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Transcript

Drones: The Future of War?

Professor Christopher Coker

Professor of International Relations, LSE; author, *Warrior Geeks: How 21st Century Technology Is Changing the Way We Fight and Think About War*

Dr Marco Roscini

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Chair: Deborah Haynes

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Deborah Haynes:

We're here today with two very distinguished speakers to talk to us about drones, or UAVs – or as the military now likes to call them, 'remotely piloted air systems', because that makes them sound a bit more soft and cuddly.

Our first speaker is going to be Professor Christopher Coker. He is a professor of international relations at the London School of Economics, and an expert in defence and foreign policy. He is also a serving member of the Washington Strategy Seminar, the Institute for Foreign Policy Analysis, the Moscow School of Politics and the LSE Cold War Studies Centre. He has also recently published a book, which is available for purchase at the desk afterwards if you're interested, called *Warrior Geeks: How 21st Century Technology Is Changing the Way We Fight and Think About War*.

Our second speaker is Dr Marco Roscini. He is a reader in international law at the University of Westminster School of Law and a visiting fellow at King's College London. He is widely published on the law of armed conflict and disarmament law. His book, *Non-Proliferation Law as a Special Regime*, which he co-edited, has just been published by Cambridge University Press. He is currently writing a monograph on cyber operations for Oxford University Press. He is a member of the International Law Association's Committee on Nuclear Weapons, Non-Proliferation and Contemporary International Law, and of the European Union Non-Proliferation Consortium. So a very well established expert. He will be talking about the legality of drones, and Professor Coker will be talking about the future of armed conflict and how drones are invariably going to be playing a part in that.

Unfortunately, David Aaronovitch of *The Times* sends his apologies – he is unable to come tonight. I think he's been called in to help out following Margaret Thatcher's death. I also work at *The Times* – sorry, I should have introduced myself. I'm the defence editor at *The Times*, and I've written quite a lot about drones, on the sort of military utility side of things. So I'll be making a few comments on that. But without further ado, I'll hand over to Christopher Coker.

Christopher Coker:

Thank you very much. I've only got 10 minutes in which to explain how drones are not changing the face of war but are part of the change in the face of war. The chair asked me, just before we came in here, whether I was in favour of drones or not, and I said I was resigned to the use of drones – because I am resigned to this change in the face of war. I don't think there's

much point being for or against it. This is the very first observation I want to make. I'm going to make five very quick ones.

Practically every technology from the early 20th century on, the inventors of those technologies said that they would make war impossible. Orville Wright said, 13 years after he took flight, that planes would make war impossible. [Guglielmo] Marconi, the inventor of radio, said that radio would make war 'wicked', which is a slight variation on Oscar Wilde's idea that once war ceased to be wicked and became vulgar, it would come to an end. I think he still was onto something there. The third was Hiram Maxim, the inventor of the machine gun, who said it would make war so wicked that it would not come to an end. [*sic*]

The fascinating thing is that no one has said that the invention of drones is likely to bring war to an end. Seventy-six countries are now investing in drone technology – not all of this the 'killer drones'; not all of them Predator drones, for example, or the next generation. Only 15 countries are investing in cyber warfare technology. But the fact is that although groups like Human Rights Watch argue that we should try to ban what they call 'killer robots' – they see drones as a kind of avatar of the future; drones are not robots, of course, but they will become robots in 15 years' time when they become fully autonomous and don't require pilots with a joystick. That is going to be the end result. No one is suggesting that they are going to bring war to an end, or could do. That's the first point I would make.

The second point I would say is that this is a further development of something which has long been happening, which is the reduction of war's human space. The human element gets smaller and smaller, particularly when it comes to physical labour. We will still have people out in the field – the grunts, as the Americans like to call them – who will be doing the physical things. Women will be joining them in combat after 2016, as you know, and I'll come to that point in a moment. But the point is that war has become more and more cerebral in the last hundred years. This is the direction in which we are going.

To be a warrior in the 21st century is to essentially be somebody behind a screen, whether it's a cyber screen, a cyber warrior or what the Americans call cubicle warriors – drone pilots, analytical warriors, people whose job is to process data. People who have three particular attributes which are now required of warfare in the 21st century, compared with, say, a hundred years ago: mental agility, communication skills and multitasking. A particular generation – and most drone pilots in the United States are between the ages

of 19 and 21, precisely the generation that is very good at these particular things. But a generation that has difficulty coping with stress, a generation that does get traumatized by what they see on their screens, and a generation that may not be able to cope with stress as much as the ideal age for coping with stress on a battlefield, which is still around 23.

A third point that I want to make is: what is the commitment and the engagement with war? We talk about the dissociation of sensibility, that in essence we're worried that war is becoming more and more like a video game. There are people who now spend 80 hours a week playing video games. Many of them are the generation of the drone pilots. Some of them are the drone pilots themselves. There was a virus that got into the American drone system last year which for a moment people thought might have been placed there by Al-Qaeda or by Russia or by China. In the end it was discovered that in fact it was the fact that they were playing games at the same time that they were sometimes flying the drones, and the virus had jumped from one system to the other.

The dissociation of sensibility – very different from distance. We were very worried in the late 19th and 20th centuries that if you were behind a machine gun or behind artillery pieces, you're lobbing mortar bombs or whatever it might be miles away, or if you are 35,000 feet up bombing a German or Japanese city in the 1940s, to what extent did you appreciate the damage that was actually being caused? This was the problem of distance, physical distance.

This problem is a different one. It's about dissociation – not actually knowing what you're doing. This is of great concern to the American military and I imagine to the British military as well. There was an article in *The Economist* in November 2012 saying our soldiers must now be quarantined against trauma, since trauma is now the biggest reason why people are hospitalized. The suicide rate now is going at 14 a week in the United States military. This is a concern, that human beings are having more and more difficulty coping with war. So the idea is that if they are dissociated from what they see on a screen, then that might be the best way of doing it.

We're talking about empathy here, essentially. Is it possible to empathize with the enemy that you are watching all the time on the screen and that you're about to vaporize at some point? The main point about empathy is it's a rewiring problem – it's a neural problem, it's a patterning problem in our brains. Empathy is in the prefrontal cortex. If you have to – and there's been a 3,000 per cent increase in the amount of information that is now processed as

a result of video streaming from drones, and it gets more and more demanding every week as the information continues to accrue – at what point, in order to process the information, do you have to switch off that part of the brain which is the part of the brain where you empathize?

Basically it's a bandwidth problem. You have to go broadband, and there are only two ways you can go broadband. One is by putting microchips in brains – we do that for paraplegics, and that enables them to actually be able to move a cursor around without use of their hands. We do it with blind people: about 15,000 people in the United States can now see as a result of microchips in their brains. We don't do it with drone pilots because of the side effects. You only put microchips in brains if there is a real physical problem that you want to address and there's a benefit that emerges from it, whatever the side effects may be.

The other is just taking drugs to boost concentration. The drug of use is Ritalin; 20 per cent of scientists, *Nature* magazine worked out as a result of a poll a couple of years ago, now take Ritalin voluntarily to keep up with the amount of information that is appearing every week in the magazines and on their screens.

So I think the rewiring of our brains is something which is quite new in war, and the rewiring is something that is of interest to Americans, to the American military. They are worried about concentration, because if you're watching a screen for eight or 12 hours a day you begin to lose concentration. They're monitoring concentration levels through brain scanning now. They can switch drone pilots off if necessary, when they realize that they're losing their concentration. Susan Greenfield at Oxford, the neuroscientist, has written about this at some length. She's very concerned about these issues – something we might want to have a look at, because this is new in war. This is not the interface of the human being and technology; this is the integration of the human being into technology, and the integration of technology into the human being. This is something which is new.

A fourth point: are they warriors? Are drone pilots warriors? You can now get a medal for being a drone pilot: it's called the Distinguished Warfare Medal in the United States. It actually is more prestigious than getting the Bronze Star or the Purple Heart. This upsets a lot of American infantrymen, who feel that those two medals which they are entitled to win through good service on the battlefield – this is a matter of some concern. But it seems that we are tenaciously holding to the idea or the myth of the warrior, as something that we can't let go of. Not least because of course with the warrior comes the

warrior ethos. This is where we come to the morality and the ethics – not necessarily the law.

But let's ask some other questions. Why shouldn't civilians be drone pilots? Indeed, a Predator commander in the United States last year said civilians could do the job just as well. Why do you actually have to wear a uniform to be a drone pilot? There are examples in history – we can go into this if you like – of where civilians have actually performed military functions.

And women: one of the fascinating things about the future character of war is going to be the use of women in combat but you won't find women drone pilots – very few. The actual people who have the joysticks, as opposed to the analysts – you don't find many women cyber warriors. It's an interesting phenomenon because of course the generation that are drone pilots are the generation of video game players, who tend to be adolescent males. Just as the number of people who hack into computers from the age of 11 or even earlier these days – who the US military deliberately looks for now to be the cyber warriors of the future, many of them with criminal records because of their hacking activities, but not for gain, just out of curiosity or to win kudos – are mostly male adolescents, not women. So when it comes to the feminization of war or the masculinization of women, these are issues that divide the community when it comes to whether women should do combat or not. Nobody needs to talk about women here because this is still a male world. How long that will remain the case is in itself quite interesting.

Last point: what's happening to war then? I think that war is alive and well. It is once again showing its protean nature, its resilience, its ability to reinvent itself for the 21st century. I think it may be becoming a little bit smaller. Some of you may know that wonderful line in *Sunset Boulevard*, where Joe Gillis, the journalist, says to Norma Desmond, 'You used to be in pictures – you used to be big.' She says, 'I am big, it's the movies that got small.' In essence, I think, war is perhaps getting smaller in the way that perhaps 50 years ago we would have understood it, in terms of involving an entire community and producing national heroes and producing heroic stereotypes – or real heroic personalities.

I think this is beginning to be touched upon by writers. I just wanted to mention two writers in conclusion. John Updike: one of his last novels was about a putative war between the United States and China in 2020, where his hero looks back at what he calls a 'diminished world' – a war that had been brought to us by young men and women, highly trained, doing 3G computer graphics in bunkers and never actually emerging to understand the real world.

Or Don DeLillo's short story, 'Human Moments in World War III', written a long time ago in 1982, long before – well, drones have been with us since the 1960s, but long before drones became part of the popular psyche. Writing about a young guy called Vollmer in a space orbital mission: essentially a drone pilot, zapping anything that moves on the planet, wearing his carpet slippers at the remote console, wearing whatever costume he wants because he doesn't have to wear a uniform, and at one point saying in the story to his commanding officer, 'You know, I'm actually quite happy.' And his commanding officer saying, 'Listen, happiness is not one of the mission parameters.'

Emotions are not the mission parameters. It's what Clausewitz said is what war might become one day, although he had difficulty imagining it: war by algebra, war without human emotion, war without human involvement. Now, we are a long way away from that, and drone pilots are involved emotionally, which is why many of them suffer as they do. They make sacrifices. It's an extraordinary kind of life that you or I would be asked to lead, to spend 12 hours in the office, possibly killing people, and then having to go back to your wife and children. You try to live that life. That is a life of sacrifice that they have to make, and that is why war still has this human dimension.

But I want to end on this note, and it's the note that I tried to develop in the book, which is essentially that war has always been what Thucydides, the first military historian in the world, called 'the human thing'. He refused to come up with any other definition for war. It's very generic, 'the human thing'. It's what human beings do.

But I think our humanity is beginning to change. We will be sharing the battle spaces of the future with robots, so that coexistence with machines is going to be a very important part – but we're not here to talk about robots today. We are talking about the integration of man and machine – man and machine, not woman and machine, at this particular level. That I think would, if Thucydides were alive today, make it very difficult for him to come up with this term 'the human thing' – unless we say that our humanity itself is changing, as Susan Greenfield suggests, as a result of changes in our neural patterning and things of this kind, and we're talking about post-humanity, the post-human age. This is the first sign of post-human war. On that note, I will end.

Deborah Haynes:

Thank you very much. A futuristic view of what is to come, which is very interesting, thank you. I forgot to say this is all on the record and is actually

being streamed live on the internet. Now we have Marco, to offer your views on drones.

Marco Roscini:

I'm going to talk about the legal situation here. In 10 minutes I can only paint in very broad strokes, but I hope I give you an idea and perhaps we can expand on some details in the Q&A session. I'll also be talking only about combat drones, not drones for other purposes – for instance, intelligence gathering, etc. – which raise different problems.

As far as combat drones are concerned – drones that are equipped with and use weapons – we have first of all to establish the right legal framework. Are these drones used in the context of an armed conflict – international or non-international – or are they used outside the context of an armed conflict? Because if the latter is the case, the legal framework is domestic laws and international human rights law.

Now, international human rights law is very stringent with regard to the requirements for the use of lethal force. You can only use lethal force under international human rights law – for instance, if you look at the European Convention on Human Rights – where it is absolutely necessary to protect someone, to prevent another person from an unlawful use of force or to execute an arrest, or to quell a riot or an insurrection. So it is very stringent: you can use force, lethal force even, but only to protect other human lives. That's why in most cases the use of drones equipped with lethal weapons will be an extra-judicial execution, or at least that was the opinion, for instance, of the special rapporteur on extra-judicial execution with regard to the drone killings in Yemen in 2002.

But if we move on from the peacetime context and the drone attack is situated in the context of an armed conflict, then it is international humanitarian law (IHL) – the laws of war – that applies. International humanitarian law is much more liberal with regard to lethal force. You can use lethal force not to protect human lives and when it is absolutely necessary, but to achieve a military advantage. A very concrete and direct military advantage, but that's the purpose that would allow the use of lethal force.

In this context, I think the drones have to be distinguished into at least – again, broad strokes here – two categories: those that are unmanned but remotely piloted from someone who is sitting comfortably somewhere very far from the battlefield perhaps, and the possible future use of fully autonomous

weapons systems. As far as the first ones are concerned – as far as remotely piloted systems are concerned – international humanitarian law has two main principles in attack: the principle of distinction and the principle of proportionality, which translate into two main obligations. The obligation not to make civilians the direct object of an attack – civilians and civilian objects – this is the principle of distinction. The principle of proportionality means that when you target a military objective, it is admissible that civilians and civilian damage occurs in the process – this is not a violation of IHL; even less is it a war crime. But this must not be excessive with respect to the military advantage that you gain from attacking that military target.

Now the question is whether drones are compatible with these principles. If they can never be used consistently with these principles, then they would be unlawful weapons. Unlawful means you don't need treaties, you don't need to conclude, negotiate and ratify a treaty to outlaw them – they would already be outlawed, if they can never be used consistently with distinction and proportionality.

As I said, if you distinguish between a remotely piloted system and a fully autonomous system, the former would just be another case of remote warfare. So there would be no peculiarities here. Remote warfare is something that, as we said, started with warfare. The fact that there is no visual confirmation of the target does not mean that the attack will be indiscriminate. It might increase the risk of errors but that's not necessarily the case. I could, for instance, make also the opposite argument: that is, this person that is controlling the weapons system and sitting in this office would probably be surrounded by senior military officials, military lawyers, etc., who perhaps would be able to better advise this person on what they can do and what they cannot do. Technology could allow, through the use of high-precision sensors or algorithms, etc., to distinguish between what is a lawful military objective and what is a child or a civilian. So although there could be situations where the use could be problematic, this is not necessarily and always the case.

Also, from the point of view of proportionality, remotely piloted systems might actually be a better way to comply with this principle, because the pilot who is remotely situated elsewhere will not have to take additional risks in order, for instance, to go closer to the target and check better whether the target is really a military objective or not. They can fly down and have a better vision of the target. You might remember, for instance, that was the case in Serbia during the Kosovo war. The NATO pilots were flying at a very high altitude to avoid being shot down, but it obviously created problems with regard to the

accuracy of the attack. You wouldn't have that problem because by flying at lower degrees in the altitude there would be no risk of losing soldiers.

With regard to fully autonomous weapons, however, the problem might be – these are where the new problems are. Human Rights Watch, for instance, has published a report recently called 'Losing Humanity', where they claim that a fully autonomous machine would never be able to distinguish between civilians and combatants. There's nobody that checks on a screen – these machines would be fully autonomous. I think the conclusion that even if fully autonomous the system would be inherently indiscriminate is a bit simplistic. First of all, because you could use it in an area where there are no civilians. For instance, you could use these kinds of machines on the high seas against warships. There would be no risk of breaching the principle of distinction simply because there are no civilians around. But even if there were, again, the use of technology might allow the distinction between civilians and combatants, and military and civilian objectives. As we were saying, it is one of the advantages that the autonomous system will not act out of self-preservation, or hunger for revenge, or fatigue – although obviously, on the other hand, it would not feel any sympathy for the target, or remorse.

With regard to the other principle, the principle of proportionality, this is where fully autonomous systems might be more problematic – more problematic than with distinguishing between combatants and civilians. Would fully autonomous weapons systems be able to balance these two values: military necessity and humanitarian considerations? The number of civilians killed incidentally, and the military advantage gained from the attack? This is not just a quantitative evaluation obviously – it's a qualitative one, and it's also very situational. It depends very much on the situation on the battlefield and that might change quite quickly. Would the machine – I assume it will have to be pre-programmed – envisage all possible scenarios and all possible combinations in order that it can make the evaluation?

On the other hand, there could be other ways that even a fully autonomous machine could meet the principle of proportionality. Again, it could be used in areas where there is no or little presence of civilians. It could be equipped with no lethal weapons if there is a huge concentration of civilians, and so on.

So my conclusion is just that I can't see drones, whether fully autonomous or remotely piloted, as inherently unlawful because they can never comply with these principles. There are situations where they can be used – actually, they can increase in certain situations the accuracy of the attack and minimize the collateral damage. So we should distinguish between indiscriminate weapons

and the indiscriminate use of weapons. In this case I think we are in the latter scenario. It all depends how you use them. That's why the duty to take precautions, which is another basic rule in the international humanitarian law regulating attacks, is fundamental. You always have to check that all feasible precautions have been taken, drone or not drone – it applies to attacks by all kinds of weapons. But in particular this should apply to drones as well as other remote kinds of warfare. So if it becomes clear at some point that the target is not a military objective, if it becomes clear that in the attack you will cause excessive civilian damage, the attack must be cancelled and suspended. This is not my opinion; it is the Protocols to the Geneva Conventions that say so. If there is doubt whether the target is civilian or military, it has to be presumed to be civilian. If the combatant surrenders, the attack has to be cancelled.

The question is whether a fully autonomous system will be able to take these precautions or not. That's why probably even in the case of fully autonomous systems you still need a man in the loop that monitors the situation and is able to take control of the system if things go wrong and the situation changes.

So just to make my final point, I would say that combat drones are not inherently indiscriminate weapons because there are circumstances and situations and drones that can be used consistently with international humanitarian law. So it all depends on how you use them. In order to check the boxes that you need to tick to verify that the use of drones in a certain specific case is lawful or not. First you have to establish whether it is a peacetime or a wartime operation. If it is peacetime, you check that it is consistent with international human rights law: it is absolutely necessary against the threat of violence against other persons. If it is armed conflict, you have to use it consistently with IHL: you can only target a combatant, or a civilian taking direct part in hostilities; you can't cause excessive collateral damage, and all feasible precautions are taken.

Obviously there is also the further issue of when the attack occurs outside the immediate area of hostilities, such as the case of Pakistan. In that case we have an additional level of legality, which is not international humanitarian law but the UN Charter and the respect of the sovereignty of other states, which is regulated by the Charter. Therefore you need the consent of that state to conduct the operation, unless you can claim self-defence. I can stop here.

Deborah Haynes:

Thank you very much. Two really interesting insights into the whole world of drones. I was asked to make some comments as well, to replace my colleague, but because this has gone on for so long I will keep them very short.

Drones have become such a hugely controversial topic. Obviously any new weapon is controversial but drones have been particularly so because of the whole emotive nature of the collateral damage and the sort of secrecy behind the CIA-backed programme in places like Pakistan, Yemen, Somalia. You have the whole human rights lobby calling for drones to be outlawed or accusing the United States of war crimes – and potentially the United Kingdom, because there is that question of intelligence sharing when finding targets in places like Pakistan, for targeted drone strikes.

The fact that governments have yet to engage properly in a really open debate about their policy for drones is something that I think is quite lacking and should be embraced. That way it would help everybody to understand why drones are so useful. The fact is, if you speak people on the intelligence side of things, they will say that drones have been the single most effective weapon against terrorism over the past decade, because they can strike in places where it is very difficult for humans – for special operations guys – to get to. But then the counter-argument is, what about when terrorist groups start using remotely piloted objects to launch terrorism attacks? This was obviously a concern, for example, during the Olympic Games.

Drones clearly are here to stay and that is why debates like this are really useful, really helpful, and will hopefully help to shape a future where drones slot in with all other forms of conventional weapons.