Annie: Tony and Joyce, thank you so much for joining us. Really excited to have you. Can you just start off by introducing yourselves for listeners, you know, give us your name and the work that you do?

Joyce: Hi, my name is Joyce Sohyun Lee. I work for the visual forensics team at The Washington Post and our team really focuses on visually driven investigations.

Tony: And I am Tony Wilson, I am the founder and director of the Security Force Monitor, which is a project of the Human Rights Institute at Columbia Law School. And our project, the Security Force Monitor, focuses on using publicly available information to understand the structure, the commanders and operations of police and military forces around the world with a goal of having that information be useful to journalists, human rights researchers and others concerned with the conduct of these forces.

Annie: Before we dive into your research, I want to start by putting this research in context. Can you describe what the war has looked like in the last few years? What we know about civilian harm trends in Yemen, and what the US role has been?

Tony: So just as a way of background, on March 26 2015, a coalition of nine countries led by Saudi Arabia and the United Arab Emirates launched an airstrike campaign and later a ground invasion campaign in Yemen, with the goal of defeating the armed group, Ansar Allah, also called the Houthis, which at the time controlled northern Yemen and had proceeded into the south and had seized control of southern Yemen as well. Since the beginning, I mean, since day one, human rights groups have been raising concerns about the conduct of coalition operations, in particular the airstrike campaign. Actually, the first recorded airstrike that human rights groups raised concerns about was on day one, was on March 26 2015. And that continued going forward as human rights groups recorded strikes on other things that they classified as civilian objects, be it residential homes, factories that produce beverages like milk and other things, funeral halls, schools and other things that, according to the groups as they documented them, should not have been struck by the coalition, that were not military targets, are not appropriate targets to be struck by the coalition. At the same time, these countries are huge recipients of US security assistance from training, sales of weapons, planes and other equipment. And that trend continued through the war as well.

Joyce: I think that Tony covered that incredibly well. The only thing I would add is that the conflict has led to one of the world's worst humanitarian crises: hundreds of thousands of people have died from fighting or indirect consequences like hunger, and conservative estimates put that civilian deaths from the air campaign alone is somewhere around 9000.
And again, I would emphasize that that is a conservative estimate. So, the toll of this Saudi-led coalition intervention in Yemen and the civil war has just been devastating.

**Annie:** And what made you undertake this particular investigation? How did you start? What did the research look like?

**Tony:** The research started from where we were able to support human rights groups like Mwatana and others who were doing really critical on-the-ground investigations of the airstrikes and their consequences. Obviously, we are not going to be able to do on-the-ground research. I mean, there are so many constraints for groups even based in the country and threats and other things that they have to overcome. But what quickly became clear as a question that we could really tackle was this uncertainty around what the coalition was. Everyone said, 'Okay, the coalition it is these countries, the coalition.' But what does that mean?

For the Monitor, we know from other countries and other contexts, that when a major operation like this occurs, the militaries of the countries just take units that they have and deploy them. There is not some other reserve force, there is not. There is no time to create new units especially trained for this operation. They just take what they have and they go. And so what we did is we started with what the coalition said about itself. When the war started, on March 26 2015, there was a lot of announcements about ‘this country sent this’, ‘Bahrain sent F16s’, ‘Saudi-Arabia sent F15s’, ‘other countries sent other types of planes’. And that gave us a hook of where to start the research. So what we did is, I went in and documented, ‘Okay, what are the air forces of these countries? The entire Air Force? What are all the units? What do they fly?’ And then from there to take those first kind of glimpses into the air campaign to say like, ‘Okay, well, if this source is saying Bahrain sent F16s, if I know everything about the Air Force from public sources, what units fly F16s, and conversely, what units do not fly F16s, which units we do not have any evidence of them serving in Yemen’, and kind of went down the line, country by country.

The key there for Air Forces is this term that we will use again and again: squadrons. Which are the main fighting unit of an Air Force, that is from 8 to 24 planes. It is kind of a range, but they generally have one role or a main role. So they are a transport squadron: they fly planes that transport stuff. They are not designed and their mission is not to go bomb things. If they are an airstrike squadron, then their mission is to go to conduct airstrikes. If they are an interceptor squadron, then their mission is to shoot down other planes, not to do airstrikes; it is to shoot down other planes. Having all that information together allowed us to understand, ‘Okay, not only are these the squadrons that we should be concerned about, but these are the squadrons we should be concerned about not only for their planes, but because they can conduct airstrikes.’ And really, that took a variety of sources from very useful books from Anthony Cordesman and Tim Ripley, supplemented with media reports from Arabian Aerospace, Air Force monthly, and plane watching sites like Scramble and F16.net.

From there, it was a question of, ‘Okay, we have a good sense of the air forces and what units could have served, we know more about them: How do we track US security assistance to these forces?’ And the good news is that the US is comparatively fairly transparent and makes a lot of announcements of things. The bad news is to understand it, you have got to go through every daily announcement of the DoD [Department of Defense] website, read through it and say, ‘Okay, well, what are they selling today? What has been approved? Could this go to one of the countries we are concerned about? If it does, could it go to one of the units we are concerned about?’ And so that is what we did: we just dug through all of those reports and all those press releases to see what contracts had equipment, planes, weapons, other things that an F16 from Bahrain would have used, or an F15 from Saudi, or an F16 from the United Arab Emirates would have used and that was the way we understood, ‘Okay, this contract could have gone to these squadrons because they fly that type of plane.’
Finally, the last thing we looked at was: ‘What are the allegations that have actually been made against the coalition, against the air campaign?’ And so we read through the various human rights reports to pull together a list of over 300 airstrikes that they had raised concerns about that they allege either were potential violations of international humanitarian law or potentially were war crimes. And just to flag again, doing on-the-ground work and documentation in Yemen is incredibly, incredibly challenging. And so there are certainly other strikes that groups were concerned about that they were not able to document and thus could not say, ‘Okay, this is a violation’ or ‘We are concerned this is a violation’. They simply could not access the site. So that is a very low number, given the war in Yemen, but it is still deeply, deeply concerning.

Joyce: I think that that sort of covers it for us at the Post. I know Tony’s body of work was so incredible and thoroughly researched. And my colleagues and I thought that – and Tony had brought this up as well – that there was a lot of opportunity for us to really dig into the visual material that has been released by the coalition countries and the US government itself, to give us some data points that are not immediately obvious from contracting language or in the military structure. But you know, I think Tony has covered really the breadth and depth of the project.

Tony: Well, I will just add one plug for the always modest Joyce and her team, which was going through and trying to find out this question about who had been trained, which, unfortunately, is a lot less transparent, and involved her and her colleagues going through various sites that had pictures of planes serving in trainings and seeing the tail numbers and country flags for them, and being able to tie that to specific squadrons so that they could understand, ‘Okay, from the contract side, maybe these planes had been serviced by the US or have been sold by the US to the squadrons. But also here is concrete proof of this tail number belonging to a particular type of plane from this squadron.’ And if it has been pictured flying at a US base for training, that means that squadron was trained by the US.

Annie: This is so interesting, because the Pentagon has often said that it is difficult to pinpoint which units in foreign militaries are actually receiving US equipment, because US equipment can be moved around. But what you are saying is that the research that both of you have done, has found that the specific squadrons receiving US support is actually completely knowable information. And with open source information, no less.

Tony: That is exactly right. That even with all of the concerns being raised and all the potentials for all these airstrikes, at the end of the day we found that if you only know the types of planes that countries sent, that is 39 squadrons that could have done the airstrikes in Yemen. That is it. And from there, we were able to find publicly available information to confirm 19 of those squadrons did serve in Yemen. It is ultimately very, very knowable. Actually, Joyce and her team wrote a great line in the story, which I want to quote, which is: ‘The universe of squadrons carrying out airstrikes is a narrow, and knowable one.’

Joyce: I think that was also just a big realization for us is that – and I think Tony spoke to this earlier – but the sense of the airstrikes being attributed broadly to the coalition and the various air forces inside of it, and the sense that we will not be able to know which plane carried it out or which squadron carried it out, because it is just a big amorphous blob. But that is so far from the truth: it is actually quite accessible information. It took us a while to do the reporting, obviously. But it is knowable. We have a finite list of squadrons that carried out these airstrikes, we have videos and images of them at the air bases, either taking off or landing after airstrikes. And we know a good deal about each of these squadrons thanks to Tony's incredible work. And so what felt meaningful for us about this project was sort of chipping away at this illusion that this is too large to know when it is really not.
Tony: Just to add and even get down in the weeds a little bit: The implications of what squadron served is also very huge for US policy, because for many countries with the coalition, every squadron flying a particular type of plane served. So there is really no way to touch that plane with contracts. That type of plane for these countries cannot go to a squadron that has served. So, to put it another way: Every F16 squadron from Bahrain and the United Arab Emirates served. So therefore, if you are doing a contract that is supporting F16s for either of those countries, all the squadrons served in Yemen, so there is no way to support an F16 and not run the risk that you are supporting the airstrikes squadron that served in Yemen and thus might be connected to an airstrike that groups have said is a potential war crime or violation of international humanitarian law. Same thing for Saudi Arabia with their F15s. Same thing for Kuwait with the F18s. So, the implications of just open source research that we were all able to pull together is really, really troubling. And we do not have the resources like the US government to understand what is going on. It is just our small little team. So that is also very troubling.

Annie: And I actually want to ask you a bit more about that. How did your findings line up with what we know about civilian casualties in Yemen, including possible war crimes? In other words, did you find that US support was linked to airstrike that may have been war crimes?

Joyce: We were not able to link a specific squadron to an airstrike. It is not something that we were able to do, ultimately, and it is not for a lack of trying. As we discussed before, usually when an airstrike occurs, even when the coalition says that they are going to investigate their own airstrike, they will still say, ‘This was carried out by the coalition’, without any kind of specifics about the squadron that was involved. And we found that detail to be exceedingly difficult to know. But what we do know is that the Saudi-led coalition maintains a master database of each airstrike. And they also in that database detail the squadron and the type of munition that was used. And we also know, according to US officials, that both American and British personnel that were stationed at Riyadh at the coalition headquarters have had access to this database at some point during the war. Meaning that Tony and I might not know, but in theory, American and British officials should have known or at one point knew, which squadron carried out which airstrike, and potentially might have known which squadron carried out airstrikes that violated or appear to violate the rules of war. The Washington Post did file a Freedom of Information Act request for this database, but the US Air Force declined it, saying that they did not have the records. But for us, knowing that this knowledge is out there, that this is something that in theory US officials had access to, was a crucial point that came up.

Annie: So what I am hearing from you is that your research was not able to make that exact connection because of the information available. But, I was struck by a quote from Tony in your piece, that, based on what you found, there is virtually no way for the US or other countries to support these squadrons without supporting squadrons that may be linked to war crimes and other violations.

Tony: That is correct. There is really no way to be supporting these squadrons and not run that risk of supporting a squadron that has potentially committed a war crime. One thing, and this is again going into the weeds a little bit, but what we did is that we looked at the seven year period from when the war started to the seven year anniversary of the war, to see what the US had supplied and supported during that time period. And so there are as many as 94 contracts which the US approved that went to airstrikes squadrons for the Emirates and for Saudi Arabia. And this is out of more than 200 contracts across all the coalition countries that were approved that would probably benefit airstrikes squadrons that could have or did serve in Yemen. And when I say ‘probably benefited’, what I mean is that US contracting is not specific enough to say like ‘this squadron is getting this thing’. But the type of plane or the weapon or the equipment that is in that contract, we have sources saying is for a particular
type of plane, you know for an F16, from the Emirates, and thus, the Emirates has three squadrons that fly F16s, all of them potentially benefit, probably benefited from this, we cannot say ‘it is this one versus that one’, necessarily, so we can just tag them all as ‘probably benefited’. But across all the countries we are talking about, when we are concerned about a plane that could have served in Yemen and you know what type of plane, there are only two or three squadrons that fly that type of plane in each country. So at a certain point, if we are sending so many contracts with the country, it kind of boggles the mind that people only go to one squadron, not the other, and for most, like Bahrain, like Kuwait, like Saudi-Arabia, like the Emirates, it does not matter because all the squadrons flying the type of plane served. So, if you have only supported one of those squadrons, one of those three, one of those two, that squadron served in Yemen.

Joyce: Overwhelmingly, so much of the coalition, they are flying American equipment and using American weaponry. And it is worth keeping in mind that at the end of the day, we have gotten really into the specifics, but the top line is that the majority of these squadrons could not fly or even exist without American fighter jets and planes and American personnel on the ground helping these planes get off the ground.

Annie: Given that reality, the US has faced quite a bit of pressure around its role in civilian harm in Yemen. What do we know about how the US government has addressed these concerns over the last few years? Or tried to?

Joyce: That is a great question. We know that pretty much from day one, there were significant concerns about whether coalition airstrikes may have violated the rules of law. And we know that there are these internal State Department discussions around it as well, because of documents of emails that were released as part of a Freedom of Information Act request by Reuters. The United States took a couple of steps to mitigate these civilian harm risks. The first is that they sent advisors to the coalition headquarters to advise on civilian harm reduction tactics. Additionally, for the Saudi Air Force, they provided civilian casualties, law of armed conflict and human rights trainings as part of their foreign military sales package to the Saudi Air Force. And in 2019, the US also adopted a policy that required that precision-guided missiles have to be sold with appropriate targeting infrastructure.

One concern that really piqued our interest in the topic is concerns about whether any US officials might be vulnerable to charges of aiding and abetting war crimes under international law. I am not a lawyer, but having spoken with a few brilliant lawyers for the story, we learned that war crimes and aiding and abetting have different standards in different courts, including domestic ones, but one standard that we came to again and again is that individuals or states might be found guilty of aiding and abetting if they continue to provide the systems to a problematic actor with knowledge that their support would contribute to future crimes despite assurances. That is important to keep in mind. And moreover, the GAO [US Government Accountability Office] publicly released a report in June that basically found that the DoD and State have not properly investigated which US support contributed to civilian harm, despite reports of extensive civilian harm in Yemen.

Tony: I will just add that from the contracting side, even while these concerns were being raised over that seven year period, every US administration approved contracts that probably benefited airstrikes squadrons serving in Yemen. The Obama, Trump and Biden administrations all approved contracts that went to the various coalition countries, and had planes, equipment or weapons that, we have sources, could only have benefited airstrikes squadrons.

Annie: In 2021, the Biden administration announced that it would end US support for what they deemed offensive operations carried out by the Saudi-led coalition in Yemen. I am
curious, in terms of your research, did you find that that distinction held? Was there assistance continuing to support these squadrons?

Tony: Right. So I think the distinction that they are making is on offensive weapons. So let us say the bomb that you would actually use to carry out the airstrike, they have not sold. At least as far as we know from the contracts that we looked at. However, the issue is that, sure, you are not selling the bomb that is being put on the plane. But if you are still selling the plane or servicing the plane or putting new equipment in the plane that is then carrying out these strikes, that is not a very good distinction. And that is not really that much of a limitation. It seems like you are still running the risk of supporting the plane supporting a squadron that is potentially linked to an airstrike that is a potential war crime. And also, the number of squadrons does not really change. So even if you come in and let us say, hypothetically, there were no airstrikes that were potential war crimes or violations under Biden – even though that is not the case – that squadron is still the same one that in past administrations potentially did that thing for which there is no accountability, not for those strikes that they potentially did. And if you are servicing that plane, if you are selling that squadron new planes, then that is very concerning. That raises a lot of troubling questions.

Joyce: I would just add that the State Department has not provided a clear definition of what they mean by offensive versus defensive. And I think that the line between the two, as Tony just went over, is quite blurry and – depending on who you speak to – could swing one way or the other. And so when President Biden took office and pretty much immediately after announced the end of offensive support and paused sales to Saudi Arabia and the Emiratis pending review, despite this pause, the maintenance contracts that Tony just alluded to, were not impacted, those are still ongoing. We are helping keep these Air Force squadrons ready to fly and helping at least planes to stay in good shape, which has now come in sharp criticism from members of Congress.

The other side of this is that the US still has moved forward under the Biden administration with arms sales to the Saudis and Emiratis, with what they call defensive weapons. The State Department has approved a sale of hundreds of millions of air-to-air missiles to Saudi Arabia. And then for the UAE, a tens of million dollar sale to bolster the country's missile defense systems, with the justification that these are important to help the two countries defend their borders, especially against Houthi attacks from Yemen. So, all this to say, the support continues. Whether it is defensive or offensive. It is a solid question to determine for us, but you know, there is a blurry line and that was something that we sort of ran up against: as we tried to ask the State Department, ‘what is offensive? What is defensive? What falls under which?’ And, you know, that has been a really difficult question to answer.

Annie: In light of these really well-documented civilian harm and human rights risks, why do you think so much of the support that you investigated, continued? And some of it, as you just mentioned, has continued?

Joyce: We came across two points to that. The first is Leahy vetting: the Leahy law is about the statute that essentially says that the United States cannot provide security assistance to units of foreign militaries that are implicated in gross violations of human rights. But under the current interpretation, the Leahy law vetting only kicks in when that security assistance is paid for by the United States. So countries like the Saudis and the Emiratis, that pay for their own assistance are not subject to Leahy vetting. And then the other factor that we learned about is that the sheer volume of contracts overwhelms human rights concerns in the vetting process. And I am sure, Annie, you are well aware of this, the House Democrats wrote a letter to a subcommittee back in April. And just to quote them: referring to staffing constraints, over the course of the year, the State Department was expected to complete an analysis on the human rights risks associated with a weapons export license every five
minutes, which is an impossible task, really. But it really brings to mind that it is not just the sales that we hear about for military sales that are over a certain threshold, there are also direct commercial sales and this whole other universe of sales that the public does not really have any insight to, and that the sheer volume of contracts is really much larger than that we were able to review for this project, not because we did not want to, but because that information is not public.

**Annie:** I want to close by asking you what was most surprising to you in doing this investigation? And also, what are your biggest takeaways, or what do you see as the biggest implications moving forward?

**Tony:** The biggest surprise, well, there are actually a couple from my side. It took us a while to pull together all of the sources, but what was quite depressing was once we got them all together and understood what they were telling us and all that, by late 2015, you could have mapped out the coalition from open sources. If those were literally the only things you had, you could have done it, you could have understood. And so that means the US government could have understood who was serving in the coalition and what the concerns were, simply because they did have access to the same sources we were looking at with, obviously, vastly more resources.

The second thing, thinking of civilian protection concerns and the questions that this raises for US policy is, again, we only looked at contracts for that seven year period, but those contracts are still going; the latest ones through like 2029. So, these questions are for this administration, but also for future administrations.

Finally, the implications for any one sale can really reverberate through time. The planes that we are raising concerns about that are attacking Yemen or that may be potentially involved in war crimes, these were sold by the George H.W. Bush administration, the Clinton administration, the W. Bush administration. And so, when these sales happen, what are the implications of it five years down the line? Ten years down the line? Fifteen years down the line? Twenty years down the line? That is the real concern: once they are re sold, they are sold.

**Joyce:** I think that is such a great point. When you look on Scramble [aviation website], and you look up the planes and the squadrons, I think, correct me if I am wrong, Tony, but I believe they are like the old tail numbers or detail. And the way they are labeled before they are given to countries, it will say like the year. So, for example, like 93/TK. Number 93 tells us that that was the year, for example, that that plane was manufactured and sent, and they are still in use. So, to Tony's point, these contracts just have really long tails. And know that in Yemen, there have been the remnants of bombs that have been found that were sold in the nineties. You know, they just keep them in the arsenal and it is there. They have a long shelf life, essentially.

I think the biggest challenge for us, unsurprisingly, is that this is such a complicated universe, to learn about complicated laws, a myriad of government agencies and offices within the Department of State and the DoD, and a number of challenges towards transparency and accountability. And that feels concerning given the amount of money that is involved in this, the number of countries that the US is selling and supporting. It raises important questions for us about how we can have accountability and transparency into a really lucrative industry that does have a very real impact, especially in Yemen. That continues to be a challenge for us.

**Annie:** That is such an important point, because if this universe is difficult for the people on this call to understand, for researchers and journalists and advocates who are dedicated to
understanding this issue, then for an issue of such scale and importance to our foreign policy, it is so hard for any members of the public to really understand if they are not really focused on it. And even then it is a really complicated issue.

**Tony:** Exactly. All of the holes, the barriers to transparency that Joyce mentioned, are very, very high for the US. But they are even higher for European countries. So, we have some semblance of what the US has done in supporting these countries. For Europe, it is much more of a black box.

**Annie:** Thank you both so much for joining us today. It was an absolute pleasure. And of course, if there is anything else, you all want to make sure you cover that we did not get to please, now is the time.

**Tony:** There is one thing, I definitely should have added and did not. Just as far as the research goes: The research was really aided by a researcher at Mwatana, who I worked with extensively over the course of more than a year, training them in Security Force Monitor’s methodology, but then really relying on them to dig through Arabic language sources to find material related to this question about the coalition. And that was really instrumental to the success of this project and the ultimate outcomes. So it was quite a privilege and honor to be able to work with them on that.

**Joyce:** If we are doing shout outs, working with Tony and Priyanka at the Security Force Monitor was truly a delight in a lot of ways, but also to see the detailed and thorough work that Tony does. If it takes someone like Tony, who is dedicated and well versed in this world, so many months and hours to accumulate this dataset, then I think it speaks to the challenges for the rest of us to know the extent of US involvement in conflicts abroad. It has been a fascinating project to work on.