

Special Series on Warfare: Final War Series Session

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Webinar transcription

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Meredith Friedman:

Thank you for joining today on our final session for our series on warfare. It's been a long haul eight months roughly since we started this series and we've covered a lot of ground. So today we're going to ask George, if he will give us a wrap up on our whole series and I hope each of you finds it useful and valuable, and we would like to try to answer all of your questions. So start putting them into the question box as Georgia's speaking and we'll try to cover all of your questions, hopefully in an hour, hour, 15 minutes. Thank you, George over to you.

George Friedman:

Welcome everybody. It's been a long road and we're still not there. The road on war never ends. And we're merely talking about the latest transformation that took place. The series began with the discussion of a pretty primitive, simple munition. The eighty-three Sagor the NATO designation that was wire guided optically guided so that you squinted at it, honed in on it, fired and guided the muscle to it. And that event destroyed. And the first encounter and Israeli brigade. Now did that point. The tank had been the king of warfare. Now suddenly the infantryman carrying this simple weapon, forced the Israelis to shift from having to spearhead B the tank to the infantry, going first, protecting the tank, clearing out the ground of the infantry troops of the sackers. And so on. This seemed at the time and extraordinary events, but we didn't really appreciate the extent to which it changed, represented a change of warfare. It wasn't the last weapon of transformation, but it was the one that signaled that world war II was over. And the game was different.

I learned a lot myself in this series and the thing I learned the most is that the distinction between strategic and tactical is in a sense obsolete. We had understood the strategic level to be the broad battlefield and the tactical being the manner in which the pieces, the small units encountered each other small unit encountering small unit was one level of the warfare, the strategic consequences of what happened on the broader battlefield or in the war itself, a different one. The introduction of precision guided munitions created a massive vulnerability to the weapons platform. The weapons platforms could no longer mass is already was created with tactical nuclear weapons, but those were unused. The idea that massing the platforms, massing the troops and crushing forward became problematic. And we saw it in our various discussions. It became problematic because precision guided munitions allowed a significantly high level of casualties to advancing forces grouped together with relatively little cost to break the attack.

The mass attack that we saw couldn't in world war II, couldn't be done. What happened was that we've been discussing is the reduction of the number of platforms, their dispersal on the battlefield, and forcing the enemy to concentrate on locating these platforms and taking them out individually massed and discovered a fleet. A division could be decimated dispersed, not so easily. The key became the uncertainty principle, having discovered one capital ship or one large unit. You could not assume that the rest of the unit was there. You could not plan around that. The dispersal meant that your found flanks were never secure. There was always an opportunity of the enemy to strike at you. And this changed the nature of the battlefield, the use of massed forces as a strategic basis for the attack or the defense shifted the number of platforms, engaged number of troops, engaged, decreased at least per square mile. They had to disperse and its dispersal. You found yourself with a new battle problem. Where are they? The question of the uncertainty principle I will do invoke, Heisenberg became the fundamental question. The battlefield, that sort of intelligence was always there, but this one could never be solved because of the platforms, agility and ability to transport itself.

What became important during this battle was not space as much as time, the time to detect the time to launch against that platform. The time to get information on the outcome of that engagement time was everything with the speed, which travels weapons traveled, which you already saw with missiles, but certainly in a tactical battlefield, what we call we call that time was the variable. This really began with nuclear war where the time to detect an incoming missile gave you the opportunity to strike back no time, no counter. Well, this was not the technical case on the battlefield at this point, but it became a crucial element.

The really important question was how to render the enemy deaf and dumb. Also blind. The enemy that you had was not the weapon, but your detection on the battlefield. If you were detected, if you were heard, if you spoke, your location could be determined. And the probability of a strike was not like the probability of a rifle shot. It was much higher because officials and guided munitions, the PGMs once they knew where you were, they didn't even have to know where you were. They had to know roughly where you were, have a computerized model of what they were looking for or terrain and they were looking for and take you out. So the battle became a battle of the electronic electromagnetic sphere. It was to disrupt the communications between widely dispersed units.

And it was also to disrupt the enemy's ability to see you much harder than disrupting, maintaining your own ability to see them. This is a process that's ongoing. We are continually developing new methods to render the enemy and capability. Yes. The critical element in terms of movement is agility. The ability of a platform, a platform team to move from the point of which they were detected to another point in sufficient time that the incoming round could not pick them up and detected. It became crucial. So the battle became a battle of intelligence as it always was, but at a speed at which it never was, the counter was not kinetic. It was electronic and the ultimate counter was agility. So a fleet or a division had a built-in vulnerability. Given the time it took to relocate on the battlefield, it's just too large.

The units have to break down into smaller and smaller numbers and the ships into more and more agile numbers. So movement on the battlefield, which had been very complex during world war II and divisional level of combat or things like that, that couldn't be afforded. You have to, as we move

forward, have smaller units in an odd way. The special forces become the basic bloody infantry only because there are fewer of them and they're agile and have with them equipment that allows them to confuse. And this is the battle. The battle is not the mass battle that we saw in world war II. It is a dispersed battle. The fleet is there. The division is there, but it is not there at that point. At the same time, it must absorb casualties. It will fail. It was an expectation of that, but you cannot destroy the entire, I call the platform division.

You can't destroy allow that entire platform to be destroyed. You can't allow a capital ship to be taken down. You have to build in an element of not only massive uncertainty, but of agility and also the ability to fight and electromagnetic war. So when we take a look at the China war, we did, we have one problem. The Chinese are in a tight battle box, 100, 200 miles east, west, very long south, but their ability not to be detected by non electromagnetic systems. A drone for example, is very low. You have a high probability where they are the American's ability to disperse into Pacific out of asset number reads to an uncertainty principle at a certain type of electric medic system, but not to space-based systems.

So we all understand that space-based systems have an advantage. If you're trying to see may not interfere with other things, but it can see. And therefore the first level of warfare is to blind the enemy. And therefore, we assume that even if there were a us Chinese war, each side would go blind the first 15 minutes, they would not have that capacity. Each side would want to degrade it. Okay. That will be replaced by other reconnaissance, Mexican distance old-fashioned aircraft, whatever would see them. Those that were in a tighter box would have a higher probability of detection. And those would be in a broader box. The Pacific it's very broad. And the advantages once the enemy is blinded, it is hard to find us. The Chinese have a disadvantage. The probability of detection is higher. Not certain, there are many things they can do to confuse the situation. But this is where we went from the Israeli war, where we discovered precision to speculating on this war. We're precision grows in the probability of a hit kill is extremely high. If you know where the hit kill is, that's where the battle is not to know where the hit kill comes. Okay.

You also have to have something we don't have yet, but we'll have to come. [inaudible] In communication right now. Electric electro magnetic pulses travel in a straight line, traveling in a straight line. They can be disrupted, disrupting communication is something, both sides. Do they do by laying down other like magnetic fields that make it impossible for the information to pass inflammation currently is the fad where we say that information based warfare is critical. Well, that has always been critical information based warfare was critical, but the Spartans who could yell over to the other guy, a stash move over here. That was easy as the battlefield expanded. Okay. Communication became dependent on enhancements flags, very symbols. When that became impossible to maintain the electromagnetic came in. Now the electromagnetic is the primary means of communication on the battlefield, a battlefield that could be thousands of miles wide, which has to be wide enough.

You can't bunch up. As you said, in every movie in world war II said, don't bunch up; spread out. I mean, cause that's not actually you, but the extent of the spread is somewhat you. So you spread out and you have to do something about electrical magnetic communications. Well, if you're being jammed, that jam has a geographic location. You know, it's not an infinite jam. We have no way to shift the trajectory of

the electromagnetic. Once the pulse is released, it goes in the line that it has to go. You can flood the atmosphere with that, but that also tells the enemy exactly where you are. Triangulation gets really easy and you're met with a very high explosive. So you want to keep your you're going to want to keep your communications very tight. You're going to want to keep your detection systems very tight or the reporting from the detection systems. And for that a straight line doesn't really work space is wonderful because the origination point is far away and location reception is hard to know, but those satellites will be taken out or else one side of the other is going to have a very big surprise.

And so the next problem on the battlefield is going to be not only agile communication and detection, but agile pulses, they cannot simply be sent to a straight line. Now, do I know how to do this? Not a chance, no idea. Kind of, I've got a silly idea of embedding command pulses into, but this is based on total ignorance. And I have no idea how to do this, but the problem we have right now is that you can render the fighting force that dispersed in capable of cooperative operations by intruding on their communications, which means that at this point each group, each platform has got to operate individually. There has to be a general understanding of where, what you're doing with the high probability, then the process of doing it. You're going to go deaf. You're not going to be hearing anything; adjustments are going to be difficult.

Thus command has to devolve to a very low level. It's the key units are going to be smaller because you can't mask them agile because they've got to move very quickly so that they have an indetermined location, but they also have to execute a battle plan without central control during the battle, or at least without counting on central control during the battle. During world war two, the assumption was that the largest unit would still be in contact with headquarters and Patton could order whatever crazy thing, patent, a lot of order. And he would do that and change the direction of the battle, changing the direction of the battle in a world where the probability is that the essential units no longer operate is very, very hard. Okay. so you to have a very different mindset as you enter the battle of the small unit, not only understanding what the mission is okay, but understanding how he can innovate around that mission. So you have to have a very different training for the officer Corps because under the current circumstances, whether you're a army unit, who's dispersed and operating in a wide battlefield or a ship shivered line, and you're operating somewhere, you are not going to necessarily, you cannot guarantee communication. You cannot guarantee third party intelligence. You can't guarantee all the things that were in the center, and now we're going to be coming down to you.

The problem of war is that it is inherently kinetic. It is fought by killing your enemy. But in order to do that, there has to be a substantial organization, logistics, communication, intelligence, flip flowing, and so on. That's no longer possible because non-kinetic warfare has rendered the command system that we've been working with. Non-Functional the ability to disrupt is the ability to isolate the ability to isolate was the ability to destroy. And so that last piece cannot be there. The ability to isolate cannot be the ability to destroy the ability to maintain the offensive just has to exist even in that circumstance. So either you create a technology that can easily overcome this, and I really don't see it easily overcoming it. I could imagine it's okay. Or you have to have a different concept of what the battlefield looks like. Dis-Aggregated battlefield adult battlefield commanded in a very different way.

And, and so the interesting thing is the uncertainty of location and dispersal makes things like tactical nukes inefficient. The tactical nuke existed was the perfect weapon against the gate or divisional Lowell operation. Had we landed in Cuba during the Cuban missile crisis. The Soviets had tak nukes just deploy there. Their intention was which we learned only after the cold war, their intention was to use those techniques on the landing field where the landing point, the beachhead, well, you can't afford a beachhead like that any longer, because even if you're not using tech nukes, the ability to send in large-scale missiles, unmanned aerial vehicles that were first, the missiles really changes your opportunity on the battlefield. You don't have that opportunity there. The fog of war has always been conditioned. The fog of war used to come. You're very close in, but you really in the mayhem don't understand where everybody is, where the fog of war would come out of fear, or the fog of war would come out of many different directions in many different ways.

Now the fog of war is, are dependent on widely dispersed units and the electronic sphere that connects them, always in war. These have been solved, but the usual solution I don't want to emphasize has been to devolution of command, to seasoned junior officers or somewhat higher, or even sergeants, they would conduct the battle. So what frees you from the F from the fog of war is closest, closest to your command, which is deadly. So you must give your enemy many targets, overwhelm them with targets, some dummies, some not dummies, but always more targets. And they can hit tactical. Nukes were an interesting solution to the battlefield. If NATO, where in the event of a Soviet attack, there was some probability of them being sufficiently bunched that attack nuke would do the job. There was great expectation to the Soviet abusing techniques, but how do you attack nuke fleet separated by thousands of miles where you don't know where they are? The satellites are out, your UAVs are hunting all over the place and picking up some, not picking up others and where no one hit defeats the enemies capability of waging war against you. It's a very different world. Okay.

One of the interesting things and I'll stop on this is that the vision, the war is won by those that can yield the largest workforce to produce technology. And the largest army Navy to fight is obsolete. Small nations are capable of having large scale capabilities. If they can dominate the electromagnetic spectrum, if they have large scale unmanned aerial vehicles if they have relatively small craft firing precision guided munitions and, and so on, okay. We entered into with Napoleon the idea of massive continental armies and from the polio in the first world war to the second world war to the cold war. The idea was that only a nation that could field and feed and support an army of this sort could end in battlefield. Therefore, the great powers were the Soviet union, the United States, and even Britain couldn't afford wages were lower. It needed the Americans.

So the vast powers that had worked forces to create demans of war and at the same time field, very large armies that would mass the carry out to Blitzkrieg. It would mass to break let's create. I mean, that was the kind of model we had now in history, going back to the Greeks, us smaller units were used, but they would operate at a different type of communication, different set of weapons. And so on the Roman empire used larger forces to flank and destroy enemies. Okay. That was a evolution, but we've never had the kind of armies we had from the 19th and 20th century humanity, never wage war on that scale on a global scale, never wage war with the entire workforce of millions producing. The means of war never had that. That was a freakish period. What I think is happening here is we're breaking down with alcohol, the world war two model of massive industrial nations, hurling themselves. Each other.

What we're looking at is not techno is not industry nearly as much as technology and sufficient industry to prepare it.

And we're looking for our forces that have to be smaller, more agile, wildly separating connected. Israel is the interesting model. We began with Israel surprised by the eighty-three Sagor okay. Now Israel is a country that should not be a significant power. It is a significant power because of his intelligence, not only the intelligence that human intelligence, but arrange of electronic intelligence because of weapons that are produced that did not require large numbers of manpower to carry them out, but fit in with the electronics. In other words, smaller countries can become deadly. Now we haven't seen Israel really fight a war on these new terms. 73 is a long time ago. Okay. We had no that those wars are no longer being fought in the kind of wars we had in world war II. We assumed that these wars are kind of intermediate wars between major wars, but what we see in the kind of guerrilla warfare, that's being carried out with the availability of missiles drones and other technologies may not be an indirect and in between world war II in the next big one. Okay. It may be that you are seeing the accommodation of armed forces to the new battlefield. The Israelis have the ability to see deep the shed gorillas have a little, have the ability to be highly agile as well as to take casualties.

So there's a possibility that begins to Dawn. To me that the world war II model of great nation states is not the model that we're following and that the guerrilla war is not only, it's not an intermittent situation between the grade wars, but is the new model of warfare in Iraq. We had tremendous problems dealing with gorillas who operated without communications or significant communications understood how to command and control very small units and strike. Since really Vietnam, we have seen these kinds of battles. It's been a time, you know, half a century that we should consider that this is the new norm of war. The norm of war is not large industrial powers, hurling tanks at each other. Okay. We can't survive on the battlefield, but the ability to acquire or to build technical systems at various scales, the eight, the eighty-three Sagor was the ability to acquire a Russian weapon designed for the north European plane.

When you look at it in their hands, it didn't win the war for them, but it was only the beginning of that. Take it down to the kind of weapons that are currently being used. Some highly technical, some very simple, but nothing compared to the kind of division on division conflict that we saw empirically. It hasn't happened. It didn't happen on the battlefields of the cold war. It happened in various ways. When we try to impose that kind of battle on the Viet Cong and north Vietnamese army, and they refused combat in those terms, they had a different strategy. We've consistently been seen a type of warfare that originally was seen during the Napoleonic days as well, just a minor way of small group fighting. Okay. In Spain, for example, it is possible. And I began to think of this when I think of the high technology, the forces combat to small technology, that because of the incredible power of high technology encounters between the two, we'll always destroy the smaller unit, unless the small unit is agile and so on and so forth.

Okay. That's a possibility. I'm not ready to say that that's true, but that's what came out of this, this thinking about this for this group, which is that we're always preparing for fight with a great superpower. They don't happen. We wind up fighting miserable, little groups that beat us. They beat us

in various different ways. Now that somehow intersex has a very different low tech thing, but it does intersect with the concept of war that's imposed by the new technologies. And those new technologies can be produced by Denmark once conquered Europe. I doubt that they will, again, but any industrial power couldn't impose that girl is confined in their hometown. They're good at that. They can't fight internationally, but this is kind of the analog that we're seeing. I think of these gorillas, which is we're turning to us Navy. You're going to turn into U S Navy and the gorilla force operating in great distances, unable to communicate taking the initiative.

So the crucial thing I take away from this is the eighty-three. Sagor, like you can't mass artillery unit, and try to take out an infantry position. If patent heard that he'd have a heart attack, but that's the way it is you can't because if they've got anti-tank weapons with precision built in, they can defeat the tank. Now you can build a tank and they built all sorts of armor and reactive armor and every kind of armor you can think of, okay, it still comes down to you. Can't send a division into that. So we have a different type of warfare that's emerged. And I think beginning with [inaudible] was a pretty good idea because that's where it started. Well, it started before then, but it was the first time it was seen on a modern battlefield. And there's been a radical change, I think, in a battlefield. And I think as an oil, military principles, acknowledging that something dramatic has changed requires a major defeat at least to somebody, hopefully not us. Okay, let me stop there.

Meredith Friedman:

So we have three members who were on our American team for the U S China conflict with us. It seems like all the China team went on vacation as soon as we had our last session. But Fred, your hands up, I'd like to see if you have a few comments, either on what Georgia said, or a couple of minutes, summary of your own on what we've learned from this series.

Fred Borowski:

Thanks Meredith, can you hear me? Yes. Okay. George, I, I, in the last month, less than a month since we conducted this pseudo war between China and the United States Senator down the streets of Taiwan, the following things have happened right. In Japan. The deputy prime minister said that if Taiwan were attacked Japanese, the Japanese would have to help the Taiwanese because otherwise it would be an end game for Japan just yesterday. I believe the it was announced that Indonesia and the United States are participating jointly in a series of exercises, which is highly unusual in India. There have been a massing of troops in India on the disputed border, up near Tibet by both sides in Taipei in Taiwan, the combing town has elected a representative, which has, has really thrown the Chinese for a loop.

And that they is basically an anti PRC move in Washington. The president announced a global initiative against China on hacking. Secretary of state blinker went to visit the Dalai Lama. The Chinese have had a new ambassador, which to the United States who is very critical of the U S the Chinese turns out, have built another IBM base or two in China. And I think that in the last week, the PRC conducted a amphibious practice session in the streets of, of Taiwan. So I think we are topical and I think geopolitical futures was pressured and almost the exact timing to, to what's going on. That's just all I wanted to know.

George Friedman:

Thank you. At one point I'd like to make is we all saw the Chinese preparing a salt, and this is the problem, the salt we'll all see it. The Chinese, as you see in the U S Alliance structure is pressing in on the Chinese. Okay. And the Chinese, for example, have known your financial problems and so on. But the important thing to bear in mind is that China has a very narrow space in which to maneuver its fleet. Okay. And in that narrow space in the United States is a very large space in which to maneuver its fleet. Ben still bring fire power to bear. So I don't think there's going to be a war. I think there's going to be a negotiation there's got to be because this all started with a tariff that can be solved. But I think the Chinese are having an internal literal crisis because they've walked into a situation they didn't expect to have didn't they, they didn't expect to see this rigidity on the part of the United States. But anyway, that's my opinion. Sorry,

I'll just, I'll just make one final note. And that is the blue team, the blue team strategy was to avoid conflict specifically with China over Taiwan and instead build out the Alliance structure and strengthen it in order to counter the Chinese potential attack and threatened China with what we see going on basically right now, which would mean that there could be a blockade, so kudos to the U S team.

George Friedman:

They're absolutely right.

Meredith Friedman:

If Lee or, or Laky want to make a comment, I'll come back to you in a second. Let me just take a question from the attendees first. Paul Jackson asks is Australia's launched geography of any relevance.

George Friedman:

Launched geography, correct. Okay. So that would miss lunch. It certainly has value. Okay. You can certainly have that. If you have indeterminacy of launch site, the Chinese construction of a fixed launch site is very interesting from 1960. I'm not sure that it's really relevant here, Australia. However, has a vast countryside. We're going to have mobile weapons relatively easily handled with logistics. So I would argue depending on what the launch site is there be an additional complication in any confrontation to have a sea-based system.

Meredith Friedman:

Okay. Lee, you wanted to make a comment.

Lee Pryor:

Yes. well, first of all, I want to compliment George and the team at geopolitical futures from putting these sessions together. I think they've been very interesting and as Fred points out very timely and so thank you very much. It's been a real pleasure to be a panelist. I've really enjoying the experience.

George Friedman:

And I'm very grateful for you to have been there really seriously. Thank you.

Meredith Friedman:

Your experiences from Vietnam and other places have been most useful for us to let me take another question from attendees. Matt Shoemaker says sun ziu provides many quotes around winning the war without fighting actual battles. Can you speak to what that might mean in today's scenario?

George Friedman:

Well, today's scenario dealing with China, there is a economic dimension, so it was there. There's also a propaganda dimension where each side tries to appear more fearsome and reasonable at the same time. There's all sorts of other dimensions, but for China, the most critical dimension is the economic because China's entire public profile is that it's a brilliant economy and it is, it is done magnificently, but this whole confrontation we've had with China happened over one thing. The United States wanted equal access to Chinese economy. As China had to Chinese refused. Do you guys put a tariff on, which was not a terrible tariff? And that was the beginning of this. So the heart of this is the economy and sun ziu understood that it could be wealth. It could be psychology, it could be all sorts of things. But the thing to remember about China is that it is the world's second largest economy, but it is the seventh 75th largest per capita income by GDP.

It ranks behind Guiana and Equatorial Guinea, so that when you look at China, you see on the one hand part of China, having created a massive economy and the rest of China being very much left behind, we don't get to see that very often. So when you think about China and sun ziu made the case that you have to appear to be fearsome or at least appear fearsome and the Chinese in order to show itself, dangerous has made itself appear over a fairly trivial economic issue, more fearsome than it should, but why did it do that? Well, not because of a self-confidence, this was a way to compensate. So in dealing with China, we always have to remember where the crisis began and try to figure out why that turned into a military confrontation. And is that a competition serious? So I think sunsuit has been by GE and having been read by GE or part of his culture. You know, he is posed a threat that he hopes can shape the us and has so far failed to do so. And I suspect she's in more trouble than we think, because if you take a look at how China was 500, five years ago, you take a look at his condition. Now with this huge lions that Fred was talking about a raid against him the central committee can't be thrilled. But how much internal control he has that central committee? I don't know.

Meredith Friedman:

Okay. So you mentioned the concept of guerrilla fighting in your summary, George. James asked the question, the concept that gorillas can only fight on their own turf seems to be contradicted by the development of small teams of terrorists that can be deployed worldwide, that may not have staying power, but can they wreak havoc on key targets? What are your thoughts on that?

George Friedman:

They can have a vast psychological effect. What happened in nine 11 was frankly, I don't mean even brutal, but not a major event. Militarily psychologically. It forced the United States into actions that it might not have chosen to take otherwise. And what you can do with terrorists is to shape against, on SU to shape the consciousness of your enemy, to force him to act. And that's really what happens. So, yes, they're best. I divide guerrilla fighters who are engaged in, can sustain battle from terrorists who are engaged in strike and flee or die. What have you? Okay. The strike is not designed to cripple the enemy

except psychologically the guerrilla war is intended to reach political ENS, fighting a train to the gorilla is familiar with and knows how to disperse them. Okay.

Meredith Friedman:

Laky, I saw you nodding there. You're either listening to someone else or agreeing with George. You want to make a comment?

Laky Pissalidis:

No, I just agree very, very deeply. We have had a big debate over the years about the difference between terrorists and, and guerrilla warfare. And there was a big difference. One is exactly the one is the strategy is psychological first and foremost, they cannot sustain a fight, whereas a guerrilla warfare or even insurgencies that have to necessarily be local are able to change the situation on the ground, tactically and come to generally come to a negotiation best that's their strategy. That's what I was agreeing with growth, a lot of the other things as well, but that's what I was nodding my head towards. I do have one other technical I don't know if this is of any help but regarding the propagation of radio electromagnetic waves, they, I, I think eventually they're going to have to be able to travel in a straight line or some kind of communication that is able to travel straight line ready to complete electronic radio propagation actually is not in a straight line.

It goes everywhere. When you send out a signal, it sends, it sends it's sent out in a bubble and away from the center. Now you could direct it to a certain extent, but the big problem with it is that direction, everybody that has that frequency and is able to receive that particular frequency is going to be able to catch what you're, what you're, you're propagating. Ultimately, what I would think you would need is something that shoots a straight line like is laser or at least the propagation field would have to be much smaller.

George Friedman:

Well, you know, thank you for pointing out something on which I've totally ignorant, but have an opinion. What are those things? But the problem is twofold reaching the target, you're communicating with the leading interference. So the problem is, yeah, it goes out everywhere and they can detect it and come in at you. Okay. So the laser-like targeting is excellent, but they can also interfere with that. You need to have agility. Now. I'm not going to just keep talking about Savannah, nothing about and have a discussion like I do. However, it'd be nice. If somebody invented a really tight agile beam, I can name things. That would be nice, but I won't do this company.

Meredith Friedman:

I haven't known you not to talk about something you don't know anything about before, but if there's always a first, so let's go onto the next question. A very technical topic. Andreas asked this question, you were talking about the saga three missile, and as an example of how devastating PGM can be over the last two decades, the U S has been engaged on two different battlefields, very different one flat terrain in Iraq. One very mountainous in Afghanistan. We've obviously had a little lessons or time to draw lessons. So his question is, do mountain still provide a good terrain to protect a defender against guided missiles, particularly against missiles from land vehicles.

George Friedman:

It may not defend them against missiles, but it makes it very hard to see them. So where is the target? And one of the problems of mountain warfare is that the opportunity to hide yourself okay, is massive. And if you're in small enough units, which the gorillas were African, gorillas were, and know the mountain in infinitely, there are caves and all sorts of other things. You can hide it. Now, if I could spot you, if I knew you were going to, and you please stay there for the next 15 minutes while I get my weapon ready here. Yeah. Then I can definitely mountain Dew. But the problem of precision guided minute munitions was not encountered in Israel. And in the battlefield, in the Sinai, they, you knew where they were and they could only be there. They were tanks, fighting individuals is harder. Part individuals are agile. And if they know the terrain, you're, you're going to lose going into that mountain, trying to dig them out. And that's what we tragically have been doing for 20 years, going to the mountains that we really didn't know into the home territory of the gorilla using weapons, that would be effective if we knew where they were. And very frequently you getting ambushed and whatnot. So yeah, the problem is the technology is to hit a spot on the mountain. Is there having some idea of where that spot is, is not there?

Meredith Friedman:

One of our members, James just sent a note saying the ages type radar system is based upon a focused steerable beam of electromagnetic kinetic energy, no reason the same technology couldn't be used for communication. And in reality is used in microwave.

George Friedman:

It's a steerable one, but not natural one. You can't chase, it changes routes midstream. So you can't say, I want you to go ahead, 30 miles, turn left, get around in the difference option. So it ages, you know, it's C depending on what battle field you're on, you have a better sense of where these things are, but to go to the other extreme, a mountain, you know, detecting it, you may detect it. You may not be able to trace it back to its origin, but what I'm talking about is something crazier, which is vacating the charge. So yeah, you can change the direction to some extent, but again, I'm way out of my league. I sell stuff.

Meredith Friedman:

Okay. we'll come back to your league here and talk about China again, why it difficult mock baker asks, why is it difficult for China to understand that another nation may find it untenable to allow complete access to their economy without a measure of re re reciprocity, and then taking that, can you be as fearsome as you want, but some nations don't respond well to threats?

George Friedman:

Well, the United States has always managed to respond to a threat somehow, but here's what it goes out to. I had mentioned that China had a 75 ranking in, in per capita GDP. Ratchet is a very poor country. China is trying to has created a massive export market as the top of the list technology, but it is overwhelmingly in agrarian society, very poor. And in the mountains of the west, in the area of west of the coast, mine about a hundred miles. West is extreme poverty. And this is the country in which Mount Satan made the long March raised a peasant army and ultimately came back and shocked everyone. National bourgeoisie, the coast. Now China is acutely aware as now was when he launched to cultural revolution, the great leap forward of the inherent instability in China. And he conducted a long reign of

terror. Historically speaking, China has had two conditions, one where the emperor ruled with an iron hand and did not engage in international trade and periods when it engaged in international trade.

And those times the coastal region, which was profiting from the international trade control, the government left the peasants to starve and then wound up in a civil war. So these is to the strong emperor weekend per model. Don't shout, ping, try to get out of this mess. He tried to maintain the communist party in dominant position yet open up the country to trade. And the same result happened, a vastly profitable coastal region with a very Western style academy and the rest of the country call it 700 billion living much poor life. What, what you wanted to do was to create an second economy to raise the standard of living in the mountains. And to do that in two ways first, to get jobs to these and then have them sell it. The Americans wanted to sell products into China that would make it impossible to develop domestic consumption, which is what they wanted because they wouldn't be creative domestic production.

So the U S would be competing with China's core problem, which the United States didn't understand and doesn't want to understand fair enough. But the Chinese had to react the desire for the Americans to have access and foodstuffs and everything else that the Chinese market meant that they would be competing with the peasants that they're most afraid of. So they locked them out. They did not calculate. And the American response, they tried to create a military situation, but the us didn't back off, but what they did made perfect sense. If you take seriously that they are the 75th ranked country in GDP per capita GDP, then you have to start linking, how could you be that condition? And the second largest economy, the answer is an awful lot of people left out and that's why they had to resist. They had to develop that area. They could not compete with American products in that market. And so we stand at the crossroads.

Meredith Friedman:

Okay. the last question I have up here and mark, you're welcome. Michael asks, I just wanted to inquire as to why Taiwan would be an end game for Japan, as far as Beijing's influence over the island is concerned. And I think Fred, that came a little bit from some of the comments you were making. So if you have anything to add after George feel free.

George Friedman:

So Taiwan is a symbol. If the Chinese can take Taiwan without resistance in the United States or effective resistance, the entire line from Vietnam through Indonesia, Philippines would reconsider their position. That line is like NATO was in world war II in the cold war. I should say, NATO was our Alliance structure for containment. That's what that line is that line of islands, the Chinese need to demonstrate some capability, but they can't afford to defeat. And this is the dilemma, which is they are low, have a low tolerance to risk because of the possibility of internal decision and a high appetite for some invading Philippines. I mean, it's a hard thing to do. Indonesia. That's another set of large islands. They got their kicked by the Vietnam back in the seventies when they tried to go to war with Vietnam. So they're not going to do that again. They're not going to invade Japan.

Maybe they could do in South Korea, something, but probably not. The Taiwan. Taiwan is the perfect place to demonstrate capability. And I think that if they invaded Taiwan, it would be for two reasons first to break the choke points and get an area wide enough between Philippines and Japan did, they could maneuver and partly to send a message to the, to this NATO that we've created, okay. That this is what an American commitment is worth. And it's very much in many ways is very much like the cold war with the Russians, trying to show the NATO members that the United States has no guarantee, but it's not able to guarantee you and the Americans choking off Soviet opportunities. This is the same sort of thing. And they badly need a military victory because they've talked up their elder had ability. And if an item threatened Taiwan, threatened Taiwan, threatened Taiwan, showing pictures of how they would invade Taiwan and didn't move.

George Friedman:

So you get in propaganda kind of return declining return on capital and I, in my mind, I mean, the problem they had is they are going to have to negotiate with the U S that's becoming obvious the longer they wait, the rougher, the negotiation will be, and they have no lever over the United States. And this, by the way is why I worry about Cuba because when the Soviet needed a lever for negotiation over Berlin, they brought missiles into Cuba. I don't think China will bring missiles in, but they can threaten the Gulf area with submarines and they logically need to do it. And a history of Brandon Rogers, Lee, especially by my logic, then everything would be clear what's happening, but in time they're not. But boy was, I interested in seeing it uprising in Cuba.

Meredith Friedman:

Okay. Fred, did you have anything to add? Taiwan and the Japanese?

Fred Borowski:

I mean, George has really set at all. I think that the United States and we on the blue team or of the opinion, Taiwan is not an existential issue for the United States. And as such, we can approach our allies and say just what he said. Look, if they take Taiwan, you're next. So the logical thing for us is exactly what we're doing. We're sending blinker out there to irritate the Chinese in various parts of Southeast Asia. You know, I don't know exactly what happened with the Japanese deputy prime minister, but that was that was quite a stir that he created. So, so exactly be if they take Taiwan, it's, it's, it's almost a loss because the other countries are gonna feel threatened. And if the United States is agile enough to, to work that in its favor, you know all the way from India to to Japan and you're going to there Chinese are going to have a problem because as George says, it's an economic issue. And if those nations bind together to prevent commercial ships from entering or leaving China, I mean, the Chinese are cooked.

Meredith Friedman:

Okay. Laky or Lee, do you have any other final comments you'd like to make? Nope. Okay. For everybody who's joined today, if you did not get a copy of a book, the Future of War at the beginning of this series, please email support at geopolitical futures and Angela will make sure you get a copy. It's a PDF version. But that was the book where George outlined back in the nineties all these weapons systems that were being developed and how warfare would change. And a lot of them are obviously here now. So it was just something we wanted to give you as a gift for attending these sessions and listening to our panelists. And thank you again for joining. I hope all of you will stay club members and

we'll have a lot of more special series in the future. George, do you have any final goodbyes comments on this?

George Friedman:

Thank you all for attending. And oddly enough actually did learn something from it. I stopped learning and about 20 years ago and gone on dry, but this was a great experience. Bye.

Meredith Friedman:

Thank you. Have a great rest of your day, everybody. And thanks to the panelists again.