

**DRONES AND DELICT:**  
*Robot Usage and Damage in South African Law*

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## **INTRODUCTION**

A desktop search involving the word 'robot' in South African case law will reveal volumes of judgments making pronouncements on motorists ignoring traffic lights and being held liable by a Court for damage caused on the country's roads. In this article, however, the inquiry is into the legal implications of using a robotic machine commonly known as a drone. Drones are used for a number of functions including aerial photography, search and rescue operations, crop monitoring in farming, border control surveillance and various other important uses.<sup>1</sup>

As with any technological object, the possibility of malfunction and resultant damage (whether to objects, property or persons) is a reality and this raises concerns on issues of liability for damage caused as well as the possible application of the laws of Delict and Damages. This article interrogates the interplay between laws with a bearing on these three potential areas of future litigation, namely robot / artificial intelligence law, the law of Delict and the law of Damages. This article also draws comparison with foreign laws with a brief recommendation for the South African regulatory framework on the field of artificial intelligence.

## **1 ROBOTS IN SOUTH AFRICAN LAW**

An expert legal/tech opinion on how regulatory bodies can ensure that regulation keeps abreast with advances in technological innovations makes the observation that the world we exist in today is in a constant state of disruption, that emerging technology is adopted at exponential rates and that the regulation of technological innovation should acknowledge that innovation is good for the economy.<sup>2</sup>

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<sup>1</sup> Joshi, D "Drone technology uses and applications for commercial, industrial and military drones in 2020 and the future" 2019 Business Insider (accessed at <https://www.businessinsider.com/drone-technology-uses-applications?IR=T> on 11/8/20).

<sup>2</sup> Bowan, N "How does regulation keep up with technology and innovation: Part 1" Law. Innovation. Technology. Tomorrow (accessed at <http://nerushkabowan.com/2017/06/23/how-does-regulation-keep-up-with-technology-and-innovation-part-1/> on 17/8/20).

This opinion further highlights the attitudes and reactions of regulators to technological innovation by pointing out that there are mainly three approaches adopted by regulators – firstly, a regulator may bury its head in the sand by ignoring disruption in technological use and application; secondly, it may resist the disruption and seek to regulate against the continued use of the technology; and lastly, a regulator may opt to foster the collaboration of various stakeholders as a realistic and more efficient manner of regulating the technology.<sup>3</sup> The last is the preferred method of regulation and with a number of cyberlaw instruments from the South African Parliament, it becomes necessary to probe whether there exists sufficient regulation and certainty on the use of artificial intelligence and robots in the country.

It has been suggested by legal/tech experts that the laws with a bearing on the use of robots in South Africa include the Protection of Personal Information Act,<sup>4</sup> Part 101 of the Civil Aviation Regulations,<sup>5</sup> the Consumer Protection Act,<sup>6</sup> the National Road Traffic Act<sup>7</sup> (and the National Road Traffic Regulations),<sup>8</sup> the Medicines and Related Substances Amendment Act,<sup>9</sup> as well as various facets of the Laws of Intellectual Property.<sup>10</sup> Aside from the regulation of technological instruments, another practical issue for consideration is what the consequences may be for the use / controller of a robot in the event that a technological instrument such as a drone causes damage to persons and/or property. To probe this question further the principles found in the Law of Delict provide some guidance.

The trite elements that constitute a delict are contained in its very definition: “A delict is the act of a person that in a wrongful and culpable way causes harm to another.”<sup>11</sup> It is therefore held that all five elements of a delict, namely (1) an act; (2) wrongfulness; (3) fault; (4) causation; and (5) harm must be present before the conduct complained of may be classified as a delict.<sup>12</sup> In discussing the element of wrongfulness, Neethling *et al* hold (within the context of product design and manufacturing) that in questioning the defectiveness of a product, the state of human science and technology as well as the need for testing or experimentation must not be lost sight of.<sup>13</sup>

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<sup>3</sup> Bowan, N “How does regulation keep up with technology and innovation: Part 3” Law. Innovation. Technology. Tomorrow (accessed at <http://nerushkabowan.com/2017/06/23/how-does-regulation-keep-up-with-technology-and-innovation-part-3-2/> on 17/8/20).

<sup>4</sup> Protection of Personal Information Act No.4 of 2013.

<sup>5</sup> Civil Aviation Act No. 13 of 2009.

<sup>6</sup> Consumer Protection Act No. 68 of 2008.

<sup>7</sup> National Road Traffic Act No. 93 of 1996.

<sup>8</sup> National Road Traffic Regulations, 2000.

<sup>9</sup> Medicines and Related Substances Amendment Act No. 14 of 2015.

<sup>10</sup> Schwartz, D “Robot Law Explained” Phukubje Pierce Masithela Attorneys website (accessed at <https://www.ppmattorneys.co.za/robot-law-explained/> on 17/8/20).

<sup>11</sup> Neethling (ed), Law of Delict (2015) 19.

<sup>12</sup> Neethling (ed), Law of Delict (2015) 19.

<sup>13</sup> Neethling (ed), Law of Delict (2015) 242.

Furthermore, they draw a brief comparison of South African law with Anglo-American legal systems by pointing out that while in South African law fault must be present as an element in proving that a delict has occurred, even the fault theory was beginning to be questioned by South African jurists.<sup>14</sup> The reason given for questioning whether fault is indeed a necessary element within the context of technology lies in that increased mechanization and technology in ordinary life, coupled with the inherent risk of harm, the fault theory simply is inadequate.<sup>15</sup> It is for this reason that we discuss the concept of liability without fault (strict liability) in the next part of this article.

## 2 LIABILITY FOR DAMAGE CAUSED BY ROBOTS

For the sake of our exercise, our focus will be based mainly on liability of Drones. Legally speaking, Drones on their own do not have legal capacity and therefore could not be held personally liable for a delictual conduct. This introduces the legal consequence - liability for a delict. It is important, however, to note that the most commonly imagined form of liability known as vicarious liability may not form part of such a discussion by virtue of how this form of liability is defined. Neethling et al offer the definition that vicarious liability is the strict liability of one person for the delict of another, and furthermore that this form of liability finds application if there exists a relationship between the two persons.<sup>16</sup> A robot in terms of our law can therefore not be classified as a person as it is trite that a person is either a living, natural person or a juristic person.

The question that can be raised is whether the owner / controller of an unmanned aircraft be held liable for the damage caused by his or her drone and what is the legal status of the drone flying over a private property without prior consent of the owner of such private property. These are questions to be borne in mind in grappling with the recourse that may be sought by an aggrieved party. Robot Law as a stand-alone discipline is a nuance, however it is clearly taking strides through aviation regulations and other legal instruments with a bearing on technology as mentioned before. Some general assent by South African legal-tech experts has been placed on three fictional laws of robotics, namely that (1) A robot may not injure a human being or, through inaction, allow a human being to come to harm; (2) A robot must obey the orders given it by human beings except where such orders would conflict with the first law; and (3) A robot must protect its own existence as long as such protection does not conflict with the first two laws.<sup>17</sup>

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<sup>14</sup> Neethling (ed), Law of Delict (2015) 265.

<sup>15</sup> Neethling (ed), Law of Delict (2015) 265.

<sup>16</sup> Neethling (ed), Law of Delict (2015) 272.

<sup>17</sup> Schwartz, D "Robot Law Explained" Phukubje Pierce Masithela Attorneys website (accessed at <https://www.ppmattorneys.co.za/robot-law-explained/> on 17/8/20); Murphy, R "Beyond Asimov: The Three Laws of Responsible Robotics" 2009 Intelligent Systems, IEEE 14.

The operation of drones is regulated by Civil Aviation Act<sup>18</sup> as well as Civil Aviation Regulations<sup>19</sup>. Part 101 of the Civil Aviation Regulations governs the operation of remotely piloted aircraft (RPA) and unmanned aircraft (Drones) in South Africa or remotely piloted aircraft systems (RPAS). Proof of Neethling's view on the element of fault is found in Section 8 of the Civil Aviation Act, in that it imposes a strict liability regime for material damage or loss caused by an aircraft in flight, taking off or landing, or by any article falling from such aircraft to any person or property on land or water, and accordingly damages may be recovered from the registered owner of the aircraft in respect of such damage or loss without proof of negligence or intention or other cause of action as though damage or loss had been caused by his or her willful act, negligent or default.

In blatantly stressing the element of causation, this makes it clear that a sufficiently close link between the owner and the delictual conduct of a drone would have been established, taking into account the fact that such drone was at all material times operating on the command and control of its registered owner. A clear example is when A flies a Drone and takes photographs over B's private property without prior consent from B to do so. B can bring civil claim for the infringement of her right privacy. It is in such an instance where the provisions of the POPIA<sup>20</sup> and the right to privacy as contained in the Constitution<sup>21</sup> become relevant as it Furthermore, any damage caused by A's Drone to B's property will be accounted for by A. According to the South African Civil Aviation Authority there are General rules to be recognized for operating drones in South Africa. It is worth noting that failure by the owner and/or controller of a drone to adhere to the said rules may result to a lawsuit. The rules include, but are not limited to the following:<sup>22</sup>

- *Drones may not be flown 10 (ten) Kilometers or closer to an airport without special permission from the SACAA;*
- *Drones weighing more than 7 (seven) Kilometers may not be flown;*
- *Drones may not be flown within 50 (fifty) meters of people or private property (without permission from the property owner);*
- *Drones pilots must maintain a visual line of contact with their Drones at all times while in flight;*
- *Drones may only be flown during daylight hours.*

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<sup>18</sup> Civil Aviation Act No. 13 of 2009.

<sup>19</sup> Civil Aviation Regulations, 2011.

<sup>20</sup> For example the purpose of the Act entails giving effect to the Constitutional right to privacy by safeguarding personal information when processed by a responsible party. It may be in this scenario that A is indeed a responsible party as defined in the Act and as such the provisions of the POPIA are applicable to safeguard B's right to privacy in terms of the Constitution.

<sup>21</sup> Section 14 of the Constitution of the Republic of South Africa, 1996 provides that Everyone has the right to privacy, which includes the right not to have their person or home searched; their property searched; their possessions seized; or the privacy of their communications infringed. This is a right contained in the Bill of Rights (Chapter 2) and as such it is not absolute, but may be limited in terms of Section 36 of the Constitution.

<sup>22</sup> "Remotely Piloted Aircraft Systems" South African Civil Aviation Authority (accessed at <http://www.caa.co.za/Pages/RPAS/Remotely%20Piloted%20Aircraft%20Systems.aspx> ; <http://www.caa.co.za/Pages/RPAS/Legislation.aspx> on 11/8/20).

With drone regulations in place, the owner of an unmanned aircraft will be held liable for the damage caused by its Drone and will be equally liable for invasion of privacy if such Drone is found to have flown over a private property without consent. Any owner of the Drone found to be in violation of Civil Aviation Regulations will be prosecuted. An aggrieved owner of a private property has a legal recourse for any damage caused to his property by the Drone belonging to another. The law is clear in this regard and it is equally important to note that as from the 1<sup>st</sup> July 2015, new regulations for South Africa regarding Remotely Piloted Aircraft Systems (RPAS) or known as “Drones” or “UAV’s” introduced the following:<sup>23</sup>

- *Do not fly more than 400 feet (120 meters) above the ground.*
- *Do not fly more than 500 meters away from the pilot (line of sight).*
- *Do not fly closer than 10km from an airport (any registered aerodrome, airstrip, helipad, etc.)*
- *Do not fly in controlled, restricted or prohibited airspace.*
- *Do not fly closer than 50m from people.*
- *Do not fly closer than 50m from buildings.*
- *Do not fly closer than 50m from roads.*
- *Do not fly any drone more than 7kg for hobby use (up to 20kg for commercial use).*

These rules are indicative of a shift from the traditionally first principle of the Law of Delict, which is that everyone has to bear the loss he suffers.<sup>24</sup> It is important, not only for persons operating drones to know and understand the rules imposed when doing so, but also for a legal practitioner assisting with a person who has suffered harm that strict liability is applicable for the benefit of his client if the claim is indeed good in Delict Law. Parties to a dispute may engage in a tussle of semantics where one party seeks to escape liability by contesting the meaning of words such as ‘any damage’ which was contained in a lease agreement.<sup>25</sup> It is therefore important to consider the technical definitions provided by the SACAA and to appreciate the challenges that may be raised by a party seeking to escape liability for harm, damage or any other infringement through the operation of his or her drone as Robot Law develops.

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<sup>23</sup> Staff Writer “These are the laws you should know before flying a drone in South Africa” 2018 BusinessTech (accessed at <https://businesstech.co.za/news/technology/278085/these-are-the-laws-you-should-know-before-flying-a-drone-in-south-africa/> on 11/8/20).

<sup>24</sup> Telematrix (Pty) Ltd v Advertising Standards Authority SA 2006 (1) SA 461 (SCA) at [12] as cited in the judgment of Boshoff v City of Cape Town (7407/16) [2019] ZAWCHC 17 (27 February 2019).

<sup>25</sup> City of Cape Town v Rhooode (A314/2017) [2018] ZAWCHC 49 (17 April 2018).

#### 4 CONCLUSION

The possibility of malfunction, abuse by an operator/owner/controller or otherwise ill use of a technological instrument such as a drone has an effect on other persons' rights including the right to privacy as well as other rights enforceable by means of a civil claim. Technological innovation is the order of the day as South Africa actively participates in development on various methods of advancement in every day life that include the use of technological instruments such as drones that are flown above ground for various reasons. This being the case, the SACAA is applauded for not seeking to re-invent the wheel by calling for the promulgation of a new and hefty piece of legislation with delayed formation and application which might be irrelevant as technology evolves rapidly. The collaborative approach taken in issuing Regulations and providing clear rules is also applauded as it creates certainty for the people of South Africa and legal practitioners called upon to offer their assistance in resolving disputes. The legal approach of strict liability for damage caused by drones, which in and of itself deviates from the trite principles of delict within the context of fault as an element required to prove that a delict indeed has occurred, is indicative of a realistic approach to the technological advancement brought about by the use and operation of drones.

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