Ted Postol: Fraud of Missile Defence Exposed in Iran War

MIT Professor and Pentagon advisor Ted Postol explains why the missile defence systems are failing in the war against Iran, and why the US and Israel will not win this war. Follow Prof. Glenn Diesen: Substack: https://glenndiesen.substack.com/ X/Twitter: https://x.com/Glenn_Diesen Patreon: https://www.patreon.com/glenndiesen Support the research by Prof. Glenn Diesen: PayPal: https://www.paypal.com/paypalme/glenndiesen Buy me a Coffee: buymeacoffee.com/gdieseng Go Fund Me: https://gofund.me/09ea012f Books by Prof. Glenn Diesen: https://www.amazon.com/stores/author/B09FPQ4MDL

#Glenn

Welcome back. We're joined by Theodor Postol, a professor of science, technology, and national security at MIT, who specializes in nuclear weapons, delivery systems, missiles, and missile defense. He's also done some work for the Pentagon. Thank you very much for coming back on.

#Ted Postol

Well, it's my great pleasure to be invited by you.

#Glenn

Well, yeah, I've been looking forward to speaking with you because this war against Iran is largely a war about missiles and missile defense. Essentially, whoever can create the most pain and absorb the most pain is able to exhaust the adversary. I thought you were the recipient of the Norbert Wiener Award from Computer Professionals for Social Responsibility for uncovering all the deceptions that have been made about missile defense. So I thought, who better to have a critical view and cut through all this fog of war? There's a lot of focus these days on narrative control, which obscures reality. And yeah, I wanted to get your take. I guess a good place to start is your overall assessment of this war—what stands out to you, or what's your takeaway?

#Ted Postol

Well, I think you got a fantastic assessment recently from Larry Wilkerson, but I'll give you my assessment from my much narrower point of view—because Larry, I think, is really broad and has all this experience. But from my much narrower technologist's point of view, let me caveat my initial discussion by pointing out that I've literally been working night and day to try to keep up with what's going on. It takes time to put together slides and videos, which I hope I'll be able to show some of.

That will be helpful—they'll try to inform your audience, because looking at a video is one thing, but knowing what it's telling you is another.

So let me start by saying that from a purely technical point of view—not from the much broader and wiser perspective that someone like Larry has—it's very clear that this war is going pretty much as someone like I, and more importantly Larry, would have guessed. What we're seeing now is that in the initial phases of the war, the United States and Israel are doing tremendous damage to Iran. But of course, Iran is a country of 90 million people, and it's a very cohesive country. For all the internal problems it has, it's still basically a cohesive culture. And it doesn't appear to me that the situation is in any way favoring the outcome that both President Trump and Prime Minister Netanyahu are talking about. That is to say, it hardly seems likely there will be any collapse of the kind these leaders are aiming at.

I have to say, though, I'm becoming extremely concerned about Netanyahu. I'm just going to say it, because it's been on my mind: this man is a homicidal maniac. And the kind of homicidal maniac who could actually use a nuclear weapon at some point. So I think—perhaps next time I'm on—I can remind your audience about the capabilities of Iran as a nuclear weapon state. It is not a non-nuclear weapon state. It is not a nuclear weapon state that has built a nuclear weapon, at least as far as we know. But it is a state that could build one on very short notice. And it would not be possible to stop them from doing so, even if you were using nuclear weapons on Iran while they were constructing theirs.

They have enough enriched uranium hexafluoride to construct ten atomic bombs, which would be more than enough to finish off Israel as a state. Israel is not a country of ninety million people—it's eight or nine million. It has a few large, critical cities, and ten nuclear weapons would be far more than needed to end Israel as a state. There's no way to stop Iran. I could talk a bit more about that another time. Basically, what you need could be housed in a tunnel that's not especially large, and you could carry out the final enrichment to get weapons-grade uranium and build a nuclear weapon that doesn't need to be tested.

It's important to understand that this is a uranium weapon, and it would not need to be tested. It's well within Iran's reach to build these nuclear weapons. So we need to start worrying—or at least start thinking—about the possibility that we could see nuclear weapons used. Now, I do not think Iran will use nuclear weapons against Israel first. But I think as this war goes on, Israel's situation is going to continue to deteriorate. And we can already see—I'll show some evidence for this—that the attacks on Tel Aviv and Haifa have been extremely effective. It looks like the precision of the ballistic missiles now being used by Iran is higher than what we saw earlier.

I think that's probably because Iran was using older ballistic missiles, saving the more advanced ones for a long war if it happens. So I don't think they were using their most capable missiles during the earlier attacks we saw in June, for example. Now we're seeing much more capable missiles—I'll talk a bit about those. We're also seeing the effects of drones at a level that, I have to say, I should

have expected, but I've been a little surprised by it. This is due to two technical factors that are extremely important and not nearly as well understood by the general public as they should be—and by "general public," I include the press. The first is that China and Russia are providing real-time, high-resolution satellite data on the targets Iran is interested in attacking, both in the Persian Gulf states and in Israel itself.

So the location of these potential targets is known—essentially in real time. Now, the drones have a homing capability that I'd like to describe, because I don't think people appreciate how extraordinarily effective this homing capability is. Basically, what I'll describe is how these drones, from thousands of kilometers away, can get real-time homing information and real-time guidance from Iranians sitting in control centers in Iran. So if you want to run a drone into a radar station, a docked ship, or an oil facility—if you decide you're going to attack those—you can strike with precision within tens of meters, which is more than enough to destroy most targets you're concerned about.

And it's extremely important for people to understand that these drones are extraordinarily problematic. They can be intercepted, as I'll discuss, but there are large numbers of them. They carry warheads large enough to do tremendous damage against significant targets. And they're ubiquitous—just everywhere. There are thousands of them, and there could be thousands more coming. They're simply going to overwhelm what's left of the air and missile defenses, which are now being depleted by the Iranian attacks. This is the Ukraine War 2.0 here. What the Russians did in Ukraine was use drones very effectively to deplete the entire air defense network, leaving Ukraine essentially naked, so they could then go about destroying large parts of Ukrainian facilities.

Now, in the case of Iran, they do not have a functioning air force to deliver munitions against Gulf or Israeli targets. So they're confined to using ballistic missiles—but they have thousands of these, and those missiles are becoming more and more capable. I'll describe some of these advanced capabilities shortly. Let me start by explaining how these drones get their targeting information. We've seen a lot of evidence that they've been destroying key radars in the Gulf states. The Bahrain naval base has been up in flames, and they've done tremendous damage. Unfortunately, I've been so overwhelmed I haven't had a chance to put together the materials on that.

But probably many in your audience have already seen it if they've looked at videos on the web. In any case, let me just turn on the share here. What this slide shows is a satellite constellation known as Iridium. Most people have heard about Starlink, but Iridium has been operating for a longer time. It works at higher altitudes and basically provides satellite telephone service. So it's similar to Starlink. What you're seeing—if you focus on the circles—shows the range at which an Iridium phone system on the surface of the Earth can communicate with a satellite. You can see the circle when I point it out? Yes.

We're not—good, okay. In the middle, we see there's a satellite, and this satellite is sort of like a phone modem. It has about a 300-kilobit-per-second downlink and a 700-kilobit-per-second uplink.

Now, those numbers are relevant, as I'll show you shortly. If you look at these brighter lines here, these are the links between the satellites. So if I'm at a location—let's say under this particular satellite—and I want to communicate with some location on the other side of the planet... This next slide shows, on a Mercator projection, the overlapping circles. You can see there are—I think—76 of these satellites.

I may have that wrong, but they're somewhere around that. These satellites are in polar orbits, and anywhere on Earth you can communicate with anywhere else on Earth at a data rate of about 350 kilobits per second—700 uplink, 350 downlink. If you look at one of these terminals—well, this isn't really a terminal. It's a device that goes into, let's say, an airplane or a drone. It's an Iridium mobile communication system device. It's small, it's light, it only uses a little power, and it can communicate from the drone—underscore, from the drone—at up to 350 kilobits per second. Here I've shown you two satellite photos of Tel Aviv, taken from about 1,300 feet above the city.

And this top photograph shows a high-definition image of Tel Aviv. The one below is the same photograph, but at 240p resolution—much lower. This gives you about 20 to 30 frames per second, so you're not seeing 60 frames per second at that resolution. You can see it's slightly blurrier, but this resolution is more than adequate to give the drone operator in Iran the information they need to command the drone's maneuvers. So now you have this global—well, I don't know what you'd call it—first-person-view drones anywhere in the world. That's very significant. When you look at these drones—I'll talk about this shortly—here you have a drone.

This drone can be launched in very large numbers. If you look at this particular drawing of a launcher that carries five drones, you can see this tube at the bottom of the drone. That tube is a rocket motor. What happens is, when the cage that carries the drones is raised to a near-vertical position, each drone can be launched using its rocket motor to get it up to speed. The propeller motor is fairly underpowered—it's only strong enough to keep the drone flying once it's in the air. So you need the rocket motor to launch the drone onto an aerodynamically stable trajectory. That's easy enough to do.

So if you look at a drone, you can see there are all kinds of equipment you can put on it. And it's not hard to—well, in fact, we now know that the Iranians are using Iridium communications. This particular drone doesn't necessarily have Iridium communications, but it's not hard to obtain that. Here's an example of a drone. A very helpful individual who also works at the Department of Defense alerted me to an error I made in an earlier presentation. This actually is not an Iranian Gen 2 drone—it's an American drone. But it looks exactly the same; it's indistinguishable from the Iranian drone. And you can see here it has an optical system of some kind. It could be an infrared optical system, it could be visual, or it could be both.

This is one of the things that's extremely important to understand when you look at technology disparities. What would normally have been a problem in the past for less developed states, relative to more advanced ones like the United States, isn't necessarily a problem anymore. The availability

of very high-tech commercial systems—things that literally fit between my fingers, like infrared cameras—has changed that. Those cameras, both infrared and visible, are extraordinarily advanced devices that are very difficult to build and require a highly developed industrial base. But now they're commercially available everywhere. You can practically go out on the street and buy one, or walk into a hobby store. So these things are accessible.

So it doesn't matter that you can't manufacture them. What matters is that you can obtain them. For example, when you have improvised explosive devices—which have done tremendous damage, been a tremendous problem for the Americans in Iraq, for instance—those devices actually use incredibly advanced technology. They combine an explosive component, which is well within local technological capabilities, with a very advanced cell phone, which is far beyond the technology capabilities of the people using it, but still available. You can just go into a store and buy one. So I take this phone and attach it to a detonator on this relatively simple but deadly improvised explosive device, and now I have a remote system that I can detonate from long range.

So it's this kind of spread of all these technologies. A satellite system like Iridium is very advanced, but it's available to anyone. Who's going to say who's calling? I can't screen phone calls on Iridium—it's just not possible. Iridium is designed to service aircraft. You go on an international flight, you want to watch videos, and you may be using Iridium or, more likely, Starlink. But there are these fast terminals that are available, and it's just a matter of buying the device and installing it. If we look a little further—here's an Iridium antenna. You can see how large it is by the size of the man's hand as he installs it on an airplane. So this airplane can have a cell phone connection; you can have cell phone communication.

#Ted Postol

This is aerodynamically... I mean, you put this antenna on a drone, you buy that device I showed you earlier, install it, and you have two-way television communication. So this means the drones are far more problematic than most people realize. Let me just go back here—sort of fluctuating around. If we look at the amount of damage one of these drones can do, you can see this is probably one of the smaller ones, maybe with a 100-pound warhead. And here's another drone, maybe with a 100- or 200-pound warhead, that hit a building. We have lots of videos of these drones hitting buildings. So the situation is really not very favorable to the West—in this case, both Israel and the American military bases in the Persian Gulf—because the satellite information provided by China and Russia is very detailed.

You can have a drone en route—it might take an hour or two, or even several hours, to reach the target area—but you can update it just 10 minutes before it arrives. So no wonder Bahrain is in flames, because the Iranians are getting real-time data on what's happening there. These drones can come in and hit radar systems, which reduces the chances of those radars detecting them and

launching interceptors. Then they can go about their business without worrying about air defenses. As time goes on, the attacks will become more and more effective, because the radars are going to be depleted over time.

And the interceptors are going to be depleted too, so these air bases will take more and more damage. The only way they'll start seeing less damage is if the Iranians run out of drones—and there's very little reason to believe that's going to happen. These drones are being manufactured in real time, and probably hundreds can be produced each day. The Russians are manufacturing thousands per day. We also don't know if the Russians or the Chinese will decide to transfer more drones to the Iranians, because this war is now becoming a concern for both Russia and China, which is part of the reason they're already starting to help Iran.

So this is not a situation that's going to develop favorably for Iran. Now, in addition to these problems, we have the issue of countermeasures that we're seeing in the ballistic missiles. Unfortunately, this won't be as organized as I'd like it to be, but let me just show you a few images, and then I'll describe them. I'll also show you some videos. Again, I apologize for the disorganized presentation, but this is an Al-Fatah warhead. What you see here is the warhead—this section is the explosive part. These fins allow the warhead to be guided in the atmosphere. These fins are effective; I've done aerodynamic calculations in the past.

I can tell you that this vehicle can start maneuvering in a significant way at 25 or 30 kilometers altitude. Even though the air is quite thin at that height, these fins can still provide enough lift to reorient the vehicle and make it maneuver. This rocket motor has two effects: it creates thrust to increase the speed of the incoming warhead, and it helps control its trajectory. The warhead might enter the top of the atmosphere at about three kilometers per second—around Mach 10—but it can easily gain another kilometer per second of speed as it descends, thanks to the rocket motor. Now, what most people—very few people, if any—would know is this: I've been studying this system for many years.

What this rocket motor does is that when the warhead gets to a lower altitude—maybe 5 or 10 kilometers—this motor is still releasing gas. This gas comes out of the back of the vehicle and reduces drag. In other words, the air is flowing over the vehicle at low altitude at a very, very high speed—Mach 12, Mach 13. So there's a kind of vacuum behind it. That vacuum creates a pressure that pulls on the vehicle; this is called base drag. It's pulling the vehicle from behind and causing it to slow down. But the rocket motor continues to emit gas, and that gas alleviates the vacuum so the vehicle isn't being pulled from behind, allowing it to come in at a higher rate and not slow down nearly as much.

So these things are hitting the ground at speeds in excess of Mach 10, even Mach 12. At Mach 10, this vehicle has roughly twice the explosive capability—it does twice the damage of its total weight—because the weight of the vehicle itself is converted by its kinetic energy. The velocity is so high that it turns into thermal energy, essentially explosive energy, on top of the warhead's own munitions. So

this vehicle could be delivering the equivalent of two tons of explosive power. That's a lot of damage potential. Now, this part is still a bit speculative, but I'm pretty sure we understand it fairly well at this point. I'll know more about it next time we talk.

You can see this bright plume behind the leading edge, which looks like some kind of cone-shaped vehicle. This is probably a high-altitude maneuvering warhead—a warhead with a low-thrust rocket motor that maneuvers at high altitude to change its trajectory. The reason for that is the vehicle is changing its trajectory because missile defense systems take literally minutes for the interceptor to reach the intercept point. When you're talking about THAAD or Arrow, these interceptors take a long time to get to high altitudes, and their divert capability is very limited—very small.

The divert capability is designed just to let them make minor adjustments so they can actually hit the target—when they do, which is rare. So if I can, say, 500 kilometers away, divert this missile, by the time the Arrow interceptor gets to that location, it's too far away to maneuver. I can just fly past it. That's what this is designed to do—it's a countermeasure. Frankly, I don't think it's even needed, because I don't think the Arrows or the THAADs are functioning at all. And the reason we know this is that we can only see what's happening at low altitude. But if you look at low altitude, the air is filled with incoming ballistic missiles. So you have to ask yourself, what's the upper tier doing?

The upper tier isn't intercepting much, because everything's coming in at the lower tier. That's what we see. We don't know what's going on in the upper tier, but it's clear it's making almost no difference—if any. So, okay, here's just an example. I'll relate this quickly to the situation in Iran and Israel. This is an Iskander ballistic missile—a much shorter-range ballistic missile that comes in at a much slower speed. It's completely defeated Patriot missiles in Ukraine. The Patriots are claiming a 5% or 6% intercept rate, but I doubt it's that high, and I doubt it's been that high throughout the war, because this thing can maneuver fast.

And the Patriot can't maneuver to match it. So if we look at this missile—let's just look at the back end of it—we can see there are fins. This is the rocket exhaust motor, the actual rocket engine, and the exhaust comes out through this nozzle. These jet vanes deflect the exhaust so the missile can maneuver. It's an old design. You wouldn't use it on the longest-range missiles because you lose efficiency, but that doesn't matter here—you want simplicity on a shorter-range missile.

And notice there are these kind of attachments here. What's in those attachments are decoys. Here's a picture of one of these decoys—it's got electronics in it. There's no reason at all why the Iranians can't be deploying simple things like this. We haven't seen evidence for it yet, but this is the kind of thing you'd, you know, toss over the fence to the Iranians if they haven't done it on their own—if you're talking about Russian aid to the Iranians. What I'm trying to do here at this moment is give you a sense of why things are going to go to hell in a handbasket as this war goes on—with regard to attacks against U.S. bases in the Persian Gulf from drones, as well as ballistic missiles, but also damage to Israel itself from ballistic missiles.

This is going to go downhill fast. And we're only beginning to see how bad it's going to get. Here's a picture of this particular decoy—this is the Russian decoy. Notice back here, there's evidence of some kind of burning material. That's because when the decoy is deployed, it's released from the back of the Iskander, and it's got a small amount of rocket fuel at the rear to push it slightly forward. So there's a cloud of these decoys around the incoming Iskander, and they're radiating electronic signals. Now, they could be doing several kinds of electronic signaling—they could just be jamming the radar, because if they're close enough to the Iskander, the radar beam is still pretty wide.

So if I'm in the beam of the radar with a decoy and it's just a jammer, there's no way for me to null it out—null the jammer out. If the jammer is far away, I can null it out, and the radars are capable of doing that. But if it's right in the main beam, I can't do it. So I could be just jamming the signal, which takes no effort, or I could be mimicking the radar signal. Every time the radar pulse hits, I record the pulse and send it back, so I create a giant false image. This is what Israel is going to be facing tomorrow—or in the future—if it isn't already facing it. These countermeasures have existed for years. And people—well, I've largely been alone talking about this—but I've been warning people for decades about these countermeasures.

So you not only have the United States spending hundreds of billions of dollars on a strategic ballistic missile system that can be defeated with these measures, but you also have tens or hundreds of billions spent on shorter-range missile defenses, which are being defeated by the same countermeasures—just against more tactical systems rather than strategic ones. This is a gigantic technical fraud that's been going on for decades. And the argument has always been, "Well, we don't see countermeasures." My response is, of course you don't see countermeasures, because there's been no need for them. As soon as there's a need, you're going to see them—and now we are. So the prediction from 30 years ago is coming true in spades. Here's to give you a sense of the size of one of these decoys—they're not big.

And if we want to see, this is an Iranian submunition. I was looking all over the place. I just—this is a submunition. It probably contains about three or so kilograms of high explosives. This particular one didn't detonate; it landed on the ground. You can see that it had wings that fold out. The wings fold into these cavities here. The submunition is thrown out, and the wings deploy—the submunition immediately stabilizes. So when you see these things, if it doesn't stabilize, if it tumbles, it's going to slow down and hit the ground at a subsonic speed. So you're going to see this munition like we see it here. But if the fin deploys quickly enough, and it doesn't tumble and it stabilizes, this munition will go right along with the main vehicle. And we can see this in videos.

I don't know if we have time to look at it. We probably don't have time to watch a video now. I don't know if you're willing to, but here's another example of a strategic decoy. This one's Russian. I actually first brought this up in 1996. That year, I was in Russia, and someone gave me the first photographs I know of showing this decoy. I took them back to the United States. I was talking to the Russians and told them I was going to share them with the Americans. I said it was in the

interest of both countries not to have missile defenses that would complicate arms control. The Russians didn't want the Americans building missile defenses, because they knew they'd have to compensate for them—they couldn't just ignore it.

You just can't ignore this kind of thing—it's too much on the line. So they showed me one of their decoys, and I said, "Well, if you give me an image, I'll take it back. I'll give it to the Pentagon and explain what it is." And they gave it to me. So the Pentagon was certainly informed that the Russians build these kinds of decoys. This is what I call an electronic replica decoy, and it would fly along with strategic warheads. Now, when I was in the Pentagon—just to show you how the intelligence system failed—we would observe flights from Plesetsk in Russia. The Russians would launch ICBMs from Plesetsk to Kamchatka. They'd launch these missiles over Russia, so these would be strategic ballistic missile tests. And the Russians would deploy their warheads. You'd have an incoming, what's called, a post-boost vehicle.

And this vehicle would have a rocket motor that causes it to slow down, and it would go along what' s called the range-insensitive axis. I can describe this later if people are sufficiently interested. This is a direction in space where the warhead will land on the same location but follow a slightly different trajectory. In other words, if it's slower, it'll follow a trajectory like this; if it's faster, it'll follow one like this. But everything will land on the same location. So the Russians like to deploy their warheads along what's called the range-insensitive axis. We would see the Russians deploying their warheads that way.

We could observe them because we had these imaging radars—synthetic aperture radars. The Russians understood we could do this, but, you know, so be it. What we'd also see was a large number of reentry vehicle–associated objects. I even remember seeing this in the intelligence reports—RVAOs. I'd say, "For Christ's sake, these are decoys." And they'd say, "No, they're not decoys, they're RVAOs." I'd talk to these intelligence people and say, "Do you understand that what the Russians are doing is testing the deployment and stability of the decoys as they're released, and they're not showing you the actual decoys?"

They're showing you canisters designed to match the moments—what they call the moments of inertia—of the actual decoys, which they're not showing you at this point. But they're testing the deployment scheme to make sure that when they release these decoys, they don't tumble or do something unexpected. This is evidence of a serious countermeasure effort on the part of the Russians. "Oh no, they're RVAOs." So here you have the intelligence community—well, you know, you can say, "Look, you can say what I just told you." In other words, you're the decision maker, Glenn, and you say, "What is this?" And I say, "Look, we can't say for sure, but let me explain it to you, Glenn. Glenn, sir, I'm your decision maker."

You know, these are almost certainly—well, in fact, they have to be—replica decoys. We're not seeing the actual decoys. They're testing to make sure that when they deploy the real ones, they'll behave exactly as we see them here. There's nothing else they could be. But the intelligence

community wouldn't tell you that. So let me just show you how widespread this problem is. These are four images from the test of an ICBM—a solid-rocket ICBM—that was tested by North Korea. This is North Korea. What you see here is the upper rocket stage burning out. The violet, purple-looking area is just the rocket motor burning out. Here you see something being ejected. Well, let me show you what that object is: it's a canister of chaff. So this is the North Korean missile.

So here you see, this is a U.S. Navy chaff dispenser. You have chaff of one length, here's another length, and another—because they're cut to different lengths depending on the radar frequency, since you want to build a big puff cloud. Now, each one of these can act as a decoy at high altitude in space, because the chaff just moves along with the warhead. So I can create a chaff cloud with the warhead inside it, and I can create another chaff cloud with no warhead inside, because the radar can't see through it. In essence, I can create all these chaff clouds—which is what I'd do if I were the Iranians—because I think it's too much trouble to do what they're doing.

But they know what they're doing, and they're obviously extremely well trained—well informed about the countermeasures—and absolutely able to implement them. We're seeing this from Russia, North Korea, Iran, and China, which we know has a big countermeasure program. So all these missile defenses, whether strategic or tactical, are worthless. All this money that's been spent, and all these false claims that we can protect the public from ballistic missiles—those claims have now been shown to be false over the last 30, 35 years. You know, I've been talking about this for 35 years.

I can give you—well, you know, if I didn't have such a short time, I could organize a talk. I could show you slides from 35 years ago that I presented to the International Institute for Strategic Studies, and people said, "Well, what can we do about it?" I was in London 35 years ago, and people came to me saying, "What can we do about it, Dr. Postoloff?" And I said, "I'm telling you because I'm trying to alert you to the fact that you can be defeated, and there are no countermeasures to these. I'm trying to warn you that you cannot deal with these things when the adversary chooses to react." "Oh, you're a negative person."

Well, I'm just a scholar trying to inform you of what's technically doable on both sides. And, you know, you can't—this has nothing to do with interceptors. They want to show you rockets launching from the ground and interceptors, but this has nothing to do with interceptors. This has to do with sensor systems. If the sensor can't see what's a warhead and what isn't, you cannot make interceptions—you don't know where to send the interceptors. And that's the situation we're in. Things are going to go to hell in a handbasket in Israel, and they're going to go very badly. In the Persian Gulf military bases, as the radars get depleted by drone attacks, the radars are going to get hit.

Sometimes they'll be able to intercept, sometimes not. As the radars get depleted or the interceptors disappear—because there are none—you're going to be left with nothing but guns. In fact, there was some video I saw just a few hours ago of gunfire from one of the American military bases, showing they were using guns to try to shoot down the drones because they had run out of

interceptors at that particular base. That's what we're looking at. So, I have a bad story to tell you. It's nothing as spectacular as what Larry had to tell you from a broader view, but from the little keyhole of a technologist, things do not look good in the next part of the war.

#Glenn

From watching this interception—or attempted interception—what's your general sense of the ability to defend? I mean, you covered this quite well, but is it diminishing fast? Was it never great?

#Ted Postol

It's diminishing fast. And it's diminishing fast. It's diminishing from a very low number, fast. I mean, the interception—this is a total, a total fraud perpetrated not only on the public but also on, I mean, you can find, you know, Mike's—as you may know, in the Gulf War of 1991, I was the sole voice, along with my very talented colleague George Lewis, describing the Patriot's failure in the Gulf War of 1991. We eventually showed, and it was eventually accepted, that the Patriot had not intercepted a single Scud warhead in the Gulf War of 1991. Now, the Patriot used at that time was the Patriot PAC-2 interceptor, which was a bargain at a million dollars each.

Now you have the Patriot PAC-3, which has some improvements, and it's a bargain at $4 million each. But the problem with this interceptor, although they've made improvements clearly aimed at solving the problems with the PAC-2—which failed catastrophically—it turns out the PAC-3 is also failing catastrophically. It's maybe got a 3%, 4%, or 5% intercept rate against Iskander and longer-range ballistic missiles. So we haven't been seeing a high level of intercept success even earlier. And what you see is—this is déjà vu all over again, as I joke with my friends. In the Gulf War of 1991, we got all these videos, and we were analyzing them.

The videos were very hard to obtain back then. We didn't have all this stuff on the Internet, so we went to broadcasters and begged them to let us copy their footage of the engagements. It took us months to collect the videos, and in each one you could see the misses. In fact, we gathered a large number of them and showed that they were all misses. If you listened to the journalists talking, they'd say, "There's a hit, there's a hit, there's a hit." But what they were calling hits were actually the explosions of the Patriot interceptors—because they have a warhead on them—going off in empty space. I could show that video if you're interested.

I could do that on another show. It's kind of an interesting piece of history, because this is what happened in the Gulf War of 1991. And since there's no memory in either the journalism community or even in the military community, I'm afraid we're seeing the same thing. We're seeing Patriot PAC-3s exploding in the air. They make little fireballs. They're not intercepts; they're just detonations in free air. I can show you again if we have another session. I can be more organized. If you think we want to schedule something, I can go through what an intercept looks like, because we do have evidence of intercepts—very, very unusual ones—but we've been able, over time, to find them.

That's because we have dozens and dozens and dozens of videos where there are no intercepts. And every once in a while, we find a video where there is an intercept. It's not because intercepts are common; it's because they're so uncommon that we have to go through video after video after video to find them. But we know we can see intercepts—that's what's important about finding one. The fireball from an intercept is very big and distinctly larger and brighter than the fireball from an exploding Patriot PAC-3 interceptor. That's how you can tell it's an intercept. The Patriot PAC-3 runs into the front of the warhead and detonates it. If it hits the side and detonates—no cigar. So that's what's going on. The intercept rates are very, very low.

They haven't gotten better. If they're lower now, it's only because they've run out of Patriot interceptors to use. And it looks like there may have been some successful Iron Dome intercepts, but even those are at a lower rate. So I'd say between Iron Dome and the Patriot PAC-3, the intercept rates have been a few percent—at most—when interceptors have been available. Things are going to get worse because they'll run out of interceptors, but I don't know if it matters much. What's really going to get worse is the damage-inflicting capability, because these accelerated warheads—the ones with powered flight to low altitudes—do a lot more damage when they hit the ground. Their kinetic energy is very high; it almost doubles the explosive power because all that kinetic energy gets converted into explosive force.

And we're seeing more and more of these come in. I can show you some of them in a follow-up discussion. They do tremendous damage—really devastating on the ground. Just before this, my wife came in and showed me a message we got from very good friends of ours in Israel who have been against Netanyahu. You know, I don't have a good firsthand sense of what's going on in Israel today, in the population, because all our friends are against what's been happening there. But we were told that things are hellish on the ground—that's the word they used. And they look hellish, from what I can tell in the videos. And it's going to get worse. This is going to go on—it's going to go on indefinitely. We're only seven or eight days into the war.

#Glenn

Well, once a war can't be won on the ground anymore, we often see that the strategy, the tactics, and the targeting also change.

#Ted Postol

My concern is that this homicidal maniac will resort to using a nuclear weapon against Iran. And if that happens, Iran will respond. Whether or not they have nuclear weapons now, it may take them a few weeks, but they'll have one, and they will respond. That's what we could be facing. So I hope the United States has the kind of control over the Israelis that they like to say they do, because I don't know if anyone can stop this guy. We've been playing with fire with Netanyahu. This man is a homicidal maniac, and I'm extremely worried. Incidentally, if Larry disagrees with me, I'd be interested to know. We should bring it up. I saw Larry's comments on your show earlier—I think he

agrees with me, but I’m not sure. I really value his perspective because of all his insider experience, which I don’t have. But I’m becoming very concerned about what’s going to happen over the next few months, or even a year or more. This is not going to be free.

#Glenn

What I was going to say is that from the attacks on the fuel depots now in Tehran, we have this toxic rain that burns skin and destroys lungs. There have also been attacks on the desalination plant that provides water, which is a war crime. And Trump recently made a statement that the map of Iran will probably not look the same after this war. So it looks as if—well, I’m not sure if it’s going to involve introducing Kurdish fighters—but either way, I think the escalation is really getting out of control. The prospect of a nuclear weapon should not be ruled out as a failure to win.

#Ted Postol

Well, Glenn, you're obviously deeply studied on this subject—more so than I am. But I have to tell you, I'm starting to get concerned that we're walking into a global nuclear war. I think it would stay in the Middle East initially, but God knows how far it could escalate. There are so many unknown factors at this point. Hopefully it won’t happen. If it starts in the Middle East, it doesn’t have to spread—but there are plenty of scenarios where it could. We’re really moving into unknown territory.