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PRESENT MEETS FUTURE: EVOLVING DEFENSE PARADIGMS

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PARTICIPANTS:

PANEL 3: TERRORISM AND COUNTERINSURGENCY BEYOND 2012:

Moderator:

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Panelists:

LIEUTENANT COLONEL KRYSTAL MURPHY (USAF)
Air Force Fellow, Argonne National Laboratory
“Bioterror Bedlam: A (Much Needed) Framework for Risk Assessment, Planning and Prioritizing”

RANDALL BLAKE (National Counterterrorism Center)
Federal Executive Fellow, The Brookings Institution
“Next Chapter of Global Jihad: New Realities Trumping Old 9/11 Paradigms”

COLONEL ERIK GOEPNER (USAF)
Military Fellow, Center for Strategic and
International Studies
“Battered Spouse Syndrome: How to Better Understand Afghan Behavior”

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PROCEEDINGS

MR. SHACHTMAN: Hey guys, if I can ask you to take your seats? I used to be a musician and we always knew the worst slot of the night was right after the star attraction and I feel like that's happening right now. I thought that was a really remarkable presentation by the General.

You know, we've covered a lot of big topics today; the U.S.'s future relationship with China, the nature of ethics in wartime, the future of our NATO alliances. So luckily we've got -- this panel is about some really small, minor topics like the future of the Afghan War, decision making going forward in any future combat operations, the capability of Al-Qaeda and every other terrorist group, and whether they're ever going to acquire weapons of mass destruction. So pretty small topics; I figure the whole panel should take like -- what do you think guys? Like three, four minutes tops and then we can get out of here? Okay, that joke went over well.

So my name is Noah Shachtman. I'm a non resident Fellow at the Brookings Institution and here to sort through those issues we've got a great panel. We've got, starting to my immediate left, Lieutenant Colonel Krystal Murphy, who is an Air Force Fellow at Argonne National Laboratory. She's an Air Force Bioenvironmental Engineer, and as part of that mission she's deployed in support of both Operation Iraqi Freedom and Operation Enduring Freedom. She's also served at U.S. Strategic Commands Center for Combating Weapons of Mass Destruction.

To her left is Colonel Erik Goepner. Am I pronouncing that right? Good. He is a Military Fellow at CSIS. He is an Air Force Security Forces Officer with 18 years of experience. In 2010 he commanding a provincial reconstruction team in Zabol, Afghanistan; very unusual for an Air Force Officer. And led a squadron in 2007 responsible for detentions operations at Camp Bucca in Iraq.

And finally at the end of the table, we've got Randy Blake, Federal Executive Fellow here at the Brookings Institution. He's got 25 years of experience in the intelligence community and most recently he served at the National Counter Terrorism Center. Before that he served in leadership positions at the Defense Intelligence Agency and at U.S. European Command.

So I'd like to ask Colonel Goepner to start out, who's got a very interesting presentation I think on Afghanistan and then we'll go to Randy and then to Krystal and they'll present for about 10 minutes each and then we'll stop for questions.

COLONEL GOEPNER: Good afternoon everybody. So this all started back in 2009 as

we were preparing to go to Zabol in Southern Afghanistan. The research, the midway point, was battered spouse syndrome, which you may be seeing in your handout today and we're just going to kind of do a little tactical deception role right by that. And I want to start off with giving you a non controversial proposition.

And it's basically this idea that there is an enduring argument against counter-insurgency. And the enduring argument has essentially nothing to do with today's budgetary woes and it has nothing to do with wary eyes towards China or the pivot that we're doing currently.

The argument is that successfully countering insurgency, in weak and failed states, which is where we typically have conducted COIN, it's where we are more than likely to continue conducting COIN in the future, is an almost impossible venture. That's my premise.

This difficulty is driven in part by the high rate of mental disorders that are common to the populations of weak and failed states. Said another way, the main effort in COIN is the host nation government, and the host nation's security force, and the population whose allegiance they're seeking, both of those groups are beset by high rates of mental disorder; is what I'm going to seek to sort of establish for your consideration today.

Just as mental disorders have a deleterious effect on the individual level, once a population has a high enough rate of mental disorder; it's going to have a similarly deleterious effect on the society writ large. And central to my argument is that a nexus exists between weak and failed states, insurgencies, and the prevalence of mental disorders. And so just a quick background on weak and failed states.

Back in 1994, kind of the study began in earnest Political Instability Task Force funded interestingly enough by the CIA. That work is continued today by the Fund for Peace, by *Foreign Policy Magazine*, George Mason University, and now the Center for Systemic Peace who kind of keeps the broadest set of data; their data goes back to 1995. And what they're looking at is a broad array of security, political, economic, and social factors that speak to a government's legitimacy and a government's effectiveness.

And what they do is they essentially give you a grade of all of the nations and they put you in one of six categories. The easiest, or best category if you will, are those states with little to no

fragility, which would be the United States plus an additional 41 states currently.

You slide all of the way down to sort of the butt end of weak and failed states, those that are extremely fragile. There are eight currently in that category; Afghanistan would be one, Chad, Somalia, that type of thing.

So my first point is that insurgencies tend to take place in weak and failed states. So there's eight states currently listed as extremely fragile, seven of those eight are at war. If you do a study back over the last 10 years of all extremely fragile states, they were at war 64 percent of the time. If you go to the second category, kind of the fifth worse category, they were only at war 15 percent of the time and you keep stepping down until you get to countries like us at low to no fragility and they're only at war two percent of the time.

The 2009 authors concluded their report by saying if you're a weak and failed state that is synonymous with nearly perpetual warfare, if that makes sense to you. And then at the regional level that was kind of affirmed by (inaudible). They did a study of 25 years in Africa, 1970 to 1995, and they found that failed states were at war 60 percent of the time. And then they did it in the reverse and they found that of all wars that had taken place in Africa in that two and a half decades, 70 percent took place in weak and failed states.

So the idea is the majority of insurgencies do occur in weak and failed state and then kind of the duh light is if we're going to do COIN in the future, we're bound to do it in weak and failed states. So my second point, and potentially what's more provocative, is this idea that weak and failed states are home to really high rates of mental disorder. And I'm way out of my league here in terms of as a security law enforcement guy, but I've read some really good articles.

The mental disorders that I want to kind of focus on are Post Traumatic Stress Disorder and major depressive disorder, and I'll refer to them just as PTSD and depression, but when I do I'm trying to fall in line with the American Psychiatric Association's definition. And you can check it out in the diagnostic and statistical manual for mental disorders. So just like the military; they do a great job of codifying everything and so you can kind of check out the way they define those things.

A quick caveat, if you have PTSD or you have depression, those are considered highly, what they call co-morbid, mental disorders. If you have one of them, the chance is you're going to have

another mental disorder as well.

For those who have PTSD, 30 to 50 percent of you will end up having major depressive disorder as well. So you get the idea of if you have one you can often times have the other.

In terms of causation, there is some debate but generally, PTSD and depression are caused by exposure to traumatic events. Though usually referred to three factors, the severity of the trauma, the cumulative nature of the trauma, and then how long since the last traumatic exposure until today. And those are the three variables they usually look at.

For PTSD, the number one driver of whether you will or won't get it is the severity of trauma. For men, it's typically combat, for women it's typically rape. When you go to depression, it's the cumulative trauma that tends to be the primary driver. So you look at APA and a number of different peer reviewed articles and you'll come away with the idea that about five percent of the world's population currently has PTSD.

The Journal of the American Medical Association did a great med analysis where they take 181 studies of PTSD and or depression and basically they -- not reduce -- but they take all of the numbers and they give you a sense of what the literature suggests the rates are today.

So for PTSD and a weak and failed state, 30.6 percent tend to have PTSD. Depression rates almost identical, 30.8 percent; so you go from 5 percent up to 30.6 percent PTSD rate at a weak and failed state. And then they went another step and they said okay, let's look at those weak and failed states that also have high, what they call terror rates. And there's really cool work being done by the University of North Carolina; data goes all of the way back to 1976 called a political terror scale.

And basically they said when you get to a certain level of political terror, your PTSD rate jumps from 30.6 percent to 53.4 percent of the population. You may want to place a wager on the likelihood that Afghanistan or Iraq has been on that list much; Iraq since 1983, without exception, Afghanistan began the list in 1979, came off of the list twice, once in 1990, once in 2003. So the medical experts in their peer review journals suggest to us that more than one in two Iraqis, more than one in two Afghans, has PTSD today, you know, medically diagnosed if they were able to see a doctor, PTSD.

The impact of a mental disorder is kind of like a no brainer. As a military guy, if I have enough men and women in my unit with PTSD, we're declared combat ineffective. If I'm overseeing an

office where everybody has depression, I don't expect a lot of ingenuity, a lot of effort, a lot of self starting, job performance is going to suffer. That's kind of just the lay person's assumption.

The APA does it a little more precisely and they say if you've got PTSD or major depressive disorder, you have an array of cognitive and behavioral symptoms that impair your social, occupational, or other area of functioning. A large body of literature also suggests if you have either of those you also have impaired learning and memory processes as well.

Potentially though, the most difficult piece is something called learned helplessness and if anybody's interested, it's a really great body of work that began in the '70s. Martin Seligman kind of spearheaded that effort and it's back when we weren't limited in how we treated animals. So they did some really crazy stuff to dogs and then they did less crazy stuff to human beings. And what they found out is you can teach people by experience to be helpless.

And the idea is that after you have enough exposure to uncontrollable events, the person no longer perceives themselves as having control over future outcomes so they no longer give an effort. Their learning is impaired, voluntary initiation of activity decreases, and their interest levels decrease.

And so having spent a good amount of time in Zabol Province, Southern Afghanistan, that for me was the number one piece that resonated; that was the group of people I saw, was a group of people that had learned how to become helpless. They could tell you every problem, ad nauseam, and then when you'd start to war game and what if on how to solve them, every answer was it's impossible, it's impossible, it's impossible.

Remission, which is kind of the medical term for curing somebody for depression, remission rates are not positive at all. The med analysis that looked at 34 cases, or 34 studies of depression, found that basically 38 percent are likely to be cured, if you will, of depression. For PTSD, the results are more ambiguous.

They did a med analysis of 55 studies on PTSD remission rates and they find that you can expect about a 56 percent remission rate. And so the point there is if somebody's got major depressive disorder or PTSD, they have a basically one in three to a one in two chance of actually being cured, if you will, from that impairment.

And so kind of closing up here with my recommendations, you know, if it's true that the

average Afghan suffers from a mental disorder, and the average Iraqi suffers from a mental disorder, and the average person of a weak and failed state suffers from a mental disorder to such a significant portion where it's one in two of the population.

You really have to scratch your head and ask what are the reasonable chances of achieving stability, or moreover, achieving the U.S. objectives in that country. You know, so I can just kind of borrow from a princess bride. Never mess with a Sicilian when death is on the line. You guys remember that; okay.

Actually, that was the second oldest. The oldest is never start a land war in Asia, but that's incorrectly been identified. It should be the idea of do not conduct counter-insurgency anywhere unless you absolutely have to because the chances are you're going to be doing it in a weak and failed state and there's not a lot of reason to suspect that that's going to turn out well from the America -- from our objective's perspective.

The second recommendation is this idea that if we're going to do counter-insurgency, we have to include a psychological estimate in our old plan. And I don't mean this from a benevolent kind way, I mean this from an ass kicking America wants to achieve its national security objectives way. Every gain we achieve and then leave behind a traumatized mental disordered population, you can see how that's like a house on sand; it's just -- it's going to collapse is the idea.

So we need to take that into account in our planning factors and to the extent we can, we need to bring forward mental health capability, just like we do a lot of our other capabilities to seek to restore the population, not just to be kind, but to achieve U.S. objectives.

And then the third and kind of most obvious recommendation is somebody well beyond my skill set needs to investigate this, hopefully from the academic world, the medical world, and confirm or deny my central preposition, which is weak and failed states are beset with mental disorders and that does not bode well for us achieving the U.S. objectives there. Thanks.

MR. SHACHTMAN: Thanks, Colonel. Now we're going to shift from over there to really all over the world and radicals here too, with Randy Blake's presentation.

MR. BLAKE: This already has a feel of a really depressing panel. And I suspect I'm not going to help that feeling anymore. Although, I do have to say The Princess Bride is a classic.

Okay, last September Al Qaeda in the Arabian Peninsula and *Inspire Magazine* had this quote, tenth anniversary, "There was a world before 9/11 and another one drastically different after 9/11." 9/11 has left a permanent scar on the American psyche and will live long after in the hearts of all Americans, of every American. Yet the only constant is change and no one issue dominates forever.

And my research is focused much less on the post 9/11 decade, but on outlining a series of new realities that had already begun to take shape in late 2008 and 2009 well before Osama Bin Laden's death and are dominating the violent terrorism landscape today.

So what am I talking about? I'm talking about three paradigms. The first -- and with obvious overlap. The first is what's been described as a world on wi-fi, which is the fundamental impact of the merging of globalization with the technological revolution underway.

Now to be clear, I'm not talking about the onset of the internet in the early 1980s, or the post Cold War emergence of globalization as a dominant theme, or in particular, I'm not simply talking about propaganda videos that have been on the web for years now. I'm talking about developments in the last three to four years and that are on the horizon that have had a big impact on the way we live and the way terrorists do business and on our security.

There's nothing subtle about what's unfolding around us. The British Technologist Ben Hammersley called it a revolution, easily on par with the Renaissance with the Enlightenment. The scope and scale is enormous. In 2003 less than one billion devices connected to the internet. By 2010 that number was over 12 billion and we're headed to 25 billion in 2015.

What matters most about this is not whether we call it revolution but how we use it. We now live online predominantly in what has been called digital silos or filter bubbles. And think about this in your own life with those that are most like us and reinforce our own views and biases.

In this new form of online tribalism, connected networks are rivaling physical hierarchies and speeding up terrorist recruitment and transformation from radicalization, to mobilization, to action. Overseas travel and communications with organization terrorists group, which are a key vulnerability, are no longer a prerequisite meaning that more and more extremist activity is occurring locally. And I'm here to repeat that. More and more extremist activity is occurring locally.

American born and now D.C.'s Anwar al-Auloqi is a good example of this and the best

one so far, of redefining this dynamic intersection between the message, the messenger, the new media, and operations. According to a January analysis by the Muslim Public Affairs Council, of 28 plots since Barack Obama was elected President, al-Auloqi has played an inspirational or an operational role in 18 of them.

Online violent jihadist opinion leaders only have to be believable to be effective. And let me give you one example. In 2008, an 18 year old Fairfax, Virginia resident named Zachary Chesser became interested in Islam and obsessed with extremist online content.

By the time of his arrest two years later in 2010, he had threatened the creators of South Park's sitcom for their portrayal of the Prophet Muhammad, had posted personal Facebook information of some of their supporters, and had tried to travel to Somalia to join the Al Shabaab.

In those two short years, Chesser had been directly involved with three YouTube channels, two Twitter accounts, his Facebook blog, his Facebook profile, one blog, six forums, and two websites. His sites had hundreds of hits, which he monitored on a monthly basis. This increased transparency and sharing online is providing expanded operational options for surveillance and for targeting.

In August of 2009 another fast tracker, Collen LaRose, or better known as Jihad Jane, was on her way from Philadelphia to Europe as part of a terrorist sale that had coalesced online with a plan to kill Lars Vilks, a Swedish cartoonist for his drawing of the Prophet Muhammad. While there, LaRose joined Vilks' online community and attempted to track his movements on the internet.

But 2009 already seems like a long time ago in the technological revolution that's underway and that it's changing the way we think about privacy and the way terrorists think about surveillance. And just one of what could be many examples of today, several companies have developed apps that analyze your Facebook and Twitter networks to see if any friends or friends of friends are nearby. This new generation of apps broadcast your location at all times to friends and often, in many cases, to people you don't even know.

In 2011, Rezwan Ferdaus, a 26 year old Massachusetts man with a Bachelor's Degree in Physics, tried unsuccessfully to put together an attack on the U.S. Capital and the Pentagon by using remote controlled unman aircraft. The ones he was looking at were nearly six feet long with a wingspan

of four feet.

And we tend to think of drones in military, and certainly in this audience, in terms of predators and reapers but it's time to think again. How about your own personal surveillance drone the size of a pizza box or even smaller that you can operate with your iPhone, one that could be used by the paparazzi to spy on celebrities or by others to spy on cheating spouses or wandering teenagers with a 40 minute hover period that could prove very effective for terrorists in an updated Collen LaRose scenario?

The FAA projects that 30,000 drones could be in our nation's sky by 2020. It's also remarkable that global jihadists employing the far enemy strategy to defeat the U.S. Military politically and economically have not today put themselves near the top of the information warfare cyber operators list. But that may be changing. In June of 2011, Al Qaeda Core, for the first time, went to some length to encourage individuals to conduct cyber attacks on the West.

The second key paradigm shift, which is related to the first in this new chapter of global jihad, is the new normal of the increased threat of homegrown violent extremism here in the U.S. A small handful of extremists, unmoved by planned U.S. military withdrawals from Iraq and Afghanistan are attempting to fight overseas wars at home. Many came of age in the post 9/11 America and are also dealing with more localized grievances here.

That same study that I mentioned earlier noted that 54 percent of all incidents and plots by Muslim terrorists against the United States since 9/11 have occurred since early 2009. Another researcher noted back in December that out of the 18 attacks that have directly targeted the U.S. Military Force that's here in the United States, 14 of those have occurred since 2007.

A decade after 9/11, something in the American extremist calculation has changed. And going on assuming that high probability low consequence attacks will continue in an increasingly tech enabled world is a risky bet. In this new chapter of global jihad, the glide path from radicalization, to mobilization, to action is changing and it's unclear whether the end of the wars or the death of celebrity ideologues, like al-Aulqi, will move us from what -- since 2009 has become the new normal.

Effective strategies that treat the tech revolution like a revolution, active community engagement, local and federal law enforcement efforts, and moving the broader national discussion beyond the 9/11 scar that *Inspire* referred to are some of the key ways of dealing with the challenges of

these two paradigms.

The third one, which I'll hit much more briefly, is the issue of changing dynamics overseas that are impacting that threat. The first is the hollowing out of the Al Qaeda core leadership, which goes way beyond Osama Bin Laden. This increased under President Bush and then went onto new heights under a new President in 2009, moving the group closer to operational dismantlement and strategic defeat.

It's occurring at the same time that there's an increasingly vertical global jihadist movement operating more like network communities of interest. They're gradually replacing this more center of gravity hierarchical focused structure dominated by Al Qaeda core for almost 25 years now. But unlike Al Qaeda core, which has engaged almost all -- completely in terrorism and survival, the affiliates and allies have a lot more on their plates and are becoming increasingly diverse, and that's key, while dealing with an array of local and regional activities to include terrorism, insurgency, criminal enterprises, humanitarian and government issues.

The second is the post war conflicts in Iraq and Afghanistan. Ari Gardy already pointed out the affect there, of countries in which, if you were born there or live there, born after 1979, you've seen 10,000 days of war.

A generation of extremists, though, raised in that war have been preparing to move from wars to alternatively hot and cold ethnic and sectarian conflicts in which neighboring states are playing an often unhelpful self-interest role. Our withdrawal is robbing the Al Qaeda -- the global jihadist of the currency of a key pillar of their strategy, but also providing openings for them. If you think war is messy, wait until you see what peace looks like.

The third is the Arab Awakening which is haltingly moving toward a potentially irreversible shift from subjects to citizens, with an uneven pace in trajectory. It represents a challenge to Al Qaeda core's message on how to obtain and exercise power. Islamist prominence in governance with a distinctively nationalist pedigree is providing a viable alternative to Al Qaeda's grand goal and relegating the group to a near turn future as a quasi opposition as troublemaking party in exile.

But unique opportunities are also there and the history of modern global jihad is littered with examples of prison releases, producing new terrorist leaders. The developments of factionalism

within disinfected Islamists could include the emergence of new extremist groupings, some linking with existing ones to include Al Qaeda.

A potential for terrorist acquisition of conventional and non-conventional weapon stocks is alerting Yemen, Libya and Syria in particular, provide opportunities for affiliates to make gains and establish (inaudible)

So keeping the pressure up on Al Qaeda core, treating the affiliates and allies in terms of local and regional issues is a strategy prescription intent on affectively trying to deglobalize the global jihad. This is true whether we're talking about a post war conflict of the Arab Awakening, where negotiations even while fighting and new governance coalitions pose a significant challenge to Al Qaeda's increasingly out of date my way or the highway vision. Thank you.

MR. SHACHTMAN: Thanks, Randy. And now for our last bit of good news, we've got Lieutenant Colonel Murphy and her presentation on bioterror bedlam.

LIEUTENANT COLONEL MURPHY: Thank you. And personally I think a personal surveillance drone for my soon to be teenagers would be a very handy thing to have. Good afternoon, everyone. I'm going to submit to you this afternoon that the answer to the problem of bioterror bedlam lies in elephants and cheese. And if that made no sense to you, that's a good thing, but hopefully I have your attention.

I chose to call this bioterror bedlam, even though those are somewhat, you know, terror and bedlam are somewhat synonymous, not because it is, but because when it comes to discussing the prospect of bioterror, there is absolute bedlam as far as what the analysts think might or should happen.

Over the past 20 years, there have been several assessments with a different tag line on the front. Some of them say risk, some of them say threat, some of them say vulnerability, and often those terms are used interchangeably. But they have reached sometimes wildly different conclusions, everything from, and not I'm paraphrasing here, I'm surprised we haven't seen more of it to it may or may not be a concern in the future. So at the beginning, I'll do something that I loathe to do which is start with a definition. But while I'm talking about biothreats, to me, threats, I'm going to be using the same way that the Air Force does, which is the round construct, threat is a function of intense and capability.

So with that, I'm going to go back to those studies and point out to you that those

analysts have reached very different conclusions about the factors involved in threat, as well. And some have asserted that it is impossible to know intent, impossible to discern it, therefore, we should turn to capabilities assessment as a surrogate to get at what is the bioterror threat.

Interestingly, this year's Counter Proliferation Review Committee's report to Congress concluded that because it is relatively easy to hide an offensive biological program, that we should make a better effort at assessing intent as our surrogate for a threat analysis. So we've come full circle at least on our opinions.

This reminds me a little bit of the Indian parable about the six blind men and the elephant, hence elephants, which is, some of you may recall the six blind men examined an elephant, but each of them examines a different portion of the animal through touch, and, of course, come to wildly different conclusions about what an elephant looks like and what it is. So none of them, by themselves, could paint the complete picture. And, in fact, what they really needed to do was assemble a composite, and even then, because they were only using really one sense, probably shouldn't have quite the complete picture.

But that's the best analogy I could think of. And I would submit to you that like a living being, the elephant, a bioterror attack is actually a complex system, and a systems approach and a systems analysis really is indicated for getting at that -- unraveling that mystery of how likely is it that we might face this.

Now, these two main pieces, intent and capability, are themselves huge, multi faceted issues. We have about six minutes left, so I'm going to dwell mostly on the capability piece, which, in my opinion, is probably the least understood of those. But I will foot stomp a couple of things about threat, excuse me, intent, and that is, when looking at intent or looking at potential for a bioterror attack, what we need to do is examine in the context of what a potential adversary's objectives are. Those objectives will drive the targeting strategy, and then the next question is: what weapon, biologic agent or otherwise, might suit an effective attack on that target.

Sometimes we tend to divorce the study of WMD or counter proliferation from counter terror, absolutely have got to put together that analysis of how beliefs drive behavior and then what I'm going to talk about here, the capability or the biology piece of that. One more conclusion from that

parable of the elephant and one more thing I need to point out to you about a lot of these assessments that have happened over the past 20 years is, they've attempted to take the rare number of past cases of bioterror or biocrime, dissect those, and detect overarching principals from which maybe they can imply to forecast the future.

This is a very valid approach, it's absolutely necessary. But if you're going to complete the picture like we would at any good scientific enterprise, you need to use both inductive, which is what this is, and deductive reasoning.

Inductive is like this, use past cases, build upon that to develop a working theory. The ying and yang of that is, once you have a theory, you need some way to test that theory. And so what I'm going to propose to you in the next few minutes is a deductive framework from which to do some thought experiments.

An important aside on this is my other foot stomp is that, in our case, our elephant is growing and changing at the rate of about 400 percent per year. That's a rate of change in the biologic sciences since 1982. If you believe Rob Carlson, the famed biohacker, that actually outpaces anything in the information technology sector. So a very, very rapid change and the very thing we're trying to -- that's some of the danger in looking at past cases. Science isn't the same anymore. Okay.

So capability; and this is where cheese comes into the equation. When trying to assess a low probability high consequence event, the aviation safety and medical communities borrowed something known as a swiss cheese model. It was developed by a gentleman named James Reason. And the thought goes something like this.

That for those events there are several layers of safeguards in place, catastrophic accidents will only occur if holes in all of those layers happen to line up and complete a pathway. But if you take that visual model and apply it to what is required to develop and deliver a biological agent, the same theory, or same principle applies. You have to line up all of the holes, and if you're an adversary, rather than trying to prevent them from happening you're trying to line them up as fast as you can.

And so you're going to take the path of least resistance to the cheese, or the biggest holes in each slice, more than likely. So our layers in this case are working backwards from the target, the pathway we're going to deliver the agents may be or may be not having to stabilize it so we can get it

to the target, amplification or how we grow it, and if ultimately how we acquired it in the first place.

The pathway tends to be the least understood and the most controversial so I'll start there. The holes in this layer of cheese; there are five of them, five ways to get a poison or a biological agent to the human body.

I'm going to generalize this since this is so short a time. Three of those are really viable if your objective is a mass casualty attack. It's an important caveat. If your objective is merely economics or disruption, you don't really have to succeed at getting it into somebody's body.

The biggest hole in this layer is actually the ingestion route, food and water poisoning; that is the easiest pull off. And here I'd like to do a few myth busting statements. This seems to be a perception that inhalation pathway, or the privacy of aerosols is absolutely necessary, and not necessarily the case.

An interesting corollary to that is that an airborne attack is hard to pull off. And I'll reserve some of this for answers if you are interested, but I think our own experience proved that wrong way back in 1966. I'd also like to suggest to you that from here and forever we ban the term weaponization with regard to a biological agent.

Normally that refers to the stabilization layer of cheese that would be required if you were going to pull off an airborne attack. And if you're going to contaminate a food and water source with a naturally occurring bacteria that you can keep at body temperature to get it there, like the Rajneeshees did in 1986, you don't have to stabilize very much at all. So the easiest way to get through that layer is just not do it.

Finally, amplification is the growing of the agent. In general, bacteria are easier to grow than viruses. And this one you can also completely circumvent if you're able to acquire your agent in a sufficient quantity from a failed state or a supplier. And there is some concern with the advent of using Botox for cosmetic procedures; that you might just be able to go buy that off of the black market somewhere.

Okay, finally acquisition. There is an excellence in the U-paper that lists the five acquisition pathways for biologic. The first is to harvest it from nature, the second is to steal it or acquire it from a research center, the third is buy it from a culture collection, the fourth is to modify one pathogen

into another one, and there are examples of all four of these in past cases. The fifth, thankfully, we have not seen yet, which is to completely chemically synthesize a virus. But a few years ago, Wimmer, et al, proved that you can do this without even a natural template when they synthesized the Polio virus.

Personally, I'm going to add a couple more. Six; get it from a failed government program. And touching on current events, Egypt, Libya, Syria, were all fought to have at least completed some R&D work into offensive biologics. Where might that expertise and material end up? And on that note, we're still concerned about talent and material from the former Soviet Union, Iraq, and to a certain extent South Africa.

The other is depending on your definition of terror, or terrorism, if you are state sponsored or a special ops agent for a state, then you probably have no problem at all acquiring one of these weapons. I will conclude by saying, of course, the fastest way to line up the holes in the cheese is if you have expert who can do it for you. And it's pretty well documented that Al Qaeda recognized this and sought to do it and -- which has led several very prominent biologists and USMRID alumni to say we are less concerned about terrorists becoming biologists than biologists becoming terrorists. And with the transition of Al Qaeda to recruiting and radicalizing in local terrorism, that is becoming a greater and greater risk.

So in this flying ten minutes or so that we've had, hopefully you've concluded, like I did, that to get at the picture of the elephant you absolutely have to use an inner disciplinary approach, a very complex system, and as far as capability is concerned, you're hoping we race through the cheese faster than the bad guys. Thanks very much.

MR. SHACHTMAN: Thanks. I think I'm now going to retreat to my secure, hermetically sealed bubble. I want to start opening up for questions, but I'll take moderator's prerogative and ask the first one and ask that of Colonel Goepner. So you talked about, you know, a major chunk, maybe half, of Afghanistan being traumatized, PTSD, depression, both, and you talked about well, you know, we should take that into account the next time we decide to stage a large scale counter insurgency.

But I'd like to ask about the current large scale operation we're in and there's a lot of debate right now about whether we should be pulling out of there sooner or later. So what does your sort of psychological look at Afghanistan tell you about how we should precede in the next, you know, 12, 24

months and beyond? Let's start with the easy questions.

COLONEL GOEPNER: Yeah, I was going to try and say something funny and then I realized it's probably the last thing I should do; we're talking about Afghanistan. I'm a huge believer and I don't mean this in a jingoistic way, but I'm a huge believer that whatever counter insurgency we're fighting, to the extent that Americans are 24/7 with the host nation, exponentially increases our chances of success.

There's behaviors that each of us have grown up with that we can't identify but they end up being best practices for how a stable functioning society does things. And we probably can't enumerate them but they come out.

We saw a lot of evidence during our time in Zabol, just funny things, you know, we'd come around the corner and the police checkpoint would be 100 yards up the road and they'd be doing like their equivalent of the Department of Transportation, you know, one dude had a shovel and six dudes were just kind of sitting there staring at it. And then as soon as they saw the Americans they'd get right back to business doing their checkpoint type of stuff.

We'd see that with the day laborers that were being hired through the government through ISAF funding. Any time an American presence came around productivity increased and good behavior seemed to follow. And I understand that the idea of us being 24/7 with our Afghan brothers is certainly under criticism right now because of all of the shootings from Afghan security forces back onto ISAF, but that really is the number one ingredient.

MR. SHACHTMAN: And just to put you on the spot. So does that mean those ISAF forces should come home sooner, later, or is that the wrong question to ask?

COLONEL GOEPNER: Yeah, I've become deeply ambivalent. I'm a huge believer that we can win everything. There's absolutely no doubt. The people that say that it's not a military solution, I think are -- that's a foolish thing to say. Everybody has a breaking point and so the military always can help you find your breaking point and you will soon comply thereafter. But that's obviously not the way we're going to fight this. I got that part. But I'm deeply ambivalent.

I think where I sit right now is I don't think it's going to get any better. I keep hearing gains are being made but they're reversible and they're fragile. I think I've heard that, you know, for the

last four years or so. So I'm very comfortable with the President's, you know, glide slope to 2014 where we go into an advisory role only.

MR. SHACHTMAN: Okay. With that I'm going to open it up for questions. Just wait for the microphone and please make it a question, not a declaration. So have a question mark at the end of your statement. Start here with the blue shirt.

MR. PENISTON: Hi, Brad Peniston with Armed Forces Journal. A question for you, Mr. Goepner. I'm struck by this new lens of looking at counter insurgency doctrine and two possible responses; one is holy cow, we need to rethink everything. And the other one is well; we learned everything we know about counter insurgency doctrine in such places so no big deal. Either one of those correct?

COLONEL GOEPNER: Can you just sort of rephrase that question; go through it one more time for me?

MR. PENISTON: Yes; I'm sorry. If everything we know about counter insurgency was learned in a place where most of the population is traumatized, as you described, do we need to change the way we do anything, or should we just be more reluctant to do it?

COLONEL GOEPNER: I think the second is the big takeaway, which is, be much more reluctant to do it. And I'm not trying to necessarily cast stones, but I think you've heard some really funny things from high leaders over the last 10 or 12 years about these things. I think we heard democracy was messy; that's how we approached the Iraq, you know, Civil War. General, I can't remember if it was Shinseki or who it was, but got marginalized, you know, for saying we're going to need 350,000 basically constables to pass it by Iraq and that was considered a ridiculous comment.

I think it's been born out more or less. So don't do it and if you're going to do it you better bring some mental health capability or better rethink two different things; one is how soon we release sovereignty back to that nation. With Afghanistan we gave sovereignty back to the nation very quickly and I think we did it way too fast. The joint-doctrine talks about the fact that if a government is still weak and failed, it may not be the right time to give them, you know, their own sort of power back if you will. And I think we may have erred in that.

And then the other part is we -- I need to be careful of how I say this. We may need to

rethink how we look at the use of force in conducting operations, counter insurgency operations. We have taken a very specific view on the use of force and COIN and that may -- we may years from now want to look back and say you know what, military by definition, war, is kind of a disgusting thing. So when we go to war it may have to be a little more disgusting than we've tried to make it.

MR. SHACHTMAN: Okay; just to the right, my right I guess.

MS. DANIELS: Thank you very much. My name is Samara Daniels and this is a question for Krystal. I was trying to visualize, you know, a sort of map of what you were saying. And I think the weakness in so many of these analysis is, you know, you can get the right facts and you can, you know, but do you have the right story.

And I'm wondering to what extent you think different institutions get the right story because there are only a couple of narratives that are sort of, you know, gain currency?

And I'm wondering if, you know, you think it will be possible to sort of expand the, you know, these perspectives, that is, you know, I don't -- the bottom line, I don't think you can get to where, you know, a good analysis, unless you really get, you know, good history. And then I'm wondering what you think of that, my hypothesis.

LIEUTENANT COLONEL MURPHY: I guess first let me make sure I clearly understand your hypothesis. You know --

MS. DANIELS: (Off mic)

LIEUTENANT COLONEL MURPHY: Mm-hmm.

MS. DANIELS: -- you know, and cheese is one dimensional; that is, if you look at it. And I see the holes and stuff and I think that, you know, if you're going to deal with complexity you have to get the complexity and --

LIEUTENANT COLONEL MURPHY: That's right.

MS. DANIELS: -- complexity that -- find the right solution and problem. And I'm just wondering, you know, how that can occur in institutions? It's an organizational issue I think that I'm asking more than anything else to get at this issue of complexity.

LIEUTENANT COLONEL MURPHY: Okay. Well first, again, hopefully I clarified that I was only talking a very small piece, which is how to get at the capability piece. The intent piece I

deliberately glossed over largely because I'm sitting with two other gentlemen who are talking, you know, how terrorists might be thinking and what they're doing.

Absolutely; I think our current structure is a real challenge. Again we, at least in DOD, tend to separate counter proliferation from counter terror. And there is a seam there. We definitely collaborate, we definitely understand we need to inform each other, but as busy, especially as the counter terror community is, sometimes that's more challenging than we'd like it to be.

But absolutely; the cheese is just one piece to get at intent it really takes several disciplines, folks who are smart about, again, all of the factors of the ideology of the potential actor.

So in the case of the Al Qaeda, somebody who understands the particular ideological background, that particular -- is long, somebody that understands the culture, the study of how they have adapted and franchised themselves since then, and any -- to predict what is it they want to do. And the context of will they select a biological or not is wrapped up in that. Does it suit their ends?

There's a really good book by a gentleman named Adam Dolnik, they got at understanding terrorist innovation and he gets at who might innovate or be driven to use a weapon of mass destruction and why might they make those choices.

Some of them get at if you are becoming desperate to reestablish your credibility or your aura of omnipotence, it might become more attractive to you, might. But you definitely then need someone like Doctor Post who understands the behavior and psychology that might help unravel that piece. So absolutely it requires a lot of folks who have an interdisciplinary approach.

I think some institutions and academia are very well set up to do that. There are some folks at the national labs -- Livermore is a good example of that -- that can do some of those. And some folks in our IC that have been organized to look at that a little bit more. I'm not sure I answered your question.

MR. SHACHTMAN: Let's go right in the middle there.

CAPTAIN TABON: Thanks. Captain Cindy Tabon from the Navy Staff and this is addressed to Colonel Goepner. So you argue the counter insurgency is generally not a good approach for the many reasons that you've cited, but what do you see as the alternative then in a situation with a weak and failed state, an ineffective government, and a high percentage of population with PTSD and or

major depressive disorder? Which is a circumstance that we seem to think we will be finding ourselves dealing with in the near and long term.

COLONEL GOEPNER: I don't know if this is going to be at all satisfactory. I have two thoughts. You know, one I think historically we have dramatically underestimated the costs of counter insurgency. We've done ourselves a disservice to call them small wars and so I think that's part of it. I think the other part, and I want to be careful because I'm not trying to advocate a foreign policy that's unkind to people, but this idea of being -- policemen, this idea of we're going to take care of every weak and failed state, from a benevolence perspective we may want to do that through NGOs, through churches, synagogues, that type of thing. That's great. As a national security priority, I don't buy into that.

Then there's a segment that says okay, don't do it out of benevolence, just do it because that's where the terrorists are going to go. And my response to that is we're always going to have weak and failed states. We always have, we always will. The management of that is not to go in and restore a weak and failed state. The management is probably some combination of regional pressure and some degree of counter terrorism is my guess, but we're not going to do away from it.

You know, remember like when we declared war on poverty, I think one of our Presidents did that, it's a great ambition but you're never going to get there. So that's my thoughts on that.

MR. SHACHTMAN: Okay, in the back.

MR. DILLION: Ken Dillion, former State Department Intelligence Analyst. On the question of biodefense or bioterrorism, there are some very good reasons to think that the FBI got the wrong man in the anthrax mailings case. I wonder what you think of that and what you think should be done about that.

MR. SHACHTMAN: Oh, I'll take this one; fine. Right, there are some reasons and there are some reasons to think that they got the right guy, and this is in the 2001 anthrax attacks. You know, my guess after studying the anthrax attacks as closely as any reporter, I think, is you know, if I had to bet 10 bucks I'd say the guy they were after at the end was probably the guy that did it if I was a member of a jury in the -- I'd probably have to vote not guilty and, you know, I don't know that there's evidence beyond a reasonable doubt.

But I do think that there's a larger question, which actually I was going to pose to you, which is, you know, by building out all of these biodefense labs and by spreading around, you know potentially lethal stuff all over the country and by training thousands of people how to deal with it, if the real concern is biologists who become terrorists, haven't we trained a huge cadre of biologists to pull off such an attack in the name of preventing one?

LIEUTENANT COLONEL MURPHY: The answer is absolutely. And that's not an answer I would like to give. Before I elaborate though, I want to elaborate on Noah's answer and why I pointed to him. If you are not familiar with the Wired Magazine Noah wrote, a really great piece on the -- anthrax attacks in Wired, I think which has now been a year and a half or so, but it is a really great analysis and all of the forensics that went into that. And by the way, one of the authors I read pointed out that the technology to do those forensics didn't exist at the time of the attacks, to go back to how fast the science has changed.

As far as training, our potential adversary is absolutely we did. Al Qaeda is the front man for their anthrax program, graduated from I think one of the Cal State schools. It is absolutely a problem and it overlaps with another strategic problem, unfortunately that we have, which is I think America, you know, states lagging a little bit in science, technology, engineering, and math.

Where I am currently working, 80 percent of the post -- appointees at the laboratory are not United States citizens. A lot of the research that is going on there is in the biologic sciences and in physics. But that's a tough problem and what I'd offer to you is there absolutely needs to be a better connection between the defense and security sector and academia.

I think there, right now, there's a pretty large gap there. All of this, of course, is my opinion, my personal opinion, not that of the service or DOD, but I'd also offer to you that the New York Police Department has a really innovated program called Project Shield where they partner with businesses downtown to try to prevent terrorism and harden them as targets. So I'd say there needs to be a project shield between defense and security and the academic world when it gets to biologics and getting at ethics and codes of behavior and those types of things; how to prevent the human piece of that.

MR. SHACHTMAN: Okay; we've got time for one last question.

MR. HUMPHREY: Peter Humphrey; I'm an intel analyst. I think we might have to

embrace profound political incorrectness and not allow Muslims to be working in those laboratories. Doctor -- Colonel Goepner, I'm wondering if -- you send some murderers to psychiatric hospitals, you send most of them to prison. You really don't care as long as they're neutralized.

As we meet these situations out in the field, I really don't care whether the guy is motivated by his craziness, his ideology, his view of the afterlife, his economic situation, I don't care. I want him neutralized. So why criticize COIN? That's just a method of neutralization of bad people. Whether they're bad for psychological reasons or moral failings or what not, it's the same material.

COLONEL GOEPNER: Yeah, I wasn't taking the vantage point of neutralizing or the bad guys, I was taking the vantage point of the good guys. This is the government we're working with. I mean what would you expect from your government if one and two had major depression or PTSD? My assumption is you wouldn't expect a whole lot and that's essentially my argument. Is that's what you have in the Afghan security force and the Afghan government. And then moreover, that's what you have with the Afghan population that's in the midst of this tug of war that the government's trying to get their allegiance, you know, separate them from the insurgent, come over to the government side. And all of them are beset with mental disorder. So the idea that Afghanistan is going to emerge with a degree of stability in the next decade, I don't understand how that's a feasible suggestion. It has nothing to do with the bad guys. Those guys I'm all about marginalize however you want to.

MR. SHACHTMAN: Okay. Let's give a round of applause for our panelists.

(Applause)

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