

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE LAW OF DELICT AND PRODUCT LIABILITY

1 Introduction

The test for delict requires an assessment of a defendant's conduct on the foundation of a standard that is acceptable to society. The standard is demonstrated by the fictional "reasonable man/person" (Ahmed "The Standard of the Reasonable Person in Determining Negligence: Comparative Conclusions" 2021 24 *Potchefstroom Electronic Law Journal* (*PELJ*) 1). In the law of delict, this norm demonstrates society's expectation of proper and balanced behaviour. The criterion is an objective one, demonstrating that all legal persons must ensure that their actions are in keeping with this standard (Ahmed 2021 *PELJ* 1). In addition, establishing delictual liability requires an assessment of all five elements (Zipursky "Reasonableness in and out of Negligence Law" 2015 *U Pa L Rev* 2131–2170), the central examination being the question of wrongfulness. In cases dealing with artificial intelligence (AI), it is important to recognise that AI may not be the trigger to causing harm; rather, it is human beings who use AI to carry out tasks. The question that arises is who will be held accountable for the consequences (Abbott "The Reasonable Computer, Disrupting the Paradigm of Tort Liability" 2018 86 *Geo Wash L Rev* 8). The contention is that AI does not directly cause accidents; instead, they arise when individuals using AI carry out different tasks (Duffy and Hopkins "Sit, Stay, Drive: The Future of Autonomous Car Liability" 2013 *Sci & Tech L Rev* (SMU) 16). AI can be said to function as an aid, given that it is created by humans. The investigation that comes into play enquires whether a reasonable person would have used AI in a way that caused harm (Lior "The AI Accident Network: Artificial Intelligence Liability Meets Network Theory" 2021 *Tul L Rev* 95). The argument to hold AI solely liable is weak, as AI serves as a tool controlled by humans. In these circumstances, it would be better for the test determining liability to be modified to investigate whether a reasonable person erred in some way during the design phase that led to harm (Lior 2021 *Tul L Rev* 95). It is acknowledged that there is an absence of specific legislation in South Africa dealing with AI cases. It is proposed that the existing legal framework requires reconsideration in light of the evolving nature of AI and its consequences. It is important to bear in mind that AI cannot act autonomously, but human choices and actions in using AI may contribute to harm as a result. Furthermore, while investigating the consequences of AI, it is imperative to acknowledge the intrinsic relationship between product liability and delict. The note thus provides a brief examination of how AI impacts product liability in South Africa. The note also briefly examines how AI influences the interpretation of the Consumer Protection Act (68 of 2008) (CPA).

2 What is artificial intelligence (AI)?

Artificial intelligence (AI) is at the forefront of technological advancement. AI boasts of developing computer systems that can perform and carry out tasks of which previously only the human intellect was capable (Sheikh, Prins and Schrijvers "Artificial Intelligence: Definition and Background" *Mission AI. Research for Policy* (2023) https://doi.org/10.1007/978-3-031-21448-6_2 (accessed 2024-01-16)). AI can be categorised into two main branches: narrow AI and general AI. Narrow AI was created for specific purposes, such as image or speech recognition. General AI, on the other end of the spectrum and also known as strong AI, has the ability to carry out an intellectual task that is similar to that requiring human abilities (Sheikh *et al* https://doi.org/10.1007/978-3-031-21448-6_2). In the 1950s and 1960s, computer specialists began creating algorithms and technologies. Currently, AI appears in various industries, including health care and finance (Domingos *The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World* (2017) 157). AI has the ability to be flexible and transformative. A major stride was taken with the development of deep-learning algorithms (Domingos *The Master Algorithm* 158). These mimic the structural intricacies of the human brain. The creation of such algorithms resulted in computers being able to identify patterns in data without precise programming (Domingos *The Master Algorithm* 158).

Hintze categorises AI into four categories:

1. reactive machines, which are task-specific AI systems without memory;
2. limited memory systems that have memory ability and can control past experiences to advise future decisions (this decision-making function is used in areas of self-driving cars);
3. theory-of-mind systems, which operate with social intelligence, being in a position to identify human emotions, intentions and forecast behaviour; and
4. systems that are self-aware, having a sense of self akin to consciousness, which assists the system in understanding its own current state (AI with such self-awareness is currently a theoretical notion) (Hintze "Understanding the Four Types of AI, From Reactive Robots to Self-Aware Beings" *The Conversation* (14 November 2016) <https://theconversation.com/understanding-the-four-types-of-ai-from-reactive-robots-to-self-aware-beings-67616>.)

The exciting opportunities that come with AI are welcome. However, there are fears pertaining to its societal impact. Some fears include job displacement and a possible rise in social inequality, and a threat to humanity (Floridi *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality* (2014) 103–108). One should include AI working as an independent system to the discussion. Independent or autonomous in this setting may be defined as AI operations that are detached from human decision or participation (Floridi *The Fourth Revolution* 103–108). If human involvement is present to control the system, then it is not autonomous. The

control then remains with the human (Floridi *The Fourth Revolution* 103–108).

The rapid evolution of AI creates hope for changing various aspects of human life. However, the challenges and dangers that accompany AI development require amendments to the legal framework (Leung “Who Will Govern Artificial Intelligence? Learning From the History of Strategic Politics in Emerging Technologies” (2019) <https://ora.ox.ac.uk/objects/uuid:ea3c7cb8-2464-45f1-a47c-c7b568f27665> (accessed 2024-01-15)). The law will undoubtedly face challenges with the complexities posed by AI. It is therefore incumbent on legislators to address the implications and ethical concerns that surround AI, especially in delict.

3 Current requirements for a delictual claim, including the implications of AI

Five essential elements are associated with delict – namely, conduct, wrongfulness, fault, causation and harm or loss (Neethling and Potgieter *Law of Delict* (2021) Ch 2–Ch 6). These elements need consideration in relation to AI.

3.1 Conduct

The conduct of a wrongdoer in the form of a commission or omission can result in harm to a victim. The harm could lead to death or injury. Where an AI system is concerned, it independently makes decisions, and the discussion now includes conduct created by AI that leads to harm or injury. The question that arises is how AI actions, based on complex algorithms, impact or alleviate harm suffered by a victim.

3.2 Wrongfulness

Wrongfulness pertains to conduct that causes harm in a legally unacceptable manner. The arrival of AI turns the conversation to an evaluation of whether AI-generated harm falls within the domain of legal wrongfulness. The ethical scope of AI decision-making needs to be examined to determine whether harm caused by AI is governed by the legal principles of reasonableness and fairness.

3.3 Fault

Fault is another important element in establishing harm. There are two types of fault: intention and negligence. In cases of negligence, the reasonable-person test is used. It questions whether a reasonable person in the position of the defendant would have foreseen the harm and then taken measures to prevent the harm from arising. Adding AI to the equation broadens the focus to include the accountability and foreseeability of AI systems. This may require re-examination of the reasonable-person test in the context of autonomous technologies.

3 4 Causation

The case of *Barnard v Santam Bpk* ([1998] ZASCA 84; 1999 (1) SA 202 (SCA); [1998] 4 All SA 403 (A)) recognised that it is important to prove causation in addition to the other elements to establish delictual liability. It must be proved that the conduct was the factual and legal cause of the harm suffered. In respect of AI, one would have to take cognisance of the relationship between AI-generated conduct and its effects when proving causation. A flexible approach to causation encompasses factors like foreseeability and directness. It requires an assessment of how AI actions influence or remove themselves from the harm experienced. Moreover, the advancing nature of AI technology will introduce new factors, such as the presence or absence of a *novus actus interveniens*, which is a key component in establishing legal causation.

As noted, a flexible approach is important in determining legal causation. It demonstrates the importance of establishing a link between the wrongdoer's conduct and its effects. In the realm of AI, this approach requires continuous review. One would want to ensure and safeguard policy considerations based on reasonableness, fairness and justice, and these should be applied to emerging technological settings.

The elements of delict, as applied to AI, require ongoing assessment and understanding as AI evolves and affects legal liability. It must be noted that AI has the ability to disrupt many parts of our legal system, including the law of delict. AI's implications for delict are broad, and include the following areas:

- *product liability*: increased use of AI in products, such as self-driven vehicles and medical devices, leads to an elevated risk that AI-related defects could cause harm to consumers, leading to a rise in product liability claims against manufacturers and developers of AI systems (Dimatteo, Poncibo and Cannarsa *The Cambridge Handbook of Artificial Intelligence: Global Perspectives on Law and Ethics* (2022) 87–160);
- *negligence*: as briefly discussed, AI could alter the standard of care required of individuals or bodies that use AI (e.g. in respect of self-driving car incidents and accidents, the standard of care for the car manufacturer may be higher than that expected of a human motorist (Puntoni, Reczek, Giesler and Botti, "Consumers and Artificial Intelligence: An Experiential Perspective" 2021 85(1) *Journal of Marketing* 131–151);
- *strict liability*: the advent of AI may lead to a shift in the application of strict liability; challenges will arise as to who is at fault when an AI system causes harm, with some contending that manufacturers or developers of AI systems should be held strictly liable for the harm caused (Dimatteo *et al* *The Cambridge Handbook of Artificial Intelligence* 87–160); and
- *privacy and data protection*: the current widespread use of AI systems to process large amounts of personal data could result in increased litigation stemming from possible misuse of personal data by AI systems

(Dimatteo *et al* *The Cambridge Handbook of Artificial Intelligence* 87–160).

As AI advances, active legal reforms are required to traverse the attendant complexities.

4 Product liability and AI implications

The advent of AI in consumer products has prompted a re-evaluation of standard legal frameworks, particularly in the context of product liability. A discussion on delict and its consequences for AI is intertwined with a discussion of product liability (Puntoni *et al* 2021 *Journal of Marketing* 131–151). As discussed, product liability holds manufacturers or suppliers accountable for harm caused by defective products. The introduction of AI in products creates intricacies around elements of foreseeability and fault (Puntoni *et al* 2021 *Journal of Marketing* 131–151). It is common cause that delict deals with civil wrongs and subsequent liability. The effects of AI has legal challenges on product liability and delict. Thus, both delictual principles in general and product liability in particular need to adapt to the varying issues introduced by AI technology (Puntoni *et al* 2021 *Journal of Marketing* 131–151).

In South Africa, product liability in most instances focuses on consumer protection. The CPA is the legislative framework that safeguards consumer rights (Loubser and Reid *Product Liability in South Africa* (2012) 31–35). The Act provides that suppliers and manufacturers are responsible for supplying safe products of good quality (Basson “The South African Law on ‘Products Liability’ – Quo Vadis?” 2001 *SAIIE* 85). However, AI creates its own challenges, and this includes machine-learning algorithms and autonomous systems that are found in consumer products (Puntoni *et al* 2021 *Journal of Marketing* 131–151). This changes the conventional concept of accountability. The issue arises as to how conventional product-liability principles apply to products that demonstrate self-modifying traits (Wagner “Liability Rules for the Digital Age: Aiming for the Brussels Effect” 2022 *Journal of European Tort Law* 191–243). The CPA, enacted before the advent of AI in consumer products, requires careful examination in light of these technological advancements. Although the Act protects consumers’ right to safe products, the changing complexity of AI systems can challenge the traditional meaning of product defects and safety standards. Interpretation of the CPA going forward has to occur with consideration for AI (Wagner 2022 *Journal of European Tort Law* 191–243).

Product liability also depends on principles of fault. While these principles are human-centric, AI lacks individual intent as it operates on algorithms and data (Selbst “Negligence and AI’s Human Users” 2020 *Boston University Law Review* 1315). Cases attributing liability to the AI system itself or its human creators and manufacturers can result in challenging legal questions (Selbst 2020 *Boston University Law Review* 1315). A holistic approach to defining liability in the context of AI is required. It is common cause that amendments to the CPA are required to deal with the challenges of AI in product liability (Basson 2001 *SAIIE* 85). Proper standards should be established for AI-driven products. The onus should rest on manufacturers

and developers to provide ongoing information about AI functionalities (Ryan and Stahl “Artificial Intelligence Ethics Guidelines for Developers and Users: Clarifying Their Content and Normative Implications” 2021 *Journal of Information, Communication and Ethics in Society* 61). Moreover, there is a need for a framework that monitors and provides ongoing updates on product safety within AI systems.

The CPA and the principles of delict must advance to deal with harm caused by AI-driven products. These proactive legal improvements are necessary to uphold consumer rights. It is also necessary to promote accountability, and advance a legal environment that assists in the transformative potential of AI, while at the same time safeguarding against potential harms.

5 Guidance from international law in respect of AI

In the United States, the first collision case was recorded in the state of Arizona; it involved a self-driving car and a pedestrian fatality (BBC “Uber’s Self-Driving Operator Charged Over Fatal Crash” (16 September 2020) <https://www.bbc.com/news/technology-54175359> (accessed 2024-01-15)). The victim, Elaine Herzberg, was pushing a bicycle across a four-lane road in Tempe, Arizona when an Uber test vehicle hit her. The vehicle was operating in self-drive mode and had a human back-up driver seated in the driver’s seat. Unfortunately, Herzberg died of her injuries (BBC <https://www.bbc.com/news/technology-54175359>). Following the incident, the National Transportation Safety Board (NTSB) made suggestions and Uber was criticised, resulting in Uber suspending the testing of self-driven vehicles in Arizona (BBC <https://www.bbc.com/news/technology-54175359>).

In light of cases mentioned above, international-law instruments play a crucial role in the development of AI law. The law and its encompassing principles will ultimately influence law at a national level. Some of the relevant international instruments are discussed below.

5.1 *Universal Declaration of Human Rights (UDHR)*

The Universal Declaration of Human Rights (UDHR), adopted by the United Nations General Assembly in 1948, is a foundational document highlighting the fundamental rights and freedoms to which all people are entitled (<https://www.un.org/en/about-us/universal-declaration-of-human-rights> (accessed 2024-01-17)). The UDHR demonstrates the absolute rights and dignity of every person. Its expansive body of rights includes rights to life, liberty and security; freedom from discrimination; and education. Insofar as AI is concerned, technological advancements must align with human-rights principles and the UDHR so as to ensure that innovation supports the values safeguarded in the UDHR. Maintaining these principles amid technological advancements means that human rights should not be compromised (United Nations “Artificial intelligence Must Be Grounded in Human Rights, Says High Commissioner” (12 July 2023) <https://www.ohchr.org/en/statements/2023/07/artificial-intelligence-must-be-grounded-human-rights-says-high-commissioner> (accessed 2024-01-17)).

5.2 *Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data (Convention 108)*

Convention 108 (Council of Europe *Convention for Protection of Individuals With Regard to Automatic Processing of Personal Data* <https://rm.coe.int/1680078b37> (accessed 2024-01-17)) protects an individual's right of privacy by regulating the administration of personal data. It is one of the first international treaties to deal with the topic of data protection and privacy. Convention 108 created common principles and guidelines for the protection of individuals concerning the automated management of personal data. It safeguards individuals' rights and freedoms. The Convention conveys that the processing of personal data must be legally recognised. Individuals' consent must be obtained for the purposes of data processing. This highlights the importance of transparency in data procedures. The Convention highlights that personal data should be correct for the purposes for which they are processed. The Convention highlights the importance of data security, and provides measures to protect personal data against unlawful access and release. Protecting these rights is significant in instances where data-driven decisions would influence individuals. The onset of AI brings about new additions to data processing. These additions bring about both advantages and disadvantages in the context of Convention 108. Although Convention 108 requires fairness and non-discrimination, the application of AI algorithms in decision-making processes can cause biases. Convention 108 places emphasis on people's rights and encourages support for increased privacy measures in AI structures. The Convention focuses on equality, transparency and accountability. The framework it presents is centered on developing and employing AI technologies in a fair manner. The Convention emphasises that parties must be cognisant of the ethical consequences of AI applications.

Convention 108 provides the basis for the protection of personal data, and provides significant guidance in the era of AI. With technology evolving, further review is necessary in interpreting Convention 108's provisions to alleviate the challenges presented by AI.

5.3 *Council of Europe's guidelines on AI and human rights*

The Council of Europe's guidelines on AI (Council of Europe "The Council of Europe & Artificial Intelligence" (2023) <https://rm.coe.int/brochure-artificial-intelligence-en-march-2023-print/1680aab8e6> (accessed 2024-01-17)) provide suggestions for the development of AI technologies that ensure compliance with ethics and human rights. These guidelines take cognisance of the principles of the UDHR, the Convention on the Rights of the Child (CRC) (UNGA *Convention on the Rights of the Child* 1577 UNTS 3 (1989). Adopted: 20/11/1989; EIF: 02/09/1990 <http://www.unicef.org/child-rights-convention> (accessed 2024-01-17)) and Convention 108. The Council of

Europe's guidelines provide a comprehensive framework for the responsible use of AI technologies in different fields from health care to criminal justice. They emphasise the ethical and accountable use of AI. They focus on a human-rights approach to AI development. The protection of human rights is brought into focus against a backdrop of technological advancements.

The guidelines speak of the principle of proportionality, which strikes a cautious balance between the prospective advantages of AI and the protection of human rights. Clarity in AI systems is important as it allows individuals to understand and question decisions made by AI algorithms. Moreover, the guidelines highlight the significance of accountability in addressing potential biases. Attempts are directed at avoiding biases that may excessively impact certain individuals or groups. As AI is developing daily, it is challenging to implement. There is an urgent need for international cooperation as conflicts can arise between ethical issues and commercial interests. It is submitted that it will be a daunting and complex task to strike the balance between innovation and safeguarding human rights.

The Council of Europe's constant strides to develop and strengthen guidelines on AI and human rights demonstrate its commitment to addressing ethical considerations in respect of technological improvements. There will be constant changes and improvements made in respect of AI applications, making it important for individuals to keep abreast of these developments.

5.4 European Union's proposed AI regulation

The European Union (EU) has drafted AI regulations that encourage responsible AI development. The proposed AI regulation seeks to achieve a framework that provides for accountability that acknowledges the importance of human rights in the use of AI technologies (European Parliament "EU Guidelines on Ethics in Artificial Intelligence: Context and Implementation" (2018) [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640163/EPRS_BRI\(2019\)640163_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640163/EPRS_BRI(2019)640163_EN.pdf) (accessed 2024-01-19)). The regulation puts AI applications into different risk levels – namely, unacceptable risk, high risk, and low or minimal risk. The regulation further highlights the importance of data privacy. It emphasises that developers and users of AI systems must comply with data minimisation principles to ensure that only necessary data is processed. Specific consent is required for AI systems that create or influence content. The regulation calls for clarity in AI systems, specifically those affecting individuals. Users should be conscious when they are engaging with AI. The regulation calls for the provision of reasons for AI-generated conclusions to promote accountability and user confidence. It is important to note that elevated-risk AI applications require human administration to alleviate the potential risks linked with programmed decision-making. Creators must ensure that skilled people examine and control AI systems. Despite the positive aspects of the EU's projected AI regulation, there are also negative ones, which include creating hurdles to striking the balance between innovation and potential risks. Stringent regulations may constrain technological developments, while ineffective administration could result in ethical problems. Nonetheless, the proposed

regulation encourages international cooperation, and it aims to achieve global harmonisation.

The projected AI regulation demonstrates an important step towards creating a robust and morally ethical framework for AI development. The introduction of a risk-based approach encourages transparency as well as human oversight. The regulation seeks to ensure that AI technologies align with European values. However, the challenges will be ongoing and require global cooperation. Comprehensive navigation of the AI governance path will be imperative. The ongoing development of the regulation has the ingredients for the creation of responsible AI governance.

6 Future of product liability and the law of delict

As discussed, the blending of common-law principles and CPA provisions presents significant difficulties in relation to AI-related product liability. A domestic legal framework that addresses issues arising from AI-related harm would be beneficial (Wagner 2022 *Journal of European Tort Law* 191–243). Our legal systems should attempt to distinguish and explain negligence standards with specific reference to AI-related matters. Moreover, taking into account the technical difficulties accompanying AI, the formation of specialised courts or tribunals with trained professionals in both legal and technological fields could streamline adjudication procedures (Coglianese and Ben Dor “AI in Adjudication and Administration” 2021 *Brooklyn Law Review* 792), ensuring more informed and competent resolution of AI-related product liability disputes. The rapid growth of AI requires a commitment to continual review, as this would guarantee its relevance and effectiveness. Moreover, revisiting existing legislation to ensure AI development is important. This would address emerging challenges posed by improvements in AI technology (Diaz-Rodriguez, Del Ser, Coeckelbergh, De Prado, Herrera-Viedma and Herrera “Connecting the Dots in Trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation” 2023 *Information Fusion* 101896). The understanding of AI-related product liability can be complex and it would be beneficial to provide education and training programmes for legal professionals (Rodriguez *et al* 2023 *Information Fusion* 101896). In addition, it is imperative that legal experts are aware of technological advances to allow for successful navigation through the difficulties of AI-related product liability cases. In addition, a collaborative effort between legal bodies, industry and AI developers should be encouraged to advance and publicise best practices (Buiten *Product Liability for Defective AI* (2023) 21–23). Encouraging responsible AI development and operation will assist in preventing harm and mitigating liability.

Tailored regulations like the proposed regulation by the EU can address the distinctive challenges posed by AI at a domestic level. The CPA should play a major role in enhancing consumer awareness regarding AI-related risks. As the global nature of AI technology grows, South Africa should actively engage in international alliances aimed at creating regulated AI standards and guidelines (Roff “Artificial Intelligence: Power to the People” 2019 *Ethics & International Affairs* 127–140). In addition, manufacturers of AI systems should undertake periodic risk assessments to identify

prospective dangers and problems linked to their products in order to prevent harm and exhibit responsibility for consumer protection (Buiten *Product Liability for Defective AI* 24–25).

The active and rising nature of AI-related product liability requires a comprehensive and adaptive legal response. The suggested measures aim to strike a balance between protecting consumer rights and adopting sensible innovation, while providing legal clarity on the scope of AI-related harm.

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