic Institutional Fatwas Say About Medical And Research Confidentiality And Breach Of Confidentiality?." (2012) *Developing World Bioethics* 12, No. 2: 104-112.

¹⁶⁹⁶ *Ibid.*

¹⁶⁹⁷ *Ibid.*

¹⁶⁹⁸ *Jami` At-Tirmidhi* 2032 Book 27, Hadith 138

¹⁶⁹⁹ Abuznaid, Dr, And A. Samir. "Organizational Behavior From An Islamic Perspective." (2016) *Journal Of Islamic Studies And Culture* 4, No. 2: 109-121.

¹⁷⁰⁰ *Ibid.*

¹⁷⁰¹ *Sahih Muslim* 2158a : Book 38, Hadith 57

In accordance with the Prophet's Sunnah, it was deemed impermissible for conversations to be overheard without the knowledge or consent of those involved¹⁷⁰². The Sunnah has thus stated that narrating a dream that one has not personally experienced will result in great difficulty, akin to attempting to tie two barley seeds together that cannot be joined¹⁷⁰³. Similarly, those who attempt to eavesdrop on the private conversations of others will face severe consequences on the Day of Resurrection, including having molten lead poured into their ears¹⁷⁰⁴. In addition, it can be observed that the Prophetic Sunnah has prohibited the act of spreading scandals and engaging in defamation, while also emphasising the importance of safeguarding the privacy of others¹⁷⁰⁵. This is evident in the following statement from the Sunnah: "If a servant conceals the faults of others in this life, Allah will conceal their faults on the Day of Resurrection."¹⁷⁰⁶ Seeking permission before entering a premises is considered a customary practise in accordance with the Sunnah and is deemed a polite gesture. This behaviour is motivated by a desire to acknowledge and honour the need for individuals to have adequate personal space to effectively engage in their daily routines. It is therefore executed as a means of demonstrating reverence for this essential aspect of personal autonomy.

The matter regarding the Sunnah can be succinctly expressed as follows: "Malik received information from Rabia ibn Abi Abd ar-Rahman, who in turn received it from another scholar of that era, that Abu Musa al-Ashari sought permission from Umar ibn al-Khattab to enter."¹⁷⁰⁷ The individual inquired for consent on three separate occasions prior to departing. Umar ibn al-Khattab inquired, "What is the matter with you?"¹⁷⁰⁸ What was the reason for your absence? According to Abu Musa, the Messenger of Allah stated that it is necessary to seek permission to enter a place on three separate occasions¹⁷⁰⁹. Provided that authorisation has been granted, proceed with entry. If that is not the case, kindly depart. Umar inquired, "Is there anyone who

¹⁷⁰² Fisher, Karen E., Salah Falioun, Eiad Yafi, And Khadijah S. Khan. "Co-Designing With The Iman In A Haram Digital World: Drawing On The Quran And Sunnah To Support People's Privacy And Information Practices." (In Islamichci, CHI 2020, Arab Islamic HCI Workshop, Pp. 25-30. 2020.)

¹⁷⁰³ Riyad As-Salihin 1544 : Book 17, Hadith 34

¹⁷⁰⁴ Farsani, Tourj Hemmati, And Sayyed Hossain Vaezi. "The Range Of Tajassos And The Reasons Of Its Related Primary Law In Islamic Jurisprudence." (2016) Mediterranean Journal Of Social Sciences 7, No. 3 S3: 340.

¹⁷⁰⁵ Naro, Wahyuddin, Abdul Syatar, Muhammad Majdy Amiruddin, Islamul Haq, Achmad Abubakar, And Chaerul Risal. "Shariah Assessment Toward The Prosecution Of Cybercrime In Indonesia." (2020) International Journal 9: 573.

¹⁷⁰⁶ Sahih Muslim 2590b : Book 45, Hadith 93

¹⁷⁰⁷ Book 54, Hadith 3 : Book 54, Hadith 3 : Book 54, Hadith 1768

¹⁷⁰⁸ Ibid.

¹⁷⁰⁹ Ibid.

can provide confirmation of this?¹⁷¹⁰" In the absence of corroborating evidence, I shall take certain actions against you. Abu Musa proceeded to attend a gathering at the mosque commonly referred to as the Majlis-al-Ansar. The speaker reported conveying to Umar ibn al-Khattab that they had heard the Messenger of Allah, instructing to seek permission thrice¹⁷¹¹. Provided that authorisation has been granted, proceed with ingress. If that is not the case, kindly depart. Umar issued a conditional threat, stating that in the absence of a corroborating witness, he would take certain actions against the individual in question¹⁷¹². If any individual has been made aware of the aforementioned statement, "they are welcome to accompany me¹⁷¹³". Abu Said al-Khudri was instructed to accompany the person in question. Abu Said held the position of being the youngest among the group¹⁷¹⁴. He accompanied him and reported the incident to Umar ibn al-Khattab. Umar ibn al-Khattab expressed to Abu Musa his apprehension regarding the possibility of individuals fabricating statements attributed to the Messenger of Allah, may Allah bless him and grant him peace. However, he clarified that he did not harbour any suspicions towards Abu Musa¹⁷¹⁵.

Furthermore, the Sunnah has recommended refraining from posing superfluous enquiries and advocating for the preservation of individuals' privacy¹⁷¹⁶. The Prophet expressed concern regarding the potential to cause offence to others and thus conveyed a statement to his Companions through Anas b. Malik¹⁷¹⁷. He reported that the Prophet had been informed about them and subsequently addressed them, stating that he had been presented with visions of Paradise and Hell¹⁷¹⁸. The Prophet conveyed that he had never before witnessed such a clear depiction of good and evil as he did on that day¹⁷¹⁹. If one had been aware, they would have shed more tears and experienced less amusement. According to the narrator, the most arduous task for the Companions of Allah's Messenger was this particular matter¹⁷²⁰. The individuals in question veiled their heads and emitted audible expressions of sorrow. During the gathering,

¹⁷¹⁰ Ibid.

¹⁷¹¹ Ibid.

¹⁷¹² Ibid.

¹⁷¹³ Ibid.

¹⁷¹⁴ Ibid.

¹⁷¹⁵ Ibid.

¹⁷¹⁶ Muhsin, Sayyed Mohamed. "Medical Confidentiality Ethics: The Genesis Of An Islamic Juristic Perspective." (2022) *Journal Of Religion And Health* 61, No. 4: 3219-3232.

¹⁷¹⁷ Ibid.

¹⁷¹⁸ Ibid.

¹⁷¹⁹ Ibid.

¹⁷²⁰ Ibid.

'Umar expressed his contentment with Allah as the divine being, Islam as the guiding principles for life, and Muhammad as the messenger of Allah¹⁷²¹. Subsequently, an individual inquired about the identity of their father. Then, the Prophet identified the father of the individual in question and cited the verse "O you who believe, do not ask about matters which, if they were to be made manifest to you (in terms of law), might cause to you harm¹⁷²²". The Prophetic Sunnah in Islamic teachings provides an exemplar of the Prophet's conduct, which encompasses a range of social norms, including the imperative of safeguarding one's personal privacy through the adoption of precautionary measures¹⁷²³. Apart from the aforementioned instances that exemplify the reverence for privacy in the Prophetic Sunnah, there exist indications and illustrations that manifest the Prophetic Sunnah's regard for confidentiality in diverse contexts¹⁷²⁴.

Consequently, the Prophetic Sunnah ensures the protection of an individual's personal privacy, as evidenced by the following illustrations¹⁷²⁵. As an example, the act of cleansing one's body requires the wearing of garments or the utilisation of an appropriate covering. As per the Sunnah, it is reported that the narrator had arranged for water to be made available for the Prophet and ensured his privacy while he performed his ablution¹⁷²⁶. The Prophet subsequently proceeded to take a bath. Furthermore, the Sunnah offers elucidations of ethical principles and commendable traits, such as confidentiality¹⁷²⁷. Al-Husain inquired from his father regarding the conduct of the Prophet in the company of his table companions¹⁷²⁸. His father responded by stating that Allah's Messenger consistently exhibited a pleasant demeanour, was affable, gentle, and did not engage in impolite, vulgar, rowdy, defamatory, or greedy behaviour¹⁷²⁹. The subject in question exhibits a lack of interest in matters that do not align with his personal preferences. However, he demonstrates a compassionate nature by ensuring that no individual who implores him is left without recourse or satisfaction¹⁷³⁰. He refrained from engaging in hypocrisy,

¹⁷²¹ Ibid.

¹⁷²² Sahih Muslim 2359a : Book 43, Hadith 177

¹⁷²³ Ibid.

¹⁷²⁴ Ibid.

¹⁷²⁵ Hayat 1, Muhammad Aslam. "Privacy And Islam: From The Quran To Data Protection In Pakistan." (2007) Information & Communications Technology Law 16, No. 2: 137-148.

¹⁷²⁶ Sahih Muslim 337 : Book 3, Hadith 89

¹⁷²⁷ Sherwani, Mariam. "The Right To Privacy Under International Law And Islamic Law: A Comparative Legal Analysis." (2018) Kardan J Soc Sci Humanit 1, No. 1: 30-48.

¹⁷²⁸ Sahih Muslim 337 : Book 3, Hadith 89

¹⁷²⁹ Ibid.

¹⁷³⁰ Ibid.

indulging in excess, and involving himself in matters that were not relevant to him¹⁷³¹. Likewise, he refrains from assigning blame, criticising others, or encroaching upon their personal boundaries¹⁷³². He would solely articulate statements for which he anticipated receiving a form of compensation. The speaker's table companions exhibited a gesture of reverence by bowing in silence, akin to birds perching on their heads, while he spoke¹⁷³³. Their speech was reserved until the speaker ceased talking. Individuals did not challenge each other's entitlement to speak in the presence of the aforementioned person¹⁷³⁴. Moreover, when an individual spoke in the presence of that person, others attentively listened until the speaker concluded their discourse. The language used in the individual's presence was of the highest calibre among their peers. He would express amusement at the same things that amused them, and express wonder at the same things that filled them with wonder¹⁷³⁵. The individual in question previously demonstrated a willingness to exhibit forbearance towards an unfamiliar individual's coarse mode of communication or questioning, despite the eagerness of his associates to court their attention¹⁷³⁶. He expressed the sentiment that it is imperative to assist those who are in search of something they require. The individual in question exhibited a tendency to limit the amount of praise he received and displayed a willingness to patiently listen to others when they spoke¹⁷³⁷. However, if a certain threshold was crossed, he would interject with a prohibition or physically stand up to assert his position¹⁷³⁸. Hence, it is apparent that the regard for privacy in its diverse forms and manifestations is a societal and ethical value that is grounded on principles that are commonly upheld by different civilisations and societies. This is apparent based on the Prophetic Sunnah illustrations that have been presented thus far.

The importance of privacy has been established and supported by Islamic jurisprudence and jurisprudential opinions found in books of interpretation and Islamic jurisprudence. Several verses in the Qur'an and Sunnah advocate for safeguarding the confidentiality of individuals. Nevertheless, legal scholars have provided interpretations of these textual sources in order to

¹⁷³¹ Ibid.

¹⁷³² Ibid.

¹⁷³³ Ibid.

¹⁷³⁴ Ibid.

¹⁷³⁵ Ibid.

¹⁷³⁶ Ibid.

¹⁷³⁷ Ibid.

¹⁷³⁸ Ash-Shama'il Al-Muhammadiyah 350 : Book 48, Hadith 9

facilitate comprehension and adherence to Islamic jurisprudence by readers and adherents¹⁷³⁹. The jurists expounded upon a collection of legal evidence that illustrates the importance of human dignity and privacy within the framework of Islamic law¹⁷⁴⁰. One example cited is the privacy of Adam and Eve in Paradise, as described in the Qur'an, wherein God commanded them to dress and maintain bodily privacy¹⁷⁴¹. The statement asserts that a commitment has been made to ensure that individuals will not experience hunger or lack of clothing in that particular place. According to the Tafsir Al-Qurtubi¹⁷⁴², a jurist exegesis, the verse suggests that those in Paradise will not experience hunger or nakedness. In Surah Al-Isra¹⁷⁴³ of the Qur'an, it is stipulated by the divine that safeguarding one's privacy is a necessary obligation¹⁷⁴⁴. The Qur'an stipulates that it is imperative to refrain from making disparaging remarks about others. This is evident in the following verse: "And pursue not that of which thou hast no knowledge; for every act of hearing, or of seeing or of (feeling in) the heart will be enquired into (on the Day of Reckoning)."¹⁷⁴⁵ According to Ibn Saadi¹⁷⁴⁶, a prominent Islamic scholar, the verse in question can be characterised in the following manner. The underlying message is to refrain from pursuing activities or beliefs that lack a foundation of knowledge. It is imperative to substantiate one's claims and actions with evidence and logical reasoning¹⁷⁴⁷. Neglecting to do so may result in unfavourable consequences for both the individual and their surroundings. The author asserts that the purpose of the limbs created by God is to facilitate the act of worship through the preparation of questions and answers. This can only be achieved by utilising these

¹⁷³⁹ Al-Kharousi, Abdul Rahman. "The Term (The Right To Privacy) In Islamic Jurisprudence Is Problematic In Its Definition And In Its Many Fields." (2021) *Jordan Journal Of Islamic Studies* 17, No. 2: 121-141.

¹⁷⁴⁰ Akrami, Forouzan, Abbas Karimi, Mahmoud Abbasi, And Akbar Shahrivari. "Adapting The Principles Of Biomedical Ethics To Islamic Principles And Values In The Context Of Public Health Policy." (2018) *Journal For The Study Of Religions And Ideologies* 17, No. 49: 46-59.

¹⁷⁴¹ Surah Ta-Ha Verse 118

¹⁷⁴² Zhamashev, A., And R. Kopbayeva. "Al-Qurtubi, Origin, Teachers And Scientific Works." (2022) *Sciences Of Europe* 90-1: 23-27: The Andalusian Jurist, Islamic Scholar, And Muhaddith Abu 'Abdullah Al-Qurtubi Was Also Known As Abu 'Abdullah Muhammad Ibn Ahmad Ibn Abu Bakr Al-Ansari Al-Qurtubi. He Was Educated By Eminent Academics In Cordoba, Spain, And Is Best Known For His Tafsir Al-Qurtubi Exegesis On The Qur'an.

¹⁷⁴³ Surah Al-Isra Verse 36

¹⁷⁴⁴ Abu Abdala Al-Qurtubi The Whole Of The Rulings Of The Qur'an Interpretation Of Al Qurtubi , 671H

¹⁷⁴⁵ Ibid.

¹⁷⁴⁶ نواف بن رحيل. "منهج الشيخ عبد الرحمن بن ناصر السعدي وأثره في أصول الفقه." *مجلة كلية الشريعة والدراسات الإسلامية*, نواف بن رحيل, 22, no. 6 (2020): 5605-5642.

Al-Sharari, Nawaf bin Raheel, and Nawaf bin Raheel. "The approach of Sheikh Abdul Rahman bin Nasser Al-Saadi and its impact on the principles of jurisprudence." *Journal of the Faculty of Sharia and Law in Tafhana Al-Ashraf - Dakahlia* 22, no. 6 (2020): 5605-5642:

Shaykh 'Abd Al-Raman Ibn N'ir Al-Sid, Also Known As Al-Sid, Was A Saudi Arabian Islamic Scholar. He Was Also Known By His Nickname, Al-Sid. In The City Of Unaizah, Saudi Arabia, He Was Both A Teacher And An Author. He Is The Author Of Almost 40 Publications, Which Cover A Variety Of Topics, Such As Tafsir, Fiqh, And 'Aqidah.

¹⁷⁴⁷ Ibin Saadi Tafsir

limbs in the service of God and adhering to the principles of religious devotion, while abstaining from actions that are detested by the Almighty¹⁷⁴⁸. The Qur'anic chapter Surat Al-Hujurat¹⁷⁴⁹ delineates the interpersonal dynamics between an individual and their peers. This establishes a fundamental basis for the relationship and underscores the importance of exhibiting respect and appreciation within it¹⁷⁵⁰.

Furthermore, the Sunnah prohibits the act of prying into the personal matters of others. As stated by the Prophet, "Be cautious of conjecture, for conjecture is the most deceitful form of speech. Do not pry into the faults of others, do not engage in espionage, do not harbour jealousy towards one another, do not sever ties, do not harbour enmity towards one another¹⁷⁵¹."

In summary, the Sharia delineated the decorum of showing deference to others and safeguarding their confidentiality in diverse domains, as expounded earlier, via the Qur'an, the Sunnah of the Prophet, qiyas, and ijihad. Moreover, due to their grounding in human nature, the Islamic regulations and morals are deemed suitable for practical application based on their veracity. Sharia law is founded upon the agreement among individuals regarding the inherent equality of all people, as is demonstrated in the Qur'anic verse, "...O mankind, indeed We have created you from male and female and made you peoples and tribes that you may know one another...¹⁷⁵²". Undoubtedly, the individual who possesses the highest level of righteousness is considered the most honourable in the eyes of Allah. The statement "Indeed, Allah is Knowing and Acquainted" acknowledges the omniscience and familiarity of Allah¹⁷⁵³. In addition to the principle of gender equality, as espoused by the Qur'anic verse "Whoever does righteousness, whether male or female, while he is a believer – "... We will surely cause him to live a good life, and We will surely give them their reward according to the best of what they used to do,...¹⁷⁵⁴" it can be inferred that both men and women are equally deserving of divine rewards based on their actions. The principles of peaceful coexistence,

¹⁷⁴⁸ Ibid.

¹⁷⁴⁹ Surat Al-Hujurat Verse 13.

¹⁷⁵⁰ "منهج ابن كثير في السيرة النبوية." خليل حسن الزركاني. *Arab Science Heritage Journal*, 1 no. 11 (2010).

Khalil Hassan Al-Zarkani. "Ibn Kathir's approach to the Prophet's biography." (2010) *Arab Science Heritage Journal* 1, no. 11:

Ibn Kathr, Also Known As Abu Al-Fi 'Imd Ad-Din Ism'l Ibn 'Umar Ibn Kathr Al-Qurash Al-Damishq, Was A Very Important Arab Historian, Exegete, And Scholar In Syria During The Mamluk Era.

¹⁷⁵¹ Sahih Al-Bukhari 6064 : Book 78, Hadith 94

¹⁷⁵² Qur'an Surah Al-Hujurat 49-13.

¹⁷⁵³ Ibid.

¹⁷⁵⁴ Qur'an Surah Al-Nahil 16:97).

privacy, facilitation of individuals, prevention of corruption, justice, prevention of harm to individuals, and protection of wealth are all essential rules to uphold¹⁷⁵⁵.

The Legal Culture of the Kingdom of Saudi Arabia

The origins of customary constitutions and written constitutions are distinct, and the origins of written constitutions can vary depending on the political system of the state in which they are employed. The process of formulating a constitution can be carried out through two distinct approaches. The first approach involves a non-democratic process where the ruler plays a prominent role in the constitution-making process¹⁷⁵⁶. The second approach is parliamentary in nature, where the constitution is formed exclusively with the consent of the people. The Kingdom of Saudi Arabia's governmental structure is that of an absolute monarchy, wherein the position of ruler is inherited within the royal family through a system of hereditary succession¹⁷⁵⁷. The establishment of the governmental framework can be traced back to the directive issued by King Abdulaziz, the progenitor of the Kingdom of Saudi Arabia and the patriarch of the ruling dynasty¹⁷⁵⁸. This directive resulted in the creation of a constituent body, initially comprising of eight members, who were elected through a confidential voting process¹⁷⁵⁹. Following that, an additional five individuals were included in the group, resulting in a cumulative membership count of fifteen¹⁷⁶⁰. Upon the annexation of Makkah to his territory and the conclusion of the West of the Kingdom war (Hijaz war¹⁷⁶¹), the populace pledged their allegiance to him as the Hijaz king¹⁷⁶². As such, it became incumbent upon him to establish the central system of the state. This event took place subsequent to the individuals having pledged their loyalty to him in his capacity as the monarch of Hijaz¹⁷⁶³. The Fundamental Instructions

¹⁷⁵⁵ Ibid.

¹⁷⁵⁶ Umm Al-Qura Newspaper, Issue No. 55, Dated 6/30/1344 AH.

¹⁷⁵⁷ Zuhur, Sherifa. Saudi Arabia. (2012) Bloomsbury Publishing USA.

¹⁷⁵⁸ Mchale, Thomas R. "A Prospect Of Saudi Arabia." (1980) International Affairs (Royal Institute Of International Affairs 1944-) 56, No. 4: 622-647.

¹⁷⁵⁹ The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419 AH, Prepared By Institute Of Public Administration In Riyadh, 1419 AH, P. 83.

¹⁷⁶⁰ Umm Al-Qura, Second Year, Issue No. 90, Dated 25/2/1345 AH, And Second Year, Issue No. 91

¹⁷⁶¹ Bsheer, Rosie. "Archive Wars: The Politics Of History In Saudi Arabia." (2020) Stanford University Press.

¹⁷⁶² The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419 AH, Prepared By Institute Of Public Administration In Riyadh, 1419 AH, P. 83.

¹⁷⁶³ Al-Otaibi, Saud M. "The Resilience Of Monarchy In The Middle East Reconsidered: A Case Study Of Saudi Arabia."

for the Kingdom of Hijaz comprised a total of 79¹⁷⁶⁴ regular parts, each of which underwent publication¹⁷⁶⁵.

The ratification of the founding constitution of the new kingdom occurred on August 30, 1926¹⁷⁶⁶. This constitution included the fundamental instructions of the structural system of governance and was divided into nine sections. The initial segment of the text pertained to the framework of the state, followed by a section on the enduring capital¹⁷⁶⁷. The subsequent section delved into the management of the kingdom, while the fourth section expounded on the kingdom's affairs. The fifth section was dedicated to the councils, whereas the sixth section focused on the court of accounts¹⁷⁶⁸. Lastly, the seventh section was devoted to the general inspectorate¹⁷⁶⁹. The local administration committees and municipal general councils hold the eighth and ninth positions in the ranking¹⁷⁷⁰. As per the fundamental instructions, the proposed state was intended to be a monarchy with its capital located in the holy city of Makkah Al-Mukarramah¹⁷⁷¹. The regulatory apparatus was placed under its jurisdiction and it was tasked with creating several governing bodies, such as the Shura Council. (Parliament). Prior to the unification of the Kingdom of Saudi Arabia in 1932¹⁷⁷², the "Fundamental Instructions" were enforced for a duration of seven years. The fundamental guidelines lacked any provisions outlining the process for modifying or revoking them, and no official proclamation or edict was issued with the explicit intent of rescinding them¹⁷⁷³.

¹⁷⁶⁴ The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419 AH, Prepared By Institute Of Public Administration In Riyadh, 1419 AH, P. 83.

¹⁷⁶⁵ Ibid.

¹⁷⁶⁶ Elyas, Tariq, And Michelle Picard. "A Brief History Of English And English Teaching In Saudi Arabia." (2018) In English As A Foreign Language In Saudi Arabia, Pp. 70-84. Routledge.

¹⁷⁶⁷ Ibid.

¹⁷⁶⁸ Ibid.

¹⁷⁶⁹ The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419H, P. 83.

¹⁷⁷⁰ The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419 AH, Prepared By Institute Of Public Administration In Riyadh, 1419 AH, P. 83.

¹⁷⁷⁰ Ibid.

¹⁷⁷¹ Ibid.

¹⁷⁷² Willner, Samuel. "Mohammed Bin Salman: The Icarus Of Saudi Arabia? By David B." (2021) Ottaway Boulder: Lynne Rienner Publishers, 2021, 231 Pages.: 1-5.

¹⁷⁷³ Alqahtani, Mohammed Thafir. "The Benefits Associated With Teaching Asian Literature In The Saudi Educational System." (2022) The Arab Journal Of Scientific Research 6, No. 6: 27-40.

In actuality, the reason for their discontinuation was their original purpose of regulating the operations within the Kingdom of Hejaz¹⁷⁷⁴. Upon the establishment of the new kingdom, it was deemed complete in regards to the consolidation of disparate territories and the adoption of a novel nomenclature for the unified entity¹⁷⁷⁵. The reason for this was the obsolescence of the constitutional mandates that were operative prior to the implementation of the new constitution (the Fundamental Instructions) ¹⁷⁷⁶. The establishment of the first council of ministers in 1953¹⁷⁷⁷ was a direct outcome of the political and administrative expansion of the kingdom. This expansion was made feasible due to the circumstances under which the kingdom was founded. The kingdom underwent a sequence of changes as a result of these events. Following the unification of the state's territories and subsequent renaming as the "Kingdom of Saudi Arabia," King Abdulaziz made the decision to maintain the pre-existing government structures in the Hijaz, Najd¹⁷⁷⁸, and their annexations.

This was done with the intention of allowing these structures to continue functioning until new government formations could be established for the entirety of the Kingdom, based on the newly achieved unification¹⁷⁷⁹. The newly established unity is poised to act as the fundamental basis for the implementation of novel forms of governance. King Abdul Aziz instructed the councils of representatives to promptly initiate the development of a fundamental framework for the kingdom, a framework for the succession to the throne, and a framework for government formations¹⁷⁸⁰. The purpose of this directive was to enable him to issue commands based on the presented frameworks. The councils of representatives were directed by King Abdul Aziz to

¹⁷⁷⁴ AL, AOFI, And Areg Muhssen. "The Security Of The Hejaz In The Reign Of King Abdulaziz Al-Saud 1925–1953 AD/1343-1373 AH)." (2009).

¹⁷⁷⁵ Ibid.

¹⁷⁷⁶ The Development Of Public Administration In The Kingdom Of Saudi Arabia During A Hundred Years 1319-1419H. Previous, P. 83.

¹⁷⁷⁷ Issued By Royal Decree No. 5/19/4288 Dated Safar 1, 1373 AH, And The System Was Published In Umm Al-Qura Newspaper, Issue No. 1485, Dated 8/2/1373 AH.

¹⁷⁷⁸ Ahmad, Navid, Muhammad Ajmal, And Abdul Malik. "Meteorological Trend Analysis For Najd And Hejaz Regions, Saudi Arabia." (2022) Meteorology And Atmospheric Physics 134, No. 2: 1-12.

¹⁷⁷⁹ Mitchell, Brendan, And Abdulrahman Alfuraih. "The Kingdom Of Saudi Arabia: Achieving The Aspirations Of The National Transformation Program 2020 And Saudi Vision 2030 Through Education." (2018) Journal Of Education And Development 2, No. 3 : 36.

¹⁷⁸⁰ Al-Fahad, Abdulaziz H. "Ornamental Constitutionalism: The Saudi Basic Law Of Governance." (2005) Yale J. Int'l L. 30: 375.

present to him the methods. In 1936¹⁷⁸¹, the Shura Council convened a meeting where they approved the draught of the fundamental structure of the Kingdom, consisting of 140¹⁷⁸² articles. The approved draught was subsequently submitted to the King for his endorsement. The approval of the King was necessary¹⁷⁸³.

The Kingdom of Saudi Arabia experienced a deceleration in oil production due to the occurrences of World War II and the concurrent global economic downturn, which had a noteworthy influence on the country¹⁷⁸⁴. The proposed reforms aimed at achieving a substantial increase in the number of outcomes, but the administration was unsuccessful in their implementation¹⁷⁸⁵. There existed a requirement for substantial amounts of funds, however, the government was incapable of furnishing them during that particular period¹⁷⁸⁶.

Prince Faisal's ten-point reform program, initiated upon his assumption of the presidency of the Council of Ministers in 1962¹⁷⁸⁷, prioritised the establishment of a fundamental state system that would encompass the principles of governance, the relationship between the ruler and the ruled, and the regulation of state authorities. All the aforementioned aspects have been executed, except for the initial one that pertains to the formulation of a documented constitution. There was a lack of documented rationale for the decision to refrain from issuing said constitution. During the reign of King Khalid, a further endeavour was undertaken to achieve the objective¹⁷⁸⁸. The individual in question instituted a commission with the responsibility of formulating the foundational framework of the governing system. However, prior to the dissemination of the report, the individual in question expired¹⁷⁸⁹. The establishment

¹⁷⁸¹ Отман, Абдуллах Хазаа Отман. "Consultative Council: An Icon For The Development And Consolidation Of The Exercise Of Power In The Saudi Political System." In *Актуальные Проблемы Изучения И Преподавания Всеобщей Истории И Международных Отношений*, Pp. 399-407. 2021.

¹⁷⁸² Umm Al-Qura Newspaper,. "Abdul Rahman Bin Abdulaziz, The Constitutional System In The Kingdom Of Saudi Arabia Between Islamic Sharia And Law Comparative" (Second Edition, 1426 AH, P. 394. Issue 406 On 5/22/1351 AH, Published In Chalhoub, D)

¹⁷⁸³ Abdelhay-Altamimi, Nawaf. "The Kingdom Of Saudi Arabia." (2014) In *Middle Eastern And African Perspectives On The Development Of Public Relations: Other Voices*, Pp. 83-96. Palgrave Pivot, London.

¹⁷⁸⁴ Baz, Dr. Ahmed Bin Abdullah, "The Political And Constitutional System Of The Kingdom Of Saudi Arabia" (1421H) Al-Kahraji For Publishing And Distribution, Third Edition, P. 96.

¹⁷⁸⁵ Ibid.

¹⁷⁸⁶ Ibid.

¹⁷⁸⁷ Shechter, Relli. "A Social Contract Moment: Egypt's National Action Charter And Saudi Arabia's Ten-Point Program Compared." (2021) *The Middle East Journal* 75, No. 4: 574-590.

¹⁷⁸⁸ Ibid.

¹⁷⁸⁹ Ibid.

of the state's identity as a monarchy was stipulated in the founding decree¹⁷⁹⁰. Consequently, it was imperative for the royal family to have a clear understanding of the issues surrounding the inheritance of the throne. This was achieved through the successive coronation of kings to lead the state, despite the absence of a written constitution following the unification of the kingdom in 1932¹⁷⁹¹.

The transparency and cooperation between the public authorities of the state can be likened to the guiding principles of Shariah, which ensure the freedom, rights, and obligations of each individual and are similarly upheld by the government¹⁷⁹². The establishment of the constitutional framework of the Kingdom was a direct result of the customary principles that had been in existence since the unification of the nation¹⁷⁹³. The meticulous construction of constitutional articles was necessary to establish the state and define its characteristics. Consequently, these articles have undergone changes in parallel with the transformation of the political and social landscape in the Kingdom¹⁷⁹⁴.

Furthermore, the Kingdom remained oblivious to the purported "constitutional vacuum" throughout its complete history due to its adherence to guiding principles, binding regulations, and unequivocal tenets¹⁷⁹⁵. The aforementioned principles are the standards by which individuals in positions of authority such as monarchs, judicial officials, academics, and other government personnel are expected to adhere to. The Basic Law of Governance was established through the issuance of Royal Order No. A/90 on March 2, 1992¹⁷⁹⁶ by King Fahd bin Abdulaziz. Through the issuance of this decree, the monarch effectively terminated the custom of adopting constitutional standards that had been established through customary practises and instigated the progression of substituting such regulations with codified constitutions¹⁷⁹⁷.

¹⁷⁹⁰ Отман, Абдуллах Хазаа Отман. "Consultative Council: An Icon For The Development And Consolidation Of The Exercise Of Power In The Saudi Political System." (2021) In Актуальные Проблемы Изучения И Преподавания Всеобщей Истории И Международных Отношений, Pp. 399-407.

¹⁷⁹¹ Гришин, Олег Евгеньевич, And Абдуллах Хазаа Отман Отман. "Specificity Of Political Decision-Making In Saudi Arabia." (2020) Politbook 1: 147-160.

¹⁷⁹² From The Speech Of The Custodian Of The Two Holy Mosques King Fahd Bin Abdulaziz "On The Occasion Of The Issuance Of The New Regulations The Basic Law Of Governance" (The Shura Council System, The District System, Published In The Magazine's Bookletal-Arabiya, Issued In 1414 AH, P. 6.)

¹⁷⁹³ Ibid.

¹⁷⁹⁴ YAKAR, Emine Enise, And Sumeyra YAKAR. "The Symbolic Relationship Between 'Ulamā' and 'Umarā' in Contemporary Saudi Arabia." (2021) Ortadoğu Etütleri 13, No. 1: 23-46.

¹⁷⁹⁵ Ibid.

¹⁷⁹⁶ Mallat, Chibli. "Saudi Arabia: Literal Islamic Constitutionalism." (2022) Al-Abhath 70, No. 1-2: 141-176.

¹⁷⁹⁷ Ibid.

Subsequently, Saudi Arabia has adhered to a system of written constitutions rather than traditional constitutional criteria¹⁷⁹⁸. Consequently, the constitutional laws that previously relied on customary practises in the kingdom have transitioned towards a written form. As per the Basic Law of Governance, the Kingdom of Saudi Arabia is recognised as an Islamic state that holds complete sovereignty¹⁷⁹⁹. The constitution of the state is based on the Holy Qur'an and the Sunnah of the Prophet, while the official language is Arabic¹⁸⁰⁰.

Conclusion

The present chapter has furnished a synopsis of the legal culture prevalent in the Kingdom of Saudi Arabia and the historical background of the constitutional provisions employed for governing the Kingdom. Furthermore, the chapter presents empirical support in the form of illustrative instances that demonstrate the possibility of interpreting privacy through the lens of Sharia law. However, this gives rise to several enquiries. What strategies can be employed to cultivate appreciation and respect for individuals whose upbringing diverges significantly from our own? What is the rationale behind investing time and resources in the examination of legal frameworks in foreign nations and communities beyond Saudi Arabia? Additionally, is the comprehension of privacy within the framework of Sharia sufficiently developed to be adopted in the Kingdom of Saudi Arabia?

Inquiry pertains to whether the Sharia's interpretation of privacy has attained a level of recognition that could potentially be embraced within the jurisdiction of the Kingdom of Saudi Arabia. The concept of privacy in Sharia has been a topic of debate and literature for centuries. However, it is noteworthy that only in recent decades has it started to conform to the swift transformations that have been instigated by advancements in technology and sciences. Given the potential for Islamic law to encounter novel and unforeseen challenges in the forthcoming decades, the integration of Sharia tenets into the Privacy Law may offer a viable means of

¹⁷⁹⁸ Dr. Ibrahim Muhammad Al-Hadithi Journal Of Sharia And Law College Of Law - United Arab Emirates University Twenty-Seventh Year Issue Fifty-Fifth - Ramadan 1434 July 2013.

¹⁷⁹⁹ Ibid.

¹⁸⁰⁰ From The Speech Of The Custodian Of The Two Holy Mosques King Fahd Bin Abdulaziz "On The Occasion Of The Issuance Of The New Regulations The Basic Law Of Governance" (The Shura Council System, The District System, Published In The Magazine's Bookletal-Arabiya, Issued In 1414 AH, P. 6.)

redressing current privacy-related apprehensions. Furthermore, it is recommended that during the formulation of privacy laws, judges and legislators operating within the Sharia framework employ Islamic legal analysis. Expanding the scope of potential solutions will enhance their range.

Gaining knowledge about the legal customs of foreign nations, which may exhibit variations in law, society, and culture compared to those in this country, fosters a sense of security and mutual regard among individuals. By engaging in the study of culture, and specifically legal culture, one can attain a more comprehensive understanding of historical events, global positioning, and future possibilities. This knowledge can ultimately inform and enhance present decision-making processes. Acquiring knowledge about diverse cultures facilitates the ability to comprehend alternative perspectives and embrace actions that may initially be perceived as objectionable. A primary factor contributing to conflicts is the absence of comprehension, and mitigating this concern can significantly diminish the probability of its emergence.

Individuals who do not possess adequate knowledge of a particular subject may be compelled to reside in substandard living conditions. This may hinder progress and pose a threat to civilisation. Contemporary culture is characterised by the prevalence of misconceptions and lack of knowledge. Therefore, a lack of knowledge contributes to the proliferation of potentially fatal illnesses and irreversible societal disasters. The origin of various forms of oppression, including economic, intellectual, physical, and psychological, as well as other forms of suffering, can be attributed to a singular factor: lack of knowledge or ignorance.

Chapter Five: An examination of privacy within the existing legal framework of the Kingdom of Saudi Arabia

Introduction

The preceding chapter has analysed the legal framework of the Kingdom of Saudi Arabia, which is based on the Sharia Law and Islamic jurisprudence, alongside written Law. The present chapter delves into the insufficiency of the current level of privacy afforded to individuals with respect to their personal information. It argues that the existing Saudi legislation falls short in providing adequate safeguards to ensure the privacy of individuals' information in the digital era. It also provides an analysis of personal data within the context of the Kingdom of Saudi Arabia. The present chapter aims to demonstrate the legal provisions in the extant legal framework of the Kingdom of Saudi Arabia that could potentially contradict the forthcoming initiative for safeguarding privacy and information freedom.

Personal Data Analysis in the Kingdom of Saudi Arabia

The previous chapter presented an analysis of the legal framework of Sharia Law and Islamic Jurisprudence in the Kingdom of Saudi Arabia and evaluated the efficacy of the Sharia Law system in upholding the right to privacy. The written legal system of the Kingdom of Saudi Arabia may not provide sufficient measures to ensure the protection of personal data and information. The previous chapter has suggested that in response to the demands of the contemporary technological era, it is advisable to revise the legal system in tandem with Sharia Law and Islamic Jurisprudence to cater to the requirement for privacy. The present discourse pertains to an analysis of the comments that have an impact on the protection of personal data of citizens and visitors of the Kingdom of Saudi Arabia.

The absence of comprehensive privacy systems

One of the primary factors to be taken into account is that the lack of comprehensive legislation regarding privacy appears to be a contributing factor. The legal framework pertaining to the protection of personal data in the Kingdom of Saudi Arabia is deficient in terms of its comprehensiveness and specificity, particularly with regard to safeguarding the personal information of individuals in both public and private sectors. The protection of personal information belonging to individuals is overseen by a variety of regulations and compliance measures, each of which is subject to specific sets of laws and regulations¹⁸⁰¹. The approach to safeguarding individuals' privacy rights varies between the legislative frameworks of European Union member¹⁸⁰² countries and other regions.

The current regulations related to data protection are primarily based on fundamental principles that aim to protect human privacy, including electronic communication and private transactions. The regulations in question were instituted to ensure the protection of personal data confidentiality, thereby mitigating the risk of unauthorised disclosure in the absence of explicit consent from the relevant party¹⁸⁰³. Furthermore, the analysis of the study indicates that the effective implementation of protective measures necessitates the employment of several legislative and regulatory frameworks in conjunction. While the main objective of the majority of these regulations is not centred on the protection of personal privacy, they do offer a certain level of protection for the confidential data of individuals. The present legal framework exhibits a deficiency in prioritising the protection of individuals' privacy rights with respect to their personal data¹⁸⁰⁴. Moreover, the guidelines pertaining to the safeguarding of an individual's private data are frequently articulated in imprecise and ambiguous terminology¹⁸⁰⁵.

¹⁸⁰¹ Al-Ghadyan, Ahmed A. "The Judiciary In Saudi Arabia." (1998) Arab LQ 13: 235.

¹⁸⁰² Voigt, Paul, And Axel Von Dem Bussche. "The Eu General Data Protection Regulation (Gdpr)." (2017) A Practical Guide, 1st Ed., Cham: Springer International Publishing 10, No. 3152676: 10-5555.

¹⁸⁰³ Binsawad, Muhammad, Ghazanfar Ali Abbasi, And Osama Sohaib. "People's Expectations And Experiences Of Big Data Collection In The Saudi Context." (2022) Peerj Computer Science 8: E926.

¹⁸⁰⁴ Chikhaoui, Emna, Jawahitha Sarabdeen, And Rehana Parveen. "Privacy And Security Issues In The Use Of Clouds In E-Health In The Kingdom Of Saudi Arabia." (2017) Communications Of The IBIMA 18.

¹⁸⁰⁵ Nawaf Jaber Alhomoud, Ghassan. "On Translating And Drafting Sharia Legal Terms And Expressions In Saudi Contracts."(2022) Education Research International.

The current status of privacy protection is unclear due to the lack of specific legislation aimed at safeguarding information privacy and the use of imprecise and broad terminology in existing laws pertaining to information privacy. Despite the presence of targeted legislation aimed at preserving the confidentiality of information, this fact remains unchanged¹⁸⁰⁶.

Moreover, the absence of a comprehensive legislation safeguarding personal data in the nation has granted Sharia judges considerable discretion in determining the appropriate course of action in cases involving accusations of privacy infringement¹⁸⁰⁷. The matter at hand would not pose a challenge if the cases in question pertained to conventional legal matters that have been thoroughly deliberated upon in the works of traditional Islamic legal scholars¹⁸⁰⁸. In each of these cases that have been firmly established, a judge would face no challenge in the application of Sharia law principles¹⁸⁰⁹. In situations where personal privacy is jeopardized, particularly within a technological framework, the aforementioned assertion does not hold true. The principles of Sharia that relate to issues of personal privacy are frequently broad in nature. As was previously stated in the previous chapter, in order to reach a decision based on such thorough principles, a judge must have attained a certain level of diligence¹⁸¹⁰ in Sharia law¹⁸¹¹.

Regulations that are based on specific sectors

The subsequent analysis centres on legislation that pertains to specific sectors and takes into account the subsequent factors: The present study examines the organisation and evaluation of fundamental data protection frameworks and regulations across various sectors, including financial services, financial markets, credit, and telecommunications. These sectors are of particular interest in the United States and in the countries under review in this thesis. Financial services are evaluated and structured with respect to financial markets, whereas credit and telecommunications are assessed and structured with respect to financial services.

¹⁸⁰⁶ Eichelberger, Adam. "Global Employee Privacy: A Case Study On The Minefield Of Employee Privacy Rights In The EU, USA, And KSA." (2021) *Ind. Int'l & Comp. L. Rev.* 31: 177.

¹⁸⁰⁷ Almebrad, Abdulaziz. "The Sufficiency Of Information Privacy Protection In Saudi Arabia." (2018).

¹⁸⁰⁸ Abokhodair, Norah, And Sarah Vieweg. "Privacy & Social Media In The Context Of The Arab Gulf." (In Proceedings Of The 2016 ACM Conference On Designing Interactive Systems, Pp. 672-683. 2016.)

¹⁸⁰⁹ The Basic Concepts Of Shariah. (2020) N.P.: Pena Hijrah Resources.

¹⁸¹⁰ Refer To The Section On Islamic Jurisprudence Within This Thesis.

¹⁸¹¹ Abdelkader, Engy. "To Judge Or Not To Judge: A Comparative Analysis Of Islamic Jurisprudential Approaches To Female Judges In The Muslim World (Indonesia, Egypt, And Iran)." (2013) *Fordham Int'l LJ* 37: 309.

The healthcare industry can serve as an illustrative example in support of this assertion, particularly in relation to the maintenance of medical records by healthcare practitioners. Regulations have been instituted pursuant to the Law of Practicing Healthcare Professions¹⁸¹² to ensure the protection of individuals' confidential medical data¹⁸¹³. In the event of a healthcare professional's non-compliance with the regulations, the Minister of Health will establish a committee to investigate and determine appropriate actions¹⁸¹⁴. The Commission's decisions have the potential to lead to recompense for individuals who have suffered negative consequences, and these decisions are open to contestation before the Board of Grievances¹⁸¹⁵. The Board of Grievances is an administrative court that possesses the authority to resolve cases involving the government as a party to any potential dispute¹⁸¹⁶.

The General Sharia Courts possess the jurisdiction to preside over all cases, provided that there exists no explicit exemption delineated in the legal framework that pertains to the particular category of case that is being presented before them¹⁸¹⁷. It is conceivable that distinct commissions functioning under the jurisdiction of Saudi Arabia's legal framework might opt to assume the responsibility of adjudicating lawsuits pertaining to the protection of classified data¹⁸¹⁸. However, in December 2022, the Ministries of Justice and Health made an official announcement regarding the successful transfer of responsibilities pertaining to health-related matters from the Ministry of Health to the public judiciary¹⁸¹⁹. Medical error cases are adjudicated in the General Court, which is organised into 8 judicial circuits. Each circuit is presided over by three judges. Additionally, the Court of Appeal in the Riyadh region

¹⁸¹² Alkhenizan, Abdullah H., And Mohammed R. Shafiq. "The Process Of Litigation For Medical Errors In Saudi Arabia And The United Kingdom." (2018) Saudi Medical Journal 39, No. 11: 1075.

¹⁸¹³ Qureshi, Ahmad Zaheer, Sami Ullah, Adel Abdulaziz Aldajani, Petro Basson, Ahmed Mushabbab Alhabter, Taha Ali, Bazah M. Alzubair Et Al. "Telerehabilitation Guidelines In Saudi Arabia." (2021) Telemedicine And E-Health 27, No. 10 : 1087-1098. Also See Chikhaoui, Emna, Jawahitha Sarabdeen, And Rehana Parveen. "Privacy And Security Issues In The Use Of Clouds In E-Health In The Kingdom Of Saudi Arabia." (2017) Communications Of The IBIMA 18.

¹⁸¹⁴ Elgujja, Abba Amsami. Adequacy Of The Legal Safeguards Of The Patients' Confidentiality Right Under The Saudi Arabian Laws. (2020) University Of Salford, United Kingdom.

¹⁸¹⁵ Al-Jarbou, Ayoub M. "The Saudi Board Of Grievances: Development And New Reforms." (2011) Arab Law Quarterly 25, No. 2: 177-202.

¹⁸¹⁶ Al-Hejailan, Salah. "Justice For Government Contracts In Saudi Arabia." (1986) Arab Law Quarterly: 425-429. Also See Al-Ammari, Saud, And A. Timothy Martin. "Arbitration In The Kingdom Of Saudi Arabia." (2014) Arbitration International 30, No. 2: 387-408.

¹⁸¹⁷ Moore Jr, Richter H. "Courts, Law, Justice, And Criminal Trials In Saudi Arabia." (1987) International Journal Of Comparative And Applied Criminal Justice 11, No. 1-2: 61-67.

¹⁸¹⁸ Ibid. Also See Boshoff, L. L. "Saudi Arabia: Arbitration Vs. Litigation." Arab LQ 1 (1985): 299.

¹⁸¹⁹ Saudi Ministry Of Justice Medical Judiciary ..< <https://moj.gov.sa/Documents/MedicalJudiciaryFAQ.pdf> >.

comprises two judicial chambers, each consisting of three judges¹⁸²⁰. These chambers are specifically designated to handle objections to rulings and decisions made by the relevant departments responsible for hearing claims related to professional errors¹⁸²¹. The nomenclature of these entities is determined based on the hierarchical arrangement of legal divisions within the judicial system¹⁸²².

Conversely, it is imperative that the judges who oversee the Board of Grievances and traditional courts possess the required knowledge and expertise¹⁸²³. The ambiguous and inconsistent character of legal decisions is underscored by two factors: firstly, the multitude of courts that hold jurisdiction over cases pertaining to safeguarding the confidentiality of personal data of individuals, and secondly, the significant discretion that judges wield in adjudicating claims of privacy violations based on the extensive principles of Sharia law¹⁸²⁴. These two facets underscore the existence of multiple courts vested with jurisdiction over cases pertaining to safeguarding the confidentiality of personal data of individuals¹⁸²⁵.

Concern for privacy is obvious, but it is not essential or complete

The third dimension of the concern for privacy is readily apparent, yet not necessarily exhaustive or essential. Despite the existence of evident anxieties surrounding privacy, the regulatory frameworks that govern it are not universally comprehensive or indispensable. Despite the apparent concerns regarding privacy, this fact remains unchanged. The legal regulations concerning privacy in Saudi Arabia are established on a collection of principles that prioritise the protection of personal communications and associated materials¹⁸²⁶. This exhibits similarities to the regulatory structures that were analysed in the previous segment of this academic article.

¹⁸²⁰ Almughyirah, Muflih Saud. "Rethinking The Civil Protection Of Patients From Misleading Pharmaceutical Marketing Under Saudi Law." (2023).

¹⁸²¹ Saudi Ministry Of Justice Medical Judiciary.< <https://moj.gov.sa/Documents/MedicalJudiciaryFAQ.pdf> >.

¹⁸²² Ibid.

¹⁸²³ Alfaifi, Ali. "Promoting A More Circumspect Court System In Saudi Arabia: Limiting Judicial Discretionary Powers: A Dissertation." (2018).

¹⁸²⁴ Almebrad, Abdulaziz. "The Sufficiency Of Information Privacy Protection In Saudi Arabia." (2018).

¹⁸²⁵ Alkhenizan, Abdullah H., And Mohammed R. Shafiq. "The Process Of Litigation For Medical Errors In Saudi Arabia And The United Kingdom." (2018) Saudi Medical Journal 39, No. 11: 1075.

¹⁸²⁶ Omar Elsayed Data Protection In The Kingdom Of Saudi Arabia: A Primer, (2013).

Furthermore, the safeguarding of individual privacy in adherence to the established regulations and principles within Saudi Arabia is not inherently pivotal or fundamental, particularly given the integration of other interconnected frameworks¹⁸²⁷. The modification of legal structures aimed at promoting societal organization, well-being, and the collective welfare has led to the implementation of limitations on the entitlements of individuals to safeguard the confidentiality of their personal data¹⁸²⁸. These limitations are relevant to all noteworthy matters that pique the attention of the broader populace. The protection of individuals' confidentiality rights regarding personal information has been subjected to various restrictions and limitations enforced upon them¹⁸²⁹.

The Anti-Cybercrimes Law¹⁸³⁰ in Saudi Arabia illustrates legislation that provides safeguards aimed at safeguarding the privacy of Individuals. The use of vague or ambiguous language in a written piece that has the potential to assign fault can result in a variety of legal complexities. The absence of a distinct boundary between behaviours that are considered criminal and those that are not may heighten the probability of unintentional involvement in illegal activities among individuals.

In addition, the legal representatives responsible for litigating the lawsuit may encounter a significant challenge in defining the boundaries of unlawful behaviour and providing evidence to support their claims. In the event of the non-existence of a case law framework, the task of construing and implementing the law through the clarification of equivocal terminologies will ultimately be incumbent upon individual adjudicators¹⁸³¹. If there is no established system of legal precedents, such an event would take place. This situation will continue regardless of whether there is a legal precedent system in place or not. It is essential for every adjudicator to

¹⁸²⁷ Sarabdeen, Jawahitha. "Laws On Regulatory Technology (Regtech) In Saudi Arabia: Are They Adequate?." (2023) *International Journal Of Law And Management*.

¹⁸²⁸ Kahan, Dan M. "The Logic Of Reciprocity: Trust, Collective Action, And Law." (2003) *Michigan Law Review* 102, No. 1: 71-103.

¹⁸²⁹ Elgujja, Abba Amsami. "Adequacy of the legal safeguards of the patients' confidentiality right under the Saudi Arabian laws." (2020) University of Salford, United Kingdom.

¹⁸³⁰ Singh, H. P., And Tareq S. Alshammari. "An Institutional Theory Perspective On Developing A Cyber Security Legal Framework: A Case Of Saudi Arabia." (2020) *Beijing L. Rev.* 11: 637. Also See Aljurryed, Ahmad. "Cybersecurity Issues In The Middle East: Case Study Of The Kingdom Of Saudi Arabia." (2022) *In Cybersecurity Capabilities In Developing Nations And Its Impact On Global Security*, Pp. 62-82. IGI Global.

¹⁸³¹ Crawford, Kate, And Jason Schultz. "Big Data And Due Process: Toward A Framework To Redress Predictive Privacy Harms." (2014) *BCL Rev.* 55: 93.

reference the fundamental principles of Sharia law and traditional customs in order to establish a distinct boundary between these concepts¹⁸³². This will enable a clearer understanding of the differences between the two.

The establishment of a definitive boundary can only be achieved once the aforementioned point has been attained. Thus, it is crucial for judges to develop their personal comprehension of the concept of privacy and the principles that regulate its implementation. The portrayal previously mentioned serves as an illustration of how the Anti-Cybercrimes Law references the concept of privacy. However, the precise definition and extent of this concept remain insufficiently clarified and unsettled, as demonstrated by the illustration provided in this excerpt.

Benefit for E-commerce

The fourth case pertains to the advantages of e-commerce. In light of comparable circumstances in other jurisdictions, it can be observed that the extant privacy regulations in Saudi Arabia, which are dispersed across multiple legislations, lack a clear objective to facilitate commercial activities or promote the free flow of data and information across international boundaries. This phenomenon persists despite the dispersed nature of these regulations across various legislations in Saudi Arabia¹⁸³³. The European Union's adoption of the framework was motivated, in part, by member nations' aspirations to eliminate trade barriers that arose due to divergent provisions in regulations concerning the protection of personal data¹⁸³⁴. The adoption of the framework by the European Union was motivated by this aspiration, which served as a significant impetus¹⁸³⁵. Considering the growing significance that enterprises attach to inter-organizational information and data exchange, it would be advantageous for them to undertake an investigation into the diverse security apprehensions

¹⁸³² Karl, David J. "Islamic Law In Saudi Arabia: What Foreign Attorney's Should Know." (1991) *Geo. Wash. J. Int'l L. & Econ.* 25: 131.

¹⁸³³ Alghamdi, Rayed, Jeremy Nguyen, Ann Nguyen, And Steve Drew. "Factors Influencing E-Commerce Adoption By Retailers In Saudi Arabia: A Quantitative Analysis." (2012) *International Journal Of Electronic Commerce Studies* 3, No. 1: 83-100.

¹⁸³⁴ Weber, Philip Andreas, Nan Zhang, And Haiming Wu. "A Comparative Analysis Of Personal Data Protection Regulations Between The EU And China." (2020) *Electronic Commerce Research* 20: 565-587. Also See Goldberg, Samuel, Garrett Johnson, And Scott Shriver. "Regulating Privacy Online: The Early Impact Of The GDPR On European Web Traffic & E-Commerce Outcomes." (2019) SSRN 3421731.

¹⁸³⁵ Haddara, Moutaz, Ab Salazar, And Marius Langseth. "Exploring The Impact Of GDPR On Big Data Analytics Operations In The E-Commerce Industry." (2023) *Procedia Computer Science* 219: 767-777.

that are linked to personal data. This would require not only furnishing a comprehensive guidance, but also precise explications of the necessary actions.

The demographic composition of Saudi Arabia reveals that a significant proportion of its population, specifically 36.494%¹⁸³⁶, falls within the age bracket of 15 to 34 years old¹⁸³⁷, indicating a youthful populace. Furthermore, it is noteworthy that a significant proportion of the Saudi population, specifically 97.95%¹⁸³⁸, has the means to connect to the internet. Moreover, there has been a notable surge in the volume of prosperous transactions carried out through electronic commerce in recent years¹⁸³⁹. The presented statistics underscore the importance of technology in the history, present, and future of Saudi Arabia. The Saudi Arabian government aims to diversify its economy through a long-term strategy that involves leveraging diverse technological forms in multiple ways¹⁸⁴⁰. These initiatives encompass the establishment of intelligent communities, enhancement of electronic government services, and augmentation of electronic commerce¹⁸⁴¹. As a result of this development, accessing confidential information of individuals has become significantly more convenient, thereby posing a threat to their privacy in an unprecedented manner¹⁸⁴².

Lack of a single independent regulatory body

¹⁸³⁶ Albasri, Abdulkader M., And Irfan A. Ansari. "The Histopathological Pattern Of Benign And Non-Neoplastic Skin Diseases At King Fahad Hospital, Madinah, Saudi Arabia." (2019) Saudi Medical Journal 40, No. 6: 548.

¹⁸³⁷ Ibid.

¹⁸³⁸ Altameemy, Farooq A., Yasser Alrefaee, And Fahd Shehail Alalwi. "Using Blackboard As A Tool Of E-Assessment In Testing Writing Skill In Saudi Arabia." (2020) Asian ESP 16, No. 6.2.

¹⁸³⁹ Alkenani, Abdulrahman Ahmad Nasser. "Factors Influencing Social E-Commerce Success In Saudi Arabia-A Review." (In 2019 6th International Conference On Computing For Sustainable Global Development (Indiacom), Pp. 1331-1335. IEEE, 2019.) Also See Al-Mushayt, Omar Saeed, Wajeb Gharibi, And Nasrullah Armi. "An E-Commerce Control Unit For Addressing Online Transactions In Developing Countries: Saudi Arabia—Case Study." (2022): 64283-64291.

¹⁸⁴⁰ Hassan, Oz. "Artificial Intelligence, Neom And Saudi Arabia's Economic Diversification From Oil And Gas." (2020) The Political Quarterly 91, No. 1: 222-227.

¹⁸⁴¹ Delbeke, Jos, And Rebecca Lamas. "Exploring Carbon Market Instruments For The Kingdom Of Saudi Arabia (KSA)" (2021) European University Institute.

¹⁸⁴² Al Jaafreh, Mohammad Bakhit, And Mohammad Azmi Allouzi. "Smart Cities Adoption In Saudi Arabia: A Comprehensive Review And Future Drivers." (2023) British Journal Of Multidisciplinary And Advanced Studies 4, No. 5: 20-39.

The fifth illustration is the lack of a single independent regulatory body. Data privacy regulation in the European Union falls under a single regulatory structure, but there is no single regulatory body in Saudi Arabia which is concerned with the centralised supervision of privacy¹⁸⁴³.

Notwithstanding its status as a key impetus for the organisation's inception, the creation of a centralised regulatory body for privacy in the Kingdom of Saudi Arabia may prove insufficient in fully addressing the multifaceted challenges pertaining to safeguarding individuals' privacy rights¹⁸⁴⁴. Conversely, it is conceivable that a noteworthy proportion of these apprehensions could be addressed, underscoring the significance of their consideration. The implementation of privacy legislation in Saudi Arabia would function to protect the country's reputation and status on the global stage, as well as to augment the feeling of safety among individuals who utilise technological innovations.

This recent development has the potential to result in the establishment of Saudi Arabia as a reliable governing authority with respect to privacy laws, similar to the General Data Protection Regulation that has been enforced in the European Union (GDPR)¹⁸⁴⁵. The possession of a singular entity has had adverse effects on the nation's integrity and reputation within the international community. Establishing a regulatory entity can aid in attaining a thorough understanding of personal data, encompassing its acquisition and utilisation¹⁸⁴⁶. Individuals who seek to navigate this subject matter must possess a certain level of comprehension. Furthermore, the establishment of a legal structure for safeguarding privacy can be viewed as a tactic to entice multinational technology enterprises to engage in business activities within the nation, while concurrently enhancing the economy through the advancement of data management.

¹⁸⁴³ Alkrajji, Abdullah Ibrahim, Thomas Jackson, And Ian Murray. "Factors Impacting The Adoption Decision Of Health Data Standards In Tertiary Healthcare Organisations In Saudi Arabia." (2026) *Journal Of Enterprise Information Management* 29, No. 5: 650-676. Also See Alshehri, Mohammed, And Steve Drew. "A Comprehensive Analysis Of E-Government Services Adoption In Saudi Arabia: Obstacles And Challenges." (2012) *International Journal Of Advanced Computer Science And Applications* 3, No. 2.

¹⁸⁴⁴ Al-Baity, Heyam H. "The Artificial Intelligence Revolution In Digital Finance In Saudi Arabia: A Comprehensive Review And Proposed Framework." (2023) *Sustainability* 15, No. 18: 13725.

¹⁸⁴⁵ Voigt, Paul, And Axel Von Dem Bussche. "The Eu General Data Protection Regulation (Gdpr)." (2017) *A Practical Guide*, 1st Ed., Cham: Springer International Publishing 10, No. 3152676: 10-5555.

¹⁸⁴⁶ Nagarajan, Vijaya. "Discretion And Public Benefit In A Regulatory Agency" (2013) ANU Press. P 144.

The implementation of a strategy referred to as "privacy by design" is the means by which this objective is achieved¹⁸⁴⁷. The successful completion of this strategy is facilitated by the amalgamation of the two distinct functions inherent in the given structure. The objective is pursued through the implementation of a dual approach. The availability of this option may be attributed to the current legislative privacy procedures that have already been implemented and which have enabled its existence¹⁸⁴⁸. The adherence of businesses to regulatory privacy standards is associated with an enhanced reputation, resulting in a decrease in occurrences of unfair competition. Moreover, it aids the organisation in enhancing its operational efficiency, thereby conferring a noteworthy benefit.

Implementation in the government agencies

The sixth illustration depicts the implementation of privacy regulations in government agencies. An analysis of the various regulations and their interplay indicates that privacy standards have been expanded to encompass both private sector entities and government agencies. The absence of a comprehensive programme for the utilisation of personal data accumulated from diverse sources has been noted in Saudi Arabia. Despite this, an examination of the relevant regulations in Saudi Arabia indicates that they incorporate rigorous confidentiality protocols and stipulations¹⁸⁴⁹. These privacy regulations require the involvement of personnel with specialised expertise in multiple government entities to guarantee adherence to the established criteria.

It is important to address the issue of inadequate privacy protection faced by various organisations. The execution of privacy policies within the governmental sphere may present challenges. Human error is likely the most substantial threat to the safeguarding and confidentiality of information and represents the main area of concern¹⁸⁵⁰. If employees lack

¹⁸⁴⁷ Semantha, Farida Habib, Sami Azam, Kheng Cher Yeo, And Bharanidharan Shanmugam. "A Systematic Literature Review On Privacy By Design In The Healthcare Sector." (2020) *Electronics* 9, No. 3: 452.

¹⁸⁴⁸ Cavoukian, Ann. "Privacy By Design." (2009).

¹⁸⁴⁹ Qureshi, Ahmad Zaheer, Sami Ullah, Adel Abdulaziz Aldajani, Petro Basson, Ahmed Mushabbab Alhabter, Taha Ali, Bazah M. Almubark Et Al. "Telerehabilitation Guidelines In Saudi Arabia." (2021) *Telemedicine And E-Health* 27, No. 10: 1087-1098. Also See Almaghribi, Nada Saddig, And Bussma Ahmed Bugis. "Patient Confidentiality Of Electronic Health Records: A Recent Review Of The Saudi Literature." (2022) *Dr. Sulaiman Al Habib Medical Journal* 4, No. 3: 126-135.

¹⁸⁵⁰ Alkhatib, Sami, Jenny Waycott, And George Buchanan. "Privacy In Aged Care Monitoring Devices (ACMD): The Developers' Perspective." (2019) In *Digital Health: Changing The Way Healthcare Is Conceptualised And*

the requisite knowledge or awareness, they may encounter various security risks such as accessing privileged accounts, utilising easily guessable passwords, inadvertently deleting data, being susceptible to phishing scams, or browsing unsuitable websites outside their job responsibilities. The second issue pertains to the presence of sensitive information within the systems of numerous entities, which may be hosted on-premises, managed by third-party service providers, or deployed on cloud infrastructure¹⁸⁵¹. This holds true irrespective of the hosting location of the systems. The task of monitoring the extensive proliferation of sensitive data can pose a challenge, particularly in enterprises that rely on outdated or legacy systems. This is a scenario where such circumstances prevail. The task of locating data, comprehending its history, and keeping track of it can be challenging in a dynamic environment¹⁸⁵². The initial phase in the implementation of data privacy is the surveillance of the inventory of sensitive data constituents¹⁸⁵³. The main challenge is the implementation of corrective measures.

The challenge of managing an overwhelming amount of confidential information is a prevalent concern for numerous corporations and entities¹⁸⁵⁴. This holds especially true for organisations that possess a substantial quantity of applications, exhibit lenient data policies, employ impromptu data modelling, employ antiquated architectures, and operate systems that have incurred technological debt due to modified business procedures¹⁸⁵⁵. The severity of this issue is significantly influenced by the migration of corporate networks to managed service providers and the public cloud. The last of the three is referred to as the Design Challenge¹⁸⁵⁶. The importance of prioritising data privacy in system design has increased proportionally with the accumulation of knowledge surrounding the consequences of unauthorised disclosure.

Delivered, Pp. 7-12. IOS Press. Also See Ishaq, Maryam, Kashif Kifayat, And Maham Zafar. "A Survey On Human Factors In Cyberspace: A New Dimension Of Privacy Threats." (In 2023 International Conference On Communication, Computing And Digital Systems (C-CODE), Pp. 1-6. IEEE, 2023.)

¹⁸⁵¹ Sun, Panjun. "Security And Privacy Protection In Cloud Computing: Discussions And Challenges." (2020) *Journal Of Network And Computer Applications* 160: 102642.

¹⁸⁵² Kunduru, Arjun Reddy. "Artificial Intelligence Advantages In Cloud Fintech Application Security." (2023) *Central Asian Journal Of Mathematical Theory And Computer Sciences* 4, No. 8: 48-53. Also See A. Almusaylim, Zahrah, And N. Z. Jhanjhi. "Comprehensive Review: Privacy Protection Of User In Location-Aware Services Of Mobile Cloud Computing." (2020) *Wireless Personal Communications* 111: 541-564.

¹⁸⁵³ Jeff McCormick Top 3 "Data Privacy Challenges And How To Address Them"(03 Sep 2020) [Techtarget < www.techtarget.com/searchdatamanagement/feature/Top-3-data-privacy-challenges-and-how-to-address-them >](https://www.techtarget.com/searchdatamanagement/feature/Top-3-data-privacy-challenges-and-how-to-address-them)

¹⁸⁵⁴ Alazab, Mamoun, Swarna Priya RM, M. Parimala, Praveen Kumar Reddy Maddikunta, Thippa Reddy Gadekallu, And Quoc-Viet Pham. "Federated Learning For Cybersecurity: Concepts, Challenges, And Future Directions." (2021) *IEEE Transactions On Industrial Informatics* 18, No. 5: 3501-3509.

¹⁸⁵⁵ Jeff McCormick Top 3 "Data Privacy Challenges And How To Address Them"(03 Sep 2020) [Techtarget < www.techtarget.com/searchdatamanagement/feature/Top-3-data-privacy-challenges-and-how-to-address-them >](https://www.techtarget.com/searchdatamanagement/feature/Top-3-data-privacy-challenges-and-how-to-address-them)
¹⁸⁵⁶ Ibid.

Confidentiality in electronic communications

The maintenance of confidentiality in electronic communication represents the seventh component of this specific approach. The present study has focused on the constraints faced by service providers operating in various countries. The effectiveness of these constraints has been validated in regard to service providers, specifically concerning the requirement of obtaining regulatory approval prior to the transfer or disclosure of information under their jurisdiction to external third-party entities.

Safeguarding the privacy of various forms of communication, irrespective of their usage in a public domain or retention in a personal capacity, constitutes a pivotal aspect of defamation laws¹⁸⁵⁷. The breach of confidentiality is considered a tortious act under the tenets of tort law. There are certain situations where it is crucial to disclose written correspondence, particularly in most legal cases related to criminal offences¹⁸⁵⁸. Some communication service providers engage in the practise of sharing their customers' information with third-party entities without obtaining explicit written consent from said customers¹⁸⁵⁹. It is possible for governmental or private entities to access information from communication users without their explicit consent or a warrant, which may be considered a violation of tort law¹⁸⁶⁰. The safeguarding privacy can be accomplished by entities operating in both the public and private sectors¹⁸⁶¹. The tension between the values of privacy and security may cause ambiguity regarding the attribution of accountability and the maintenance of privacy as well as providing assurance of security¹⁸⁶².

¹⁸⁵⁷ Kohl, Uta. "The Right To Be Forgotten In Data Protection Law And Two Western Cultures Of Privacy." (2023) *International & Comparative Law Quarterly* 72, No. 3: 737-769. Also See Myers, Gary. "The Mindful First Amendment." (2023) *NML Rev.* 53: 411.

¹⁸⁵⁸ Blightman, K., S. E. Griffiths, And C. Danbury. "Patient Confidentiality: When Can A Breach Be Justified?." (2014) *Continuing Education In Anaesthesia, Critical Care & Pain* 14, No. 2: 52-56. Also See Citron, Danielle Keats, And Daniel J. Solove. "Privacy Harms." (2022) *BUL Rev.* 102: 793.

¹⁸⁵⁹ Matranga, Charles. "Family Ties: The Familial Privacy Implications Of Direct-To-Consumer Genetic Testing." (2020) *Food & Drug LJ* 75: 456.

¹⁸⁶⁰ Keller, Perry. "After Third Party Tracking: Regulating The Harms Of Behavioural Advertising Through Consumer Data Protection." (2022) *SSRN* 4115750.

¹⁸⁶¹ Lam, Patrick TI, And Wenjing Yang. "Factors Influencing The Consideration Of Public-Private Partnerships (PPP) For Smart City Projects: Evidence From Hong Kong." (2020) *Cities* 99: 102606.

¹⁸⁶² Balapour, Ali, Hamid Reza Nikkhah, And Rajiv Sabherwal. "Mobile Application Security: Role Of Perceived Privacy As The Predictor Of Security Perceptions." (2020) *International Journal Of Information Management* 52: 102063. Also See Abi Sen, Adnan Ahmed, And Abdullah M. Basahel. "A Comparative Study Between Security And Privacy." (In 2019 6th International Conference On Computing For Sustainable Global Development (Indiacom), Pp. 1282-1286. IEEE, 2019.)

The rationale behind this assertion is that the concepts of privacy and security are fundamentally incompatible.

Few restrictions on government agencies regarding the handling of personal data

The eighth factor that requires consideration pertains to the lack of limitations imposed on governmental entities in their handling of personal data. Specifically, there exist no limitations on the protocols that governmental bodies may employ in managing personal information, and there is a dearth of centralised oversight pertaining to contact services that retain and convey personal data¹⁸⁶³. The implementation of these initiatives has the potential to yield supplementary measures for the protection of personally identifiable information. Nevertheless, the absence of a legal structure or any comparable limitations could potentially facilitate the access or utilisation of personal information by other governmental bodies¹⁸⁶⁴.

If a governmental entity or any other institution opts to curtail the privacy rights of individuals and modify the protocols employed in data management, it could be inferred that they possess an incomplete comprehension of the importance of data governance and privacy¹⁸⁶⁵. The organisation would need to ensure that it executed each of its chosen initiatives in a systematic manner while strictly adhering to the specified constraints. In order to attain a comprehensive comprehension of the constitutional safeguards afforded to an individual's privacy rights, it is imperative to adopt a systematic and sequential methodology that encompasses a range of pedagogical techniques¹⁸⁶⁶. The Constitution safeguards an individual's entitlement to personal privacy. Prior to proceeding, it is imperative to obtain a thorough understanding of the importance of an individual's entitlement to privacy, as enshrined in the constitution¹⁸⁶⁷. This

¹⁸⁶³ Alshehri, Mohammed, And Steve Drew. "Challenges Of E-Government Services Adoption In Saudi Arabia From An E-Ready Citizen Perspective." (2010) An Illustrative Instance From A Distinct Sector May Also Be Observed: Alkrajji, Abdullah Ibrahim, Thomas Jackson, And Ian Murray. "Factors Impacting The Adoption Decision Of Health Data Standards In Tertiary Healthcare Organisations In Saudi Arabia." (2016) Journal Of Enterprise Information Management 29, No. 5: 650-676.

¹⁸⁶⁴ Ibid.

¹⁸⁶⁵ Al-Ruithe, Majid, Elhadj Benkhelifa, And Khawar Hameed. "A Conceptual Framework For Designing Data Governance For Cloud Computing." (2016) Procedia Computer Science 94: 160-167.

¹⁸⁶⁶ Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE, 2017.)

¹⁸⁶⁷ Al-Qahtani, Kholod Saaed, And MM Hafizur Rahman. "Data Governance And Digital Transformation In Saudi Arabia." (In Proceedings Of International Conference On Information And Communication Technology For Development: ICICTD 2022, Pp. 95-106. Singapore: Springer Nature Singapore, 2023.)

task must be completed prior to proceeding further. It is imperative to finish this task prior to proceeding to the subsequent stage.

The aforementioned assertion can be likened to the enactment of a legislation that accords utmost importance to safeguarding the personal privacy rights of individuals, which is subsequently implemented by an administrative entity¹⁸⁶⁸. In either of these hypothetical scenarios, the prioritisation of safeguarding an individual's entitlement to personal privacy will take precedence within a legal tribunal¹⁸⁶⁹.

The legislative measures that have been the subject of extensive discourse in contemporary times prioritise the safeguarding of the privacy of personal information that pertains to individuals¹⁸⁷⁰. The legislation mentioned above prioritises the establishment of protocols to ensure the safeguarding of individuals' personally identifiable information and the confidentiality of their medical records and other sensitive data¹⁸⁷¹. To assess an individual's aptitude for upholding confidentiality, it is imperative to execute a series of methodical and coherent protocols in a sequential manner¹⁸⁷². This constitutes a crucial component of the information gathering process. Judging an individual's eligibility for confidentiality necessitates the execution of a series of sequential procedures. Establishing a fundamental level of comprehension or expertise is imperative before embarking on a more advanced level of understanding, as it is the sole means of achieving the latter¹⁸⁷³.

Sensitive data

¹⁸⁶⁸ Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE, 2017.)

¹⁸⁶⁹ Boliek, Babette. "Prioritizing Privacy In The Courts And Beyond." (2017) Cornell L. Rev. 103: 1101.

¹⁸⁷⁰ Cavoukian, Ann. "Privacy By Design: The 7 Foundational Principles." (2009) Information And Privacy Commissioner Of Ontario, Canada 5: 12.

¹⁸⁷¹ Almaghrabi, Nada Saddig, And Bussma Ahmed Bugis. "Patient Confidentiality Of Electronic Health Records: A Recent Review Of The Saudi Literature." (2022) Dr. Sulaiman Al Habib Medical Journal 4, No. 3: 126-135.

¹⁸⁷² Honan, Eileen, M. Obaidul Hamid, Bandar Alhamdan, Phouvanh Phommalangsy, And Bob Lingard. "Ethical Issues In Cross-Cultural Research." (2013) International Journal Of Research & Method In Education 36, No. 4: 386-399.

¹⁸⁷³ Abokhodair, Norah, Sofiane Abbar, Sarah Vieweg, And Yelena Mejova. "Privacy And Social Media Use In The Arabian Gulf: Saudi Arabian & Qatari Traditional Values In The Digital World." (2017) The Journal Of Web Science 3.

The precise definition of sensitive data is not explicitly outlined in Saudi Arabian legislations, as it is not distinguished from other forms of personal data¹⁸⁷⁴. Consequently, the accessibility of a succinct and unambiguous depiction of confidential information is limited. Sensitive data pertains to information that is linked, either implicitly or explicitly, to an individual's political affiliations, racial or sectarian origin, attitudes and opinions regarding faith or ideology, membership in professional societies, presence in the crime register, pattern of stable living, or sexuality¹⁸⁷⁵. The term "sensitive data" may encompass data that is linked to an organisation with which an individual is associated¹⁸⁷⁶.

Sensitive data is a distinct subset of confidential information that necessitates heightened levels of data security measures to be enforced to thwart unauthorised access by malicious software and cybercriminals¹⁸⁷⁷. The implementation of advanced data security protocols is imperative to safeguard confidential information. The term "sensitive data" is commonly used to refer to a specific category of data under discussion in most contexts¹⁸⁷⁸. Adherence to standard protocols is a customary practise aimed at safeguarding confidential information¹⁸⁷⁹. Ensuring that unauthorised parties are unable to access confidential information without explicit authorisation is a matter of great significance¹⁸⁸⁰. The preservation of data security is imperative to meet the necessary standards. The absence of explicit reference to sensitive data in the legislation necessitates the establishment of suitable protocols to ensure the protection of such information and ascertain its classification as sensitive data¹⁸⁸¹. It is feasible to safeguard the data by adhering to the procedures that were previously outlined. Given the absence of explicit

¹⁸⁷⁴ Alshahrani, Albandari, Denis Dennehy, And Matti Mäntymäki. "An Attention-Based View Of AI Assimilation In Public Sector Organizations: The Case Of Saudi Arabia." (2022) *Government Information Quarterly* 39, No. 4: 101617.

¹⁸⁷⁵ Morgan Lewis What Is Sensitive Personal Data? The Edata Guide To GDPR 16 July 2018 .< www.lexology.com/library/detail.aspx?g=9f4e7752-ec6a-42d5-9489-afde28191168#:~:text=Information%20on%20health%2C%20race%2Fethnic,a%20higher%20degree%20of%20protection.>.

¹⁸⁷⁶ Dyke, Stephanie OM, Edward S. Dove, And Bartha M. Knoppers. "Sharing Health-Related Data: A Privacy Test?." (2016) *NPJ Genomic Medicine* 1, No. 1: 1-6.

¹⁸⁷⁷ Agil, Dr Hussain. "Copyright And Internet Laws In Saudi Arabia" *The Need Of Improvement.*" (2019) *Jurnal Elektronik Multidisiplin Komprehensif Edisi Kelima Belas.*

¹⁸⁷⁸ Brown, Hannah, Katherine Lee, Fatemehsadat Mireshghallah, Reza Shokri, And Florian Tramèr. "What Does It Mean For A Language Model To Preserve Privacy?." *(In Proceedings Of The 2022 ACM Conference On Fairness, Accountability, And Transparency, Pp. 2280-2292. 2022.)*

¹⁸⁷⁹ *Ibid.*

¹⁸⁸⁰ Alshahrani, Albandari, Denis Dennehy, And Matti Mäntymäki. "An Attention-Based View Of AI Assimilation In Public Sector Organizations: The Case Of Saudi Arabia." (2022) *Government Information Quarterly* 39, No. 4: 101617.

¹⁸⁸¹ *Ibid.*

mention of sensitive data within the current regulatory framework, it is imperative to establish suitable protocols that ensure the security of this data. Moreover, the lack of legal protections for sensitive information underscores the significance of implementing meticulous and conscientious management protocols¹⁸⁸².

Undisclosed or anonymous data

Undisclosed or anonymous data, referred to as the tenth category, is not subject to regulation in Saudi Arabia¹⁸⁸³. However, this category constitutes a fundamental aspect of privacy regulations in other nations. It should be noted that legitimate collection of confidential or anonymous data is not addressed in Saudi regulations. In situations where personal data has been altered to the extent that it is unidentifiable as belonging to a specific individual, the act of recording or sharing such information does not constitute a violation of privacy¹⁸⁸⁴. The data in question is rendered inoperable when utilised in isolation or in conjunction with other datasets, and its user cannot be traced¹⁸⁸⁵. The regulations pertaining to Saudi infrastructure imply that personal data that has been encrypted is safeguarded against unauthorised access¹⁸⁸⁶.

The implementation of governmental measures is of paramount significance in addressing the lack of regulation of anonymous data and providing a viable remedy for it. The matter is especially significant when contemplating the prospect of re-identification of ostensibly confidential data¹⁸⁸⁷. Although certain legal frameworks may not provide safeguards for data once it has been fully anonymized, this does not necessarily imply that complete anonymization is unattainable. There are various methods to attain complete anonymization.

¹⁸⁸² Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE, 2017.)

¹⁸⁸³ Chikhaoui, Emna, Jawahitha Sarabdeen, And Rehana Parveen. "Privacy And Security Issues In The Use Of Clouds In E-Health In The Kingdom Of Saudi Arabia." (2017) Communications Of The IBIMA 18.

¹⁸⁸⁴ Ibid.

¹⁸⁸⁵ Ibid.

¹⁸⁸⁶ Chikhaoui, Emna. "Implication And Application Of Cloud Computing In The Saudi Higher Educational Sector." (2019) In EDULEARN19 Proceedings, Pp. 10364-10369. IATED.

¹⁸⁸⁷ Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE, 2017.)

Information cyber security

The subject matter of the eleventh topic concerns the domain of information cyber security. The protection of sensitive information and records is a matter of utmost importance in Saudi Arabia. To this end, the country's legislation has put in place extensive provisions within various frameworks to tackle the issue of safeguarding data¹⁸⁸⁸. In addition to regulatory frameworks, there is no legal mandate to employ specific technological measures for the purpose of data protection and confidentiality¹⁸⁸⁹. The data protection strategy adopted by Saudi Arabia exhibits resemblances to the American and European models¹⁸⁹⁰. It emphasises the deployment of flexible solutions that revolve around the notion of risk assessment, rather than depending solely on measures aimed at enhancing information and data security¹⁸⁹¹.

The Saudi Arabian legislation governing cyber security recognises the significance of protecting the privacy of individuals as a primary responsibility falling under its purview, and it makes this point clear¹⁸⁹². The field of financial services is susceptible to a variety of regulatory frameworks, one of which is a code of conduct that covers issues relating to security and confidentiality¹⁸⁹³. In the context of the industry described earlier, this holds a substantial amount of significance. Legislators in Saudi Arabia who are responsible for drafting such regulations are those who are tasked with the responsibility of ensuring that freshly implemented privacy laws are in line with the existing legal and regulatory framework in the country¹⁸⁹⁴. The significance of this matter cannot be overstated. The task of formulating laws that will uphold an individual's right to personal privacy has been delegated to the members of Saudi Arabia's legislative body¹⁸⁹⁵.

¹⁸⁸⁸ Alrubaiq, Abdullah, And Talal Alharbi. "Developing A Cybersecurity Framework For E-Government Project In The Kingdom Of Saudi Arabia." (2021) *Journal Of Cybersecurity And Privacy* 1, No. 2: 302-318.

¹⁸⁸⁹ Alqahtani, Mohammed. "A Conceptual Framework For Enhancing Information Security Compliance Behaviours In E-Government In Saudi Arabia." (2022) Phd Diss.

¹⁸⁹⁰ Abdullah, Ahmed. "Consumers' Personal Data Protection In Saudi Arabia: A Comparative Analytical Study." (2020) Phd Diss., University Of Kansas.

¹⁸⁹¹ Ibid.

¹⁸⁹² Alhalafi, Nawaf, And Prakash Veeraraghavan. "Cybersecurity Policy Framework In Saudi Arabia: Literature Review." (2021) *Frontiers In Computer Science* 3: 736874.

¹⁸⁹³ Almuhammadi, Abdullah. "An Overview Of Mobile Payments, Fintech, And Digital Wallet In Saudi Arabia." (In 2020 7th International Conference On Computing For Sustainable Global Development (Indiacom), Pp. 271-278. IEEE, 2020.)

¹⁸⁹⁴ Singh, H. P., And Tareq S. Alshammari. "An Institutional Theory Perspective On Developing A Cyber Security Legal Framework: A Case Of Saudi Arabia." (2020) *Beijing L. Rev.* 11: 637.

¹⁸⁹⁵ Ibid.

Notification of data loss or hacked

Element twelve pertains to the notification of data loss or unauthorised access. The absence of regulations pertaining to the notification process for individuals whose personal data has been compromised due to an unauthorised breach is a notable concern in the realm of data protection.

The lack of legal regulations regarding the notification procedure for individuals whose personal information has been compromised due to an unauthorised intrusion is a significant cause of concern in the realm of data protection¹⁸⁹⁶. The reason for the breach can be attributed to the intrusion that took place. It is not mandatory for corporations to inform individuals whose personally identifiable information may have been compromised in the event of a data centre breach, even if this information was stored within the data centre¹⁸⁹⁷. Despite the absence of a legal obligation on the part of companies to notify individuals whose personally identifiable information may have been compromised, such entities refrain from doing so¹⁸⁹⁸. The establishment of a notification mechanism by various jurisdictions, including the United States, to inform individuals whose personal data has been unlawfully obtained or compromised is a matter of considerable importance¹⁸⁹⁹. The significance of this issue stems from the fact that the United States is among those jurisdictions¹⁹⁰⁰. The aforementioned action was executed with the purpose of safeguarding the privacy of the individuals whose sensitive information had been obtained without proper authorisation¹⁹⁰¹. The inclusion of a communication component is an essential requirement in safeguarding an individual's privacy and security¹⁹⁰².

¹⁸⁹⁶ Almaghrabi, Nada Saddig, And Bussma Ahmed Bugis. "Patient Confidentiality Of Electronic Health Records: A Recent Review Of The Saudi Literature." (2022) Dr. Sulaiman Al Habib Medical Journal 4, No. 3: 126-135.

¹⁸⁹⁷ Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE, 2017.)

¹⁸⁹⁸ A Recent Review Of The Saudi Literature." (2022) Dr. Sulaiman Al Habib Medical Journal 4, No. 3 : 126-135.

¹⁸⁹⁹ Bisogni, Fabio. "Proving Limits Of State Data Breach Notification Laws: Is A Federal Law The Most Adequate Solution?." (2016) Journal Of Information Policy 6: 154-205.

¹⁹⁰⁰ Daly, Angela. "The Introduction Of Data Breach Notification Legislation In Australia: A Comparative View." (2018) Computer Law & Security Review 34, No. 3: 477-495.

¹⁹⁰¹ Pernot-Leplay, Emmanuel. "China's Approach On Data Privacy Law: A Third Way Between The US And The EU?." (2020) Penn St. JL & Int'l Aff. 8: 49.

¹⁹⁰² Rustad, Michael L., And Thomas H. Koenig. "Towards A Global Data Privacy Standard." (2019) Fla. L. Rev. 71: 365.

Saudi privacy regulations that are relevant

The thirteenth element is, in broad terms, regulations that pertain to privacy, such as those governing e-signatures, money laundering, and cybercrime. These are unlikely to be at odds with forthcoming privacy legislation. Nevertheless, it is advisable to consider these extant laws that address privacy when drafting future privacy legislation.

Freedom of information

Scrutiny of the regulations in Saudi Arabia, shows that it is apparent that there is a dearth of explicit directives regarding the notion of privacy, which is the fourteenth element. In contrast, other systems evaluated in other countries, such as the Freedom of Information system and the general consumer protection system, have established specific patterns for such regulations¹⁹⁰³. This is exemplified by the federal trade system in the United States of America and the private sector. The objective is to safeguard the interests of consumers¹⁹⁰⁴.

Public privacy notification

The fifteenth element pertains to the absence of a legal requirement or enforcement mechanism in Saudi Arabia for public disclosure of privacy practices, except for credit information and communication systems. This differs from the United States' GLBA¹⁹⁰⁵ and HIPAA¹⁹⁰⁶, which require written privacy notices, or Declaration of Practices. This paper aims to explore the state of informatics in the United Kingdom as well as in other member countries of the European Union. Statements of this nature typically constitute a fundamental component within privacy frameworks that adhere to the European Union model or to global agreement, such as the Madrid Agreement¹⁹⁰⁷. While the US legal system differs from that of the European Union, it

¹⁹⁰³ Lunardelli, Marco. "The US Freedom Of Information Act In Light Of The 2016 Reform: Some Theoretical Issues." (2019) Italian J. Pub. L. 11: 359.

¹⁹⁰⁴ Almeida, Denise, Konstantin Shmarko, And Elizabeth Lomas. "The Ethics Of Facial Recognition Technologies, Surveillance, And Accountability In An Age Of Artificial Intelligence: A Comparative Analysis Of US, EU, And UK Regulatory Frameworks." (2022) AI And Ethics 2, No. 3: 377-387.

¹⁹⁰⁵ Barth, James R., R. Dan Brumbaugh Jr, And James A. Wilcox. "Policy Watch: The Repeal Of Glass-Steagall And The Advent Of Broad Banking." (2008) Journal Of Economic Perspectives 14, No. 2: 191-204.

¹⁹⁰⁶ Joshi, Sanjaya. "HIPAA, HIPAA, Hooray?: Current Challenges And Initiatives In Health Informatics In The United States." (2008) Biomedical Informatics Insights 1: BII-S2007.

¹⁹⁰⁷ Stevens, Trevor. "The Madrid Protocol And Its Likely Impact On Trade Mark Owners And Trade Mark Practitioners In Australia." (1993) Australian Intellectual Property Journal 4, No. 1: 48-56.

is generally expected that organisations collecting personal data will adhere to disclosure and privacy practises¹⁹⁰⁸. Additionally, obtaining consent from relevant individuals regarding the use of their personal data is considered a standard requirement¹⁹⁰⁹. The best practise for data privacy regimes is commonly acknowledged to be the principle of transparency¹⁹¹⁰.

Implementation methodology focused on a set of privacy principles

The researcher discovered that the privacy systems being evaluated exhibited a lack of specificity with regards to comprehensive regulations and frameworks, constituting the sixteenth element of the study. Instead, they were based on broad principles that could be implemented in various ways depending on the level of risk associated with the protection of personal data. The researcher observed that the privacy systems in the United States of America and the European Union were described in greater detail compared to those of the Kingdom of Saudi Arabia in the privacy-related systems under review¹⁹¹¹. Moreover, this particular methodology, grounded on several fundamental principles, is commonly associated, when implemented in the United States or in countries adhering to the European Union framework, with regulatory mandates that oversee the operations of diverse organisations and entities that consistently evaluate the hazards they encounter and adjust their security protocols accordingly¹⁹¹².

Software designed for security purposes

Seventeenth, it is a widely recognised standard for organisations that are under regulatory scrutiny to develop documented protocols that are dedicated to safeguarding data privacy and

¹⁹⁰⁸ Storeng, Katerini Tagmatarchi, And Antoine De Bengy Puyvallée. "The Smartphone Pandemic: How Big Tech And Public Health Authorities Partner In The Digital Response To Covid-19." (2021) *Global Public Health* 16, No. 8-9: 1482-1498.

¹⁹⁰⁹ Utz, Christine, Martin Degeling, Sascha Fahl, Florian Schaub, And Thorsten Holz. "(Un) Informed Consent: Studying GDPR Consent Notices In The Field." (In Proceedings Of The 2019 Acm Sigac Conference On Computer And Communications Security, Pp. 973-990. 2019.)

¹⁹¹⁰ Milkaite, Ingrida, And Eva Lievens. "Child-Friendly Transparency Of Data Processing In The EU: From Legal Requirements To Platform Policies." (2020) *Journal Of Children And Media* 14, No. 1: 5-21.

¹⁹¹¹ Voss, W. Gregory, And Kimberly A. Houser. "Personal Data And The GDPR: Providing A Competitive Advantage For US Companies." (2019) *American Business Law Journal* 56, No. 2: 287-344.

¹⁹¹² Ekardt, Felix. "Sustainability: Transformation, Governance, Ethics, Law." (2019) Springer.

security. This principle is readily apparent in certain regulations of Saudi Arabia that have undergone scrutiny, such as the roster of individuals who possess authorisation¹⁹¹³. However, there is a lack of comprehensive requirements and standards for such systems, specifically pertaining to policies and procedures concerning privacy and data security within the Kingdom¹⁹¹⁴.

Joint regulator

Eighteenth, the implementation mechanism of privacy rules and regulations in the Kingdom of Saudi Arabia is comparable to that of other countries studied by the researcher. These regulations are applicable to various economic sectors and activities, including bank credit. The regulations and accompanying guidelines for these legislations pertaining to insurance, financial markets, and communications will become effective upon publication. This practise is consistent with the approach taken in the United States of America and in nations that adhere to the European Union framework¹⁹¹⁵.

Obligation and enforcement

Nineteenth, the measures implemented for addressing breaches of Saudi Arabian privacy regulations seem to be comparable to those observed in other nations examined. The consequences for noncompliance and breaches of regulations. Simultaneously, in the event of criminal activity, the designated enforcement authority of the local system possesses the requisite legal framework to execute its mechanisms and may solicit aid and cooperation from other civil regulatory entities in relation to investigation and implementation¹⁹¹⁶.

¹⁹¹³ Peng, Ge, Carlo Lacagnina, Robert R. Downs, Anette Ganske, Hampapuram K. Ramapriyan, Ivana Ivánová, Lesley Wyborn Et Al. "Global Community Guidelines For Documenting, Sharing, And Reusing Quality Information Of Individual Digital Datasets." (2022).

¹⁹¹⁴ Al-Ruithe, Majid, And Elhadj Benkhelifa. "Cloud Data Governance In-Light Of The Saudi Vision 2030 For Digital Transformation." (2017) In 2017 IEEE/ACS 14th International Conference On Computer Systems And Applications (AICCSA), Pp. 1436-1442. IEEE.

¹⁹¹⁵ Johnson, Garrett. "Economic Research On Privacy Regulation: Lessons From The GDPR And Beyond." (2022).

¹⁹¹⁶ Sarabdeen, Jawahitha. "Laws On Regulatory Technology (Regtech) In Saudi Arabia: Are They Adequate?." (2023) International Journal Of Law And Management. Also See Alshehaby, Fatimah. "Attorney-

The present state of privacy as stipulated in the laws of the Kingdom of Saudi Arabia

The legal framework in Saudi Arabia is founded upon a blend of Sharia Law, Islamic jurisprudence, and written law, as previously expounded upon in the preceding section. This segment of the chapter presents a thorough examination of the legal measures implemented to safeguard the privacy of individuals' personal information, in compliance with the laws enacted in Saudi Arabia. The significance of the aspect of protecting individuals' right to privacy in Saudi Arabia is underscored by the dearth of research that offers a thorough examination of all the relevant laws. The process of collating all extant legal provisions pertaining to privacy is being undertaken with the aim of ascertaining any possible inconsistencies that could emerge in relation to the upcoming initiative to establish a discrete privacy legislation.

Basic Law of Governance 1992

In 1992¹⁹¹⁷, a legislative act known as The Basic Law was enacted and subsequently released to the public. This law incorporated a constitutional framework. The manuscript encompasses comprehensive discussions on a wide array of subjects, such as governmental entities, accountability in auditing, and legal protections. The Kingdom of Saudi Arabia is a self-governing Arab nation that was established on Islamic principles, as indicated in The Basic Law, Article 1¹⁹¹⁸. It adheres to the principles and practises of the Islamic religion. The fundamental sources of this particular religious practise comprise the Qur'an, which is regarded as the divine utterance of the Almighty, and the Sunnah of the Prophet Muhammad¹⁹¹⁹. The Kingdom has designated Arabic as its official language¹⁹²⁰.

Client Confidentiality In Saudi Law: A Critical Study On The Saudi Code Of Law Practice." (2023) International Journal Of The Legal Profession 30, No. 1: 115-124.

¹⁹¹⁷ Al-Fahad, Abdulaziz H. "Ornamental Constitutionalism: The Saudi Basic Law Of Governance." (2005) Yale J. Int'l L. 30: 375.

¹⁹¹⁸ Al-Mehaimeed, Ali M. "The Constitutional System Of Saudi Arabia: A Conspectus." (1993) Arab Law Quarterly 8, No. 1: 30-36.

¹⁹¹⁹ Topal, Aylin. "Economic Reforms And Women's Empowerment In Saudi Arabia." (2019) n Women's Studies International Forum, Vol. 76, P. 102253. Pergamon.

¹⁹²⁰ Al Zumor, Abdul Wahed Qasem Ghaleb. "Language Planning In Saudi Arabia (1927–2019): Arabic And Other Languages." (2019) Trames 23, No. 4: 409-424.

According to Article 7¹⁹²¹ of The Basic Law, the Qur'an and the Sunnah of the Prophet are the primary sources from which the administration of the Kingdom of Saudi Arabia draws its authority. These sources act as the most definitive places of reference for the laws of the State, including the Law that is currently in effect¹⁹²². The rules and regulations that have been established must be in absolute agreement with the Qur'an and the Sunnah¹⁹²³.

Furthermore, the text outlines economic tenets, entitlements, and responsibilities that necessitate the state's adherence to safeguarding its public finances, ensuring the sanctity of private residences and correspondence, safeguarding personal property and individuals' immunity from unwarranted detention and penalties, and safeguarding human rights in accordance with precepts from the Sharia¹⁹²⁴.

The Basic Law has stipulated in Articles 18¹⁹²⁵, 37¹⁹²⁶, and 40¹⁹²⁷ that the protection of privacy and personal property is of utmost importance, and it is the responsibility of the State to ensure the sanctity of private ownership. Individuals shall not be divested of their personal possessions, except when it serves the greater good of the community¹⁹²⁸. In this instance, the individual in question is entitled to receive just and equitable remuneration. Residences are considered to be sacrosanct and must not be violated¹⁹²⁹. Unauthorized access is strictly prohibited without the express consent of the respective owners¹⁹³⁰. Searches are only permitted in situations that are explicitly designated by legal statutes¹⁹³¹. The inviolability of telegraphic and postal communications, as well as other means of communication such as telephone, with

¹⁹²¹ Ibid.

¹⁹²² Alanzi, Awad Ali. "Exploring The Legal System In Saudi Arabia." (2020) International Journal Of Innovation 11.

¹⁹²³ احمد حسن عبدالعليم حسن. "اختصاصات ولي العهد السعودي في ضوء الأمر الملكي رقم أ/61" الخطيب, احمد حسن عبدالعليم حسن. "مجلة كلية الشريعة والقانون بأسبوط 35, Competence Of The Saudi Crown Prince In Light Of Royal Decree No. A/61 Dated 1/3/1444 AH And Its Impact On The Basic Law Of Governance 35, No. 5 (2023): 820-862.

¹⁹²⁴ Alshehaby, Fatimah. "Attorney-Client Confidentiality In Saudi Law: A Critical Study On The Saudi Code Of Law Practice." (2023) International Journal Of The Legal Profession 30, No. 1: 115-124.

¹⁹²⁵ Basic Law Of Governance Royal Decree No. A/90 March 2, 1992

¹⁹²⁶ Ibid.

¹⁹²⁷ Ibid.

¹⁹²⁸ Alanzi, Awad Ali. "Exploring The Legal System In Saudi Arabia." (2020) International Journal Of Innovation 11.

¹⁹²⁹ Basic Law Of Governance Royal Decree No. A/90 March 2, 1992

¹⁹³⁰ Ibid.

¹⁹³¹ Ibid.

regards to privacy, is a fundamental principle¹⁹³². The Law determines the circumstances under which confiscation, delay, surveillance, or eavesdropping may be permissible, and otherwise, such actions are prohibited¹⁹³³.

Basic Law of Governance 1992 No. M 18¹⁹³⁴: “The State shall guarantee private ownership and its sanctity. No-one shall be deprived of his private property, unless in service of the public interest. In this case, fair compensation shall be afforded him.”

◦ Basic Law of Governance 1992 No. M 37¹⁹³⁵: “Dwellings are inviolate. Access is prohibited without their owners' permission. No search may be made except in cases specified by the Law. “

◦ Basic Law of Governance 1992 No. M 40¹⁹³⁶: “The privacy of telegraphic and postal communications, and telephone and other means of communication, shall be inviolate. There shall be no confiscation, delay, surveillance or eavesdropping, except in cases determined by the Law.”

Review

According to the Basic Law, it is the responsibility of the state to safeguard the rights of individuals in a manner that is consistent with the precepts of Sharia law¹⁹³⁷. The principle that individuals have a fundamental right to their own privacy is acknowledged as an integral part of Sharia law and is protected as such¹⁹³⁸. The protection of an individual's right to private and confidentiality in their communications is given significant weight in Article 18¹⁹³⁹ of the Constitution. According to Article 37¹⁹⁴⁰ of the Basic Law, the house is considered to be a sacred space, and it is against the law to enter it without the permission of the owner or to

¹⁹³² Ibid.

¹⁹³³ Ibid.

¹⁹³⁴ Basic Law Of Governance Royal Decree No. A/90 March 2, 1992

¹⁹³⁵ Ibid. Article 37.

¹⁹³⁶ Ibid. Article 40.

¹⁹³⁷ Ibid. Article 8.

¹⁹³⁸ Ibid. Article 40.

¹⁹³⁹ Ibid.

¹⁹⁴⁰ Ibid.

search it unless such conduct is specifically authorised by other laws¹⁹⁴¹. This article highlights the sanctity of the home by stating that it may not be searched unless authorised to do so by pertinent statutes. The sanctity of the home is emphasised throughout the article. In addition, everyone should be made aware that Article 37¹⁹⁴² of the Basic Law acknowledges the significance of the protection of confidential correspondence in the current age of advanced digital technology. This is something that should be brought to the attention of everyone. It is made abundantly obvious throughout the body of text that the various modes of communication that are currently available, including but not limited to telegraphy, the postal service, and the telephone, amongst others, are in need of protection¹⁹⁴³. Unless explicitly permitted to do so by the applicable legal regulations, items cannot be confiscated, postponed, inspected, or eavesdropped upon¹⁹⁴⁴. It is against the law to disclose any information or content of a message that has been intercepted while it was in the process of being communicated, as this would be a violation of Article 40¹⁹⁴⁵ of the Basic Law. This is because doing so would constitute a violation of the provisions that are enumerated in the Act, which would be a violation of the law¹⁹⁴⁶. Nevertheless, the legislation does not provide equal protection to all private data¹⁹⁴⁷. The lack of specificity in the wording poses a challenge in comprehending the lawmaker's objectives, which presents a concern as judicial rulings are infrequently disseminated and do not carry authoritative weight over other courts¹⁹⁴⁸.

Telecom Act 2001

The safeguarding of the privacy and confidentiality rights of both the sender and recipient of all messages and information transmitted or received via open telecommunications networks is mandated by Article 9¹⁹⁴⁹ of the Telecommunications Act of 2001¹⁹⁵⁰. This clause is applicable to all data that is transmitted or received¹⁹⁵¹. In the absence of explicit legal

¹⁹⁴¹ Ibid. Article 37.

¹⁹⁴² Ibid.

¹⁹⁴³ Ibid. Article 40.

¹⁹⁴⁴ Ibid. Article 40.

¹⁹⁴⁵ Ibid.

¹⁹⁴⁶ Ibid. Article 40.

¹⁹⁴⁷ Basic Law Of Governance Royal Decree No. A/90 March 2, 1992

¹⁹⁴⁸ Ibid.

¹⁹⁴⁹ Telecommunications And Information Technology Act Enacted By Royal Decree No. M/106 Dated 02/11/1443H

¹⁹⁵⁰ Ibid. Article 9.

¹⁹⁵¹ Ibid.

provisions, the unauthorised transmission, receipt, or acquisition of identical information is deemed to be a criminal offence. As per the stipulations of Article 37¹⁹⁵², any conduct by an individual that entails the interception of telephone conversations or data transmitted via public telecommunications networks is deemed to be a contravention of the 2001 legislation¹⁹⁵³. The deliberate revelation of intercepted information or message content during transmission is deemed to contravene the regulations outlined in this legislation unless such disclosure is performed within the scope of official duties¹⁹⁵⁴.

- ***Telecom Act 2001 No. 9***¹⁹⁵⁵: “The privacy and confidentiality of telephone calls and information transmitted or received through public telecommunications networks shall be maintained. Disclosing, listening, or recording the same is not permitted, except for the cases stipulated by the relevant Acts.”
- Telecom Act 2001 No. 7 / 37¹⁹⁵⁶: “Interception of any telephone call or data carried on the public telecommunications networks is in violation of the provisions of this Act.”
- Telecom Act 2001 No.13/ 37¹⁹⁵⁷: “Other than in the course of duty, intentional disclosure of any information or contents of any message, which has been intercepted in the course of its transmission, is in violation of the provisions of this Act.”

Review

Despite the establishment of a defined legal framework governing telecommunications, there remains scope for enhancement. For the collection, disclosure, or use of an individual's identifiable information to be considered lawful, it is necessary to obtain the individual's prior consent or ensure that the individual has complied with relevant legal requirements¹⁹⁵⁸. Furthermore, the 2001 Telecom legislation empowers the Communications and Information Technology Commission to conduct enquiries into grievances lodged by users against service providers suspected of infringing upon their privacy rights. Users have the ability to file

¹⁹⁵² Ibid.

¹⁹⁵³ Ibid.

¹⁹⁵⁴ Ibid.

¹⁹⁵⁵ Ibid.

¹⁹⁵⁶ Ibid. Article 37.

¹⁹⁵⁷ Ibid.

¹⁹⁵⁸ Ibid. Article 9.

complaints against service providers whom they suspect have violated their privacy rights¹⁹⁵⁹. Conversely, the Act's language is notably broad, posing potential difficulties in resolving any legal complications that may emerge due to its generality. An example of this can be observed in the approach adopted by a telecommunications service provider towards safeguarding sensitive data, along with the situations that warrant its disclosure and the prerequisites for such disclosure¹⁹⁶⁰.

*Anti-Cybercrime Law 2007*¹⁹⁶¹

The Anti-Cybercrime Law was enacted with the purpose of combating cybercrimes, and it does so by outlining the offences that can be committed online as well as the punishments that can be imposed for them. The law attempts to protect public interests, moral principles, shared values, and the national economy in addition to safeguarding information security and upholding rights associated with lawful computer and information network usage¹⁹⁶².

As per the provisions of Article 3 of the Anti-Cybercrime Law of 2007, the misuse of mobile cameras constitutes a violation of privacy. The issues of digital defamation and emotional harm are of concern. As per the provisions of Article 4, individuals who engage in any of the cybercrimes mentioned therein shall be subject to a penalty of imprisonment¹⁹⁶³. Further misuse includes engaging in the purchase or promotion of transferrable assets or stocks utilising an alias or fictitious identity¹⁹⁶⁴. The act of gaining unauthorised access to banking, credit, or securities ownership data with the intention of acquiring data, information, monetary funds, or services is considered unlawful¹⁹⁶⁵. As per the provisions of Article 6, instances of ethical violations in information networks or computer systems encompass the creation, transmission, storage, or preparation of content that contravenes public order, religious tenets, societal mores, and personal privacy¹⁹⁶⁶.

¹⁹⁵⁹ Ibid.

¹⁹⁶⁰ Ibid. Article 37.

¹⁹⁶¹ The Anti-Cyber Crime Law Issued by Royal Decree Number M/17 On 26th March 2007.

¹⁹⁶² Ibid. Article 3.

¹⁹⁶³ Ibid. Article 2.

¹⁹⁶⁴ Ibid. Article 3.

¹⁹⁶⁵ Ibid Article 1.

¹⁹⁶⁶ Ibid. Article 6.

◦ Anti-Cybercrime Law 2007 M3¹⁹⁶⁷: “Any person who commits one of the following cybercrimes shall be subject to imprisonment for a period not exceeding one year and a fine not exceeding five hundred thousand riyals, or to either punishment: 4. Invasion of privacy through the misuse of camera-equipped mobile phones and the like. 5. Defamation and infliction of damage upon others through the use of various information technology devices¹⁹⁶⁸.”

◦ Anti-Cybercrime Law 2007 M4¹⁹⁶⁹: “Any person who commits one of the following cybercrimes shall be subject to imprisonment for a period not exceeding three years and a fine not exceeding two million riyals, or to either punishment: 1. Acquisition of movable property or bonds for oneself or others or signing such bonds through fraud or use of a false name or identity. 2. Illegally accessing bank or credit data, or data pertaining to ownership of securities with the intention of obtaining data, information, funds or services offered¹⁹⁷⁰.”

◦ Anti-Cybercrime Law 2007 M6/1¹⁹⁷¹: “Any person who commits one of the following cybercrimes shall be subject to imprisonment for a period not exceeding five years and a fine not exceeding three million riyals or to either punishment: 1. Production, preparation, transmission, or storage of material impinging on public order, religious values, public morals, and privacy, through the information network or computers¹⁹⁷².”

◦ Anti-Cybercrime Law M7¹⁹⁷³ : “Any person who commits one of the following cybercrimes shall be subject to imprisonment for a period not exceeding ten years, and a fine not exceeding five million riyals or to either punishment: 1. The construction or publicizing of a website on the information network or on a computer for terrorist organizations to facilitate communication with leaders or members of such organizations, finance them, promote their ideologies, publicize methods of making incendiary devices or explosives, or any other means used in terrorist activities. 2. Unlawful access to a web site or an information system directly, or through the information network or any computer, with the intention of obtaining data jeopardizing the internal or external security of the State or its national economy¹⁹⁷⁴.”

¹⁹⁶⁷ Anti-Cybercrime Law 2007, (SA). Article 3.

¹⁹⁶⁸ Ibid.

¹⁹⁶⁹ Ibid. Article 4.

¹⁹⁷⁰ Ibid.

¹⁹⁷¹ Ibid. Article 6..

¹⁹⁷² Ibid.

¹⁹⁷³ Ibid. Article 7.

¹⁹⁷⁴ Ibid.

Review

Although safeguarding individuals' privacy holds great importance, the primary objective of the law, as delineated in the second article of the statute, does not explicitly prioritise this aim. The objective of this legislation is to tackle cybercrimes by delineating the diverse forms of offences that come under this classification and by instituting sanctions that align with each of these offenses, with the aims of ensuring the following: The objectives of information security encompass a range of aims, including but not limited to augmenting the safeguarding of data, preserving the rights of computer and information network users, and maintaining the integrity of public interest, ethical principles, and shared values, ensuring the maintenance of the overall well-being of the domestic economy. Furthermore, the Act delineates the safeguarding of personal protection, albeit employing vague language that may potentially lead to misinterpretation among lawmakers¹⁹⁷⁵. Furthermore, the Anti-Cybercrimes Law exhibits a responsive nature as it solely safeguards the privacy of individuals in the aftermath of a criminal act that has resulted in its infringement¹⁹⁷⁶.

Electronic Transaction Law

The principal objective of the E-transaction legislation¹⁹⁷⁷ is to establish a legal framework that oversees and governs electronic transactions and signatures, with the aim of facilitating their effective management and regulation. In order to achieve this objective, a legal framework will be established to govern and regulate electronic transactions and signatures. The laws governing electronic transactions do not explicitly aim to safeguard the privacy rights of individuals¹⁹⁷⁸. The legal framework governing electronic transactions lacks a precise delineation of the term "personal information" and specific directives for public or private entities that handle confidential data¹⁹⁷⁹. Several regulations have been enacted by the

¹⁹⁷⁵ Ibid. As Stated In Article 2.

¹⁹⁷⁶ Ibid. As Stated In Article 3.

¹⁹⁷⁷ Electronic Transactions Law Royal Decree No. M/18 March 27, 2007

¹⁹⁷⁸ Ibid. As Stated In Article 2.

¹⁹⁷⁹ Ibid. As Stated In Article 1.

legislative body to oversee the management of electronic data, with the aim of ensuring the legitimacy and safety of digital transactions¹⁹⁸⁰. These regulations pertain to the management of both the retention and retrieval of electronic data and personally identifiable data.

The regulation of electronic transactions serves as a fundamental measure to ensure the protection of confidential data privacy.

◦ Electronic Transaction Law 2007 M23 / 3 ¹⁹⁸¹: “It is considered a violation of the provisions of this law, to disclose a certificate holder's information accessed by virtue of his work without the certificate holder's consent in written or electronic form, or as provided for by law.”

Review

The legislative framework of the Electronic Transaction Act offers legal safeguarding for electronic data and records. The establishment of a legal framework goal is achieved by imposing specific obligations on the entities responsible for maintaining the aforementioned information¹⁹⁸². The measures outlined in this context pertain to limiting access to the smallest possible number of individuals, keeping a detailed record of every instance of access, obtaining explicit consent before storing data, and prohibiting third-party access without the consent of the parties involved or legal authorisation¹⁹⁸³. The measures stated above were implemented with the aim of restricting unauthorised access to data by third parties, except in cases where explicit consent has been obtained from the concerned parties or legal authorisation has been granted¹⁹⁸⁴.

Nonetheless, it is evident that the primary objective of the legislation is not to safeguard the private data of persons. There is a widespread consensus that the extant legal frameworks designed to protect the confidentiality of individuals' personally identifiable information are

¹⁹⁸⁰ Ibid. As Stated In Article 1.

¹⁹⁸¹ Electronic Transactions Law Royal Decree No. M/18 March 27, 2007

¹⁹⁸² Ibid. As Stated In Article 2.

¹⁹⁸³ Ibid. As Stated In Article 4.

¹⁹⁸⁴ Ibid. As Stated In Article 6.

insufficient and lack clarity¹⁹⁸⁵. The absence of discrimination among diverse forms of data implies that each datum is accorded equal significance under legal purview¹⁹⁸⁶. The task of safeguarding individuals' confidential information becomes notably challenging in the absence of comprehensive justifications¹⁹⁸⁷. There is a possibility that a reassessment of the existing data protection measures may be necessary, as a significant number of organisations may determine that it is not feasible to sustain the current level of protection¹⁹⁸⁸. Within the framework of the legal regulations pertaining to electronic transactions, it may be necessary to consider the potential need to decrease the degree of safeguarding afforded to various forms of information, such as personally identifiable data¹⁹⁸⁹.

Credit Information Law

Companies are obligated to gather, provide, exchange, and protect credit information in accordance with the provisions of Article 2¹⁹⁹⁰ and Article 4¹⁹⁹¹. The goal of the Credit Information Law¹⁹⁹² is to establish the general guidelines and specific rules that are required for the gathering, exchanging, and protecting of customer credit information. In accordance with the stipulations delineated in Articles 5¹⁹⁹³ and 6¹⁹⁹⁴, it is obligatory for each member to disclose their credit information to the contracted entity. Furthermore, it is their responsibility to ensure the accuracy and timeliness of the disseminated data. In accordance with the governing guidelines, it is admissible for an individual to obtain a consumer credit report from

¹⁹⁸⁵ Kinsara, Oways. "Revising The Saudi Electronic Transactions Law On E-Signatures." (2022) Digital Evidence & Elec. Signature L. Rev. 19: 1.

¹⁹⁸⁶ Sarabdeen, Jawahitha. "Laws On Regulatory Technology (Regtech) In Saudi Arabia: Are They Adequate?." (2023) International Journal Of Law And Management.

¹⁹⁸⁷ Singh, H. P., And Tareq S. Alshammari. "An Institutional Theory Perspective On Developing A Cyber Security Legal Framework: A Case Of Saudi Arabia." (2020) Beijing L. Rev. 11: 637.

¹⁹⁸⁸ Mubarak Alharbi, Ibraheem, Suzanne Zyngier, And Christopher Hodkinson. "Privacy By Design And Customers' Perceived Privacy And Security Concerns In The Success Of E-Commerce." (2013) Journal Of Enterprise Information Management 26, No. 6: 702-718.

¹⁹⁸⁹ Sarabdeen, Jawahitha. "Laws On Regulatory Technology (Regtech) In Saudi Arabia: Are They Adequate?." (2023) International Journal Of Law And Management.

¹⁹⁹⁰ Credit Information Law Royal Decree No. M/37 July 8, 2008. Article 2.

¹⁹⁹¹ Ibid. Article 4.

¹⁹⁹² Credit Information Law Royal Decree No. M/37 July 8, 2008.

¹⁹⁹³ Ibid. As Stated In Article 5.

¹⁹⁹⁴ Ibid. As Stated Article 6.

corporations, contingent upon the condition that the consumer has furnished written authorisation for such disclosure¹⁹⁹⁵. The legal mandate necessitates that individuals, corporations, and their employees maintain the confidentiality of consumer credit information¹⁹⁹⁶. The transmission or application of such data is strictly restricted to the provisions specified in the pertinent legislation and its associated regulations, along with any other statutes and guidelines that govern the privacy of information within the Kingdom¹⁹⁹⁷. In accordance with the provisions of Article 12 of the Act, it is not permissible for any credit information member company or other entity subject to the purview of this legislation, as well as their employees during their tenure or post-employment, to disclose any confidential information acquired during the course of their employment, except in instances explicitly stipulated in this legislation¹⁹⁹⁸.

◦ ***Credit Information Law 2008 M 5 / 2.1***¹⁹⁹⁹:

“Each member shall exchange the credit information in its possession with the company it has a contract with and shall be liable for the accuracy and updating of such information. 2. A member may obtain a copy of the consumer credit record from companies, subject to the written consent of the consumer²⁰⁰⁰.”

◦ Credit Information Law 2008 M6 ²⁰⁰¹: “Members, companies and their staff shall maintain the confidentiality of consumer credit information, and may not publish or use such information for any purpose other than those provided for in this Law or its implementing regulations, or in accordance with laws and instructions regulating the confidentiality of information in the Kingdom²⁰⁰².”

◦ Credit Information Law 2008 M7²⁰⁰³ : “Credit information may be used as statistical figures, provided that such information does not reveal the consumer’s identity.”

¹⁹⁹⁵ Ibid. As Stated In Article 12.

¹⁹⁹⁶ Ibid. As Stated In Article 6.

¹⁹⁹⁷ Ibid. As Stated In Article 11.

¹⁹⁹⁸ Ibid. As Stated In Article 12.

¹⁹⁹⁹ Credit Information Law Royal Decree No. M/37 July 8, 2008, Article 5.

²⁰⁰⁰ Ibid. As Stated In Article 5/2.1.

²⁰⁰¹ Ibid. As Stated In Article 6.

²⁰⁰² Ibid. As Stated In Article 7.

²⁰⁰³ Ibid. As Stated In Article 7.

- Credit Information Law 2008 M10 / 1 ²⁰⁰⁴: “Companies shall maintain credit information.”
- Credit Information Law 2008 M12 /3 ²⁰⁰⁵: “There may be no disclosure by any credit information member company or any other entity subject to the provision of this Law, or any of their employees while in office or afterwards, of information gained in the course of their work which is deemed confidential under this Law, in cases other than those specified in this Law²⁰⁰⁶.”

Review

The Credit Information Act's legislative framework provides legal safeguards for electronic data and records. This Act pertains to an extensive array of personally identifiable data, comprising designations, identification codes, electronic mail addresses, phone numbers, permit codes, details concerning assets, banking codes, credit card particulars, permanent codes, confidential images, and various other forms of personally identifiable information. Furthermore, it categorises credit data as a type of personally identifiable information²⁰⁰⁷.

The legislative framework pertains to data related to an individual's credit history or their ability to obtain a loan, which is linked to a request for financial aid or the procurement of funds from a financial institution for personal or familial objectives²⁰⁰⁸. The achievement of this objective is facilitated by assigning specific obligations to the entities responsible for the upkeep of the aforementioned information²⁰⁰⁹. Furthermore, the 2008 Act mandates that any individual, credit reporting agency, or other organisation subject to its provisions, as well as their staff members, irrespective of their current employment status, are proscribed from divulging privileged data acquired during the duration of their service, save for specific scenarios that are explicitly delineated in the statute²⁰¹⁰. The restriction pertains to individuals

²⁰⁰⁴ Ibid. As Stated In Article 10/1.

²⁰⁰⁵ Ibid. As Stated In Article 12/3.

²⁰⁰⁶ Ibid.

²⁰⁰⁷ Credit Information Law Royal Decree No. M/37 July 8, 2008.

²⁰⁰⁸ Ibid. As Stated in Article 9/5: (A Consumer May Add Information To His/Her Credit Record Indicating His/Her Personal Point Of View With Respect To Credit Information Provided Therein.).

²⁰⁰⁹ Credit Information Law Royal Decree No. M/37 July 8, 2008.

²⁰¹⁰ Ibid.

who are presently or formerly affiliated with said organisations²⁰¹¹. Conversely, as previously mentioned, the verbiage utilised in the legal framework is ambiguous²⁰¹².

Law of Criminal Procedure 2013

The Law of Criminal Procedure expounds upon the measures for protecting personal information as prescribed in the Basic Law of Governance²⁰¹³. In accordance with the provisions outlined in Article 55²⁰¹⁴ of this Act, it is stipulated that a search may solely be carried out on the abode of the accused and not on any other individual or residence, unless there are compelling indications that such an investigative measure would be advantageous²⁰¹⁵. In accordance with Article 56²⁰¹⁶ of the Act, it is strictly forbidden for any individual to engage in the act of reading or listening in on another individual's correspondence, telegrams, phone conversations, or any other form of communication without a court order that explicitly specifies the justification for such surveillance and limits its duration in accordance with the order²⁰¹⁷. According to the provisions outlined in Article 60,²⁰¹⁸ it is strictly forbidden for individuals who have access to confiscated items and documents to utilise or disclose them in any way, unless required to do so by legal decree. Moreover, the obligation of confidentiality encompasses not only investigators but also any other individuals who may have authorisation to access the aforementioned materials²⁰¹⁹. The person in question will be held responsible for any unauthorised use or disclosure of the aforementioned information²⁰²⁰.

²⁰¹¹ Ibid.

²⁰¹² Zamberi Ahmad, Syed. "Businesswomen In the Kingdom of Saudi Arabia: Characteristic, Growth Patterns And Progression In A Regional Context." (2011) Equality, Diversity and Inclusion: An International Journal 30, No. 7: 610-614.

²⁰¹³ Basic Law Of Governance Royal Decree No. A/90 March 2, 1992

²⁰¹⁴ Law Of Criminal Procedure Royal Decree No. M/2 November 25, 2013. Article 55.

²⁰¹⁵ Ibid. As Stated In Article 55.

²⁰¹⁶ Ibid. As Stated In Article 56.

²⁰¹⁷ Ibid.

²⁰¹⁸ Ibid. As Stated In Article 60.

²⁰¹⁹ Ibid.

²⁰²⁰ Ibid.

- Law of Criminal Procedure M56²⁰²¹: “Mail, cables, telephone conversations and other means of communication shall be inviolable and, as such, shall not be perused or surveilled except pursuant to an order stating the reasons thereof and for a limited period as herein provided for.”
- Law of Criminal Procedure M60²⁰²²: “The investigator and whoever obtains information about the articles and documents seized shall keep the same undisclosed and shall not make use thereof in any way or otherwise disclose the same to a third party, except in circumstances required by law. If he unlawfully discloses or makes use of the same by whatever means, he shall be held accountable²⁰²³.”
- Law of Criminal Procedure M80²⁰²⁴: “Searching dwellings is an investigative act and shall not be conducted except pursuant to a statement concerning a person residing in the relevant dwelling, that he either committed a crime or participated therein or there was circumstantial evidence indicating that he was in possession of items relevant to that crime. The investigator may search any place and seize any item which is likely to have been used in the commission of that crime or resulting therefrom and any other item that may be useful in determining the truth, including any document or weapon. In all cases, the investigator shall prepare a record of that search, specifying the reasons for it and the results thereof. However, dwellings shall not be entered or searched except as provided by law and pursuant to a search warrant issued by the Bureau of Investigation and Prosecution²⁰²⁵.”
- Law of Criminal Procedure M81²⁰²⁶: “The investigator may search the accused; he may also search any other person if it appears on strong grounds that he is concealing certain items that may be useful in determining the truth. Such search is subject to the provisions of Article 42 herein²⁰²⁷.”
- Law of Criminal Procedure M113²⁰²⁸:
 “If it appears, following the interrogation of the accused or in the event of his flight, that there is sufficient evidence of a major crime against him, or if the interest of the investigation requires his detention to prevent his fleeing or affecting the proceedings of the investigation, the

²⁰²¹ Law Of Criminal Procedure Royal Decree No. M/2 November 25, 2013. Article 56.

²⁰²² Ibid. As Stated In Article 60.

²⁰²³ Ibid.

²⁰²⁴ Ibid. As Stated In Article 80.

²⁰²⁵ Ibid.

²⁰²⁶ Ibid As Stated In Article 81.

²⁰²⁷ Ibid.

²⁰²⁸ Ibid. As Stated In Article 113.

investigator shall issue a warrant for his detention for a period not exceeding five days from the date of his arrest²⁰²⁹.”

Review

The law of criminal procedure is a complex and intricate legal framework that seeks to strike a balance between safeguarding individual privacy rights and ensuring effective criminal proceedings. Specifically, this legal framework provides protection for individuals' rights in relation to various forms of communication²⁰³⁰, such as postal and telegraph communications, telephone calls, and other public means of communication. It is important to note that accessing or tracking such communications is only permissible under certain circumstances, namely with a reasoned order and for a limited duration. The legislation explicitly mandates that the prosecutor is responsible for safeguarding the confidentiality of the seized records²⁰³¹.

The law explicitly acknowledges the unique sanctity of the home and recognises it as a fundamental aspect of personal privacy²⁰³². Conducting searches is only permissible if authorised by the Bureau of Investigation and Public Prosecution, as per the law²⁰³³. The proposed system of personal data security appears to draw upon the law of criminal proceedings as a foundational source. The safeguarding of personal data and privacy regulations are integral aspects of criminal proceedings, necessitating comprehensive elucidation. The lack of specificity in the language employed by the legislator renders it challenging to discern their intended objectives, given that judicial rulings are non-binding on other judicial entities and are not extensively disseminated²⁰³⁴. The language employed exhibits a lack of precision and specificity²⁰³⁵.

²⁰²⁹ Ibid.

²⁰³⁰ Al-Subaie, Salman Muhammed. "The Right To A Fair Trial Under Saudi Law Of Criminal Procedure: A Human Rights Critique." (2013) Phd Diss.

²⁰³¹ Law Of Criminal Procedure Royal Decree No. M/2 November 25, 2013. Article 61.

²⁰³² Ibid. As Stated In Article 41.

²⁰³³ Ibid. As Stated In Article 13.

²⁰³⁴ Alnahdi, Layla. "Quality Of Legislation and Law-Making Process In Saudi Arabia." (2014) Phd Diss., University Of London.

²⁰³⁵ Ibid.

Conclusion

The preceding chapter has analysed the legal culture of the Kingdom of Saudi Arabia. This culture is based on the Sharia Law and Islamic legal principles, in addition to written Law. The current chapter has examined the notion of privacy within the existing legal framework of the Kingdom of Saudi Arabia. After conducting an analysis of personal data in the Kingdom of Saudi Arabia, the author has identified 19 factors that may have an impact on the current safeguarding of personal data. The author has identified the absence of comprehensive legislation pertaining to privacy as a potential contributing factor. The current legal regulations pertaining to the protection of personal data in the Kingdom of Saudi Arabia are insufficient in terms of their comprehensiveness and specificity, particularly regarding safeguarding the personal information of individuals in both public and private spheres.

The regulation and compliance of protecting personal information of individuals is subject to various measures, each of which adheres to specific laws and regulations. The lack of all-encompassing privacy laws leads to uncertain judicial rulings, as each court may adhere to unique principles. An illustrative example can be observed in the comparison between the General Sharia Courts and the Board of Grievances regarding the issue of compensation for moral damages. This is a significant matter when seeking restitution for violations of privacy²⁰³⁶. Furthermore, it is crucial to employ specific overarching principles of Sharia law to ensure the protection of individuals' privacy over an extended period. It is worth noting that the aforementioned principles were established prior to the emergence of the technological revolution, and thus do not encompass issues pertaining to technology.

Although privacy is greatly valued by individuals in Saudi Arabia, their knowledge regarding the possible violations that may arise is not always extensive. The statement above is especially applicable to instances of technological violations, as the integration of privacy considerations into the development and execution of technology has been insufficient. As a result, the legal actions taken in response to such infringements are frequently insufficient and ineffective.

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The chapter has elucidated the importance of safeguarding the privacy rights of individuals in Saudi Arabia, which is accentuated by the inadequacy of research that comprehensively scrutinises all pertinent legislations. The task of compiling all existing legal provisions related to privacy is currently underway to identify any potential discrepancies that may arise in connection with the proposed implementation of a distinct privacy law, if any. Hence, it can be observed that the Saudi lawmakers exhibit a tendency to employ expansive terminology while endeavouring to govern issues pertaining to information. Moreover, the dissemination of judicial rulings is sporadic, and their authoritative weight over other courts is limited.

Chapter Six: The Perspective of Safeguarding Information Privacy in Saudi Arabia

Introduction

Following the specified method and after identifying the deficiencies in the privacy practices existing under the Kingdom of Saudi Arabia's legislation in comparison to other legal frameworks, this chapter aims to propose a draft legislation to rectify the current limitations²⁰³⁷. The preceding two chapters of this thesis have explored the legal culture in the Kingdom of Saudi Arabia and analysed the concept of privacy within the current legal framework. The findings indicate that the current level of privacy protection for individuals' personal information is inadequate. The contention put forth by the author posits that the current legal framework in Saudi Arabia is insufficient in its ability to furnish satisfactory measures that guarantee the protection of personal data privacy in the age of digital technology. The present chapter presents a proposed methodology and a set of guidelines aimed at enhancing the safeguarding of information within the context of Saudi Arabia.

Upon reviewing the preceding chapters of this thesis and analysing the diverse privacy protection strategies implemented by various nations, it is evident that the European Union and the United States of America have adopted divergent approaches. The divergence is primarily driven by the need to safeguard the right to privacy of their respective populations, while simultaneously eliminating any obstacles that may impede their citizens or enterprises. These nations endeavour to enhance the standard of living of their populace by enacting legislation that effectively safeguards them against potential violations of their privacy.

²⁰³⁷ I would to express my gratitude to the staff at the Bureau of Experts within the Council of Ministers and the national cybersecurity authority for their library and the resources contributed to this chapter.

In contrast to a unified federal data protection legislation, the United States has a multifaceted framework of laws and statutes that govern the protection of sensitive information²⁰³⁸. This framework operates at both the federal and state levels. This differs from other countries, such as the European Union, which have established comprehensive data protection regulations at the domestic level. There are various regulations and principles pertaining to privacy that serve distinct objectives.

The Fair Credit Reporting Act²⁰³⁹ governs the acquisition, application, and dissemination of sensitive information by credit reporting agencies, whereas the Health Insurance Portability and Accountability Act²⁰⁴⁰ protects the confidentiality of personal health data. Both of these legislative measures were enacted during the 1970s²⁰⁴¹ and 1990s²⁰⁴², and have since persisted into a period of prosperity, affording ample opportunity for the identification of weaknesses in the laws and subsequent improvement. On the hand, the European Union has adapted a strong protection of privacy, the General Data Protection Regulation, which is widely considered to be the most advanced protection legislation²⁰⁴³. The General Data Protection Regulation (GDPR) is a comprehensive legal framework that regulates the processing of personal data in both public and private sectors, encompassing the collection, utilization, and disclosure of such information²⁰⁴⁴.

The Kingdom of Saudi Arabia faces a decision between two options for safeguarding privacy: either adopting the privacy protection methodology utilised by the European Union or implementing the privacy protection approach employed by the United States. Furthermore, it is plausible for the Kingdom of Saudi Arabia to establish a distinctive privacy framework that aligns with their domestic goals and promotes the welfare of their populace.

²⁰³⁸ Schwartz, Paul M. "Privacy And Participation: Personal Information And Public Sector Regulation In The United States." (1994) Iowa L. Rev. 80: 553.

²⁰³⁹ The Fair Credit Reporting Act (FCRA), 15 U.S.C. § 1681 Et Seq.

²⁰⁴⁰ Health Insurance Portability And Accountability Act Of 1996 (HIPAA Or The Kennedy–Kassebaum Act)

²⁰⁴¹ The Fair Credit Reporting Act Originally Published In 1970.

²⁰⁴² Health Insurance Portability And Accountability Act Originally Published In 1996

²⁰⁴³ Hoofnagle, Chris Jay, Bart Van Der Sloot, And Frederik Zuiderveen Borgesius. "The European Union General Data Protection Regulation: What It Is And What It Means." (2019) Information & Communications Technology Law 28, No. 1: 65-98.

²⁰⁴⁴ Voigt, Paul, And Axel Von Dem Bussche. "The Eu General Data Protection Regulation (Gdpr)." (2017) A Practical Guide, 1st Ed., Cham: Springer International Publishing 10, No. 3152676: 10-5555.

What are the possible ways for Saudi Arabia to establish a privacy law?

Sharia Law

As the Saudi Arabian Constitution is founded on Sharia Law, there exist several approaches to the implementation of a privacy law in the Kingdom of Saudi Arabia. The Saudi Arabian Constitution affirms the principles of Sharia law as the guarantor of human rights²⁰⁴⁵. The right to solitude is considered one of the fundamental and inherent human rights²⁰⁴⁶. The utilisation of private information pertaining to individuals in settings beyond their homes and social interactions has become possible due to the progress of advanced technology. Consequently, certain sets of data may disclose information beyond what could be obtained through an informal telephonic conversation. Hence, it is imperative to undertake supplementary measures apart from solely safeguarding individuals' residences and personal correspondences to ensure the safeguarding of the private entitlements of the populace.

Investments towards enhancing privacy

The justification for allocating resources towards enhancing privacy measures in the Kingdom of Saudi Arabia may be subject to scrutiny. There are numerous reasons for this, with the primary one being the pursuit of improved privacy standards via educational initiatives and increased public awareness²⁰⁴⁷. The preservation of privacy is a significant concern for the Saudi population, although they may possess an incomplete comprehension of the notion of digital privacy and its delineation²⁰⁴⁸. Therefore, it is crucial to allocate resources towards education given that the populace of Saudi Arabia can reap benefits in terms of privacy. Thus, it is imperative to increase public awareness regarding privacy.

²⁰⁴⁵ Al-Rodiman, Abdulaziz. "The Application Of Shari'ah And International Human Rights Law In Saudi Arabia." (2013) Phd Diss.

²⁰⁴⁶ Ibid.

²⁰⁴⁷ Regan, Priscilla, And Valerie Steeves. "Education, Privacy And Big Data Algorithms: Taking The Persons Out Of Personalized Learning." (2019) First Monday.

²⁰⁴⁸ Binsawad, Muhammad, Ghazanfar Ali Abbasi, And Osama Sohaib. "People's Expectations And Experiences Of Big Data Collection In The Saudi Context." (2022) Peerj Computer Science 8: E926.

The Saudi Arabian government has formulated an ambitious strategy, known as Saudi Vision 2030²⁰⁴⁹, with the aim of diversifying the nation's economy and reducing its reliance on the petroleum industry. The integration of technology is an essential element of the long-term objectives outlined in the Saudi Vision²⁰⁵⁰. The potential benefits of investing in emerging technology, specifically the development of a digital infrastructure²⁰⁵¹, e-commerce²⁰⁵², e-government²⁰⁵³ and data privacy, include increased attractiveness of the Saudi economy to international companies and the protection of their sensitive information. In the planning of one such city, Neom²⁰⁵⁴, its infrastructure will incorporate distinctive tax regulations and legal frameworks. The Saudi government's efforts to expand the economic foundation in alignment with the 2030 Vision have necessitated the attainment of technological objectives outlined in the Saudi Vision²⁰⁵⁵. The articulated goals entail the promotion of Smart Cities, enhancement of telecommunications and information technology, and expansion of digital government services²⁰⁵⁶. To achieve these objectives, it is crucial for the Saudi government to provide incentives for both domestic and foreign private enterprises to invest in the Saudi market.

However, forecasting the implementation of regulations and Sharia doctrines that oversee the utilisation of private data can be a challenging task. The legal system and legislative framework of Saudi Arabia play a pivotal role in the nation's endeavours to attract foreign investors. Foreign technology companies that lack familiarity with or disregard for Sharia principles face a higher likelihood of unintentionally committing unlawful acts when handling private

²⁰⁴⁹ Amran, YH Ahssein, YH Mugahed Amran, Rayed Alyousef, And Hisham Alabduljabbar. "Renewable And Sustainable Energy Production In Saudi Arabia According To Saudi Vision 2030; Current Status And Future Prospects." (2020) *Journal Of Cleaner Production* 247: 119602.

²⁰⁵⁰ Al-Shehri, Saleh. "Transforming English Language Education In Saudi Arabia: Why Does Technology Matter?" (2020) *International Journal Of Emerging Technologies In Learning (Ijet)* 15, No. 6: 108-123.

²⁰⁵¹ Woishi, Wasmi. "The Impact Of Digitization On The Economy Of Ksa In The Context Of Vision 2030." (2019) *Int J Eng Appl Sci Technol* 4, No. 04: 312-316.

²⁰⁵² Eid, Mustafa I. "Determinants Of E-Commerce Customer Satisfaction, Trust, And Loyalty In Saudi Arabia." (2011) *Journal Of Electronic Commerce Research* 12, No. 1: 78.

²⁰⁵³ Basahel, Abdullah, And Mohammad Yamin. "Measuring Success Of E-Government Of Saudi Arabia." (2017) *International Journal Of Information Technology* 9: 287-293.

²⁰⁵⁴ Alam, Tanweer, Mohammad Ayoub Khan, Natheer K. Gharaibeh, And Malik Khlaif Gharaibeh. "Big Data For Smart Cities: A Case Study Of NEOM City, Saudi Arabia." (2021) *Smart Cities: A Data Analytics Perspective*: 215-230.

²⁰⁵⁵ Amran, YH Ahssein, YH Mugahed Amran, Rayed Alyousef, And Hisham Alabduljabbar. "Renewable And Sustainable Energy Production In Saudi Arabia According To Saudi Vision 2030; Current Status And Future Prospects." (2020) *Journal Of Cleaner Production* 247: 119602.

²⁰⁵⁶ Aina, Yusuf A. "Achieving Smart Sustainable Cities With Geoict Support: The Saudi Evolving Smart Cities." (2017) *Cities* 71: 49-58. Also See Al-Sayed, Amna, Faizah Al-Shammari, Areej Alshutayri, Nahla Aljojo, Eman Aldhahri, And Omar Abouola. "The Smart City-Line In Saudi Arabia: Issue And Challenges." (2022) *Postmodern Openings* 13, No. 1 Sup1: 15-37.

information in Saudi Arabia, owing to the ambiguity of the regulations. This holds especially true in cases where the pertinent organisation is situated in a foreign nation. It is probable that certain data will be gathered, retained, and transmitted by enterprises situated in foreign nations. The expansion of the technology sector in Saudi Arabia is expected to result in the creation, utilization, and exchange of a greater amount of personal information²⁰⁵⁷. For this reason, the implementation of clear-cut regulations is imperative to safeguard the personal data of both the populace of Saudi Arabia and the rapidly expanding technology industry within the nation²⁰⁵⁸. The objective will be achieved through the formulation of novel regulations and legislation. It is unlikely that Saudi Arabia will be able to resolve its privacy concerns, specifically those pertaining to technological usage, expeditiously through the implementation of an ideal information privacy legislation. This holds particularly true with regards to issues arising from the expansion of technology²⁰⁵⁹. Diverse nations adopt distinct methods to address issues related to safeguarding information. Therefore, Saudi Arabia must devise its own tactics to ensure the protection of personal data and establish a stable market.

Adopting a General Data Protection (GDPR)-style approach

The adoption of a comprehensive model is considered the most efficacious approach to protect individuals' personal data and augment the appeal of the Saudi market to international businesses²⁰⁶⁰. However, the author argues that the present moment is not conducive for such an endeavour as it requires enhancements. The thesis proposes the implementation of a privacy law that is proportional to the current market size and circumstances in Saudi Arabia. This approach is considered imperative until the necessary educational and other pertinent measures are completely established to enable the ultimate implementation of a comprehensive approach similar to GDPR.

²⁰⁵⁷ Abdullah, Ahmed. "Consumers' Personal Data Protection In Saudi Arabia: A Comparative Analytical Study." (2020) Phd Diss., University Of Kansas.

²⁰⁵⁸ Ibid.

²⁰⁵⁹ Hassounah, Marwah, Hafsa Raheel, And Mohammed Alhefzi. "Digital Response During The COVID-19 Pandemic In Saudi Arabia." (2020) Journal Of Medical Internet Research 22, No. 9: E19338.

²⁰⁶⁰ Laxmi, Vijay. "The Impact Of EU GDPR On Saudi Arabia's Economy: A Case Study Of Tourism And Logistics Sectors." (2019) Phd Diss., Northeastern University.

The guarantee of the fundamental human right to privacy in Saudi Arabia is founded on the principles of Sharia and the Saudi constitution²⁰⁶¹. However, the inadequacy of privacy safeguards in the digital age can be attributed to the absence of clear legislation that prioritises the protection of individuals' personal data. In addition, the thorough implementation of regulations pertaining to safeguarding of data requires substantial financial resources for entities operating in both the public and private sectors. Furthermore, there is a shortage of specialised information security technicians and privacy professionals in the industry largely due to a scarcity of specialised technical training opportunities²⁰⁶².

The document below serves as an illustration of a legal strategy for safeguarding data privacy in Saudi Arabia in the form of a preliminary version.

Privacy Legal Document Example²⁰⁶³

The following are illustrative regulations that may aid in the formulation of a forthcoming privacy act within the legal framework of the Kingdom. These regulations, which have undergone revisions of varying degrees of stringency from diverse jurisdictions, are deemed applicable to the Kingdom of Saudi Arabia.

Name of the law: Personal Data Protection Law.

Regulations: Executive Regulations of the Law.

²⁰⁶¹ Saudi Basic Law Of Governance. Article 26. Also See Elgujja, Abba Amsami. "Adequacy Of The Legal Safeguards Of The Patients' Confidentiality Right Under The Saudi Arabian Laws" (2020) University Of Salford United Kingdom.

²⁰⁶² Blažič, Borka Jerman. "The Cybersecurity Labour Shortage in Europe: Moving to A New Concept for Education and Training." (2021) *Technology in Society* 67: 101769. Also See Alsmadi, Izzat, And Mohammad Zarour. "Cybersecurity Programs in Saudi Arabia: Issues and Recommendations." (In 2018 1st International Conference on Computer Applications & Information Security (ICCAIS), Pp. 1-5. IEEE, 2018.)

²⁰⁶³ I would like to express my gratitude to the Bureau of Experts to the Council of Ministers in the Kingdom of Saudi Arabia for their valuable contribution, unwavering support, and insightful counsel provided during the development of this section. Their counsel provided a basic set of requirements, along with the literature review, for the legislation recommendation. Their counsel, based on their knowledge of Saudi legal culture, was complementary to the overseas legal knowledge of the thesis researcher.

Personal Data: any data which may identify the person, regardless of issuer or form, or which may explicitly or indirectly make the individual identifiable. This includes name, ID numbers, e-mails, phone numbers, licence numbers, identification numbers, personal possessions, bank numbers, credit card details, fixed numbers, private photos and many other personal details.

Data Controller: any person, entity or body that determines the intention and manner in which personal data of a basic legal or managerial character is handled on the data controller's behalf.

Data collection: an agency handling personal information obtained under the Law from its owners, agents, the owner's guardians or third parties.

Data destruction: any act that will erase information and make it difficult or impossible to search or restore it.

Disclosure: allows anyone, except for those who conduct any data processing, to collect, use, distribute, and access personal data by any means and for any reason.

Publication: The publication or publishing of any personal data by any readable or audio-visual means.

Critical Data: any personal data, including a reference to the racial, tribal, religious, intellectual, or political affiliation of the individual, membership in any society, business, or domestic organisation, inclusion in the criminal and security database, the names of vital identifiers, credit, health, and location data, and data confirming that the parents, father or mother of the person are unknown.

Health Data: personal details, whether physical, mental or health services supplied to the individual in question, relating to a person's status.

Health Services: health-related programmes relating to the person's health, including protective, therapeutic and rehabilitation services, hypnotism, and the provision of medicine.

Credit Data: personal data, including data related to a person's credit history or their ability to receive a loan, or related to a request for obtaining funds from a financial institution for the individual or for family purposes.

Data Owner: the person(s), or legal guardian of the person(s), to whom personal information belongs.

Data Processing Entity: any natural individual, legal person, administration, authority or agency who, via third parties, processes or receives personal data from the Kingdom, whether a governmental or non-governmental body, and processes the data directly on its own.

The Supervising Authority: any government or ministry of separate legal identities, supervisory powers and personal data monitoring.

Children and Minors: A child is a person whose age in the regulations does not exceed a specified number of years. A child is incompetent in this scheme, like a person of impaired mental ability, regardless of age.

Applied Law

The Law will be applicable to any collection, through any means, of personal data in the Kingdom, including data processing in the Kingdom by any other individual outside the Kingdom, through the use of the internet. This regulation includes the details of a dead person if these details contribute to the recognition of the deceased. The legislation forbids the collection of confidential or family records by citizens unless they are released or reported to a third party.

Provisions and Procedures

Any regulation or international agreement that aims to provide enhanced safeguarding of personal data, and to which the Kingdom is a signatory, shall not be exempted from the provisions and procedures outlined in the law.

Owner Rights

In accordance with the clauses included above, the proprietor of personal data has the following rights:

1. The right to honestly, integrally and respectfully process their data.
2. The right to know: this involves notifying the system supervisor, who must take into account the functional basis in the collection of personal data, the reason for which personal data is collected and the requirement that personal data must not be subsequently processed for a purpose other than that for which it is collected or for other purposes than those contained in the data processing body.
3. The right to ascertain that personal data is correct, true, accurate, up to date, and that regulatory periods, species correction and procedures are established to prevent the effects of data processing from misrepresenting the data.
4. The right to use the data processing body to control the available data. The data must be amended, corrected, completed or modified by the claimant. Penalties shall be sought for worthless data. Verified copies must be collected and the quality of the documents must be assured and without expense, without regard to the provisions of the Kingdom of Saudi Arabia Credit Information Law.
5. Other rights as outlined in the regulations.

Processing

Personal data may not be processed, except in the cases set out above, and the object of the processing thereof may not be changed until the data owner has given their consent. In all cases, the approval may be revoked at any time. The relevant laws shall be laid down in legislation.

Processing Terms and Conditions

1. The regulations define the terms and conditions of the approval referred to in the preceding regulations.
2. The collection of personal data is not subject to approval in the following cases:
 - a. It was considered difficult or impossible to contact the data owner before processing when data processing is of imminent interest to the data owner.

- b. When processing is in compliance with another law or when a preliminary agreement is executed to which the data owner is a party.
- c. Where the Data Processing Body is a government entity, and such processing is necessary for the purposes of protection or for compliance with judicial requirements.

Processing Approval

The processing described may not necessitate approval for the provision of a service or attainment of an interest, unless the processing of personal data is relevant to the service or gain, irrespective of the consent given.

Periods

Periods can be defined for the exercise of the right to access personal data referred to in paragraph (4) of the Owner's Rights. Each supervisory authority shall undertake to designate the required period of time. In the following situations, this right may be restricted:

1. This is intended to protect the owner of the data or third parties, if any.
2. In cases where the Data Processing Body is a governmental organization, limitations on data processing may be deemed necessary for the purposes of defence, law enforcement, or compliance with judicial mandates.

Data Processing Body

Personal data may not be obtained by the Data Processing Body, unless directly from the data owner. In addition, such data cannot be stored, except for the reason for which it was collected. However, the Data Processing Authority may directly collect or process personal data from someone other than the data owner for a reason other than that for which it has been obtained, in the following instances:

1. Where the owner of personal data decides to do so in compliance with the lawfully within a period prescribed by legislation from the beginning of the collection of data.

2. Where personal data is available to the public or has been obtained in compliance with the lawfully from a source open to the public.
3. In cases where the data processing entity is a governmental organisation and such processing is deemed essential for defence purposes, or for adherence to other legal statutes, or for the fulfilment of judicial obligations.
4. If such a prohibition is prohibited, it can cause harm to the owner of personal data or affect their vital interests.
5. In cases where the collection or processing of personal data is necessary for the protection of health, public safety, the lives of individuals, or their health, it is deemed appropriate.
6. In the absence of registration or retention of personal data in a form, it is possible to identify and recognise the data owner directly or indirectly.

Collection of the Personal Data

1. The aim of collecting personal data is to be directly connected to the artefacts of the data processing agency. It shall not interfere with any relevant laws in the Kingdom.
2. The acquisition and gathering techniques employed for personal data must conform to the legitimate and pertinent laws of the Kingdom. The data handling procedures must meet the data owner's specifications and adhere to principles of clarity, transparency, safety, and security. Additionally, they must not employ any deceptive, misleading, or coercive tactics.
3. The content of personal data obtained shall be sufficient and restricted to the minimum required to achieve the reason for which it is collected, and such use shall avoid including what could lead to the identification of the owner of the data in a particular way when the data collection objective has been achieved. The rules required for this are defined by the regulations.
4. If it is clear that the personal data collected is no longer sufficient for the object of collection to be accomplished, the Data Processing Body shall cease collecting such data and shall immediately destroy what was previously collected from.
5. When gathering and using personal data, the data officer must abide by the following requirements:
Respond to requests made by the owner of the data relating to owner rights under the law within a prescribed period of time and by reasonable means, as provided for in the Regulations.

The data officer must take reasonable steps to enforce sufficient technological and regulatory data security protections in compliance with the rules and determine the procedure required to do so. Any future contracts made by the data processor should contain this.

The data officer shall cooperate with requests relating to the operation of this scheme with the supervising authorities and the Privacy Commission Authority.

Privacy Policy

The body processing personal data shall follow a privacy policy and, before collecting data, shall make that policy available to the data owner for review. This policy requires the identification of the purpose of data collection, the content of the data to be collected, the method of collection, the means of storing the data, the processing of the data and the destruction of the data.

Collection of Personal Data

In the case of the collection of personal data directly from the data owner, the data processing authority shall use appropriate means of informing the data owner of the following elements before beginning to collect the data:

1. The appropriate regulatory or functional rationale for the collection of personal data relating to that information.
2. The object of the collection of data from them and whether the collection of data, in whole or in part, is compulsory or optional. The data owner should be informed that data will not be subsequently processed in such a way as to contradict the purpose for which it was collected or, in any case, for purposes other than those specified in the Data Processing Body.
3. The identity of the person collecting the personal data and the address of the authority for which they work (if applicable) unless the information is collected for security purposes.
4. The jurisdiction(s) to which the information will be exposed, the competence of that authority, and whether personal data will be transmitted or processed outside the Kingdom.
5. Potential consequences and risks of not finalising the private data collection process.
6. Owner right to have access to the data and to suggest, where appropriate, that it be corrected.
7. Other elements, defined by the bylaws, according to the nature of the operation carried out by the body processing personal data. In the case of indirectly gathering private data, the data processor must inform the data owner within a specified time frame.

Process or Disclosure in adequate steps

Personal data shall not be processed or released by the data processing body without taking appropriate measures to verify their accuracy, completeness, novelty, and relevance to the reason for which the data has been collected in compliance with the provisions of this Regulation.

When to disclose

Only in the following situations can the body processing the data disclose personal data:

1. If the owner of the personal data agrees to comply with the provisions of the law, provided that the owner of the personal data provides written consent with regard to criminal and security data.
2. If the disclosure is made to the data owner.
3. If the personal data is collected from a source available to the public.
4. If the agency requiring disclosure is a public authority requesting it for enforcement of the law, or protection of public revenue, or for the conduct proceedings before any court, or public health, to implement some law or to comply with judicial standards in compliance with the bylaws.
5. If the disclosure is necessary to protect the health or safety of the public or to maintain the life or health of a certain person (s).
6. If the disclosure is limited to the later processing of such data in a manner which does not cause the identity of the data owner or any other person to be precisely identified, given that the supervisory authority agrees.

When Not to Disclose

Personal data shall not be disclosed by the data processing agency in the cases provided for in paragraphs 1, 3 & 6 under “When to disclose” above when disclosure:

1. Adversely affects the Kingdom's relations with other countries,

2. Hinders the investigation of a crime, prejudices the right to a fair trial of an accused person, or affects the fairness of current criminal proceedings,
3. Results in breach of the privacy of another person other than the owner of the data,
4. Harms the needs of a minor or disabled person,
5. Violates ethical obligations set down by statute,
6. Exposes a secret source of information that does not need to be revealed in the public interest.

Correction and Update

Where the personal data has been corrected, completed, or changed, the body processing the personal data shall make the amendments accessible to any party to which the data has been transferred.

Destruction

1. Personal data shall be destroyed by the data-processing body immediately upon completion of the purpose for which it was obtained. After the termination of the referenced task, however, some information may be retained, so long as anything that may lead to the correct identification of the data owner is removed following the verification specified in the bylaws.
2. Personal data shall be retained by the data-processing body after the completion of the function for which it was obtained in the following two cases:
 - a. If there is a legislative rationale that allows the information to be retained for a defined period of time. In this case, after the expiry of this period or after the completion of the referenced function, whichever comes later, the data will be destroyed.
 - b. Where personal details are closely linked to a case under review by a judicial authority, provided that it is appropriate to retain the information for this reason. In this case, the data must be destroyed when the legal proceedings in the case are concluded.

Maintenance

The data-processing body shall take the required regulatory, administrative, and technical steps and procedures to ensure the preservation of personal data, the protection of data

security and the provision of a secure means of transport for data, in accordance with the regulations laid down in the bylaws.

Theft or Damage

The data processing agency shall notify the supervising authority as soon as it becomes aware of the theft or harm of personal data or the occurrence of unauthorised access to such data, provided that the period of time between the entity's knowledge of the incident and the supervising authority's notification does not exceed the period stated in the regulations. The regulations also prescribe the manner and content of such notification. The supervisory authority shall then decide whether or not the data-processing authority is required to inform the owners of personal data in compliance with the regulations laid down in those laws. The process and content of the data holder's notice are also stated in the regulations.

Awareness-Raising Materials

The mailing address, electronic address, and contact numbers of the owner of the personal data shall not be used for the sending of advertisements or awareness-raising materials, apart from awareness-raising materials sent by governmental authorities, except in compliance with the following:

1. The targeted recipient shall specifically consent to accept the materials in question.
2. A precise, safe mechanism shall be given by the sender to allow the target recipient to decline to receive such information.

Sensitive Data

With the exception of confidential data, personal data may be processed or released for marketing purposes, if such data is obtained directly from the owner of the data, who agrees in compliance with the requirements of this legislation. The relevant controls required shall be decided by the bylaws.

Collection of data for scientific purposes, analysis, or statistics

In the following situations, personal data may be obtained or processed for science, research, or statistical purposes without obtaining the data owner's consent:

1. If the personal data does not contain anything that accurately indicates the identity of the owner of the data.
 2. If, during the processing of data and prior to its disclosure to a third party, any information that precisely reveals the identity of the data owner is removed, provided that the information is not sensitive.
 3. Where, for these purposes, the collection or processing of personal data is mandated by another law or the implementation of a prior agreement to which the data owner is a party.
- The controls required for the purposes set out in this paragraph shall be defined by the bylaws.

Official Documents

Official records establishing the identity of the data owner shall not be photocopied or replicated unless this is done in compliance with the provisions of a law or following guidance.

Data Owner's Life Outside the Kingdom

Except in cases of severe necessity to save the life of the data owner outside the Kingdom, to protect the owner vital interests or to avoid, investigate or treat an infection, confidential data shall not be revealed to any party outside the Kingdom by the data-processing body, unless such disclosure is made to comply with a duty under an arrangement to which the Kingdom is a party or to serve the Kingdom. Conditions are as follows:

1. There is no risk to national security.
2. An individual outside the Kingdom must have sufficient protections for the security and confidentiality of the personal data to be disclosed, provided that the data protection requirements are not weaker than those set out in these regulations and in the bylaws.
3. Disclosure shall be limited to the bare minimum of personal data when necessary.
4. The approval of the competent department for such disclosure must be obtained by the supervisory authority.

Supervisory Bodies and Privacy Commission

Supervisory bodies shall assume the role of supervising and regulating compliance with the provisions of this law and its bylaws, where the existence of the personal data falls within their terms of reference provided for in the relevant law. When personal data are processed by bodies or private entities under the supervision of those supervisory bodies, the latter shall, whenever appropriate, collaborate with other relevant supervisory authorities to receive guidance, help and assistance in the implementation of the provisions of these regulations and its bylaws.

2. The mission of the Privacy Commission is to monitor, control and supervise private bodies that are not under the control of any supervisory authority in the collection of data related to individuals. In such a situation, the Commission shall comply with the provisions and procedures followed by the supervisory bodies, in compliance with the provisions laid down in this Law.

Supervision of Enforcement

Each supervisory authority shall appoint one (or more) of its departments to oversee the implementation of the provisions of this Law in accordance with the necessary mechanisms and methods established for that purpose by those departments. To ensure that they comply with the requirements set out in this Law, the competent department can request the required documents from the data-processing body.

Punishment

1. Anyone who performs the following actions shall be punished as follows, without regard to any more stringent penalty prescribed by another laws:

A. Any person who discloses or discloses confidential data in breach of the provisions of this Law shall be punished by a fine not exceeding ten thousand riyals.

B. Any person who violates the provisions of these official documents shall be punished by a fine not exceeding ten thousand riyals.

Violation

1. For issues not addressed by the stated text in the Compliance Supervision:

Anyone who violates any other clause of this Law, and its bylaws shall be punished with a fine not exceeding the sum of five thousand riyals.

2. The decision to discipline the violator shall be issued by the supervisory body after the violator has been presented with the infringement and has had the opportunity to respond.

3. The person on whom a fine has been levied may, in compliance with the provisions of the procedural Regulation before the Board of Grievances, appeal the judgement before the Administrative Court.

Employees

1. Employees appointed by a decision of the supervisory body shall be responsible for the identification of actions and violations provided for in the law or by-laws.

2. Before a final decision is made, the supervisory authority can seize the means or instruments used to commit the action or the infringement.

Confiscation

1. The competent court can decide, without prejudice to the rights of any third party (in good faith), to confiscate the money gained from committing the actions or violations stipulated herein. This payment is deposited to the treasury of the Kingdom.

2. The publication in one or more local newspapers, published at the place of residence of the violator and at the violator's expense, of the summary of the judgement or decision providing for the sentence, may be inserted into the language of that judgement or decision, depending on the type, gravity and implications of the act or violation committed, given that such publication is made after that judgement or decision has been issued.

Damage

Without prejudice to the imposition of the penalty laid down herein, a party which has suffered harm as a result of the actions or violations referred to herein may, in relation to the extent of the injury, seek compensation for material or moral damage before the competent court.

Data Confidentiality

Any person engaged in the processing of personal data shall, even after the termination of his employment or contractual arrangement, ensure the confidentiality of such data.

Complaint

The data owners are able to file a complaint with the governing body. The supervisory authority is required to inform the plaintiff of the cause of action and the outcome of the complaint, including the possibility of pursuing a legal remedy.

Review of Critical Decision

The data subject shall have the right to review significant decisions resulting from the automated processing of personal data pertaining to the subject matter, which shall be manually reviewed.

Licences

A supervisory authority can grant licences to the international data officer's local representative.

Records

If requested, the data officer shall compile reports of the data processing activities and hand them over to the supervisory authority, provided that the documents contain the following: the

name and contact details of the data officer, the intent of the data processing, a description of the categories of data holders, the entities that have been or will be revealed, whether or not personal data is transferred to the data officer.

Disclose Personal Data to an Entity Outside the Kingdom of Saudi Arabia

Personal data cannot be disclosed to an individual or entity outside the Kingdom of Saudi Arabia by a data officer or data processing agency unless the external party takes appropriate precautions to preserve personal data and to retain its confidentiality in such a way that data privacy requirements are not lower than those laid down in the Act.

End.

The present document outlines the suggested framework and scope for a system aimed at safeguarding personal data.

The author aims to provide a succinct overview of the proposed framework and the scope of the personal data protection system. The proposal advocates for the implementation of a system that is enforceable on a national level throughout the entirety of the Kingdom. The scope of the privacy laws is limited to the protection of the privacy of personal information. It is suggested that the proposed regulations for the protection of personal data in Saudi Arabia be grounded on worldwide standards of data confidentiality and facilitate the transfer of data across borders. Additionally, the cultural context of Saudi Arabia should be considered. It is advisable to accord priority to the proposed privacy system over any prevailing Saudi system relating to data privacy, in cases where the present systems fall short of ensuring impartial protection of the privacy rights of the affected parties.

If the proposed system does not provide better protection of privacy rights for the relevant individuals compared to the current system or specific provisions within it, it should not be given priority. Ensuring that the regulations concerning privacy do not hinder the authority and effectiveness of other governmental entities in the Kingdom of Saudi Arabia is of utmost importance.

In line with the customary approach adopted in other regions that have enforced data protection regulations, the privacy rights of relevant individuals under the proposed framework would not be absolute and would be subject to various exceptions and limitations, including but not limited to enforcement requirements, public health and safety considerations, and national security interests. The aim of the personal data protection system is to establish a reasonable balance between protecting the privacy rights of individuals and reducing the burdens placed on data processors. It is advisable that the provisions incorporated in the proposed system conform to the established best practises that have been observed in other national privacy systems. These provisions are intended to curtail the utilisation of pertinent individuals' entitlements in order to forestall possible misconduct and unwarranted expenses on data processors.

The management and implementation of the personal data protection system is the responsibility of a specialised government agency²⁰⁶⁴. The government entity in question has been assigned a range of responsibilities, which encompass the distribution of guidelines related to the proposed framework²⁰⁶⁵. Additionally, the entity is responsible for issuing directives and operational procedures that aim to facilitate compliance with the system by data processors. Furthermore, it is essential that knowledge is imported to the relevant parties so that they understand their rights within the established system²⁰⁶⁶. Furthermore, the government entity is also responsible for imposing sanctions when deemed appropriate, and issuing authoritative rulings to resolve disputes that are subject to legal scrutiny. Moreover, the collaboration with other governmental entities will be carried out when considered essential or suitable. Apart from conducting routine assessments and investigations, the entity must arrange comprehensive workshops on subjects related to the execution and effectiveness of the system

²⁰⁶⁴ For Instance, The Establishment Of A Privacy Commission Office. See Swire, Peter. "Why The Federal Government Should Have A Privacy Policy Office."(2012) J. On Telecomm. & High Tech. L. 10: 41.

²⁰⁶⁵ The Responsibilities Of The Privacy Commission Undertaking An Investigation Into Complaints Of Privacy Violation. The Primary Aim Is To Impart Persons With Comprehensive Understanding Of Privacy Standards And To Encourage Their Extensive Implementation. The Surveillance And Analysis Of The Influence Of Technology On The Safeguarding Of Individualised Information. See United States. Privacy Protection Study Commission. Personal Privacy In An Information Society: The Report Of The Privacy Protection Study Commission. Vol. 2. The Commission, 1977.

²⁰⁶⁶ It is essential to broaden the educational scope to encompass comprehensive instruction on these subjects before the development of any privacy system. This will enhance individuals' awareness of their rights and privacy, ultimately improving the overall level of understanding. See Livingstone, Sonia, Mariya Stoilova, And Rishita Nandagiri. "Data And Privacy Literacy: The Role of the School in Educating Children in A Datafied Society." (2020) The Handbook of Media Education Research: 413-425.

and obtain suggestions for incorporating alterations and improvements to the system. Furthermore, it is imperative that periodic reports of the system are produced concerning the execution of the system, specifically with regards to any requisite alterations that may emerge as a result of progressions in the realm of information technology. A further recommendation is to engage in collaboration, as appropriate, with data protection authorities located in other countries.

It is crucial to engage in cooperation with the regulatory authority responsible for executing and monitoring the system, as well as investigating violations pertaining to the application of the telecommunications and data technology infrastructure within the territorial boundaries of the Kingdom of Saudi Arabia.

Conclusion

The concept of informational privacy, its definition, rationale, and the need to safeguard it, can be impacted by religious and societal factors, as well as the reactions of nations, groups, and persons. The safeguarding and confidentiality of data necessitate technological considerations; however, human factors also exert an influence on these policies and constantly redefine them. It is conceivable that the classification of sensitive data within a given locale may not align with the categorisation of confidential information in regions such as Europe and the United States.

Before the Kingdom of Saudi Arabia begins the process of implementing the data protection system, it is imperative to conduct a series of systematic surveys and dialogues at both the national and regional levels across all industries²⁰⁶⁷. Gaining comprehension of a society's

²⁰⁶⁷ The Objective Of Surveys Is To Gather Information Pertaining To Individuals' Needs, Habits, And Perspectives. Surveys Serve As A Valuable Tool For Obtaining Insights Into Various Aspects Of Human Behaviour And Preferences. The Inclusion Of Surveys In Your Research Can Provide Added Credibility, Which Can Prove Beneficial In Various Contexts Such As Surveys, Opinion Polls, Customer Satisfaction Evaluations, And Studies Examining Attitudes And Responses. See University Of Kansas Conducting A Survey Section. < www.ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-surveys/main >. Also See Leung, Wai-Ching. "Conducting A Survey." (2001) BMJ 322, No. Suppl S5.

stance on diversity with respect to privacy, alongside the contextual factors, environments, and classifications of data in correlation with their level of confidentiality, is deemed an essential requirement. The conclusion drawn from the surveys and interviews conducted by national-level scientists is that the data protection system necessitates development to better align with societal norms and values concerning safeguarding personal information.

The implementation of a framework aimed at safeguarding individuals' personal information necessitates adherence to specific obligations and standards by both public entities and private enterprises. Hence, it is crucial to ensure that the approach towards the establishment and implementation of the personal data protection system aligns with the capabilities of the data sector and the security protocols enforced within the Saudi Arabian jurisdiction.

Given the circumstances, it is essential to assess the preparedness of the Saudi governmental entities and corporations in fulfilling their obligations and mandates. The rationale behind this is that the plan must guarantee the implementation of a system that safeguards the personal information of individuals. Furthermore, it is imperative for the legislative bodies to possess the capability to determine priorities and achieve a satisfactory level of security for the personal data of Saudi Arabia. These bodies would also need to impose a series of responsibilities on governmental sectors and corporations to safeguard personal data.

This can be achieved by assessing the readiness of these sectors and corporations to address these obligations and demands effectively. Furthermore, it is imperative that the legislative bodies possess the capacity to determine priorities and achieve a satisfactory equilibrium between guaranteeing security of personal data and providing the necessary means to carry it out. To do this, the legislative bodies must be informed about the readiness of governmental entities and corporations to manage their respective duties and responsibilities.

The implementation of the personal data protection scheme is expected to yield both opportunities and challenges at the domestic level²⁰⁶⁸. The anticipated financial challenges for

²⁰⁶⁸ The Challenges Associated With The Complaint-Driven System Utilised For Law Enforcement, Insufficient Budget Allocated For Enforcement Efforts, Inadequate Prioritisation Of Enforcement Activities, Lenient Sanctions, And A Limited Deterrence Effect Together Add To The Complexities Encountered During Implementation As Mentioned In Satterlund, Travis D., Juliet P. Lee, Roland S. Moore, And Tamar MJ Antin.

government sectors and emerging businesses stem from the need to adhere to the technological and organisational measures required for safeguarding data in accordance with the personal data protection system implementation. The challenge to be met is the requirement to safeguard data in compliance with the established Saudi legal system. However, the implementation of a mechanism for protecting personally identifiable information presents potential prospects for commercial ventures.

The proposed scenario may potentially give rise to a novel market segment catering to firms that specialise in safeguarding data integrity and confidentiality, alongside a market for data-dependent products and services. Therefore, prioritising the establishment of a personal data protection system over the development and implementation of an economic analysis is of paramount importance. The safeguarding of personal information holds paramount significance. The objective of this investigation is to assess the effects of the opportunities and challenges, to identify the requisite approaches and assets, to foster opportunities and resolve challenges faced if effective digital privacy law is introduced to the Kingdom of Saudi Arabia.

"Challenges To Implementing And Enforcing California's Smoke-Free Workplace Act In Bars." (2009) *Drugs: Education, Prevention And Policy* 16, No. 5: 422-435. Further, The Efficacy Of A Rule May Not Meet Anticipated Outcomes If It Is Deficient In Terms Of Comprehensiveness, Lacking Mechanisms For Its Execution, Or If There Is A Lack Of Understanding Regarding Its Requirements. In Addition To Exercising Caution, Use This Tool Outside Of Its Designated Scope May Lead To Unfavourable Consequences. See Philippart, Pascal. "The Law: A System Made Up Of Opportunities For The Entrepreneur." (2017) *Projectics/Proyética/Projectique* 3: 37-49.

Thesis Conclusion

The subject of enquiry for the thesis concerns the regulation of privacy in relation to cellular network data, with a comparative analysis intended to ascertain suggestions for the Kingdom of Saudi Arabia. The primary research enquiry centres on the potential insights that the Kingdom of Saudi Arabia can glean from the experiences of other nations in enacting privacy regulations pertaining to cellular network data. The swift progression of technology has resulted in the emergence of privacy regulations across diverse legal jurisdictions. This phenomenon can be attributed to the enhanced capacity of public and private institutions to gather and analyse extensive amounts of data, coupled with the financial incentives of multinational technology corporations to amass significant quantities of personal data. Therefore, it is essential to investigate the prospective insights that the Kingdom of Saudi Arabia can acquire from other countries' encounters in implementing privacy policies for mobile network data. The aforementioned constituted the primary enquiry of the dissertation.

The thesis has elucidated the Privacy Conceptualisation, which has been a topic of extensive academic discussion. The legitimacy of the conventional concept of privacy, which concerns the right to seclusion, has been a subject of scholarly discourse. The notion of the "right to privacy" is of paramount importance in safeguarding personal autonomy and individual freedom²⁰⁶⁹. Legal scholars, including Professor Nicole Moreham, are spearheading the advancement of a universally relevant notion of privacy by utilising privacy laws and international treaties from diverse regions²⁰⁷⁰. The notion of the entitlement to privacy encompasses every facet of an individual's existence and any data that a person would reasonably anticipate having authority over in relation to disclosure and distribution within a societal framework if they opt to do so²⁰⁷¹. In a social setting, an individual is likely to expect

²⁰⁶⁹ Bhasker, Mrs Sarbha, And Mithilesh Kumar Singh. "Right To Privacy Is An Intrinsic Part Of Right To Life And Personal Liberty." *Of Legal Studies*: 84.

²⁰⁷⁰ Moreham, Nicole A. "The Right To Respect For Private Life In The European Convention On Human Rights: A Re-Examination." (2008).

²⁰⁷¹ Moreham, Nicole A. "Privacy In Public Places." (2006) *The Cambridge Law Journal* 65, No. 3: 606-635.

to exercise agency in deciding whether to reveal particular personal information to others²⁰⁷². This illustrates the notion that protecting privacy involves preventing unauthorised access by external entities. The term "control" in academic discourse refers to the capacity to offer positive or negative feedback²⁰⁷³. However, similar to any other alternative, the utilisation of this authority does not always guarantee the achievement of one's intended result²⁰⁷⁴. The assertion establishes a correlation with the perspective of Professor Nicole Moreham, who argues that the most fitting characterisation of privacy is the state of being "desireably" inaccessible or the lack of "unwanted access"²⁰⁷⁵. The notion of privacy pertains to an individual's capacity to govern the extent to which they are perceived, heard, contacted, or recognized, exclusively at their own volition and solely to the extent that they authorise such admittance²⁰⁷⁶.

The second chapter of the thesis discussed the information infrastructure and its implications for privacy. The development of technology innovation products, including smartphones, robots, and computers, software operating systems, brain-computer interface, swallowable medical devices, generative adversarial networks, algorithms, artificial intelligence, blockchains, audio-visual tapes, coaxial cable, satellites, balloon satellites, optical communication lines, microwave networks, receivers, scanners, copiers, and printers, plays a crucial role in the maintenance and improvement of information infrastructure²⁰⁷⁷. Additionally, advancements in computing and information operations and network technologies are also essential components of this infrastructure²⁰⁷⁸. The complexities surrounding data protection challenges that arise from IT infrastructure are significant. However, through adherence to compliance guidelines and instructions, efforts are made to minimise the probability of

²⁰⁷² Moreham, Nicole A. "A Conceptual Framework For The New Zealand Tort Of Intrusion." (2016) Victoria U. Wellington L. Rev. 47: 283.

²⁰⁷³ Moreham, Nicole A. "Privacy In Public Places." (2006) The Cambridge Law Journal 65, No. 3: 606-635.

²⁰⁷⁴ Ibid.

²⁰⁷⁵ Moreham, Nicole A. "The right to respect for private life in the European convention on human rights: a re-examination." (2008).

²⁰⁷⁶ Moreham, Nicole A. "Privacy In Public Places." (2006) The Cambridge Law Journal 65, No. 3: 606-635. Also See Moreham, Nicole A. "A Conceptual Framework For The New Zealand Tort Of Intrusion." (2016) Victoria U. Wellington L. Rev. 47: 283.

²⁰⁷⁷ Maple, Carsten. "Security And Privacy In The Internet Of Things." (2017) Journal Of Cyber Policy 2, No. 2 (2017): 155-184. Also See Leenes, Ronald, Rosamunde Van Brakel, Serge Gutwirth, And Paul De Hert, Eds. "Data Protection And Privacy:(In) Visibilities And Infrastructures" (2017) Springer International Publishing.

²⁰⁷⁸ Miyaji, Atsuko, And Tomoaki Mimoto. "Security Infrastructure Technology For Integrated Utilization Of Big Data: Applied To The Living Safety And Medical Fields" (2020) Springer Nature.

infringing upon individuals' privacy. The utilisation of conventional data centres and servers or cloud computing raises enquiries concerning confidentiality and data dissemination²⁰⁷⁹. These concerns extend beyond the geographical placement of cloud services, necessitating the user's awareness of the jurisdiction/s governing the cloud services, whether domestic or foreign²⁰⁸⁰. Certain nations possess distinct privacy regulations that may bear resemblance to or diverge from the data protection laws of the user's country of provenance. Several nations lack any privacy laws²⁰⁸¹. The breadth of technology is extensive as it impacts all facets of individuals' daily activities, irrespective of their individual inclinations. The term "technology" can be characterised as a field of knowledge that draws upon innovative techniques and tools, and their interconnection with everyday life, societal dynamics, and the natural world²⁰⁸².

Chapter three of the thesis presents an exposition of the regulations at the national level as stipulated by different treaties and jurisdictions. The proliferation of social networks has led to individuals emerging as a noteworthy contributor to both domestic and global intelligence, given the substantial volume of personal data transmitted through these platforms²⁰⁸³. The growing probability of personal and international data being utilised outside of established frameworks is a developing reality²⁰⁸⁴. The safeguarding of individual privileges and liberties from potential threats that may undermine their safety and dignity requires the establishment of regulatory and procedural measures. Saudi Arabia can gain valuable insights from the

²⁰⁷⁹ Pearson, Siani. "Privacy, Security And Trust In Cloud Computing" (2013) Springer London.

²⁰⁸⁰ Ibid. Also See Coss, David Lewis, And Gurpreet Dhillon. "Cloud Privacy Objectives A Value Based Approach." (2019) *Information & Computer Security* 27, No. 2: 189-220.

²⁰⁸¹ Fahey, Robert A., And Airo Hino. "COVID-19, Digital Privacy, And The Social Limits On Data-Focused Public Health Responses." (2020) *International Journal Of Information Management* 55: 102181. Also See Rizi, Mohammad Hosein Panahi, And Seyed Amin Hosseini Seno. "A Systematic Review Of Technologies And Solutions To Improve Security And Privacy Protection Of Citizens In The Smart City." (2022) *Internet Of Things* 20: 100584.

²⁰⁸² Choi, Sue Young, Heeseok Lee, And Youngjin Yoo. "The Impact Of Information Technology And Transactive Memory Systems On Knowledge Sharing, Application, And Team Performance: A Field Study." (2010) *MIS Quarterly*: 855-870.

²⁰⁸³ Omand, David, Jamie Bartlett, And Carl Miller. "Introducing Social Media Intelligence (SOCMINT)." (2012) *Intelligence And National Security* 27, No. 6: 801-823. Also See Dwivedi, Yogesh K., Elvira Ismagilova, D. Laurie Hughes, Jamie Carlson, Raffaele Filieri, Jenna Jacobson, Varsha Jain Et Al. "Setting The Future Of Digital And Social Media Marketing Research: Perspectives And Research Propositions." (2021) *International Journal Of Information Management* 59: 102168.

²⁰⁸⁴ Rubinstein, Ira. "Big Data: The End Of Privacy Or A New Beginning?." (2012) *International Data Privacy Law* (2013 Forthcoming), NYU School Of Law, Public Law Research Paper 12-56.

privacy-related experiences of various nations²⁰⁸⁵. Through this approach, the government can establish legal structures aimed at protecting its citizens from potential risks. It is anticipated that the adoption of data protection protocols in Saudi Arabia will yield innovative and clear advantages, adequately resolving the most pressing regulatory issues across diverse legal spheres. To safeguard the privacy infrastructure of the nation, it is imperative to refrain from undertaking actions that are disproportionate.

The fourth topic addressed in the thesis pertains to the legal culture observed in the Kingdom of Saudi Arabia. The legal framework in the Kingdom of Saudi Arabia is based on a fusion of Sharia Law and Islamic jurisprudence, alongside codified Law²⁰⁸⁶. The legal framework in Saudi Arabia is predominantly rooted on Sharia law, which emphasises the preservation of individual privacy²⁰⁸⁷. The violation of this entitlement is expressly prohibited, unless under particular and extraordinary conditions. This enquiry pertains to the adequacy and efficacy of the extant privacy safeguards provided by Sharia law, Islamic legal tenets, and regulations in the Kingdom of Saudi Arabia. It is crucial to ascertain the necessary steps for strengthening the framework of information privacy in the event of insufficiency. This is particularly relevant within the domain of digital technology. The objective of this chapter is to furnish a thorough overview of Sharia law and to demonstrate its stance on issues related to personal privacy through the use of illustrative examples. This chapter aims to conduct a thorough examination of the legal culture and historical context surrounding the creation of the Statute of Governance of the Kingdom of Saudi Arabia. The goal is to achieve a understanding comprehension of the topic.

Chapter five provides an analysis of privacy laws within the current legal framework of the Kingdom of Saudi Arabia. Saudi Arabia currently lacks a comprehensive law pertaining to data protection within its jurisdiction. Numerous legal provisions pertaining to the confidentiality and security of individuals' personal information are dispersed across multiple legislative

²⁰⁸⁵ Svantesson, Dan. "Enforcing Privacy Across Different Jurisdictions." (2016) *Enforcing Privacy: Regulatory, Legal And Technological Approaches*: 195-222. Also See Rustad, Michael L., And Thomas H. Koenig. "Towards A Global Data Privacy Standard." (2019) *Fla. L. Rev.* 71: 365.

²⁰⁸⁶ Alanzi, Awad Ali. "Exploring The Legal System In Saudi Arabia." (2020) *International Journal Of Innovation* 11.

²⁰⁸⁷ Ibid

instruments. The majority of these regulations do not prioritise the safeguarding of information privacy. The regulations commonly employ expansive terminology in their efforts to govern issues pertaining to the confidentiality of information. This chapter explores the inadequacy of the current level of privacy protection provided to individuals in relation to their personal data. The argument posits that the current legislation in Saudi Arabia is insufficient in its ability to offer satisfactory measures to guarantee the protection of personal data privacy in the contemporary digital age. The present chapter presents an examination of individual data in the framework of the Kingdom of Saudi Arabia. The objective of this chapter is to illustrate the legal regulations within the current legal system of the Kingdom of Saudi Arabia that may potentially conflict with the upcoming initiative aimed at protecting privacy and promoting freedom of information.

Chapter six of the thesis discusses the perspective of safeguarding information privacy in Saudi Arabia. The Kingdom of Saudi Arabia is presented with a choice between two options for protecting privacy: either adopting the privacy protection methodology employed by the European Union or implementing the privacy protection approach utilised by the United States. Moreover, it is feasible for the Kingdom of Saudi Arabia to create a unique privacy framework that is consistent with their national objectives and advances the well-being of their citizens. The Constitution of Saudi Arabia upholds the tenets of Sharia law as the safeguard of human rights. The entitlement to seclusion is widely regarded as a fundamental and innate entitlement of the human species. As previously discussed in the preceding chapters of this thesis, the Saudi Arabian Constitution contains detailed provisions concerning the protection of privacy in residential spaces and personal communication²⁰⁸⁸. The advancement of technology has enabled the utilisation of personal information of individuals in contexts beyond their domestic and social interactions²⁰⁸⁹. As a result, specific data sets have the potential to reveal information that surpasses what could be gleaned from a casual phone discussion²⁰⁹⁰. Therefore, it is crucial

²⁰⁸⁸ See Telecom Act 2001 Article 9. Basic Law Of Governance 1992 Article 16, 40.

²⁰⁸⁹ Hasal, Martin, Jana Nowaková, Khalifa Ahmed Saghair, Hussam Abdulla, Václav Snášel, And Lidia Ogiela. "Chatbots: Security, Privacy, Data Protection, And Social Aspects." (2021) *Concurrency And Computation: Practice And Experience* 33, No. 19: E6426.

²⁰⁹⁰ Price, W. Nicholson, And I. Glenn Cohen. "Privacy In The Age Of Medical Big Data." (2019) *Nature Medicine* 25, No. 1: 37-43. Also See Wang, Yuntao, Zhou Su, Ning Zhang, Rui Xing, Dongxiao Liu, Tom H. Luan, And Xuemin Shen. "A Survey On Metaverse: Fundamentals, Security, And Privacy." (2022) *IEEE Communications Surveys & Tutorials*.

to implement additional measures beyond the protection of individuals' homes and personal communications in order to ensure the protection of the private rights of the population.

The proposed thesis suggests the adoption of a privacy legislation that is commensurate with the prevailing market conditions and size in Saudi Arabia. The approach mentioned above is deemed crucial until all requisite educational and other relevant measures are fully instituted to facilitate the eventual execution of a comprehensive approach akin to GDPR.

The insufficiency of protecting privacy in the era of digital technology is attributed to the absence of a dedicated legal structure designed to safeguard the personal information of individuals. Furthermore, the comprehensive enforcement of regulations concerning the protection of data necessitates significant financial investments for organisations functioning in both public and private domains. In addition, the industry is experiencing a scarcity of professionals who possess specialised skills in information security and privacy. This situation often arises due to a dearth of technical education options in the region. In order to comply with the General Data Protection Regulation (GDPR) and ensure adequate protection, it is imperative for a country to provide data subjects with substantial avenues to pursue remedies in the event of privacy breaches²⁰⁹¹.

The thesis proposed a privacy draft law commensurate with the current market size and conditions in Saudi Arabia, intending to rectify the absence of explicit legislation prioritising the safeguarding of individuals' personal data. The proposed framework adheres to global data confidentiality standards and aims to enable cross-border data transfer. The proposed privacy system should take precedence over existing Saudi data privacy systems, as the latter may fail to provide unbiased protection of privacy rights. The proposed framework will not be absolute and will be subject to various exceptions and limitations, including enforcement requirements, public health and safety considerations, and national security interests. The objective is to achieve a judicious equilibrium between safeguarding privacy rights and alleviating the

²⁰⁹¹ After the initial submission of this thesis, a recent data privacy act was implemented in Saudi Arabia. Nevertheless, ongoing scholarly discussions persist over the probable need for adjustments and improvements. Hence, it is widely held that this thesis would make a significant scholarly addition to the ongoing discussions and changes in this field.

burdens imposed on data processors. The provisions included in the proposed system must align with recognised best practices from other national privacy frameworks to avert misconduct and unnecessary costs for data processors. The oversight and execution of the personal data protection system fall under the jurisdiction of a designated governmental agency. This entity is tasked with disseminating guidelines pertaining to the proposed framework, issuing directives and operational procedures, imparting knowledge to pertinent parties, enforcing sanctions when warranted, and rendering authoritative decisions to adjudicate disputes. It is advisable to collaborate with other governmental entities by performing regular assessments and investigations, organising extensive workshops, and generating periodic reports on the system's implementation. In summary, the proposed privacy law in Saudi Arabia is essential for rectifying the absence of explicit legislation and the deficiency of specialised information security technicians and privacy experts.

Still, the thesis will be submitted to the pertinent Privacy legislative committee in the Kingdom of Saudi Arabia, accompanied by the proposed draft law, and the thesis will be published to assist future researchers and students with additional publications on the subject.

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G Other Resources

1 New Zealand

Information Privacy Principles (IPPs)
International Conference of Data Protection Commissioners
Ministry of Justice
New Zealand Parliament
Parliament Council Office
Privacy Commission

2 Kingdom of Saudi Arabia

E-Payment gateway
Executive Regulation of Credit Information System
Executive regulations of the cooperative health insurance system.
Implementing Regulations.
List of Licensed Persons issued by the CMA Board Decision.
list of wireless amateur service published by the Communications and Information Technology.
Ordinance of the Saudi Arabia Communications Commission

Regulation of Commercial Books.
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SAMA Compliance Manual for Banks Operating in the Kingdom of Saudi Arabia.
Saudi Arabia Ministry of Commerce
Saudi Arabian Ministry of Telecommunication and Information Technology.
Saudi Arabian Monetary Authority (SAMA)
Saudi Council of Cooperative Health Insurance
State Statistics System (Statistical System)
Telecom Commission
Telecommunications Regulation
The Publications and Publishing System.
The Regulation of the Authorised Persons issued by the Capital Markets Authority Board

3 Singapore

Personal Data Protection Commission

4 United Arab Emirates

Open Data
Regulating Telecommunications

5 United States of America

California Legislative Information
Federal Communication Commission
Federal Trade Commission
Justice Information Sharing
National Conference of State Legislatures
Privacy Shield 2015
Safe Harbour Scheme 2000
U.S. Government Information
U.S. Health Information Privacy
U.S. Securities and Exchange Commission
U.S. Securities and Exchange Commission
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