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# **ARTIFICIAL INTELLIGENCE AND ALGORITHMIC TORTS: DETERMINING APPLICABLE LAW IN CROSS-BORDER DIGITAL HARM**

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## **ABSTRACT**

Artificial Intelligence (AI) has become an important part of modern digital systems. Algorithms are widely used in areas such as online platforms, financial services, healthcare technologies, and automated decision-making systems. While these technologies provide efficiency and innovation, they also raise serious legal concerns when an automated system causes harm to individuals. Traditional tort law was primarily developed to address wrongful acts committed by human actors. However, when damage occurs as a result of algorithmic decision-making, determining legal responsibility becomes more complicated.

This research paper examines the concept of algorithmic torts and analyses how traditional tort law principles apply to harm caused by artificial intelligence systems. The study particularly focuses on cross-border digital disputes where the design, operation, and impact of an AI system may occur in different jurisdictions.

The central research question of this study is: Which legal system should apply when harm is caused by artificial intelligence operating across national borders? The research also explores whether existing tort principles such as negligence, duty of care, and product liability are sufficient to address algorithmic harm.

The study adopts a doctrinal method of research, analysing legal principles, judicial decisions, and contemporary developments related to artificial intelligence regulation. It also examines how Private International Law determines jurisdiction and applicable law in cross-border disputes.

The research concludes that while traditional tort principles provide a useful legal foundation, the increasing complexity of artificial intelligence technologies requires clearer rules regarding liability and jurisdiction. Strengthening legal frameworks and developing international cooperation

will be essential to effectively regulate algorithmic harm in the future.

**Keywords:** Artificial Intelligence, Algorithmic Torts, Tort Liability, Private International Law, Cross-Border Disputes, Digital Harm, Jurisdiction.

## INTRODUCTION

### 1.1 Background of the Study

The twenty-first century has witnessed an unprecedented transformation in technology, communication, and human interaction. Among the many technological developments shaping contemporary society, artificial intelligence has emerged as one of the most influential and disruptive innovations. Artificial intelligence, commonly referred to as AI, is no longer confined to scientific laboratories or experimental environments. Instead, it has become deeply embedded in everyday life, influencing how individuals communicate, work, travel, consume information, and make decisions.<sup>1</sup>

Artificial intelligence systems function through algorithms capable of analysing vast amounts of data and producing automated outcomes. These systems are designed to imitate certain aspects of human intelligence, including learning from experience, recognising patterns, and predicting future behaviour. As technological advancement continues, AI systems are increasingly capable of operating with minimal human supervision. This shift from human-controlled processes to automated decision-making represents a significant turning point in the relationship between technology and law.<sup>2</sup>

Today, artificial intelligence is used in diverse fields such as healthcare diagnostics, autonomous transportation, financial risk assessment, online content moderation, and recruitment processes. Digital platforms rely heavily on algorithms to determine which information users see, which advertisements are displayed, and how online interactions are structured.<sup>3</sup> These automated systems shape social behaviour and economic outcomes on a global scale.<sup>4</sup>

While artificial intelligence offers efficiency and innovation, it also introduces complex legal

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<sup>1</sup> Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (4<sup>th</sup> edn, Pearson 2021).

<sup>2</sup> Kate Crawford, *Atlas of AI: Power, Politics and the Planetary Costs of Artificial Intelligence* (Yale University Press 2021).

<sup>3</sup> Giovanni Sartor, *Artificial Intelligence and the Law* (Springer 2020).

<sup>4</sup> OECD, *Artificial Intelligence in Society* (OECD Publishing 2019).

concerns.<sup>5</sup> Technological systems are not free from errors. Algorithms may produce harmful decisions due to flawed programming, biased data, or unpredictable machine learning processes. When such harm occurs, individuals affected by algorithmic decisions may suffer financial loss, reputational damage, discrimination, or physical injury.<sup>6</sup>

Traditional legal systems were developed during a period when harmful acts were primarily attributed to human conduct. <sup>7</sup>Tort law, in particular, evolved to address wrongful acts committed by identifiable persons who could be held responsible for negligence or intentional wrongdoing. However, artificial intelligence challenges this framework by introducing situations in which harm occurs without direct human intervention at the moment of decision-making.<sup>8</sup>

The emergence of artificial intelligence therefore raises an important question: how should the law respond when damage is caused by machines capable of independent decision-making? This research begins from the recognition that technological progress has created new forms of risk that existing legal doctrines may not fully address.<sup>9</sup>

## 1.2. Emergence of Algorithmic Decision-Making

Cambridge University Press & Assessment Unlike traditional software programs, modern AI systems often rely on machine learning, allowing them to improve performance through continuous exposure to data.<sup>10</sup>

Algorithmic decision-making has gradually replaced human judgment in many sectors. Financial institutions use automated systems to approve loans and detect fraud. Employers increasingly rely on AI tools to screen job applicants. Medical institutions adopt predictive algorithms to assist in diagnosing diseases. Even judicial and administrative systems in some jurisdictions experiment with risk assessment algorithms to support decision-making.<sup>11</sup>

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<sup>5</sup> UNESCO, Recommendation on the Ethics of Artificial Intelligence (UNESCO 2021).

<sup>6</sup> Winfield P and Jolowicz JA, *Winfield and Jolowicz on Tort* (19<sup>th</sup> edn, Sweet & Maxwell 2014).

<sup>7</sup> Ratanlal and Dhirajlal, *The Law of Torts* (28<sup>th</sup> edn, LexisNexis 2017).

<sup>8</sup> Deeks A and others (eds), *The Cambridge Handbook of Artificial Intelligence and Law* (Cambridge University Press 2023).

<sup>9</sup> Russell S and Norvig P, *Artificial Intelligence: A Modern Approach* (4<sup>th</sup> edn, Pearson 2021).

<sup>10</sup> Geistfeld MA, 'Product Liability in the Age of Artificial Intelligence' in Sebastian Lohsse and others (eds), *Liability for Artificial Intelligence* (Nomos 2019).

<sup>11</sup> World Economic Forum, *Artificial Intelligence in Healthcare: Benefits and Risks* (WEF 2020).

The growing reliance on algorithmic systems has created efficiency but also dependency. Individuals often interact with algorithmic outcomes without fully understanding how decisions are made.<sup>12</sup> This lack of transparency creates a power imbalance between technology providers and users. When an algorithm produces an incorrect or unfair decision, affected individuals may struggle to challenge the outcome due to limited access to technical explanations.<sup>13</sup>

The legal significance of algorithmic decision-making lies in its capacity to produce real-world consequences.<sup>14</sup> Unlike purely informational technologies, AI systems actively shape opportunities, risks, and rights. Therefore, errors in algorithmic systems can result in legally recognizable harm, bringing such disputes within the domain of tort law.

### **1.3. Artificial Intelligence and the Transformation of Legal Responsibility**

Legal responsibility traditionally depends upon identifying a person who owed a duty of care and breached that duty through negligent conduct.<sup>15</sup> Courts evaluate factors such as foreseeability, causation, and reasonableness to determine liability. These principles function effectively when human actions can be clearly examined.

Artificial intelligence disrupts this traditional model. AI systems operate through complex interactions between software design, data inputs, and autonomous learning processes. Harm may arise not from a single identifiable act but from a chain of technological operations occurring over time.<sup>16</sup>

For example, a self-driving vehicle accident may involve multiple contributing factors, including software design choices, sensor performance, data training limitations, and environmental conditions. In such situations, attributing responsibility to a single actor becomes difficult. Developers may argue that the system functioned as designed, while

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<sup>12</sup> Fenwick M, Kaal W and Vermeulen E, *Regulation of Artificial Intelligence* (Edward Elgar Publishing 2018).

<sup>13</sup> OECD, *Artificial Intelligence in Society* (OECD Publishing 2019).

<sup>14</sup> European Commission, *Liability for Artificial Intelligence and Other Emerging Digital Technologies* (Expert Group Report, 2019).

<sup>15</sup> UNESCO, *Recommendation on the Ethics of Artificial Intelligence* (UNESCO 2021).

<sup>16</sup> Smuha NA, 'The EU Approach to the Governance of Artificial Intelligence' in Nathalie A Smuha (ed), *The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence* (Cambridge University Press 2021).

operators may claim reliance on automated technology.<sup>17</sup>

This diffusion of responsibility creates what scholars describe as an “accountability gap.” Victims may face uncertainty regarding whom to sue, while courts struggle to apply existing legal standards to technologically complex scenarios. As artificial intelligence becomes more autonomous, this accountability gap is likely to expand.<sup>18</sup>

The law must therefore reconsider whether traditional notions of fault and liability remain sufficient in a technological environment where decision-making authority is partially transferred to machines.

#### **1.4. Cross-Border Nature of Artificial Intelligence Systems**

Another important dimension of artificial intelligence is its inherently global character. Digital technologies operate through interconnected networks that transcend territorial boundaries. An AI system may be designed in one country, trained using datasets collected worldwide, hosted on cloud servers located elsewhere, and accessed by users across multiple jurisdictions simultaneously.

This global structure creates significant challenges for legal regulation. When harm occurs, multiple legal systems may claim jurisdiction over the dispute. Different countries may apply different standards of liability, consumer protection, and data governance. As a result, determining which law should apply becomes a complex legal question.

Private International Law provides mechanisms to address cross-border disputes by establishing rules regarding jurisdiction, applicable law, and recognition of judgments. However, many of these principles were developed in relation to traditional commercial transactions and physical activities. The borderless nature of artificial intelligence tests the limits of these established doctrines.

For instance, if an algorithm developed by a company in one country causes financial harm to a user located in another country, should liability be governed by the law of the developer’s location, the user’s residence, or the place where damage occurred? Such questions illustrate

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<sup>17</sup> Winfield P and Jolowicz JA, *Winfield and Jolowicz on Tort* (19<sup>th</sup> edn, Sweet & Maxwell 2014).

<sup>18</sup> World Economic Forum, *Global Technology Governance: Artificial Intelligence* (World Economic Forum 2020).

the growing importance of conflict-of-laws analysis in the digital age.<sup>19</sup>

### **1.5 Statement of the Problem**

The central problem addressed in this research arises from the intersection of artificial intelligence, tort law, and Private International Law. While technological innovation continues to advance rapidly, legal frameworks often evolve more slowly. This gap between technological capability and legal regulation creates uncertainty for courts, businesses, and individuals.

Artificial intelligence introduces situations where harmful outcomes occur without clear human intention or direct control. Traditional tort principles rely heavily on human fault, foreseeability, and reasonable conduct. Applying these concepts to algorithmic behaviour presents doctrinal difficulties.

Furthermore, cross-border operation of AI systems complicates jurisdictional analysis. Courts must determine not only who is responsible but also which legal system should govern the dispute. Without clear legal standards, victims may face barriers in obtaining remedies, and businesses may operate without predictable liability rules.

The absence of clear answers highlights the need for scholarly examination of algorithmic torts within the framework of Private International Law.

### **1.6. Research Questions**

- How can traditional tort law principles be adapted to address harm caused by artificial intelligence systems?
- Who should bear legal responsibility when algorithmic decision-making results in damage?
- How should courts determine jurisdiction in cross-border disputes involving artificial intelligence?
- Which legal system should apply when algorithmic harm spans multiple jurisdictions?

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<sup>19</sup> OECD, OECD Principles on Artificial Intelligence (Organisation for Economic Co-operation and Development 2019).

- Do existing legal frameworks adequately regulate artificial intelligence, or is legal reform necessary?

### **1.7 Objectives of the Study**

The primary objective of this research is to analyse the legal challenges created by algorithmic decision-making systems within the framework of tort law and Private International Law. The study aims to examine how traditional principles of liability apply to emerging technological contexts.

Another objective is to evaluate judicial approaches to technology-related disputes and identify gaps in existing legal doctrines. By analysing case law and real-world developments, the research seeks to understand how courts respond to technological uncertainty.

The study also aims to contribute to ongoing discussions regarding the future regulation of artificial intelligence by identifying areas where legal reform may be necessary.

### **Research Methodology**

This research adopts a doctrinal method of legal analysis. The study relies primarily on examination of legal principles, judicial decisions, academic commentary, and policy discussions relating to tort liability and artificial intelligence.

Case law analysis is used to understand how courts interpret concepts such as duty of care, negligence, causation, and jurisdiction in technologically complex disputes. In addition, real-world examples of algorithmic harm are examined to illustrate practical implications of legal theory.

The research does not involve empirical data collection but instead focuses on critical legal reasoning and interpretative analysis.

### **1.8 Scope and Limitations**

The scope of this research is limited to civil liability arising from artificial intelligence within tort law and Private International Law. Criminal liability, intellectual property issues, and detailed technical analysis of AI programming fall outside the primary focus of this study.

The research aims to analyse general legal principles rather than conduct a comprehensive comparative study of every jurisdiction. References to international developments are used primarily for analytical purposes. This research paper is organised into several chapters. Following the introduction, the next chapter explains the functioning and applications of artificial intelligence systems. Subsequent chapters examine algorithmic torts, analyse relevant legal principles, and explore jurisdictional challenges in cross-border disputes. The later sections discuss legal limitations, emerging regulatory approaches, and potential reforms before concluding with observations on the future relationship between artificial intelligence and legal responsibility.

## **2.Review of Literature**

### **2.1 Development of Artificial Intelligence and Legal Concerns**

The rapid development of artificial intelligence has transformed many sectors of modern society. AI technologies are increasingly used in transportation, healthcare, finance, law enforcement, and digital communication. These systems rely on algorithms that analyse large amounts of data and produce automated decisions. While such technologies improve efficiency and accuracy, they also raise significant legal and ethical concerns.

Scholars have observed that traditional legal systems were designed to regulate human conduct. When automated systems make decisions independently, identifying legal responsibility becomes difficult. Researchers therefore emphasise the need to examine whether existing legal principles, particularly tort law, are capable of addressing harms caused by artificial intelligence.

Academic discussions often focus on the relationship between technological innovation and legal accountability. Many legal scholars argue that the increasing autonomy of AI systems requires careful reconsideration of liability rules to ensure that individuals harmed by automated decision-making are able to obtain legal remedies.

### **2.2 Scholarly Views on Liability for Artificial Intelligence**

Several scholars have analysed how liability should be assigned when harm results from artificial intelligence. Some researchers argue that existing legal frameworks, such as negligence and product liability, can be applied to AI-related disputes with appropriate

interpretation. According to this view, developers, manufacturers, and companies deploying AI systems should bear responsibility when their technologies cause foreseeable harm.

Other scholars highlight the difficulties of applying traditional liability principles to autonomous technologies. AI systems often involve complex interactions between software design, data inputs, and machine learning processes. As a result, identifying the precise source of harm can be challenging. This complexity may make it difficult for victims to prove negligence or causation in court.

A number of researchers also discuss the concept of “shared responsibility,” suggesting that liability may need to be distributed among various actors involved in the creation and operation of AI systems. These actors may include software developers, data providers, technology companies, and system operators.

### **2.3 Algorithmic Bias and Emerging Legal Challenges**

Another major topic in the literature concerns algorithmic bias. Scholars have found that AI systems trained on biased or incomplete datasets may produce discriminatory outcomes. Such bias may affect individuals in areas such as employment decisions, credit evaluation, law enforcement practices, and digital platform visibility.

Legal researchers argue that algorithmic bias raises serious concerns regarding fairness, equality, and accountability. Even when discrimination is not intentional, automated systems may still reproduce existing social inequalities. As a result, scholars emphasise the importance of transparency, accountability, and regular auditing of AI systems.

The literature therefore highlights the growing need for legal frameworks capable of addressing the risks associated with artificial intelligence. While traditional tort principles remain relevant, many scholars suggest that legal systems must adapt to effectively regulate algorithm-based decision-making and protect individuals from technological harm.

## **3. Algorithmic Torts and Tort Law Principles**

### **3.1 Meaning and Nature of Algorithmic Torts**

The growing use of artificial intelligence has introduced new forms of civil harm that challenge

traditional tort law. Algorithmic torts refer to injuries caused by decisions or outcomes generated through automated systems rather than direct human action. AI technologies analyse data and produce decisions affecting areas such as employment, healthcare, finance, transportation, and online communication.

When algorithmic decisions result in financial loss, discrimination, reputational damage, or physical injury, affected individuals may seek remedies under tort law. However, unlike traditional torts where liability is linked to identifiable human conduct, AI systems operate with varying levels of autonomy. This creates uncertainty in identifying responsibility for harm.

Algorithmic torts therefore represent a conflict between technological innovation and legal accountability. As automated decision-making becomes widespread, courts must determine how existing legal principles apply to technologically mediated harm.

### **3.2 Negligence, Duty of Care and Causation in Artificial Intelligence**

Negligence remains a central principle of tort law and requires proof of duty of care, breach, and resulting damage. Since artificial intelligence lacks intention or awareness, negligence analysis focuses on the conduct of human actors involved in designing and deploying AI systems rather than the machine itself.

Developers and technology companies may owe a duty of care to individuals affected by AI applications. The principle established in *Donoghue v Stevenson* emphasises that parties must avoid foreseeable harm caused by their products or actions.<sup>20</sup> Similarly, the three-stage test in *Caparo Industries plc v Dickman* - foreseeability, proximity, and fairness assists courts in determining liability in technological contexts.<sup>21</sup>

Applying these principles to AI requires assessing whether developers could reasonably anticipate risks such as system errors, unsafe functioning, or discriminatory outcomes. Failure to adequately test, supervise, or update AI systems may amount to negligence where harm is foreseeable.

Causation presents additional challenges because algorithmic decisions often result from multiple interacting factors, including software design, training data, and environmental

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<sup>20</sup> *Donoghue v Stevenson* [1932] AC 562 (HL).

<sup>21</sup> *Caparo Industries plc v Dickman* [1990] 2 AC 605 (HL).

conditions. Traditional causation tests may therefore require flexible interpretation in cases involving autonomous technologies.

### **3.3 Product Liability, Algorithmic Bias and Limits of Tort Law**

Product liability law offers another framework for addressing algorithmic harm by treating AI systems as technological products. Manufacturers may be liable when defective design or inadequate safety measures cause injury. However, AI differs from traditional products because many systems continue learning after deployment, making it difficult to determine when a defect arises.<sup>22</sup>

Responsibility may also be shared among various actors, including developers, data providers, companies, and system operators. Liability depends on each participant's contribution to the harmful outcome.<sup>23</sup>

Algorithmic bias represents a significant concern, as flawed datasets or design assumptions may produce discriminatory results in employment, credit access, or digital platforms. Even without intentional discrimination, liability may arise where reasonable precautions to detect bias were not taken.<sup>24</sup>

Despite its relevance, traditional tort law faces limitations in addressing AI-related harm.<sup>25</sup> Technical complexity, lack of algorithmic transparency, and cross-border operation of AI systems make proving negligence and causation difficult. These challenges suggest the need for adapting tort principles to effectively regulate emerging technologies.

## **4.Challenges and Future Legal Approaches in Algorithmic Torts**

### **4.1 Challenges in Regulating Artificial Intelligence under Tort Law**

The increasing use of artificial intelligence has created significant challenges for traditional tort law. Legal systems were originally designed to regulate human behaviour, whereas AI systems operate through complex algorithms and automated decision-making processes. This

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<sup>22</sup> Geistfeld MA, 'Civil Liability for Artificial Intelligence and Software' (European Parliament Study, 2020).

<sup>23</sup> Prosser WL and Keeton WP, *Prosser and Keeton on the Law of Torts* (5<sup>th</sup> edn, West Publishing 1984).

<sup>24</sup> Calo R, Froomkin AM and Kerr I (eds), *Robot Law* (Edward Elgar Publishing 2016).

<sup>25</sup> Crawford K, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (Yale University Press 2021).

difference makes it difficult to apply conventional legal principles directly to technological systems.<sup>26</sup>

Another challenge relates to the complexity of AI systems. Harm caused by artificial intelligence may result from multiple factors such as software design, training data, system updates, or environmental conditions. Because several actors are involved in the creation and operation of AI technologies, identifying the responsible party becomes difficult.<sup>27</sup>

Cross-border operation of AI technologies also creates legal uncertainty. Many AI services are developed in one country but used globally through digital platforms. When harm occurs, courts must determine which jurisdiction's laws apply. Differences between national legal systems may further complicate the enforcement of legal remedies.

These challenges demonstrate that while tort law provides a framework for compensating victims, its application to artificial intelligence requires careful interpretation and possible reform.

#### **4.2 Need for Legal Accountability and Regulatory Frameworks**

As artificial intelligence becomes increasingly integrated into daily life, there is a growing need for stronger legal accountability. Governments and regulatory bodies across the world have begun examining ways to ensure that AI technologies operate responsibly and safely.<sup>28</sup>

Legal scholars argue that developers and companies deploying AI systems should adopt precautionary measures to minimise risks. This includes proper testing of algorithms, continuous monitoring of system performance, and prompt correction of errors or bias. Establishing clear standards for responsible AI development can help prevent harm before it occurs.

Another important aspect of accountability involves transparency. AI developers should provide sufficient information about how their systems function and how decisions are made. Greater transparency would allow regulators, courts, and affected individuals to better

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<sup>26</sup> Dicey A V, Morris J H C and Collins L, Dicey, Morris and Collins on the Conflict of Laws (15<sup>th</sup> edn, Sweet & Maxwell 2012).

<sup>27</sup> Cheshire G C, North P M and Fawcett J J, Cheshire, North and Fawcett: Private International Law (14<sup>th</sup> edn, Oxford University Press 2008).

<sup>28</sup> Stone P, *EU Private International Law* (4<sup>th</sup> edn, Edward Elgar Publishing 2018).

understand algorithmic behaviour and identify potential risks.

In addition, regulatory frameworks may require organisations to conduct regular assessments of AI systems to detect possible biases or technical flaws. Such oversight mechanisms could reduce the likelihood of discriminatory or harmful outcomes.

By strengthening accountability measures, legal systems can ensure that technological innovation does not occur at the expense of individual rights and safety.

### **4.3 Future Legal Approaches for Addressing Algorithmic Harm**

To effectively address algorithmic torts, legal systems may need to adopt new approaches alongside traditional tort principles. One possible solution is the development of specialised legal standards for artificial intelligence that clearly define the responsibilities of developers, manufacturers, and operators.<sup>29</sup>

Another proposed approach involves establishing clearer guidelines for the distribution of liability among different actors involved in AI systems. Since AI technologies are typically developed and deployed through collaborative efforts, legal rules must reflect this shared responsibility.

Some scholars also suggest the creation of mandatory insurance schemes for high-risk AI technologies. Such insurance mechanisms could ensure that victims receive compensation even when determining fault is difficult.

In addition, greater cooperation between governments, technology companies, and international organisations may help develop consistent legal standards for AI regulation. Because artificial intelligence operates across national borders, international collaboration will play an important role in creating effective governance structures.

Ultimately, adapting legal frameworks to address algorithmic harm is essential for maintaining public trust in emerging technologies. A balanced approach that encourages innovation while ensuring accountability will be crucial in shaping the future relationship between law and

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<sup>29</sup> Hill J and Chong A, *International Commercial Disputes: Commercial Conflict of Laws in English Courts* (5<sup>th</sup> edn, Hart Publishing 2019).

artificial intelligence.

## **5. REAL INCIDENTS, CHALLENGES AND LEGAL REFORMS**

### **5.1 Real-World AI Incidents**

Several real incidents highlight the risks of algorithmic systems. Autonomous vehicle accidents, biased recruitment algorithms, and errors in financial software demonstrate how AI decisions may cause significant harm.

### **5.2 Challenges in Applying Tort Law to AI**

Applying tort law to AI presents several challenges. First, algorithms lack human intention, making traditional fault analysis difficult. Second, victims may struggle to prove negligence due to technical complexity. Third, multiple actors involved in AI development complicate liability determination. Transparency and Accountability Issues<sup>30</sup>

Many AI systems operate as opaque “black box” technologies. Without understanding how decisions are produced, courts may face difficulties establishing causation or breach of duty. Different jurisdictions have begun addressing AI risks through regulatory frameworks. International discussions emphasise transparency, ethical AI development, and stronger oversight of automated decision-making systems.

Existing legal frameworks may require adaptation to effectively regulate AI-related harm. Possible reforms include clearer liability standards, algorithmic transparency requirements, and international cooperation in regulating digital technologies.

## **6. Conclusion**

The rapid development of artificial intelligence has significantly transformed modern society by introducing automated decision-making systems in areas such as healthcare, finance, transportation, employment, and digital communication. While these technologies offer efficiency and innovation, they also create new legal challenges when algorithmic decisions

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<sup>30</sup> Morgan J, ‘Autonomous Systems and Tort Liability’ in Roger Brownsword and others (eds), *The Oxford Handbook of Law, Regulation and Technology* (Oxford University Press 2017).

cause harm to individuals.

This research examined the concept of algorithmic torts and analysed how traditional tort law principles can be applied to harms arising from artificial intelligence systems. The study highlighted that existing doctrines such as negligence, duty of care, causation, and product liability remain relevant in addressing AI-related disputes. However, the autonomous and complex nature of AI systems often makes it difficult to identify responsibility and establish legal liability.

The research also emphasised that harm caused by artificial intelligence frequently involves multiple actors, including developers, technology companies, data providers, and system operators. As a result, determining accountability requires careful examination of each participant's role in the design, development, and deployment of AI technologies.

Another significant concern discussed in this study is algorithmic bias. When AI systems are trained on biased or incomplete datasets, they may produce discriminatory outcomes affecting individuals in areas such as employment opportunities, credit access, and digital platforms. Even when such discrimination is not intentional, the resulting harm raises serious legal and ethical questions regarding fairness and equality.

Furthermore, the study identified several limitations of traditional tort law in dealing with algorithmic harm. The lack of transparency in many AI systems makes it difficult for victims to understand how decisions are made. Technical complexity also creates challenges in proving negligence or causation. Additionally, the global nature of digital technologies raises jurisdictional issues when disputes arise across different legal systems.

Despite these difficulties, tort law continues to play an important role in protecting individuals from harm. By adapting existing legal principles and developing appropriate regulatory frameworks, legal systems can address the risks associated with artificial intelligence while supporting technological progress.

In order to effectively address the challenges posed by artificial intelligence, several measures may be considered.

First, governments and regulatory authorities should establish clearer legal guidelines regarding the responsibilities of developers and companies involved in the creation and

deployment of AI systems. Clear standards can help ensure that technological innovation occurs within a framework of accountability.

Second, organisations using artificial intelligence should adopt stronger transparency practices. Providing information about how algorithms function and how decisions are generated would help individuals understand automated outcomes and enable courts to evaluate liability more effectively.

Third, regular auditing and monitoring of AI systems should be encouraged to detect potential bias, errors, or safety risks. Such preventive measures can reduce the likelihood of harm and improve public confidence in AI technologies.

Fourth, legal frameworks should recognise the shared responsibility of different actors involved in AI development. Establishing guidelines for distributing liability among developers, data providers, and operators may help address the complex nature of algorithmic systems.

Finally, greater international cooperation is necessary to regulate artificial intelligence effectively. Since AI technologies operate across borders, collaboration between governments and international organisations can contribute to the development of consistent legal standards.

In conclusion, the relationship between tort law and artificial intelligence will continue to evolve as technology advances. A balanced legal approach that promotes innovation while ensuring accountability will be essential in protecting individuals from algorithmic harm and maintaining trust in emerging technological systems.

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