Prof. Ted Postol: Israel NAKED: No Air Defense, No Radars, No Interceptors

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#Nima

Hi, everybody. Today is Friday, April 17, 2026, and our dear friend and brother, Prof. Ted Postol, is here with us. Welcome, Ted.

#Ted

Nice to be here.

#Nima

Ted, let me start with the latest news on what's happening between the United States, Iran, and Israel. Here's what we've learned so far. Iran has opened up the Strait of Hormuz, and all these commercial vessels can now pass through under the control of the Iranian government. They're controlling everything — even the route, the path these tankers are taking. On the other hand, we've seen the United States announce a ceasefire between Israel and Lebanon. And the latest news today, from the Iranian Tasnim News Agency — which is officially connected with the government in Iran — is that Iran was prepared to attack Israel last night at 8 p.m.

Because one of the main conditions before this ceasefire between Iran, the United States, and Israel was that the war should end on all fronts — which hasn't been the case so far. So Iran said, "We're going to get back." Then the United States — it was the deadline for the Iranians — they said 8 p.m. last night, but Donald Trump announced 8 p.m. Iranian local time. And Trump announced the ceasefire between Israel and Lebanon at 7 p.m. Iran time. How do you see the situation, Ted? Looking at the chaos, you see some sort of new... you know, every time you hear Donald Trump, he comes out with something new. And I don't know — we're so tired of these kinds of surprises, this sort of, you know, unrealistic instability on the part of Donald Trump. What's your understanding when it comes to Donald Trump and Benjamin Netanyahu?

#Ted

Well, first of all, let me say that I've been traveling, and some of these details are new to me, unfortunately, because I've just been so busy. But the problem Trump has is that he's started something he has no chance of resolving on favorable terms for himself. It just boils down to that. And the Iranians are in the driver's seat. In fact, it's interesting — they announced they would be attacking at eight o'clock, and at seven, all of a sudden, the Israelis agreed not to continue murdering people in southern Lebanon. That's an interesting result. I don't know how long it will persist. The Israelis are taking a terrible beating from the Iranian drones and ballistic missiles.

And the Israelis have controlled the press very efficiently. But every time you get a glimpse under the tent, you find evidence of very substantial stress in Israeli society — damage, and people simply not able to function at night. They're in shelters. They can't function during the day because there can be attacks at any time. There's a large amount of general damage. And it's not like — I mean, you can't make the place look like Gaza, because you can't deliver the incredibly enormous amounts of munitions that the Israelis have been able to deliver over months with aircraft bombing and destroying things on the ground. But there is a lot of damage, and there's enough damage that when an air raid occurs, you're not going to ignore it.

I mean, it's not as if a bomb goes off somewhere in the city and, you know, the odds are very high that you won't be involved. There's enough damage being done in each raid that you have to take cover — unless you have a death wish, you're going to take shelter. It's just, you know, it's your life, and you're not going to play with it that way. So people take shelter, and this completely disrupts every aspect of their lives. The stress, from what I can tell, is beginning to show in society in general. Now, I assume — I don't know — I assume this is a source of pressure on Netanyahu. I know he's been giving speeches saying, "Just hang on, we'll be fine, we're about to win," you know, that kind of nonsense. Really, it is nonsense.

But my guess is people are no longer buying it. And he's looking at—well, I don't know if you'd call it a revolt, but a serious loss of support. He's got an election coming up, and he's probably worried about that. So this may be influencing his behavior with regard to Lebanon. My guess—and it's only a guess—is that as soon as he feels he's free from some of these pressures, he's going to go back at Lebanon. I mean, he's going to go. And the Iranians are going to do what they've said they will do, which is renew their attacks on Israel and, you know, American military bases in the Gulf. So it would be nice if I'm wrong, but what the Iranians want is... unrealistic, given the behavior of the United States. It's not unrealistic—it's appropriate.

What they want is to be left alone. They want these outrageous economic sanctions lifted. They want to be able to build their society without being attacked militarily or economically. Three of these attacks involve the American—uh, the Secretary of the Treasury—working with intelligence organizations to try to devalue their currency. You know, this is just... if you're Iranian, I can understand how you'd be totally fed up.

And, uh, so, um, I think that as soon as the Americans or the Israelis do something that isn't consistent with the ceasefire agreement the Iranians understood was going to happen—which included, of course, that Israel would not be carpet-bombing southern Lebanon—as soon as that ends in some way or another, the ceasefire is going to be over. And my expectation is it will be over, you know, unpredictably, but not very long from now. The Iranians can persist. They have the missiles. In fact, in some sense, the ceasefire is—well, people talk about the ceasefire being good for the Americans because they're resupplying, but they don't have a lot to resupply with.

They're running out of weapons to send. I mean, yeah, you can resupply, but you have to have the weapons to send. And the Americans are in bad shape. The Americans are taking weapons out of countries like Japan and South Korea, and this is not a benefit to American alliances, because the Japanese and South Koreans are looking at this and saying, "You're taking these weapons out because you're trying to defend Israel. You started this war, and you claim you're defending us, but in fact, you're showing your priorities—and your priorities don't include us in a serious way."

I know the South Koreans are very disturbed about this. They've been worried for a long time, and I have contacts in South Korea, so I know for a fact they've been very concerned about the nature of the American commitment there. And, you know, things are generally moving in the wrong direction for the United States and will probably continue to do so. So, from Iran's point of view, it seems to me that the ceasefire works better for them than it does for the United States, because the pressure from a potential drop in oil supplies is still there. And the Iranians can shut the Strait anytime they choose to.

And they probably will, the moment the ceasefire ends. My expectation—well, I don't see why not. I mean, I'm just trying to put myself in the position of the Iranians. You're right, because they mentioned that today—the point you just made—that at the end of the ceasefire, everything's going to end, they're going to close it. Yeah, why would you give up this leverage you have, given the insincerity of American and Israeli conduct toward you, and after suffering all these economic sanctions, military attacks, and loss of life? Why wouldn't you just return to a full-scale war? Especially since you're the one who's going to benefit most from it. You'll be able to put the pressure back on, and it's going to be just as bad.

In fact, it's going to be worse, because the air defenses haven't had any significant capability against ballistic missiles, but they have had some capability against drones, since drones are slow-moving and viable targets. In fact, they're somewhat easier to shoot at—well, somewhat easier to shoot at when you can see them—than aircraft. They're not necessarily easier to detect, though, because when they fly low, they have small radar cross sections. I described in the last session why, when they're low, the radars experience a phenomenon called clutter, which comes from reflections off the ground, buildings, and waves if you're coming in over the water.

And those reflections are very large relative to the reflection from the drone, so it's extremely difficult to see these things at a long enough range. By the time you see them, it's also very difficult to bring interceptors to bear. And of course, now that you're running out of interceptors, you don't have any resources left to stop these drones—and they're getting better all the time. You know, they now have two-way communication that's unimpeded, so you can literally have a person sitting in Iran seeing exactly what the drone's television camera sees and guiding the drone in real time. I mean, this extra communications capability is now built into probably all of the more modernized drones.

And, you know, when you have that capability, you can do damage to anything you choose. You don' t have as big a warhead, but it doesn't matter, because you can hit exactly where you want to. The damage from the warhead can be amplified. And if you want to cause larger areas of damage, you can have several drones come in. Since you know where the damage occurred with the earlier drones, you can be very specific in targeting areas where you want to increase or concentrate the damage. So it's not a winnable situation from the point of view of the Israelis or the Americans. I think this ceasefire is not going to work. It would be nice if it did, but it has to work—and there's just no way it will.

Unless the Americans and the Israelis find some way to guarantee the Iranians that they're going to be left alone in the future, nothing will change. If I were Iranian, my attitude would simply be what I believe the Iranian attitude is: I have time. I have an infinite amount of time at this point. I have enough drones to keep going as long as I want to. You know, I have thousands—maybe even tens of thousands—of these things. If I don't have thousands now, I will have thousands, because I can build them very fast. Ballistic missiles are a little harder to build on short notice, but I can still produce significant numbers of them as I go along. And I'm surely getting help from the Russians and the Chinese.

And so my capacity to build—if there are limitations on it now—those limitations are going to become less so. They're going to be smaller and less problematic. The Russians have a big incentive to provide help to the Iranians, if nothing else because the Israelis have made it clear to the Americans: you give all these missiles to Ukraine, and then those missiles are being used to attack us in Russia, and we're not going to put up with it. And the Russians have made it very clear that if a situation comes up where they can help someone attack American interests, they will help. They've made that very clear. So the idea that someone's suddenly surprised the Russians are doing this is ridiculous.

I mean, uh, things are going to get a lot worse in Ukraine because there's no munitions for Ukraine now either. You just can't ship things you don't have. And that's what's going on in Ukraine now. You know, all the vectors point the wrong way from the American point of view. And Trump, even in his dim-witted understanding of the world, has to see that. There's evidence that he does see it. Now, he's a megalomaniac. He's probably suffering from some kind of dementia—if not, it may be

stress-related—but it could be dementia too. It could be physical, just because of his age, which is my age, incidentally. So maybe I'm going to be suffering from dementia next.

#Nima

Like your pride.

#Ted

But he's got Netanyahu there, who's just as crazy as he is—but in a different way. Still, you know, Netanyahu has no interest in helping out Trump, none at all. He'll use Trump and throw him away if he can. His problem is that he needs Trump, and he can't go too far over the edge and get a reaction from him. But Trump, on the other hand, is owned by the American-Israeli Public Affairs Committee—AIPAC—and these ultra-wealthy Jews who are ultra… I don't like using "Zionism" as a word, but I think it's correct.

The ultra-nationalists who are willing to literally murder all kinds of innocent people—families, children—and, you know, forget about women and men, but I mean, it's just horrifying, this attitude these people have. And given that they have this attitude, and they have a lot of money and can influence, in a dramatic way, the political decision-making in the United States, we have an American political system that prioritizes Israeli ideas about what Israeli security is over American ideas about what American security should be. I mean, what we're doing now—what we Americans are doing—is definitely not in our national security interests.

You know, we're alienating all our allies. We're expending munitions that, if you want to argue we have legitimate defense needs, we're using up by giving them to these absolutely maniacal Israelis who are bombing innocent civilians. This is not in the American interest. And it's against Judeo-Christian ethics, which, incidentally—from my friends' relationships with people who are Muslims, and I do have a bunch of Muslim friends—is not very different from the Muslim principles of being moral, kind, and generous. So it just contradicts all the moral values of everyone, whatever their religious background is.

And yet we're doing it. We are co-belligerents. And, you know, I don't see how this thing is going to persist. I just—I hope I'm wrong. But when I say I hope I'm wrong, I mean I'm inferring that this problem of Iran being constantly attacked, both economically and militarily, will be solved. So if I'm wrong and, you know, there's a ceasefire that continues and Iran achieves the reasonable objectives it's aiming at, fine. I think that's good for everybody—good for the world. If the Israelis don't like it, tough luck. You're a small country.

You survive because the Americans have this constant preoccupation with funding you and supporting you. You've behaved in a criminal way—the country has behaved in a criminal way. And it' s about time for you to fess up and start acting like a responsible member of the world community.

So I'm—you know, I don't think that's going to happen. I hope I'm wrong. I really hope I'm wrong, but I don't think that's going to happen. And if it doesn't, we're going to be back at it again. The Iranians are going to be back at it. So that's my best guess of what's going on now, of what the situation is.

#Nima

There are reports, Ted, that the United States is preparing for a massive attack on Iran in the coming days. They're saying this because the U.S. has been moving and sending a lot of weapons—over 75 U.S. logistic flights into the Gulf since the ceasefire started, according to the reports. So, based on what's happened so far militarily, what are they aiming for if that happens?

#Ted

I don't know what they're going to bomb. They're going to bomb more hospitals, more girls' schools. I mean, what do these people think they're doing? The real military capacity of Iran right now is all in underground tunnels. There's no way of getting at those tunnels. You know, I've studied tunnels because I think I mentioned I was on this weird Department of Energy committee that looked at this in the '80s—well before there was any issue of Iran or anything like that. It was just a general preoccupation with the fact that we have all these other people out there who have tunnels.

We wanted to be able to threaten them, and it was just ridiculous. There was no technology that could be found. It was a lot of wasted American taxpayer dollars and ridiculous studies that I criticized to the point they threw me off the committee. But there's no way to get at the tunnels. And Iran has done a spectacular engineering job—it's been deeply thought through. Every time I see one of these photographs, I say, wow, these guys knew what they were doing. And you're not going to be able to destroy these tunnels, given that the people who built them knew what they were doing. There's just no way around it.

And as long as they have these tunnels, they can manufacture things inside them. They can keep storing whatever they make. They can keep launching missiles—you can attack the exits, and then they can launch again later. You know, there's just no way of stopping them. So from the Iranian point of view, I don't know what this massive attack is supposed to do. I have no idea what you're going to tunnel, unless you're just going to do more general murder of innocent civilians and attack more universities and, you know—I mean, attacking universities, gee whiz, I mean, schools. What do you think you're doing?

I mean, you know, if you're trying to win a war or you're trying to destroy the society you're going up against, there's no moral defense for that. There's no way to morally argue for it. So I don't know if a new attack is being planned—I mean, the evidence certainly points to it—but I don't know what

they're going to attack. Are we just going to keep destroying hospitals and schools, hoping people will be upset enough to stop? That's not going to stop the Iranians. They know they're in a fight for their lives, and they'll take the pain. They're tough people.

They've been through a lot. They have thousands of years of civilization that they're very proud of. I mean, I have some Iranian friends—they're very proud of their civilization. That's important because it's part of the culture, the mindset. You're not going to push these people over the edge to surrender. No way. So all you're going to do is kill more people, expend more munitions, and have no effect. Well, the effect you're likely to have is that the Iranians will double down even further on keeping up the pressure through these ballistic missile and drone attacks. Seems to me that's the natural thing they'll do. Yeah.

#Nima

The other point, Ted, which is part of your work and something you understand well, is the use of nukes—nuclear weapons—and the threat of using them. You know, this war started on that understanding. And Donald Trump kept saying that we wanted to get rid of Iran because it was on the verge of producing nuclear weapons. He even went so far as to attack the Pope, saying the Pope didn't understand—that we attacked Iran because it was about to produce nuclear weapons. That's why we attacked Iran.

#Ted

I think the president—correct me if I'm wrong—but I thought he was now saying there are no more nuclear weapons to worry about. Didn't he just switch on this one? Either there are nuclear weapons to worry about or there aren't. I mean, what is he talking about? Am I right? I think I heard that the other day. I've been traveling, just got off a plane yesterday.

#Nima

He's literally talking about how Iran was building nuclear weapons, that he attacked them, and they destroyed everything. Right now, that's because of the attack. Yeah. They could achieve everything with their time. And the Pope doesn't understand that—that's why he's picked a fight with the Pope. He said, "If I wasn't the president of the United States, you wouldn't be in your position." It's amazing, the whole case of Donald Trump. But considering the—yeah, go ahead.

#Ted

No, no, I mean, it's just that, you know, there isn't a religious leader in the world this guy hasn't infuriated yet. It doesn't matter who you talk to—Jews, progressive Jews, Catholics, Islamic people, Muslims—it's incredible. He's just... anyway, I mean, all of his political support is nearly gone. He's only got a very, very low percentage of people supporting him. And the congressional elections are

unpredictable, but I don't rule out that the Democrats will retake the Senate along with the House. The House, to me, is just—there's nothing to talk about. It's going to be a landslide.

The Republicans are going to lose a tremendous amount in the House. But if they lose the Senate too—which is less of a clear outcome—that will really be bad for the Trump presidency, because I think he will be impeached by this new president if the House and Senate go. He may escape the consequences of impeachment, but I'm not so sure these days, because people are pretty fed up. And he's got his own MAGA people—you know, the Make America Great Again crowd. They are surprisingly committed to their principles. I mean, I don't agree with much of what MAGA argues for, but I have to give them credit for standing by their principles. And their principles include no more wars.

No more spending of national treasure on wars that get us nowhere and just impoverish us, causing us to lose our ability to work in the world. And they're angry about that—and good for them. Again, you know, I can disagree with people. But I'm, you know, I'm a person who believes strongly that you should respect people's views, unless they're talking hatred or bigotry or, you know, violence. Then I can't go along with that. But if you're talking about something I basically disagree with, well, you know, I'm an American citizen. If you're an American citizen and you have this view, I'll debate it with you. And I may ultimately not come to agreement with you, but I'm not going to hate you.

I'm not going to treat you as a criminal unless you're arguing for criminal things. So, you know, that's my attitude toward American citizens I debate with or deal with. And, you know, I don't like this business of saying, "This person is a MAGA person, and hence they're unethical, they're monstrous." They just have different judgments about certain things than I do. I don't agree with those judgments, but, you know, we're citizens trying to navigate our way to build a country that's just and fair to a large number of people. And we don't have that country. I mean, if I look at, for example, China's leadership—it's an autocratic state. So if I have a home and the Chinese want to build a highway that would go through where my home is, I don't have many options to stop them. I would in the United States.

I may not succeed, but I can do that. The autocratic state will give me money—what they think is a fair amount. I know this for a fact because I was in China talking to people who were in that situation. Some former students of mine took me out into the Chinese countryside because I wanted to see ordinary Chinese people. They brought me to a place where everyone was about to be moved out. They weren't afraid of the government; they were bellyaching about it. They didn't say they wouldn't obey or question the government's right to do it, but they spoke freely. They were being paid some money and provided alternative homes. They didn't like it, but, you know, the country is an autocracy, and it could do it.

On the other hand, the autocracy—the leadership—is aiming to raise everybody's economic standing and opportunities in the country, helping everyone live a better life. That's the objective. And if you look at the things the autocracy does, I mean, it arbitrarily raises salaries for everyone because it

wants to. You know, it says, "We've reached a point now where we should raise salaries so that people have more money to buy consumer items." That's not what happened in the United States. What happened here is we passed a bill that gave all the people who needed no more money—all these billionaires—more money, at the cost of people's health services and their financial security. And that's not a government that's doing the best for its people.

#Nima

So you can tell me, "Oh, we're better because we're free," whatever that means. I don't know what "free" means in this case.

#Ted

I mean, I'm free in the sense that nobody's going to come and knock down the door of my home, come in, beat me up, and arrest me. However, I'm educated and I'm white. If I were not white—let me tell you—I have friends who are Black. I don't just say that; I have real friends who are Black, over many years. And, you know, they don't feel that way, and they're right. There's evidence to show that. So, what's all this stuff about freedom versus autocracy? It's just ridiculous. I mean, there are differences. I prefer my society to living in China, if that were my choice, but I'm not Chinese. I'm not a product of their culture. I don't speak their language.

I have great regard for their culture and for them, but, you know, the United States is my home. I'm an American. And as I joke with all my foreign friends, I'm an American redneck. But, you know, this has nothing to do with freedom and democracy versus autocracy—this nonsense that this guy, Mike McFaul, spouts all the time. I mean, it's ridiculous. He runs a center that's not free at all. He runs a center that's an academic shithole—literally. There's no way to carry on an open debate in that place. But he's for freedom. I mean, I've never seen anything so repressive in all my career in an American academic institution. But he's for freedom. So anyway, that's the situation we're in.

#Nima

Yeah.

#Ted

Yes.

#Nima

You may go to the second part of our discussion. Yes.

#Ted

And I was about to say, speaking of freedom and academic integrity, I had quite an experience on my trip from Germany on the airplane. The airplanes now have reasonably good internet, so I'm sitting there, and the first thing I get is an article that was just published by the Bulletin of the Atomic Scientists. If I want to be honest, it was so inaccurate that it wasn't even wrong—it was just completely without merit. And, of course, a day later—I'll show you this in some slides—I get an email explaining to me how the Bulletin is this expert source of scientific information, and that I should give them money because they have real expertise and are informing our society about the critical national security issues we should all be concerned about.

So it's quite an interesting set of issues that have come up. Let me—why don't you just show slide number one. Okay, so there are serious errors and misinformation in this Bulletin of the Atomic Scientists article about a false alert that occurred in 1995 in Russia. It was an alert—I'll discuss it in some detail, depending on how much time we have. And the article said nothing correct about this false alert, nothing. It provided no information about what the false alert actually was. Instead, it had all kinds of discussions about how this false alert occurred when the Russians were losing a war in Chechnya, about the Russian economic downturn—all of these things that had nothing at all to do with the false alert were somehow rolled into the article as being associated with it.

It was just amazing—an incredible fabrication of irrelevant things that might have happened at the same time but had nothing to do with the false alert. It was really remarkable. Now, in all fairness, I want to take a moment to point out that this article was written by two very young, very junior people. I won't talk much about them, but I'm a little concerned, quite honestly, because they did such a bad job. I feel bad for them, because these are young scholars, and you could argue they should have known better. But my first question, since I'm an educator, is: how did their supervisors, or the people they work with, let them do this? What was their role? I mean, one of them is from Princeton.

#Nima

They're working for some kind of NGO.

#Ted

Well, maybe, maybe. But one of them is from Princeton, the Science and Global Security program there, which—if you look at my Google profile—it falsely states that I was thrown out of the program. In fact, I resigned from the program after it did something unethical, a scholarly issue I could talk about. So I resigned in protest, even though I'd been on the board of this program for 30 years. So it wasn't as presented in my—well, I'd have to spend all my time correcting these false statements that get into, you know, Wikipedia. It's really disturbing. But anyway, this article was simply ridiculous. And let's go to slide two. The article was erroneous.

It was published on April 13th. The next slide shows what I received on April 14th, the day after. "Dear Ted, in a world facing escalating nuclear risk, accelerating climate disruption, and rapidly advancing technology, having access to clear and credible information has never been more essential. The Bulletin is known for authoritative, science-based journalism, and our online and in-person programming complements our coverage to unpack complex, urgent issues. Yet this article is totally—like I said—it's not even wrong. It doesn't even come close to being wrong. But we're not done yet. To power this work and advance meaningful solutions, we need an all-hands-on-deck effort."

You can help strengthen this movement. So this is what I get a day after that article—totally misleading, filled with false information. Let's go to slide four. Here's just the beginning of the article as mocked up. The article has this lavish photograph, which you see below. The photograph—this is the first thing you see in the article—says the rocket, it's talking about this rocket that caused the false alert, carried instruments about 200 miles, 320 kilometers, into the atmosphere. That's not correct at all. It's simply wrong. This rocket went to a very high altitude—almost 1,400 kilometers high. It was extremely high, completely distorted in the way they described it.

That's the relevant piece of information about this trajectory, because the Russians had never seen a rocket launch from this particular location that went so high. What caused the alert was the fact that the rocket went so high relative to anything they had seen before. It had nothing to do with it traveling laterally by 200 miles. I mean, it's totally misleading. So, if we go to slide four—you can see it's slightly blown up. And slide five—I'm sorry. All right, so this is an article by the Bulletin. Now, let me re-summarize the claims. You go to the Bulletin, give them money, in fact. Oh, incidentally, I was told that I wasn't acceptable as a writer for the Bulletin a few years ago.

So I stopped writing for them. I would have stopped anyway because of these articles. But you're told, "Give them money," because, you know, these are the people who are holding the truth. They're scientists, they're experts. And because they're scientists and experts, they're giving you information that helps you be a responsible citizen—of the world and of the United States. And yet, nothing in this article is correct about what caused this alert. They're talking about weird things like... I had some notes here to remind myself. It was so strange, I can't even recall all the details they mention. They show a complete misunderstanding of satellite early warning systems.

They talk about constraints on providing launch information about your missiles because of what they call "cueing." But there's no way the satellites would use cueing. The satellites are designed to survey the whole Earth. You don't need to be cued. If someone tells you there's going to be a launch, and you have a satellite that can look at the whole Earth like the United States has, you see it—you see the launch. You don't need to be cued to it; you just see the launch because you're surveying the whole Earth. It's ridiculous. Why would cueing be an issue? It's all fabricated, showing a complete lack of understanding of the most basic facts about how early warning systems function, and then using these misstated facts to come up with proposals that are totally ridiculous.

So, this is really—well, all right, this is an article. Remember now, this is a good slide. Remember, this is a journal; it has an editor. His name is John Mechlin. The editor decides what's published. The editor has a responsibility to determine whether or not an article is accurate. Even a newspaper article goes through some level of review—at least you try to get a date right. So I just, out of curiosity, did a Google search. I said to myself, what if I were going to write an article about this and I knew nothing about it? So I asked Google, "What was the cause of the Russian false alert in 1995?" Well, I won't go through the details here, but basically the Google search gives all the right answers.

In other words, if you just did a Google search, you'd get information that was reasonably accurate. There are some minor details that aren't quite right, but I'm an expert in this—I've spent years working on this particular problem. You also get references to articles. You see on the right, the "Norwegian rocket incident" on Wikipedia—the Wikipedia article is very comprehensive. You get a Union of Concerned Scientists article, and you get an article that I co-authored, from over—well, it must be 25 years ago—*False Alarm Nuclear Danger* by Jeff Forden, Pavel Podvig, and Prof. Ted Postol. All you have to do is read these articles and you'd know everything you needed to know, at a reasonably competent level, about how this false alert occurred.

You got nothing wrong. If you believed anything this article from the Bulletin was saying, you'd have no idea what you were talking about, and you'd be wrong in the things you talked about and proposed. It's that striking. So, if you want to see how striking this is—in the next slide, I just show you the Wikipedia page. It goes on for quite a while, but you can see an image of the rocket that was launched, and you can see a map—none of which are in this article from the Bulletin—showing you the launch point. And if you read this and took it seriously, you would know infinitely more than the authors of the article know, because it's clear they don't understand these basic facts and pieces of information.

They didn't even check Wikipedia. Now, to emphasize this further—if we go to the next slide—this is from the Wikipedia article. I won't go through it, but it shows you other articles you could look up that talk about this false alert. And why would you write an article showing no knowledge—not even a basic understanding—of how satellites function, when the issue has to do with early-warning satellites, and then publish it? And how would the editor of the journal, Mr. Mecklin, who claims to be an expert himself—incidentally, he's not my favorite person, so I'll use my own language—he's technically illiterate. His word is worthless. I dealt with him as an editor; he would tell you one thing and do another. He would try to mislead you when he was editing an article.

I mean, this is not—I've never dealt with an editor who did this before. This guy's unique. And then he publishes this article, which was clearly not even—A child could have fact-checked this article and found it was just nonsense. A child. You get a bright high school student who knows how to use, you know, ChatGPT or something, and they would know that this article was nonsense. This is the Bulletin of the Atomic Scientists. It's telling you that it's an expert organization, touting itself as a

scientific, national-security source of wisdom—and it's publishing total nonsense. Total nonsense. If you go to slide nine, it's just an image from another article I wrote about this ten years ago. But slide ten gives you some points that I want to make.

First of all, what is the problem, and how can it be solved at the Bulletin? The Bulletin has a long history. I was writing for the Bulletin over forty years ago. At that time, there were serious people involved in overseeing it. Now it's a social club—a social club of people who are telling themselves they're good people, you know, that they know better than you and me, and they're going to tell us how to manage the world and do good things to keep it from being destroyed by nuclear war or climate change, which I'll mention briefly. So, point number one: this article is just one example of the kind of pieces routinely published by the Bulletin, where the scientific accuracy and content are either in error or completely without merit.

This is only one article. I could come up with zillions of others. And I'm going to try to talk to the board of the Bulletin. So I'm saying this publicly: if I don't talk to the board of the Bulletin, it's not because I'm not willing to—it's because they're not willing to talk to me. I'm a scientist of some repute, and I think I can tell them things they should want to know. So I'm planning to talk to the board. We'll see if that happens. You can ask me about it sometime in the future. All right, the Bulletin—I know for a fact that the Bulletin has no process for reviewing articles. None. Now, any journal that purports to be a scientific journal has an extensive review process. And the reason you do that is, even if you're an expert, you want another expert.

I was told that the editor, Mr. Mecklen, doesn't want to deal with me ever again because I kept insisting that he have an article he didn't want to publish reviewed. Then it turned out he lied to me. Incidentally, I have all the emails, if anyone wants to see them. He lied to me about the review process because he never got any reviewers, and then he tried to claim that the review process was secret. Now, this is such a joke it's hard to believe. The identity of the referee is generally kept from the author for obvious reasons, but you don't keep the review itself secret. The review has to be shared.

In fact, I resigned from the Princeton group because I found out they had used a slanderous letter against me—one that was secretly sent to them about me and the article I was trying to publish—and they had never told me about it or informed me they were using it for their review. I said, if you're going to do this, you're violating the principles of refereeing. This letter contained outrageous statements about me. For example, it claimed I was a Holocaust denier. I actually got hold of this letter—a Holocaust denier! So this piece of garbage was written, and they looked at it. They treated this letter as if it were serious. Keep in mind, I was on the board of editors.

I mean, it has to be separated in this case because I was publishing in the same journal. I was on the board of editors for 30 years. The three editors involved in this case were all former students of mine. Now, let me tell you, Nima, I never get a letter saying that Nima is a, you know, whatever—I don't care what it says. If I ever get a letter that's being circulated behind your back, I promise you'll

be the first person to get a copy of it. That's not appropriate. It's not appropriate to keep slander behind a person's back secret. If someone's writing secret letters about you, I don't care if it's true—you have a right to know about it.

So, you know, this is the kind of outrageous behavior I've been subjected to by the Bulletin—and actually by the Princeton group, too. And, of course, one of the authors is from Princeton, from that group. Anyway, let's go back to slide 10. All right, let me make a point here. I've also done a lot of work on climate change. I haven't talked about it—that's another discussion—but I know quite a bit about the scientific foundations of climate change. I can tell you that the articles on climate change in the Bulletin are almost always nonsense or outright misinformation. And I've tried to make that point to Mr. Mechlin, because I was saying to him, why don't you get referees involved? You're worried about climate change? Fine.

Have some people who actually know something about the science review the articles you publish, instead of putting out any piece of garbage from somebody whose concern is based on ignorance. The articles are typically just that—a concern rooted in the ignorance of the person writing it. "Oh, I don't understand why the weather is what it is today; it must be climate change." It's incredible. So this Bulletin is telling you—just as you saw from the letter I showed you—they're talking about nuclear safety, nuclear war, and climate change, and none of it is backed up by any kind of academic expertise reviewing these articles. It's just whatever Mr. Mechlin decides he wants to publish, without oversight from any other part of the Bulletin.

So this deals with the Bulletin's science advisory committee. I don't know what they do—they don't do anything. I wrote the science advisory committee article a few years ago, before they threw me out. And I said, "You're not publishing accurate information on climate change. Here are some articles you ought to be aware of." I sent them articles—refereed scientific journal articles. And I got a letter back from the guy who was then the chair, Bob Rosner, a distinguished professor of public policy at the university. He's distinguished, but I can't find any articles by this guy on public policy. None.

But he's a distinguished professor, and he writes back, "Well, I talked to some of my friends, and they don't agree." Well, I'm a scientist. You're supposed to be a scientist. What do you mean, your friends? What do they not agree with? So that's the science advisory committee. They do have some people—some potential scholars, people who could be reviewers. But if you're going to review an article that's outside your field, you have to do some work. You have the training. If you're a well-trained scientist, you can handle it. A lot of the things I've talked about over the few years I've been doing things on the web are things I learned about that way.

I'm a well-trained scientist. I can go and look something up, and I can very quickly understand it because I have the technical foundation to grasp something that would take a person without that training a long time to figure out. And it's good for me, frankly, because it broadens my understanding of all kinds of issues I should know about—although we all have limits on our time

and energy. At the same time, I'm able to translate this material into solid, understandable technical discussions that the public can absorb, and that helps people make more informed decisions for themselves.

In other words, my objective is to help people understand enough of the basic, accurate facts so they can decide for themselves which policy alternatives make sense. I'm not here to tell you what to think—that's my position. I'm here to help you understand the issues, and it's your job as a citizen of the world and of your country to think it through and decide what you believe, given your values and the values you think your country should uphold, especially in how you deal with a given set of problems. That's what I try to do. So anyway, that's the situation with the article. Do I have a few minutes to talk?

#Nima

Yeah, yeah, we have.

#Ted

Okay, so let's take a jump and talk about what this event actually was, because it's a very interesting event. Let's jump to slide 29. Okay, this is the Russian experience—a false alert on January 25. If we go to the next slide, anybody who really put energy into understanding this alert, which I did, would have asked the question: why didn't the dog bark? So, what happened is a rocket was launched. Let' s go to slide 31. This was a four-stage rocket. I won't spend a lot of time talking about it, but if we go to slide 35, we'd see the powered flight profile of the rocket. Basically, what happened is, if you look above 50 kilometers—so, the set of points above 50 kilometers, out to maybe 100 kilometers altitude—what you had was the third rocket stage.

The first two rocket stages burned out below 50 kilometers. Bear in mind, this is a scientific rocket. The guys who built it were scrounging for pieces of rocket motors so they could send something up to high altitudes for an ionospheric experiment—at a cost they could afford, because they couldn't just pick up the phone like Lockheed does and say, "Build me this rocket stage." So they scrounged a couple of stages from old surface-to-air missiles just to boost the thing up. Then they had a real rocket—a NASA rocket stage—to propel the payload from roughly 52 or 53 kilometers up to maybe 100 kilometers, before the fourth stage began burning.

Well, it turns out that if you go to slide 36 and look at the burnout events associated with the Trident II or Trident I ballistic missile, there are events—I won't go into details—that you can see on a long-range early warning radar. You can recognize them, but you can't see them in detail. For example, you see the rocket motor burning because the rocket motor plume has a radar reflection. When the rocket motor turns off, all of a sudden the plume disappears. You can still see the rocket—you just see a blob, a point of light that is the rocket.

But you know the rocket plume burns up to a certain altitude and then it turns off. Well, does that look like a rocket? How do I classify this rocket? Maybe it's a Trident II. Because when I see this thing, I don't see the lower stages—the curvature of the Earth keeps me from seeing them—but I do see the upper stage, and it turns off at an altitude that matches a Trident II first-stage burn. If this is an early warning radar, that's not a good thing. I mean, I'm not exactly happy seeing this event. So if I go to slide 37, this shows the full trajectory of the rocket. The little red curve you see below is one of the lower stages, which I can see with the radar. Now, the radar is looking—unfortunately, I don't have… let's go to slide 40. Slide 40 shows the fan of the particular radar that detected the launch.

So what the radar saw was a rocket motor that turned off. It couldn't see anything else at an altitude that could have been, you know, a Trident ballistic missile. Now, why would this cause an alert? Well, the reason it could cause an alert is, if we go to slide 44, my concern would be that at the apogee—if this were a Trident missile—I would be detonating a nuclear weapon. And that nuclear weapon would create an ionized layer in the ionosphere, and the radar would be blinded. It would be as if I took a metalized blanket and threw it over the radar. So now the radar can't see beyond this layer of ionized air at high altitude. The net result is, I'm basically blind. So if we go to slide 55, the radar is looking out…

#Ted

And there's a layer of ionized air—you can see it at about 50 kilometers. You see a slightly flat but curved, hatched area. That shows the volume of sky the nuclear detonation has ionized. Beyond that region, the radar can't see; it's blocked. So if I go to the next slide, this means the radar can't see ballistic missiles coming in from the North Atlantic. The purpose of detonating a nuclear weapon at high altitude nearby would be to blind the radar, so it can't detect the developing attack it would otherwise see at longer range before the detonation occurred. Now, this is a crazy attack—I want to be very clear about that.

But it's an attack that both the United States and the Russians have worried about. The only reason—well, you know, this is a very esoteric thing. You might ask, how the hell do I know about it? Well, it's because I studied nuclear war. I studied nuclear war inside the Pentagon, and I did my own calculations because I wanted to understand what I was doing. So when I saw this, I knew immediately that the Russian response was due to the danger of this unknown rocket being part of a precursor nuclear attack on Russia. That's what the system was responding to. I gave a talk at a Stanford seminar sometime after I had begun to analyze this, and in the audience was a retired Colonel General who had been commander of the Moscow Early Warning Center. Lovely man.

I got to know him quite well, and he said, "Ted, you figured it out. This is exactly what we were always worried about when we were in." So the natural question I asked was, why? Let's go back to slide 56. Why didn't the Russian early-warning satellites see the launch of those submarine-launched ballistic missiles in the North Atlantic? The answer, after an enormous amount of work, turned out to

be that the Russian satellites are unable to look directly down at the Earth. There's a technical discussion about why that's the case—we can't go into it here—but if people are interested, it could be a subject for further elaboration, because it's a very interesting problem.

But the Russians had not solved the problem of looking down at the Earth, which the United States had solved. Incidentally, they still haven't solved this problem, which is a great surprise to me. So the Russians have no satellite system that could tell them they're under attack from the North Atlantic. The warning of an attack from the North Atlantic comes from their radars. So tampering with those radars—like the Ukrainians tried to do in Armavir, which was a radar looking south in that case into the Indian Ocean—attacking those radars or tampering with them could precipitate a high level of alert in the Russian warning system, because the Russians would say, "Why is this happening? Who's doing it?"

I don't know whether that drone is American, whether that damage shut the radar down, or if it's Ukrainian. You know, this is how I got into this strange internet business I'm in now. What happened was, I was so disturbed when the Ukrainians attacked this Russian early-warning radar that I started writing to people like Jeffrey Sachs, trying to get them to alert the appropriate authorities, because I knew Sachs had contacts at the White House. And from my earlier experience with the American intelligence community, I knew that people in the White House didn't know much about their own early-warning system and didn't understand the limitations of the Russian early-warning system. There's a whole interesting story there about how I discovered this.

I was asked by the Clinton administration to review what the Americans knew about the Russian early-warning system, because the administration was considering early-warning cooperation with the Russians. When I reviewed the codeword documents, I was stunned to find that the American intelligence system didn't know the Russian early-warning satellites couldn't look down at the surface of the Earth and see launches. That's important, because an American president in a crisis could think, "Well, the Russians are doing this—they must know that we know. Why are they… you know, they must think we're attacking them. We need to do something." You know, this could literally lead to a misunderstanding that could result in massive nuclear use by both the United States and Russia.

This was a serious intelligence shortfall. And when I discovered it, I was working with a group of Russians. I said to myself, this is too serious not to tell them that I'd figured it out. So I went to Moscow. I didn't know if I was going to be arrested, to be honest with you, because this was one of the most closely guarded secrets in Russia—it had to be. I know how we Americans would have dealt with something like this. When we first launched our early-warning satellites, we didn't even acknowledge that we were trying to do it. The fact that we were doing it at all was secret.

And I went to Russia and gave a talk. Sitting in the audience—God bless him—was Anatoly Savin. He's dead now, so I can use his name; I wouldn't normally. Anatoly was the chief designer of the Russian early-warning satellite system. I was giving this talk to a group of people in an organization called KAMIATA. KAMIATA is a giant government-run and government-owned organization, the

equivalent of Lockheed, Raytheon, and everyone else combined—but owned by the government, which is the right way to do it. You don't want these guys deciding what's good for your national security like we do. So he's head of this thing. He'd been decorated multiple times for his work during the Great Patriotic War and otherwise. He was a serious communist.

I mean, he and I had a very good relationship. For some reason, he just took a liking to me, and I would joke with him about it. You know, he was a serious man, though. And he's sitting there and he says, "You know, Ted, you've got the surveillance areas in your analysis—the shape is wrong. The shape is wrong." What he told me was how the scanning system worked, because I knew there were two possible shapes for the areas I believed they were looking at, which were very limited. It wasn't a global system. So he—no, there's no question, none at all—that Savin knew exactly what he was doing. He was telling me, "You're right." And the reason he was telling me I was right was that he understood what I was trying to do: start a cooperative program. I was going to the Americans and saying, this is not good for American security as well as Russian security.

If the Russians accidentally attack us because they think they're under attack, the United States is destroyed just as surely as Russia. So it's in the American national security interest to try to help the Russians solve this problem. And I've been working on this problem for 25 years and getting nowhere. So this is an issue. When I see this Bulletin article, and they're telling everybody they're such experts—they've already told me, you know, you're forbidden, you're dirt, we don't want to talk to you again, we don't want you dirtying up our club—I felt that it's important people be alerted to this. And I hope, if you have audience members who read the Bulletin—and I suspect you do, because you have a pretty highly informed crowd—they should write letters about this particular discussion we're now having.

They should write letters to the Bulletin and demand that they do a proper job—or cease and desist, just close down. You know, don't falsely represent yourself as an organization that's giving people accurate information. You're not doing it. You're lying. You're misrepresenting yourselves as experts on matters you have no knowledge of, and that is immoral. It's also dangerous. If I tell you I know that a bridge is okay, but in fact it's not and it's going to fall down, I'm being immoral by telling you to go ahead and use the bridge. And that's what these people are doing. This is immorality on a massive scale. And the Bulletin needs to correct its act. That's my bottom line for this discussion.

#Nima

Sure, sure. Thank you so much, Ted. As always, we're grateful for everything you do.

#Ted

Well, I hope this gets a lot of views—not because of me, but because of the content.

#Nima

It's amazing—amazing as always. Thank you so much, Ted. Thank you.

#Ted

Now I'm going to go to sleep because I'm exhausted. Okay, bye-bye.

#Nima

Bye-bye.