Moderator: Welcome to the Western Way of Warfare. This is a weekly podcast that tries to understand the issues around how to fight and succeed against adversaries in the 2020s. I'm Peter Roberts, director of military sciences at the Royal United Services Institute on Whitehall and every week I'll talk to a guest about the Western way of warfare, has it been successful, is it fit for task today and how much it needs to adapt in the future. This podcast is only possible because of the kind sponsorship of the good people at Raytheon UK, a subsidiary of Raytheon Technology, a British company that creates jobs in England, Wales and Scotland contributing over £700 million to the UK economy. Over the past 5 years my team at RUSI has been increasingly interested in the interaction of fighting styles between belligerents, specifically how Western forces have fared with adversaries who didn't engage in warfare in the way that Western militaries had predicted and expected they would. The record in reality versus how such conflicts pan out in war games or virtual scenarios isn't great, success on the battlefield above the microbe is proving most illusive. This is not simply an imbalance of technology of inefficiencies but rather is connected to the way each side is fighting. That how part of warfare doesn't get too much coverage, some people argue that our military failures have been due to an inability to do manoeuvre in some form or another well enough.

We have been wondering whether this is a little too tunnel vision, what of those concepts that form the triumvirate of fighting styles that used to sit alongside manoeuvre, and here I mean positional and attritional warfare. As Tony King talked about in an episode of the podcast last year we need to be more critical about manoeuvre rather than just accepting it as the single panacea to every problem. All of this came to ahead, I don't know, 15 months ago when it became clear to me that engagements fought between the West and the rest were different in how but also in the why. Digging into this as we wrote our paper on the Future Conflict Operating Environment in 2019 it was clear that the rules of warfare were understood and perceived differently between the West and others and this was only likely to increase in the future. Having tested this idea in a paper last year we started to setup a research project called The Future Rules of Conflict. Here it's important for us to acknowledge that our own perceptions of the rules are changing given technologies, societal attitude, budgets and risk appetites but it's also important how this interacts with our adversaries in peace and in war. These are shifting the norms of competition and conflict. The implications from such deductions are significant, we might imagine that our moral, ethical and legal frameworks are robust but there are significant questions about whether they would stand up to future challenges. Getting funding for any project during a pandemic is testing and finding someone to jump on-board with this is a real challenge.

After some soul-searching we just couldn't delay any longer and formed a partnership with HRI at the University of Buckingham to kick off the work while we waited for funding to catch up with thought leadership in this field. Today my guest is someone who overlaps between RUSI and HRI and is currently responsible for delivering the first stage of this project and I wanted to get him to come in and talk to you about the future rules of conflict because this is one of the most vital pieces of the jigsaw about the
Western way of warfare and it's not getting too much coverage right now. As a day job Dr Paddy Walker runs the Leon Group, now a fifth-generation multi-asset family office. By night this mild-mannered former ops officer of 7th Armoured Brigade under Patrick Cordingley has an almost unhealthy obsession with the future of autonomy on the battle field, specifically the question of moral and ethical challenges associated with the potential removal of human control from such systems. Paddy is the co-chair of the London Committee of the Human Rights Watch and a director of Article 36, an NGO focussed on reducing collateral harm from weapons. He's got a PhD from Buckingham School of Humanities in the field of autonomous weapons and challenges on their deployment. He's a senior research fellow at Buckingham's Humanities Research Institute and an associate fellow at RUSI.

In Paddy we have a genuine crossover of military to academia with proven business acumen and the perfect choice of a person to talk to us about this work on the future rules and norms of conflict and war. Given Paddy's research and background I am really interested to hear of what he makes of our first question. Dr Paddy Walker, what does the Western way of warfare mean to you?

Dr Paddy Walker: Professor Peter, thank you very much for having me as your guest today and also your excellent thought leadership and initiatives around this space. First off, I do feel a slight imposter here as your and my project is in very early stages at the moment and we'll be covering that I'm sure over the next half hour. Onto your question, so I found it suitably daunting and I wondered if that was not least because it actually captures the essence of what we're trying to do with our project, so just as norms of war are changing, which obviously they are, so to any definition of the way of war, so your question today. This I think all underscores the general uncertainty here by pretty much all of the inputs that need consideration, both of the project but also for your question. It's in macro matters, it's grand strategy but my interest is all the way down to boots on the ground practicalities, operations that strategy informs and then also entails. I thought actually the best contribution I could do today would be to give you an answer but actually probably more importantly I think to discuss a couple of observations on how our audience might like to frame the matter ongoing, so as our project and we'll be doing 3-monthly, 6-monthly distillations of what we’re doing so they can frame the matter ongoing. I like that and obviously this will feed into our project outputs in due course.

First point we've already discussed, this general degree of uncertainty. It's that sort of fleetingness, that instability across the debate and it's not just the process of allocating weight to an argument or measuring a recent bit of catchy scholarship. I'm sure we'll speak later on hybrid and asymmetries place in our work but it's really about the multiplication of data points, it's about collecting reliable evidence about which we can then create an answer. It's not the spoiler for the rest of this podcast that all of this is morphing, as you said at the top, fundamentally and perhaps at a speed not seen before and a priority for our work is therefore really to judge is there an inflection point, what they are and really on these sort of change agents, to identify the change agents, their manner, speed and effect. That leads on nicely to the second point I think here, it is actually all about context. Lloyd Clark, who is my supervisor, just said that it's all about the economy stupid, it's all about context stupid. A moving pallet like this does need that framework, that rigour in order to support outputs that are relevant but also that are going to meet the test of time for our project. A possible contribution today I suggest is that framework and to me it's an equation through which to approach your question. Not surprisingly it's got a couple of parts to it this equation. Pace, we talked about the speed with which such changes will occur, persistence though, the longevity, the permanence of those changes, how relevant are they and then something I like, I like this term 'assemblage', assemblage.

Lots of change agent factors here and you mentioned some at the top, technological, technical, legal, my field the sort of operational leadership behavioural part of all of this and then of course the political, that's the context, together they will comprise the adjustment to a current way of war that we're going to discuss and understanding the ways of war actually requires the audience today and our readership when we get this project out is really to balance the equation’s 3 components. The third point before I actually get to
answer your question is really the importance of, and this may surprise, just the empirical lens through which to consider the question. It's got 2 parts there, so it's pragmatics not in the linguistic sense but actually the day-to-day actualities of battlefield grind, the resource constrained reality of skinny budgets that you mentioned, overextension. The expression I like from bounding from one thing that we're not ready for to another thing that we're not ready for and all being undertaken with weapons that are too few, too expensive and far too long to replace with which to fight that war. The second part relates to our themes and I'm sure we'll touch on our initial set of topics for our projects, our starter for 10 in a few minutes. From my perspective, as you also said, one important story, the important story is around autonomy and what will be the rise and rise of those cheap, unmanned and attritable, your word, assets. See for instance Jack Watling's great words on Nagorno-Karabakh.

The example there, so we've got the F-35. It contains more than 300,000 bits and most of the mare there to ensure (TC 00:10:00) that the pilot, to ensure that Peter Roberts is safe, he's comfortable, he's effective, he's doing a good job but empirically, of course, unmanned assets they don't need any maintenance and actually will enable a whole set of tasks and battle crafts. That is a changing norm. That's the framework, a rather long build up to answering your question but let's now briefly because I can do it quite quickly, a Western way of war? Today January 2021 I would borrow bits from General David Petraeus's excellent list. It is war undertaken by high quality professional forces, it's done with best weapons, best technology. It is genuine governance under the laws of armed combat, so proportionality, distinction, Martens Clause and the like, and we can cover that later if you want. Also an intention to minimise Blue Force casualties, in the case of our hyperpower ally in the US, it is full capability across all domains and arguably this still and erroneously dominates our own strategic planning here at Whitehall and given that our project will be aimed at Whitehall that will be a consideration. Closing here I'd add 3 sentences to this, we don't go to war on other people's soil. I didn't know how to include it but I worry that adversaries actually really have caught up, so I'm thinking here about widespread evolution in precision ammunitions, ramifications for aerial denial, previously safe areas.

Everyone on the battlefield can now be seen and another point on technology I think the possibility now of war on the cheap and the importance here is that in olden days we would call it 'non-peer, near-peer, peer-on-peer' or whatever. It's a blurring delineation between these states. Third, while we still trust in this small number of very technical, highly expensive, highly prized assets to deliver a swift win actually the issue for us in the Western way of war is still how we fight and not with what we fight. That's always the best indicator of success in conflict. Clear characteristics, an evolving picture, I'm sure it always has been. We're moving from predictable set pieces and well-defined parties, the old sea of red in a perfect square but I think now, Peter, the Western way of war it's going to be super contested, it's messy, it's unpredictable. Certainly a heavy conventional fist as a core enabler there but much more multi-domain, much more challenge. I'm glad I'm not doing it, the command and control and I would imagine greater scope for surprise and also exogeneity from adversary's actions.

Moderator: It struck me that there was a difference between the framework which you painted this broad canvas and the everything is changing, we're ill prepared for it, it's too fast, it's too complex and then almost the sort of clear methodological view that you took of it that says it's about high tech, best tech. It's about legal frameworks, it's about no casualties, it's about JADO, Joint All-Domain Operations. These are 2 very different ways of looking at it. Do you think therefore that we're at an inflection point? Lots of people talk about an inflection point, usually it's because of technology but do you see this inflection point it seems almost conceptual that you're saying that we do have one right now. That we've gone from this beautifully careful, predictable way of thinking about war to something that now says, 'That's not good enough anymore,' and you ended up by saying we've gone from predictable to super contested. This does mean we're at an inflection point necessarily from your description, right?
Dr Paddy Walker: Well, that is the wrestling point, isn't it? Again, it's context but it's also the role of history and continuity and setting that context. We have the traditionalists, they focus on continuity, they contend that strategy should not succumb to fads and I understand that. Really that's history fundamentally repeats, so Colin Gray, a historical perspective is that only protection against undue capture by the concerns of fashionable ideas of today. I asked you in preparing for this what you thought of that and actually you're probably in that camp. I never used to be in that camp but I probably am now. You start from the assumption that future war will be strategic history much as usual, regardless of weapon and other developments. In the middle ground there, and it is a continuum I think. In the middle ground you've got the pragmatists, perhaps it's Strawn and that sort of history is the study of change that students of change should look at Basil Liddell Hart observation that the past is a foreign place, situations never exactly repeat and actually change is the norm. If you're defence planner in all of this, we're talking about Whitehall, what must the defence planner be? Don't be wrong, that's it. Just don't be wrong, that's all he's got to do, he or she has got to do.

Then really to answer your question actually you've got the new club on the block, this notion of durable disorder and that's probably it's the disruption, it's the norm changing boundary, it's actually that conventional warfare is dead and there are some very different rules there. I think our project may be that the modern scholars, I think it was your word it's sort of like a pinprick compared to Colin Gray's work which gives it anchor and rigour but actually moving so quickly Jack Watling's work on the Caucasus and Nagorno, that actually shows that proper change is on its way so maybe that is that inflection point and that's why I think that the project that we're doing at the moment it does need to be anchored in context but I would imagine that all of these variables would actually probably move it slightly to the right and towards McFate.

Moderator: That is interesting because you've got Sean McFate, you've got David Kilcullen who aren't the right-hand edge of this. The far right-hand edge of this is the futurists, those in science fiction who are increasingly gaining traction with political and military leaders who seem seduced by these beautiful prose that P. W. Singer and August Cole write about what the future looks like in 5 year's time with amazing AI and swarms of AI-enabled drones that are scourging the battlefield and C2 organisations that are in a small place somewhere surrounded by touchscreens with Google glasses and smart gloves bringing precision effects everywhere. I guess it feels as if there needs to be a balance with this. Colin Gray and others are at the other end, as you described, they are, 'Actually this is not an inflection point, it will be seen as a very small change in the history of warfare,' but there's got to be somewhere in the middle. There's no way that we could just discount everything that's happening, the changes with AI, with data, with cyber, with space, with all the technologies that are coming on with quantum and nano, and gene editing, bioenhancement. All these things seem to be coming together at a moment. I wonder if you think that those points are actually coming together at the moment or we're just bringing them together.

Do we think that they're likely to all deliver over a 10-year timeframe that does bring a complete revolution to warfare or do you think that this is something that's going to be more spread out, that they will fail individually to live up to our expectations?

Dr Paddy Walker: There's a lot to unpack in that question, Peter, and interesting I was listening to the West Point podcast this morning. Our timeline is 2025 to 2035, they look rather bizarrely at 2028 to '35. Within that they certainly have all of the components that I look at for my dissertation, so autonomy and all the things you marvellously explained there. Let's look at the problems here with your scenario, this rosy scenario of technology you're coming here. Most of it is of course based on data and this sort of fantastic coming together of data there but it's incredibly difficult. The dynamic updating, the rapid obsolescence of that data, the polling, the number of data points, the heuristic minefield. That technology will be coming in in 10, 15 year's time or whatever but all of the heuristics that will be embedded in the coding of that is happening now, so recency heuristics and satisficing so where we don't have all of the data and with the noise of that data we're having then to backfill and all the data classification errors and whatever. I absolutely do not see that coming together in 10 years because it's not just the delivery of technology but of course it's
the integration of that technology and in the face of all of those inertia agents. These are such systemic changes that you're trying to bring on what is already a very fast-moving force, an army structure. All sorts of problems with doing that.

**Moderator:** Given that it strikes me it's really interesting that you talk about the heuristic minefield that we're approaching now and that we're laying the groundwork now but we're only writing the code for it now, a code that will contain our biases, our personality, our societal values right now but this (TC 00:20:00) is not going to come in for 10 years. No one expects us to see complex broad AI delivering any kind of assistance on the battlefield certainly in decision making until 2040 maybe. Can you explain why we're doing this project now? Why is this moment that we've decided on being really important, why is that true now if actually none of this stuff is coming to light for another 10 years?

**Dr Paddy Walker:** Great point, so why are we doing it? RUSI has to do it, RUSI is exactly the right organ to be doing this. No single body of work I think particularly currently looking collectively at the whole issue with fundamental research, with evidence to the extent that there is, notwithstanding it is a long dated issue, as you said. Norms are empirically changing we've been discussing so we need to be front footed on that and have that conversation within the broad bounds of the great power conversation, I think. Everything is moving so quickly so we do need some sort of structure to rein that in, to provide a play book to the extent that that is useful. At least it is useful because we can refer to it, revisit it, update it as other changes occur. We've got I think to prioritise all of these pieces and map their trajectories because they aren't, Peter, moving at the same time and there's the cross-cutting exercise because I think we've got 12 themes to start with, actually they're not discreet themes. They're themes that all move each other and as one moves that actually enables theme 4 and 5 to get traction and move quicker. The reason to do the project now I think there's lots of recent activity, we've got to engage with that activity and put it in that framework. We have got the timeliness of the 2023 Defence and Security white paper. I think it's a means for us to formalise institutional knowledge, also to signpost probably. Get a handle on whether the UK are we on pace, are we behind pace, are we ahead of the pace?

Given your long lead times actually there is this opportunity to inform procurement and policy alternatives, especially in what is a tight fiscal constraint. I think it's strategically lazy not to ask those questions and for the Humanities Research Institution at Buckingham and RUSI it's a great opportunity and an obligation on us I think to articulate the issue and advocate on the issue to advance knowledge. All of those things why we're going to be doing it now.

**Moderator:** Remind me, you've talked on the themes of this several times. What themes have you pulled that we're going to run?

**Dr Paddy Walker:** I don't want to just give a list because it will be rather dull but it's the battle space fighting I think we've called it. Change to operations in the deep and the close quarters and from that it's all the expanding domains, 5-dimension operations and such like. To me I think it's also the warfare processes, so we've discussed autonomy but it's remote operations and it's that incremental introduction of unsupervised methods and actually all of the ethical, moral as well as the operational, as well as the technological constraints upon that. We thought we'd give cyber at the moment its own heading, so 'digital attack, digital deterrents'. The deployment challenges and the integration of this new weaponry and technology within that sort of contextual piece that you and I have discussed, so the future for conventional land and sea operations and then the verso of that argument is the unconventional activities, so non-state, unrestricted, hybrid. The importance that one might give that in the grand scheme of new norms. I think an interesting one to look at is the cost of changing norms, so proliferation, escalation, instability. Anything that adds to this misunderstanding, the difficulty of second order effects and also I think the difficulty of especially in this un-war, non-war stuff is really establishing intent and within that the bubble of misunderstanding and wrong action is trying to look probably at leadership, command and control aspects there. The last 3 bits I would think that we do with that is stability of the structures that we have in place, so operational stability.
That is rules of engagement, it's current field manuals, it's course of action models and whatever, are they fit for purpose given what may be quite a speedy trajectory and change? Stability of the legal structure, so I chair Human Rights Watch and also a director of Article 36. It's looking at IHL, IHRL, civilian protections, remedies. All of that law of armed combat and I think also allied to that is the technological piece around can you really have an ethical governor that works in tandem? Some of these things look great on a piece of paper and you have this wonderful revolution and expectation. I've seen it on a page, that sort of future developments you talked about higher up in our chat but actually that's a revolution and expectation. Can you deliver that? Let's opine. I don't want to do it now but that will be something that's for our project. Then the last point here the context, context, context piece. It's the situational awareness, it's politics, it's that sort of sociobehavioural part and also the manning ramifications. What actually do you want your force to look like? What's appropriate given the foregoing?

**Moderator:** In that there is both the technical and the social sciences, isn't there? There's the pure STEM science and then the cognitive science around it. I guess the difficulty or one of the big difficulties we're going to come across is how we do that tech mapping against the values that we try and code into a system and the values that we have are changing but also understanding how the adversaries are coding their values or a different set of values into it and how those interrelate. This is an exceptionally complex conundrum to put together. It imagines in many ways everything into one melting pot. How? Frankly we've bitten off here more than we can chew, is it deliverable? Do we need to do that academic thing of breaking it down into much smaller very discreet bubbles and ignoring the breadth and the scale and the size of it. Is it possible to deliver something with the vision and the amount of variables that we've just talked about?

**Dr Paddy Walker:** I think so because it goes back to my point of empirics. Actually there's a lot going on, a lot of moving parts, lots of moving parts to the puzzle. I think notwithstanding Gray that certain parts of those puzzle actually empirically are more important than others. You mentioned the value part, so values is really challenging. Values for an autonomous weapon system, configuring that and applying confidence levels and coding for ambiguity, we talked about that. Learning from mistakes for a machine. How do you classify for these sort of moral traits in code of guilt and shame, and deceit and whatever? Values to me were my little red book at Sandhurst, what was it? Serve to lead or whatever which I think there was 7 of them. God, this is testing. Loyalty, duty, respect, service, integrity, courage or something like that but actually that is not part of what we are doing. We are much more interested in that sort of context dependent state, national values that you mooted at the top here. That's difficult to write so much about I think, this may be contentious to say this but states are opportunistic, they're quick. The decisions to do something that looks though it may change a norm whether it's using chemical weapons in Iraq, or whatever, actually how quick, how considered was that decision process? Was it panicked? Did they think they could get away with it? It's very much this public versus private and opportunism of it all.

I think it might not be as difficult and as worrying as you suggest. I think we can actually bring that down just using that empirical lens that I mentioned at the top to actually bring something that is useful but does try to qualify and place in a framework using that equation of pace and persistence, and the assemblage I think that we can bring that, deliver actually some really useful, empiric outputs there.

**Moderator:** I'm pleased you've said it's possible but when can the audience expect to see some of the outputs of this work and what are the outputs? What's it going to look like?

**Dr Paddy Walker:** The audience for the project military service members, defence policy makers, think-tanks, special interest, third sector politicians across the way from RUSI, procurement. I think all of that and as I said before that the ability to connect academics and journalists, and whatever. We've got to establish that baseline, we're going to establish the boundaries of the argument, we're going to be doing that. We've identified the experts under those 12 headings that we're going to go out to. We're going to over the next 3
months I hope start to get this best practice on the issue and actually also reconcile the change in norms, the change agents that we've identified actually with the idiosyncrasies of existing UK policy and just policy practice. (TC 00:30:00) We will be doing 6-monthly updates I hope on where we've got to with the project in July, August this year we'll have a seminar using the experts and specialists really to come and to try and advance that cross-cutting that I mentioned earlier on. 'This is what we found so far, oh my goodness that sparks 4 other different things and perhaps a different workflow.' I would think that after 6 months, 8 months we'll be able to refine that workflow and go then into the second year of this project. Actually quite a few deliverables. The final deliverable will be I would imagine an edited amalgamation of the expert evidence, the expert witnesses we'd gotten and whether that is done in book form or whether actually we capture that aurally through the ear then that is something that you and I have got to discuss.

Moderator: Paddy, brilliant. I am genuinely excited about this and like you I am quite passionate about trying to understand how these norms that are developing and have changed considerably since the 1980s, how these map against the future and against how our adversaries behave. I think that's the point that we get to with this at the very end of this which is how our expectations for the future norms of warfare map against an adversary, a fascinating topic and something I hope we can get you back to talk to the listeners about later in the year and give them an update on how the norms of warfare are changing. You can find our show on all major podcasting platforms including iTunes and Spotify. Your downloads regularly place us in the top 5% of nearly 2 million podcast shows globally, who said we were too niche to develop an audience? This show is produced by Tom Ascott, Peppi Vaananen and Kieron Yates, and is sponsored by Raytheon UK. If you did enjoy the show you can find out more about the subject and our papers on the future conflict operating environment, and the (mw 32.06) competition in our research publications at RUSI.org/(mw 32.11). Finally I'd like to take this opportunity to remind you that RUSI is a membership organisation and a charity. I'm guessing that you're getting a bit bored in lockdown, exercise your mind, sate your curiosity by joining and becoming a member of RUSI.

I can guarantee that it will take you outside of your intellectual comfort zone. Details are at RUSI.org/membership and if you need an independent view on that RUSI recently won the Prospect magazine think-tank of the year. Recommendations don't come better than that. Thanks for listening.