

## Inaugural Lecture<sup>1</sup>

### From Science Fiction to Science Fact – The Ivory Tower's Role in Developing the Law of the Future

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NWU 2019

Good evening everyone, friends, family, colleagues, and government agents. Conroy and Stephen, thank you very much for those kind words of introduction! I am extremely pleased that you did not manage to embarrass me too much – since I had no idea what you were going to say! In fact, in the runup to this event, the more thought I gave to the nature of such events, the more it seemed as if the proceedings could eventually amount to more of a comedy roast than a lecture. Unfortunately for everyone, (except for me), this is not a comedy roast and you will have to quietly sit through the whole of this lecture.

As stated in the program, my topic for today is *From Science Fiction to Science Fact – The Ivory Tower's Role in Developing the Law of the Future*. Having said this I now suppose you would like to know what it means – and so would I. You get a title like this when you are supposed to give a lecture that shows off your superior knowledge and research expertise. Unfortunately, experience has taught me (from the perspective of being an audience member at such illustrious events as this) that if you do, in fact, succeed in your quest for showcasing your expertise and sound sufficiently intelligent, you manage to (at worst) alienate your audience, or (at best) sooth an acceptable number of people into a revitalising snooze. Now, since I abhor boring

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<sup>1</sup> General disclaimer. This is a verbatim copy of the inaugural lecture of Prof Wian Erlank, given at the North-West University in 2019. As such it is not fully cited and does not feature citations of all sources mentioned. An updated version with full citations and expanded bibliography will be published in due course in the form of an academic article.

lectures, I will try my utmost to keep this one as entertaining and informative as possible, and I will gauge the success of this by the number of people who are still vaguely attentive by the end!

So, enough of the banter, and onwards into the breach of the ivory tower! See, I managed to work the title into the body of the lecture! I note that some of you are looking uncomfortable because there are no indications of where I am going with this lecture. Let me set your minds at ease. In the first part of this lecture, I will provide a brief overview of the origin and meaning of the ivory tower as it relates to academia. In the second part, I will discuss a couple of examples of developments in technology and society which have outstripped the ability of law to keep up with it. Finally, in the last part, I will reflect on how the ivory tower as institution has enabled me to write about things as weird and wonderful as ownership of virtual swords in games, and of questions of whether a commander of a spaceship can throw someone out of the airlock if they don't want to obey orders in outer space! So onward to part one!

### **The Ivory Tower**

I am very sure that if I do a quick poll in the room right now, pretty much everyone would have heard of the concept of the *Ivory Tower*. In fiction it is a popular trope – often referring to someplace that a wizard (who is usually either evil or misunderstood) calls home - much like teenagers! In academia, the concept of the ivory tower is not too dissimilar from the wizard's tower, allowing for the production and safeguarding of strange, wonderful, and unbelievable possessions and arcane knowledge. However, the focus will, of course, be on the application to academia and universities, more than to wizards and their arcane knowledge!

Where does this concept of the ivory tower come from? In preparation for this lecture, I have consulted numerous authoritative sources for my quest in seeking the exact historical origin of the ivory tower as a concept. I can confidently say that I now don't know exactly where it originated from after consulting the 100% authoritative source of WIKIPEDIA... Just kidding – in this instance I actually neglected to properly consult Wikipedia.

From my overview of several sources the following theories seem to be at least generally accepted; and while lawyers like to deal in absolutes (and exceptions where appropriate), it would appear that historians tend to deal in extrapolated theories and conjectures that sounds plausible at the time of writing.

So, back in time we go.

### **The history of and (perceived) problem with the ivory tower**

Some sources suggest that the first appearance of the ivory tower can be found in the *Bible*, specifically in the passage of *Song of Songs* 7:4;

Quoting here from the *New International Version* of the *Bible*:<sup>2</sup>

"Your neck is like an ivory tower. Your eyes are the pools of Heshbon by the gate of Bath Rabbim"<sup>3</sup>

The context of this verse clearly uses the figure of the ivory tower not to describe either a place of learning, or a physical structure, but rather as "notions of virginal purity"<sup>4</sup> and more practically "about the appearance of a woman's neck and it's beauty".<sup>5</sup>

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<sup>2</sup> Song of Solomon, or Song of Songs. *Holy Bible, New International Version NIV*.

<sup>3</sup> Song of Songs 7:4.

<sup>4</sup> <https://www.phrases.org.uk/meanings/210800.html>.

<sup>5</sup> Wendler "Our University – The Ivory Tower" 1.

Moving on to a more contemporary use of the phrase, Martin<sup>6</sup> notes that it is said that the contemporary figurative meaning of "the ivory tower" is a place of unworldly isolation – and some people speculate that this alludes to the Hawksmoor Towers of All Souls' College at Oxford University which were of an ivory colour when built in 1716. The same author then casts doubt on the accuracy of the reference and notes that while the term is found in 19<sup>th</sup> Century French, it only seems to appear in English literature with relation to the modern meaning, in the translated work (from French) *Laughter – An Essay on the Meaning of the Comic*<sup>7</sup> by Henri Bergson, in the early 1900s. The specific reference can be found on page 135 of the work and states that "[e]ach member must be ever attentive to his social surroundings; he must model himself on his environment; in short, he must avoid shutting himself up in his own peculiar character as a philosopher in his ivory tower."

This caveat from Bergson ties into Wendler's mention of another passage in the Bible, found in 1 Kings 22:39, where King Ahab (a tyrannical and poor leader)'s palace was either built from ivory, or inlaid with ivory – depending on which translation you consult.

Wendler notes that Ahab's palace was "a place of isolation" and the fact that it was inlaid with ivory "...is clearly a pejorative reference to the separation, high mindedness and distance implied in the modern concept of the university as an ivory tower".<sup>8</sup>

Accordingly, the modern definition or concept of "the ivory tower" is used in a negative sense when ascribed to universities "to indicate a separation from reality and practical

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<sup>6</sup> <https://www.phrases.org.uk/meanings/210800.html>

<sup>7</sup> Bergson *Laughter – An Essay on the Meaning of the Comic*

<sup>8</sup> Wendler "Our University – The Ivory Tower" 1.

concerns of the world."<sup>9</sup> While this perception (if true) inarguably highlights the need for Universities to constantly reach out to include the wider community and society in its activities – this does not mean that the exact thing that is seen is problematical cannot sometimes be what is, in fact, needed at Universities – albeit to a limited extent. Therefore, my intention is not to enter into a debate about the negative aspects of higher education and Universities as representations of exclusion, hierarchy and high-mindedness. My reflections are about the importance of this isolating and reflective quality to academia, the law, and my own studies – as well as the supremely important fact that the ivory tower allows a researcher to ask "what if?"

Irrespective of the interpretation of the phrase "ivory tower" and whether one would view it as a good thing or a bad thing, the following should be clear. In the first place, even in ancient times ivory was considered to be beautiful and was a scarce commodity – usually destined for those with wealth and power, who were more often than not themselves removed from the reality of the others living in the world around them. Hence, the aptness of viewing an ivory tower as something special, ie not a commodity. However, from a legal perspective, the fact that an ivory tower is high and separate from the ground is important and finds an analogy in the adjudication culture (at least in common law countries) of a judge not descending into the dust of the arena – lest his vision be clouded. It also tends to provide one with a broader overview of problems and the concomitant ability to see problems from a different perspective - or as I like to think of it - it helps one to think outside the box!

We now move on to the second part of this lecture!

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<sup>9</sup> Wendler "Our University – The Ivory Tower" 1.

## **From science fiction to science fact**

Since I now have you as a captive audience for at least short while, I would like to discuss some examples from my own research areas. While I have already written about some of these in the past, much of this is new even for me, and therefore, an unforeseen benefit of preparing this lecture, was that I managed to identify a number of topics that I will be writing about in the future!

So, let us look at the first example:

Consider the case where someone has amassed a vast digital library of digital goods such as eBooks, music, apps & movies. This is not unusual, and I would bet that many of you sitting here today have your own collections of digital goods, stored away on phones, computers, tablets and other devices. After collecting these digital objects throughout your lifetime, it should form part of your patrimony or total wealth when you pass away – should it not? It is taxed when you buy it (SARS enthusiastically takes their 15% VAT on digital goods and services) and in theory you should be able to pass your digital collection onto your descendants when you shuffle off this mortal coil. For some of you the fact that you would rather collect music and books digitally and store them in a virtual digital library, might seem strange, but for many, if not most, it will be the most natural thing to do. However, it might come as a shock that the industry that supplies us with the wonderful convenience of purchasing, using and enjoying books and music digitally, in fact, aggressively fights against the idea that you are, in reality, the owner of your digital goods. While you might consider that the only difference between having a physical library full of physical books in your living room at home, and having the same books stored in a digital library on an ereader or

online, is one of convenience [– specifically of not having to store and carry the weight of the physical books, as well as to always have all your books at hand wherever you go – ] the sad truth of the situation is that in most cases, you do not actually own the eBooks in the same sense as their real world counterparts. Shocking isn't it? It is against this background that I had the opportunity, in my doctoral dissertation (aptly titled *Property in Virtual Worlds*)<sup>10</sup> to argue for the possibility that one can, in fact, be the owner of digital goods, and that the legal relationship between you and your digital goods is not just purely confined to a contract that allows you to enjoy the digital objects for a limited time at the behest and whims of the publishers and service providers, who may, and I quote here from an end user licence agreement - revoke your access to the digital goods by terminating "this Agreement **at any time for any reason or no reason**".<sup>11</sup> Point in case, Microsoft recently announced that all the digital books or eBooks that people purchased via Microsoft's online store will not be accessible from July this year (2019). Luckily, they have indicated that they would refund the purchases for buyers – but this is a small comfort for someone who has spent years buying and curating their favourite books – and who was secure in the knowledge that irrespective of what happens to their physical eReaders, their purchases will remain accessible in their digital libraries in the cloud. Previously, Microsoft also stopped selling and removed access to digital music (albums and songs) purchased via their Groove Music service. While it seems nice of the company to offer refunds, I can assure you that the offer of refunds will be severely restrictive and limited in time, and many, many users will miss the notifications to apply for refunds – just as many users did not download their digital music for offline use before

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<sup>10</sup> Erlank *Property in Virtual Worlds*.

<sup>11</sup> Erlank *Property in Virtual Worlds* 86-87 fn 73.

access to their music was discontinued. Other examples of eBook stores that went belly up include the Borders eBook store and the Sony Reader Store.

Let's now continue to the second example:

While I was focussing on digital goods and virtual property during the writing of my dissertation, I started speculating on how property rights and ownership would work in outer space. I set this problem aside for a while, and when I had completed my dissertation, at long last I had the opportunity to do some research about the issue and eventually write some preliminary thoughts on the matter. The problem, in a nutshell, was that international law prohibited the concept of acquiring ownership of parts or the whole of naturally occurring objects in space, such as planets, asteroids etc. I felt, and still do, that people who get to outer space will claim property rights to outer space objects, similar to the way it works on earth, and that there is scope for the development of space law to allow for – and regulate these actions. Thereafter, a couple of years ago, and like a good academic; I went off to France and presented a paper on the topic of property in outer space at the Toulouse Space Show. I enthusiastically (and somewhat naively) presented my views on **property and ownership in outer space** to a crowd of space lawyers (or whatever the collective noun is in this case – a galaxy, constellation, cluster?). They were kind enough to hear me out, but eventually in the Q and A session, someone summed up the general feeling of the crowd as follows: "your views are very interesting, but unfortunately this cannot be, since it is not in accordance with the international conventions". Perhaps I should note here that these conventions are a product of the cold war and the associated fears surrounding it; and have remained essentially unchanged since their inception. And as far as the changes in technological and scientific development,

innovation and abilities go, these conventions might just as well have been initiated in ancient times. But I digress, my comeback to the space lawyers at the conference was something along the line of "well, if international law and the conventions do not allow for the development suggested by me, then they are wrong and should change". You can just imagine how well that statement was received! During the following years I have managed to continue to engage with the topic and have written a number of articles and book chapters on the issue. Since that time, the sentiment expressed by the audience at the conference has started to change, and there is currently a clear international push by some of the biggest actors in the outer space arena, such as the USA, to normalize the idea that one could acquire ownership or at least property rights to naturally occurring objects in other space... I feel slightly vindicated.

As an aside here it is important to note that contrary to what many lawyers, judges and even academics believe, the law is not, and has never been, set in stone, immutable and stagnant. It has always been in motion, sometimes developing slowly, but in other instances developing in leaps and bounds. It can be said that the tempo of change and development in law typically follows that of development in society at large. It follows that disruptive changes in society and technological innovation should automatically trigger disruptive changes in law. Think, for instance, of the challenges faced by the law of the time in dealing with the immediate after effect of the French Revolution or the Industrial Revolution. And place this in context with the fact that we are currently actually participating and experiencing the fourth industrial revolution – which is caused by such disruptive innovations and technological advances as artificial intelligence, virtual and augmented reality, robotics, self-driving cars and self-replicating robots (or at least 3D printers).

This brings us to the third example:

A while ago, a journalist contacted me and asked what laws (if any) there are to protect humanity from the scenario where robots or artificial intelligence could take over the world. Cue flashbacks to the Terminator movies and the malevolent Skynet AI which caused Armageddon. It was an interesting question, but the possibility of such a far-fetched scenario seemed very remote at the time. I was, however, quite certain that there must be various legal instruments that deal with such a doomsday scenario, or at least would try to regulate surrounding aspects of technology. I was sorely mistaken. At the time of my initial research into the matter, I could only find one group of people in the far-east who seemed to deal with the issue coherently – and they were scientists. Their analysis of the best way to deal with the threat of AI was that we would have to embrace a policy of mutual recognition and respect between Artificial Intelligence and humans. If not, we would probably face eventual annihilation at the hands of AI. I did find some laws dealing with robotics – but those were essentially occupational health and safety laws – with guidelines on how far you have to stand away from a robotic arm in a factory etc. In the few years since my initial investigations into the matter, the role of AI, and the policies and ethics surrounding it has started to get mainstream international attention. It is currently receiving high level legal attention from such heavyweight law shaping institutions as the American Law Institute and the European Law Institute which both have projects concerning AI and ancillary areas of technology such as robotics and automated contracts. More specifically, the ELI's Digital Law Special Interest Group (of which I am a member) lists the following current subgroups where research is currently being undertaken: Online Intermediary Platforms; Free Flow of Data and Data Property; Internet of Things and

Self-Driving Vehicles; Big Data and Personalisation of Private Law; The Future of Digital Technologies: The law clinic; 3D Printing: Challenges for Contract, IP and Tort Law; Information, Advice and Intermediation in a Digital World; The Data Protection Officer; Robotics; Blockchain Technology and Smart Contracts; and last but not least: Artificial Intelligence.

So what does this mean – most of these topics would have seemed unthinkable as areas for serious legal studies a few years ago – now they are vigorously being investigated and in fact the legal research is actively influencing current law-making around the world – irrespective of the fact that most people (and lawyers) will just shake their heads in disbelief if you tell them that you are doing active research in one of these fields.

So, moving on to the next example, I would like you to consider – for just one moment- that there is a possibility that artificial intelligence is on the cusp of becoming self-aware. If this happens, one scenario is that this event (sometimes called the singularity) will result in a cascade effect where there is a runaway reaction of self-improvement in the AI – eventually resulting in a super-intelligence that would far surpass the human intellect! What a scary thought. Even leaving that aside, if your robotic vacuum cleaner – like the Roomba – was to become self-aware, and therefore be aware of its own existence, could you just throw it away if it broke? Would you not have an ethical and moral obligation to repair it if it broke, rather than just to replace it. As humans we often tie our humanity and separateness from the rest of the animal kingdom to the maxim – *cogito ergo sum* (I think therefore I am) – would the vacuum cleaner not also hold to that same maxim, or at least to the maxim of *computo ergo sum* (I compute therefore I am). And if you think this is crazy, some of the greatest

intellects and influencers of our time, including Stephen Hawking and Elon Musk – have warned of the dangers of a high probability for an AI takeover in the near future. Some of you in the audience will probably now think that even if AI becomes more prominent and we are surrounded (or even outnumbered) by robots, the so-called three laws of Robotics<sup>12</sup> (incorrectly attributed to Isaac Asimov) will protect us.

These laws state 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 orders given to it by human beings except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law."

While they sound cogent, it has been shown that these three laws are not foolproof, and as such a fourth law was introduced - endearingly called the "zeroth" law:

0. "A robot may not harm humanity, or through inaction allow humanity to come to harm."

This zeroth law also does not solve the problem, since it could be that the ultimate way for a robot or AI to prevent harm coming to humanity, might be to destroy humanity. Furthermore, and more pragmatically, aside from the noble ideals of the laws of robotics – the actual practice of robotics and especially their use by the military embrace the total opposite of the lofty ideals of the laws of robotics. In fact, since the military is one of the driving forces behind the developmental progress of robotics and AI, current practice actively allows for the hurting, maiming, and killing of humans by robots and AI. Perhaps the law needs to take note of this.

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<sup>12</sup> See in general Vaknin, S "The Fourth Law (of Robotics)"; Wikipedia "Three Laws of Robotics".

Keeping with the theme of IT and cyber developments, previously mentioned billionaire Elon Musk (known for creating such visionary companies and associated technologies as Tesla and SpaceX) has just announced progress on the so-called "neuralink" brain-computer interface. The neuralink is a device or technology that has the goal to connect the human brain to AI software. The low-hanging fruit in this case is for the technology to be used by people who are paralysed, to allow for control of their computers and phones. The eventual goal will be (and I quote) "to achieve a symbiosis with artificial intelligence" so as not to be left behind as AI develops, but to allow for a merging with AI. While this technology would allow us to interact with digital devices and information more efficiently – it once again leads to questions concerning the legality and ethics of so-called bio-hacking, as well as questions about ownership of data generated by the interaction with the devices. This is possibly also another step in the direction of moving or duplicating someone's consciousness into the cloud or some other set of digital archives – the question remains – could somebody own a copy of another person's consciousness or memories?

Following on from this is the question about ownership of so-called Big Data, one aspect of which relates to data generated by human interaction with technology; and here I will use its application to modern cars. Modern cars continuously collect data about a multitude of various aspects of the vehicle, its location, and the driver – including the driver's driving habits. Think of the example of cars that monitor whether you are nodding off and prompt you to wake up. Who owns this data and how can it be used? Could it be sold to the highest bidder? Could your insurance company use such information to reject a claim or decline to provide you with cover? This sounds rather abstract does it not? But what happens to the data collected by insurance

companies with the full knowledge and blessing of South Africans? The insurance companies promote the intrusive monitoring of your driving habits as a way to earn discounts and loyalty points – but do we really believe that this is where the use of the data will end? I am quite sure that we will soon find out that the same data will be used against clients to reject claims, increase insurance premiums and even to terminate the insurance policies of clients. And afterwards – what then? – Does that data get added to a central register of insurers who will share it or sell it to others – with the possibility that a person will become uninsurable through no fault of his or her own?

This illustrates why it is necessary to ask "what if" ... "what if this happens". To date there seems to be lethargy in legislators and researchers – especially when it comes to pro-active planning and policy making. It takes effort, creativity and imaginative thinking outside the box to work through such possibilities and problems as raised above and to then think of possible solutions. This is where the comforting cosiness of the ivory tower comes in. It gives researchers like me the opportunity, facilities, tools and time, to ponder the mysteries of current, emerging and possible future technological advances and the concurrent ability to pro-actively contribute to the scientific, legal and societal debates that both shape and is simultaneously shaped by technological advances. And this is free from the constraints of contract driven and real-world applicable research that often dictates what researchers can spend their time and effort on.

## **Conclusion**

Is our university an ivory tower? Perhaps once the August winds start to blow and the Law Faculty is covered by a thin sheen of dust, our white building can be described as ivory coloured. It certainly is not a tower – and as for being able to loftily view the

masses (of students) from above – that is simply not something that we can do – the ground is too close. Our faculty is open to students, and lecturers and researchers are accessible and available. At other institutions, the academic staff are locked away in literal towers (of concrete) and students have to battle their way past any number of gatekeepers. While this accessibility is good for our students, for teaching, and for our participation in society in general – we should jealously guard the little time of solitary, and lofty confinement, away from the bustle of the crowd and the demands of everyday life. This peaceful isolation is the most necessary evil of research. Away from the pressing needs of the real world and pressing administrative tasks. Sometimes, we need to be able to ask, "what if", - and be inspired by irrelevant and fanciful ideas from impractical and even improbable sources. Because, if we are able to dream every once in a while, those dreams turn into visions which turn into reality. The crazy "what if's" become "what whens", and eventually "what nows"? And sometime, especially when it comes to the intricate dance between law and technological innovation, it is better for lawyers to be prepared, than to always lag behind, scratching our heads, and saying "but this is not allowed".

### **Vote of thanks**

I did not have to give much thought to the planning of this event since Ms Saritha Marais – the keeper of faculty knowledge and defender of the budget, took everything on her to plan this fabulous event. Thank you so much Saritha, Daleen and Rieëtte! Once again, a big vote of thanks to our DVC, Prof Balia; our Dean, Prof De La Harpe and the kind words by Dr Cupido. We can thank the Faculty and the University for the funding of this event, the provision of this glorious venue, the catering and everything associated with it. I will thank the caterers later – as they say the proof is in the tasting!

I would also like to thank every single person who came out in the cold this evening to listen to me ruminate on weird areas of development and the law associated with it. To every colleague, family member and friend, some of you who have driven quite far, thanks for supporting me. While the life of an academic is often a lonely one, the support of colleagues and family is supremely necessary for a successful career. A special thanks to my mother and brother. To my lovely wife, Maryke – you supported me throughout my career and encouraged me every step of the way – no words of gratitude can suffice. Finally, and most importantly, I owe all my thanks to God, without Whom all of this would be impossible

Now, I believe that we are nearly finished with the formalities, and after we are done with the next part there is some snacks and wine to help heat you on this cold winter's night.

### **Abbreviated Bibliography<sup>13</sup>**

Anon "The meaning and origin of the expression: Ivory Tower" 2020 *The Phrase Finder* at <https://www.phrases.org.uk/meanings/210800.html> last accessed 22/11/2020.

Bergson, H. (tr Brereton C & Rothwell F) *Laughter – An Essay on the Meaning of the Comic* (1911) (Macmillan and Co, London) at <https://archive.org/details/b28135544/page/n5/mode/2up> last accessed 22/11/2020

Erlank, W. *Property in Virtual Worlds* (2012) (University of Stellenbosch, Stellenbosch)

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<sup>13</sup> See footnote 1 above for disclaimer.

International Bible Society *Holy Bible, New International Version NIV* 1984 (Biblica, Colorado Springs)

Vaknin, S. "The Fourth Law (of Robotics)" (date unknown) at <http://samvak.tripod.com/robot.html>  
last accessed 02/11/2020

Wendler, W.V. "Our University – The Ivory Tower" 2009 *Higher Education Policy Commentary* Paper  
30

Wikipedia "Three Laws of Robotics" 2020 at [https://en.wikipedia.org/wiki/Three\\_Laws\\_of\\_Robotics](https://en.wikipedia.org/wiki/Three_Laws_of_Robotics)  
last accessed 02/11/2020.