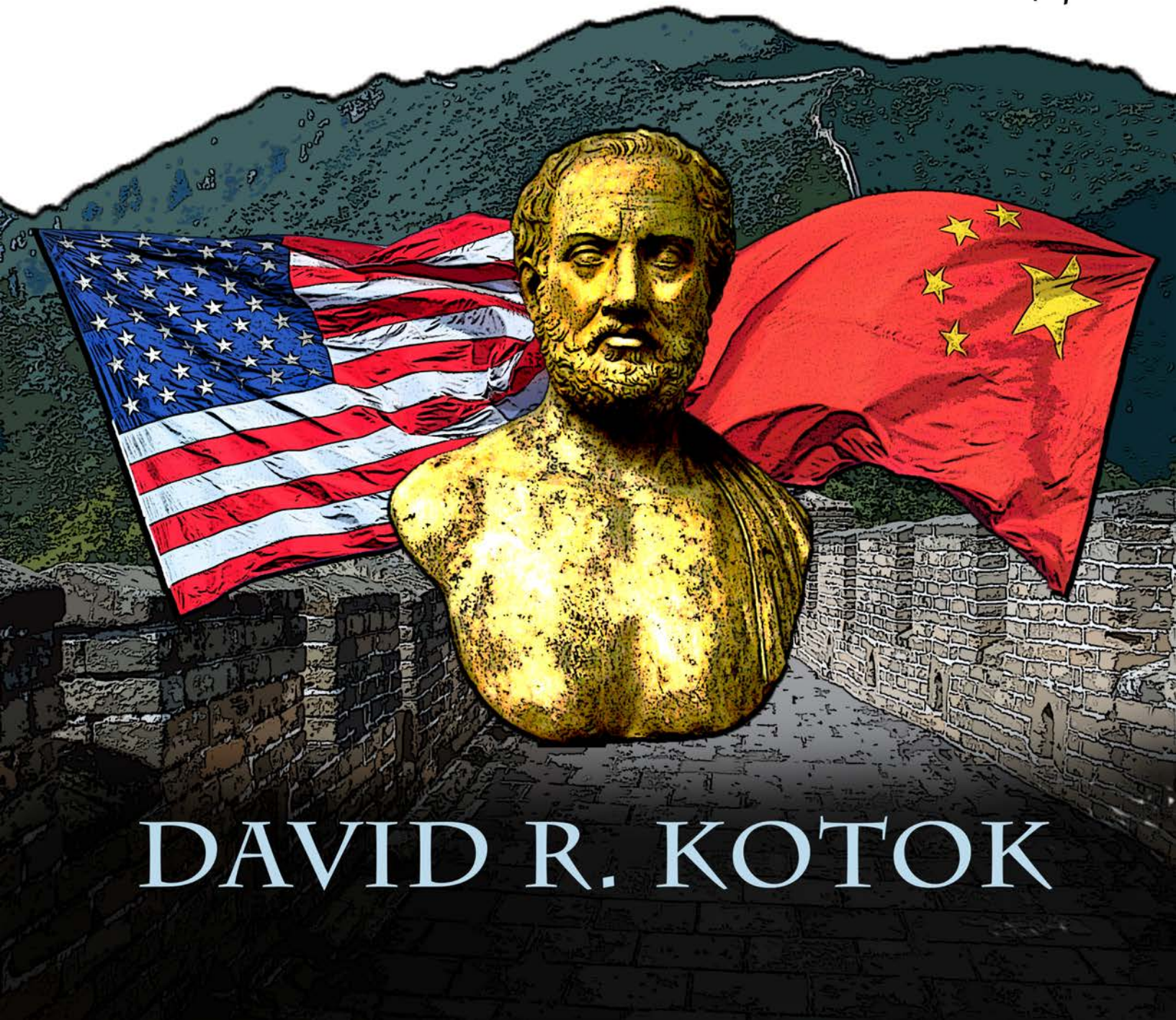
LESSONS FROM THUCYDIDES



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David has authored or co-authored four books, including the 2nd editions of *From Bear to Bull with ETFs*, & *Adventures in Muniland***.** David has also written the monograph pamphlets, "Lessons from Thucydides" detailing information asymmetries & their implications for investors and world affairs, and "Zika".

Mr. Kotok has served as Program Chairman and currently serves as a Director of the Global Interdependence Center (GIC), www.interdependence.org, whose mission is to encourage the expansion of global dialogue and free trade in order to improve cooperation and understanding among nation states, with the goal of reducing international conflicts and improving worldwide living standards. Mr. Kotok chaired its Central Banking Series and organized a five-continent dialogue held in Cape Town, Chile, Hong Kong, Hanoi, Milan, Paris, Philadelphia, Prague, Rome, Santiago, Shanghai, Singapore, Tallinn, and Zambia (Livingstone). He has received the Global Citizen Award from GIC for his efforts.

Mr. Kotok is a member of the National Business Economics Issues Council (NBEIC), the National Association for Business Economics (NABE) and served on the Research Advisory Board of BCA Research. Mr. Kotok has served as a Commissioner of the Delaware River Port Authority (DRPA) and on the Treasury Transition Teams for New Jersey Governors Kean and Whitman. He has also served as a board member of the New Jersey Economic Development Authority and as Chairman of the New Jersey Casino Reinvestment Development Authority.

A BRIEF INTRODUCTION

Pamphleteering has a long tradition in America, although it didn't start in the North American continent. Martin Luther was a pamphleteer. Thomas Paine's *Rights of Man* was a famous pamphlet originating in the American Revolution. The poet John Milton was a pamphleteer. Pamphlets permit a writer the luxury of writing as much or as little as needs to be said. A pamphlet can be as short as a single two-sided page or as long as a mini-book.

An assemblage of our four-part writings about Thucydides is our first attempt at a pamphlet. We hope you enjoy it.

In this pamphlet we were inspired by the work of Graham Allison and his recent book, *Destined For War, Can America And China Escape Thucydides's Trap?* The reading of that book led us to reread Thucydides' famous chronicle, *The Peloponnesian War*. Other books were added to the reading list as we prepared to write each of the four parts of this pamphlet. Those books are mentioned in the pamphlet where they serve as references.

We noted some lessons from history and antiquity. And we learned about money and debt and financing of defense expenditures as they were revealed in the references to ancient times. We also saw the guidance of history with regard to deception, spying, and bribery in geopolitics. In so many ways, nothing has changed in the two and a half millennia since Thucydides's chronicle was written.

To locate the e-pamphlet follow this link www.cumber.com/thucydides or scan the QR Code below.

We also offer our pamphlet, "Zika" which may be located at this link http://www.cumber.com/zika/ or by scanning the QR Code below

These e-pamphlets and all relevant links are also available on Cumberland's website, www.cumber.com. If you have any difficulty with any link, please email me, and I will ask one of our IT gurus to help you.

There is no cost for these pamphlets. We enjoyed putting it together, and that satisfaction is sufficient compensation for us. If you wish to offer any monetary recognition, we suggest it be directed to the Global Interdependence Center, www.interdependence.org. That organization encourages dialogue about important world issues and seeks to do so from a neutral place, wherein it convenes that dialogue.

Special thanks to Norm Dempsey and Tom Patterson for help in the development of these pamphlets.

LESSONS FROM THUCYDIDES

PART ONE

THE U.S. STOCK MARKET, "THUCYDIDES TRAP", AND ITS IMPLICATIONS FOR US POLICY.

"Let China sleep; when she wakes, she will shake the world."
– Napoleon, 1817 [1]

"We really don't think it was tariffs – those have been in the public domain for days. Rather, we believe the market has a very unhealthy dynamic at the moment. Washington policy is critical to the market direction, but information asymmetries there are profound. No one wants to buy the dip if a real seller with better DC sources caused it."
– Datatrek, March 22 (Kotok note: On this date an interim stock market bottom may have occurred.)

Is the US stock market worried about a "Thucydides Trap" and its implications for US policy? We think the answer is yes (hat tip to Jason Trennert for raising the question) and that it may explain why a trillion dollars in market cap can get wiped out quickly and why (as Strategas's Don Rissmiller has noted) all of the "discounted benefit of the tax cuts ($800 billion fiscal stimulus) got erased by $37 billion in tariffs."

Let's tackle information asymmetries, Trump, and Thucydides.

We begin this multi-part commentary with a recommendation of Graham Allison's book. We suggest that it go immediately to the top of your reading pile.

The title is *Destined For War: Can America and China Escape Thucydides's Trap?* [1] (See https://www.amazon.com/Destined-War-America-Escape-Thucydidess-ebook/dp/B01IAS9FZY.)

For the government and academic credentials of Graham Allison see:

https://www.hks.harvard.edu/faculty/graham-allison.

For an overview of the Belfer Center at the Harvard Kennedy School, see:

https://www.belfercenter.org.

Graham Allison coined the term Thucydides Trap (T-Trap) to describe the reactions between world powers and how one of them may engage in an action in response to how it perceives the other (information asymmetry at work). Over and over in the history of the world, a rising power challenges a dominant power, creating fault lines of stress and competition between the two. Allison provides a detailed historical log of 16 such major events in the last 500 years. He documents how 12 of the 16 ended in war.

As investment professionals, we must immediately note that in the first four of Allison's 16 events (Spain versus Portugal, 15th century; three rounds of the Hapsburg Empire's demise) there was no stock market. In the other 12 examples there were bourses. Amsterdam's was the first one, trading shares of the Dutch East India Company in 1602. Over the following four centuries, other stock markets came into existence. In each occurrence of a T-Trap scenario, there was a serious market reaction. There are no exceptions. War or a perceived risk of war moves stock market prices.

We believe that the Datatrek warning about information asymmetries is correct and that Allison's concept of the T-Trap is applicable in many forms today, although Allison focuses primarily on the geopolitical realm. Here is Allison as he argues that the US-China relationship is developing as the 17th T-Trap case study. (Remember, he has 500 years of history on his side of the argument.)

"In the seventeenth case, an irresistible rising China is on course to collide with an immovable America. Both Xi Jinping and Donald Trump promise to make their countries 'great again'. But unless China is willing to moderate its ambitions, or Washington can agree to share primacy in the Pacific, a trade conflict, cyberattack, or accident at sea could be the spark that ignites a major war." [1]

Note that the moving agendas in relations between North and South Korea, as well as between Japan and the US, are also parts of the huge global realignment underway. All these countries but North Korea have major stock markets.

When we say moving agendas, we need to always be thinking about asymmetric information. Here is an example of what we didn't know and the North Koreans did know: it may explain Kim's motivation.

"On 25 April, the South China Morning Post reported that North Korea's mountain nuclear test site has collapsed. Two separate groups of Chinese geophysical scientists studying the mountain have reached the same conclusion. A research team from the University of Science and Technology of China (USTC) in Hefei concluded that the collapse occurred because of the detonation last September of North Korea's thermal nuclear warhead in a tunnel about 700 meters (2,296 feet) below the mountain's peak. According to an analysis posted to the team's website, the 100-kiloton explosion on 3 September vaporized surrounding rocks and opened a chasm that was up to 200 meters (656 feet) in diameter. A large section of the mountain's ridge slipped into the pocket created by the blast. The explosion turned the mountain into fragile fragments, the researchers wrote. The USTC team plans to publish its findings in the Geophysical Research Letters of the American Geophysical Union, according to the Post article. Another research team at the Jilin Earthquake Agency of the China Earthquake Administration in Changchun reached similar conclusions to the USTC team. It concluded that the fracture created a "chimney" that could allow radioactive fallout from the blast zone to rise into the air. This team published its findings in the 16 March edition of Geophysical Research Letters of the American Geophysical Union."[4]

A specific domestic stock market asymmetry is found in the Amazon-Trump squabble. Remember that Jeff Bezos owns the Washington Post and that Trump doesn't like anyone who is critical of him. Also note that more people use Amazon and vote for it with their pocketbooks every day than voted for Trump (or for Clinton, if that matters). Amazon outpolls Trump with real money bets by its customers.

Here is information asymmetry applied to the stock market. If you knew that President Trump would soon be picking a Twitter fight with Bezos and Amazon, would you front-run the news (or tweet) and sell Amazon? That's what went down once their fight started. We've seen many other examples, too, where Washington politics made news and dramatically changed market prices.

Here's another info-asymmetry example: If you had had early warning signs that the new tax law bill would have a component that was detrimental to MLPs, would you have bought, held, or sold MLPs? Clearly, the tax bill hurt certain MLPs.

In an era of tariffs, barriers, protectionism, and trade wars, doesn't this T-Trap scenario (with its component of asymmetrical information) apply to every item in the commercial arena? Isn't that one of the outcomes of protectionism? Would you buy, sell, or hold if you knew, before a tariff announcement, that your item was going to be mentioned? Remember the trade negotiation with China is underway, right now!

The T-Trap has nothing to do directly with stock markets; it is about lessons from history. It is about imperfect information leading to mistakes and mismanagement of geopolitics. And it is about the assumptions used and decisions taken by nation states and their leaders. What Graham Allison says about the T-Trap and why it is important is best summed up in a remark often (but perhaps incorrectly – [6]) attributed to Mark Twain:

"History never repeats itself, but it rhymes."

Stumbling into a Thucydides Trap results in painful time of reckoning — a "day of wrath, that day which will reduce the world to ashes," if you will permit me an old Latin phrase that comes to mind (*Dies irae, dies illa Solvet saeclum in favilla…*).[3]

There is no evidence that corporate shares existed and traded in the ancient Greece of the Athenian historian Thucydides. There is some evidence that deals occurred with partnerships and similar organizations. The Greek stock market is modern, not ancient.

There is, however, evidence of using money to settle disputes without war and of encouraging commerce over war. There is also evidence that during 30 years of peace following a treaty agreement among the Greek city states, dispute resolution was handled according to agreed-upon procedures. Thucydides includes such references in his chronicle, *The Peloponnesian War*. [12]

The Delphic Oracle was an early version of an international court. We might think of it as a dispute-resolution system among the Greek city states, playing a role not unlike that of the World Trade Organization today. Early Greece offers a lesson for our trade and tariff disputants. There are benefits of peace over war, as Thucydides carefully chronicles. But, as in ancient times, the benefits of peace are now

being placed at risk. (We encourage readers to examine the history of Pythia, the high priestess of the Temple of Apollo.)[7]

Thucydides was not the first historian to chronicle ancient times. But he was the first who did so in human terms. Throughout *The Peloponnesian War* [12] (I'm using the Martin Hammond translation) Thucydides avoids references to "the gods." Thucydides wrote about man's behavior instead. He left the Greek gods out of the story in order to show how people were, how they behaved and made decisions. He quoted them carefully.

In our multipart series we will talk about T-Traps and trade (although we have hit that one hard already). And we will discuss money (gold). We will try to focus on victory versus defeat. And we will offer investment positioning that may have T-Trap conceptual support for its rationale.

Let me segue to some excerpts from Thucydides. Also, please think about our T-Trap theme in the context of today's world and in the particular context of US-China relations. Try to imagine today's bilateral discussions reported by Thucydides with non-Greek names like Trump or Xi or Abe or Navarro or Bolton or Kudlow or Mnuchin as replacements for the leaders of Corinth, Sparta, and Athens. Thucydides dealt with Greek city states, but the context today is nation states.

My takeaway is that 2500 years later very little has changed, and history has been proven to rhyme.

Let's go back 2500 years to an assembly in Sparta. Greek city state allies of the Spartans have gathered for a meeting. Thucydides quotes a speech by a leader from Corinth:

"Spartans, the trust you place in your own constitution and society makes you less trusting of others when we have something to say to you.... Many times we have warned you of the harm we anticipated from the Athenians.... The time is past for debating whether or not there is aggression against us: The question is how to resist it." [12]

There are Athenians in the assembly who happen to be in Sparta on business. They speak up:

"Our delegation was not sent here to engage in dispute with your allies, but on a separate mission from Athens. Nevertheless we are aware of considerable outcry against us, and we come before you now... to

ensure that you are not too readily influenced by your allies into making a wrong decision on matters of great importance." [12]

After extensive debate involving many in the assembly, the Spartans clear everyone else away and meet among themselves. Many want war at once. Their king, Archidamus, displays patience and experience. He argues that Sparta is not ready for war:

"Spartans, I am old enough myself to be experienced in many wars, and I see some of you here the same age: None of them will share the longing for war felt by most who have never known the reality. Our navy? We are inferior. Our finances? Here we are more deficient. My advice is that we should not yet take up arms. We should look to acquire further allies… we can supplement our naval resources… let us first see to our finances…. We are not schooled in the useless over-intelligence which can make a brilliant verbal attack on the enemies' plan but fail to match it in consequent action…. It is our principle to make practical plans on the assumption of an intelligent enemy, and not let our hopes reside in the likelihood of his own mistakes, but in the security of our own precautions." [12]

One of the five magistrates of Sparta (who collectively have more power than the king) takes the other side and calls on the Spartans to vote for immediate war. The resolution to go to war against Athens is deemed the majority view. Thucydides summarizes:

"This resolution of the Spartan Assembly, the treaty [with Athens and other city states], which had been broken [by Athens] was made in the fourteenth year of the duration of the Thirty Years Treaty." [5]

Thucydides' analysis is critically important:

"In voting for war on the grounds of breach of the treaty the Spartans were not so much influenced by their allies as by their fear of increasing Athenian power." [12]

One element of T-Trap behavior is fear. Thucydides demonstrates this reality repeatedly.

The other two key elements are state interests (what is in the interests of the states and of their leaders?) and honor. "National interests are plain enough," says Graham Allison. "The survival of the state and its sovereignty in making decisions in its domain free from coercion from others are standard fare in

discussion of national security." Allison warns about maintaining "objectivity" and about the flaws of emotional behavior and acting on misperceptions. [1]

The last pillar is honor. Allison notes: "To many modern ears the word sounds pretentious. But Thucydides' concept encompasses what we now think of as a state's sense of itself, its convictions about the recognition and respect it is due, and its pride." [1] Wow – the danger of appealing to pride as a political motivator.

Fear, interests, honor. Those are the operative three prongs of T-Traps.

Allison concludes that, "Ultimately, the leaders of Athens and Sparta were overwhelmed by their own domestic politics. Pericles and Archidamus understood the insight about the inherent weakness of the leader." [1] (Can this insight be applied to a US president? Is it is true for all US presidents?) That weakness, too, is part of the foundation of the T-Trap. We add that not having full information (the risk of asymmetry) exacerbates that weakness.

So are stock markets dealing with the risks of T-Traps? We believe the answer is yes. Is the US-China trade skirmish the beginning of a new cold war? That is the suggestion from BCA Research. Does the skirmish have global implications? Yes, says George Friedman. His book *Flashpoints, The Emerging Crisis in Europe* [7] needs to be read in conjunction with Graham Allison's.

PART TWO

A DISCUSSION OF MONEY, INVESTMENTS, AND WHEN THUCYDIDES TRAP RISKS ARE RISING.

In part 1 we noted the discussion of the North Korean mountain collapse that followed last September's nuclear test there. We speculated about this collapse's being the motivation behind Kim's changing posture. We wondered what the US intelligence apparatus knew and when. Or was this hugely negative North Korean development just good luck for the US? Did a leak of radioactive material into China spur China into action? Did Beijing tell Pyongyang, "Enough is enough?" Is that what eventually got the two Koreas and the US and China to work at the new détente? Could it be that the NK nuclear failure wiped out so much of their program that it forced Kim to sue for peace in a way that makes him save face by looking heroic? Does Kim face a nuclear catastrophe of Chernobyl proportions?

(Here's a story on the aftermath of Chernobyl and continuing radiation damage: http://time.com/5255663/chernobyl-disaster-book-anniversary/.)

Is this a Fukushima-like disaster? (Here's reporting on the continuing flow of radioactive water from the plant into the ocean: https://www.japantimes.co.jp/news/2018/03/29/national/seven-years-radioactive-water-fukushima-plant-still-flowing-ocean-study-finds-.Wumg48ghokh.)

(It is worth remembering that 10 years ago the previous dictator Kim blew up the cooling tower that was the most prominent symbol of NK's plutonium production program. He used that act as a teaser to

prompt negotiations, but three years later he was back to his old ways.
See https://www.nytimes.com/2008/06/27/world/asia/27iht-korea.1.14044540.html.)

Reminder: The three prongs of a Thucydides Trap are fear, national interests, and honor.

The present summation of the Korean T-Trap situation looks like this: Kim saves face (T-Trap honor); South Korea gets relief (T-Trap fear relief); China gets a Korean buffer in place without nuclear risk (T-Trap national interests); the US president gets a political victory; and the US defense establishment accepts a reprieve from war. (Donald Trump's administration is affected by all three prongs of the T-Trap.)

With détente, everybody wins, at least, temporarily. Thucydides cites the 30 years' peace in Greece as proof that a détente can happen. Graham Allison notes how the periods of peace are so fruitful. And he warns about how they do not always last.

Trump lovers credit the President. They support his Twitter diplomacy and "rocket man" threats. They credit him with successful belligerency. He is seen as purposefully posturing the US as the mighty and the righteous. He gets credit for supporting the Olympics in South Korea and for publicly displaying that support through the drama of Vice-President Pence's and First Daughter Ivanka's attendance at those games. And Trump is lauded for facilitating the détente with the cooperation and assistance of China. In his Michigan speech on April 28, Trump took full credit for the Korean Peninsula détente, and he attributed the result to his policy and interventionism and style. [11] To describe the extent of the role he played in achieving the Korean breakthrough, he said "everything." The audience cheered robustly and sustainedly.

Even those who don't like Trump must concede that this is happening on his watch and that it is a breakthrough. Or we should say, it appears to be a breakthrough.

So did the initiative really start with the NK nuclear test failure? Was Trump shrewd, or just lucky? Does it matter? Trump will be the first US president to meet with a North Korean leader. Bill Clinton reportedly came close to a meeting but didn't succeed. Trump's favored TV channel ran a report on the three Kims and their nuclear ambitions. The title is "North Korea's nuclear weapons program has grown with each Kim regime." Here is the link: http://www.foxnews.com/politics/2018/04/27/north-koreas-nuclear-weapons-program-has-grown-with-each-kim-regime.html.

During a private dinner I attended recently, conversation about NK morphed into talk about the reunification of Germany after decades of division. We looked at how a subsidy was transferred to the East

Germans through the mechanism of maintaining the official East German Mark exchange rate when the conversion to the West German Deutschemark occurred. I personally recalled my experience of walking through Checkpoint Charlie in Berlin in an Army uniform. In those days, an American officer visiting East Berlin in civilian clothes risked arrest and imprisonment for spying. We went only in uniform. I remember vividly the machine gun slowly turning as I transited the border maze. A few others at the dinner offered metaphors of breakthroughs and how they occurred. Nixon-China and Reagan-Russia were cited as cases of success that avoided war and overcame the heightened risks of a T-Trap, with its asymmetric information. Historic T-Trap failures in history were also cited. Perhaps Chamberlain's pacifist initiative with Hitler was the most dramatic.

Trump lovers and Trump haters aside, Kim's about-face is happening on Trump's watch. If peace breaks out on the Korean peninsula, Trump will be the sitting president of the United States who will be credited with success in that chapter of history. Now I have just invited an onslaught of rebuttal.

Passions about Trump run to the extreme. We saw that in Michigan from the Trump lovers.

Thucydides' repeated warnings about emotions are confirmed in Americans' behaviors today. Passions run high on both sides.

Here is a quote from an avowed Trump hater:

"He's now jumping to take credit for whatever good happens in Korea. (He'll blame others for anything that goes wrong, of course.) China reveals that Kim Jong Un blew up his nuke testing site and faces an existential cost threat to clean up his self-inflicted mess (the threat compares to making N Korea clean up the Hanford Washington breeder reactors). Then S Korea impeaches a leader for corruptly taking instructions from a chaebol (think, Trump taking orders from Putin). They then elect Moon on a platform to unify with the North; China rightly decides they have a better chance to succeed trading with Korea than conquering it (not to mention the chance Korea will either pick up the nuclear cleanup costs or get the US to help, saving China billions). AND TRUMP SAYS PEACE HAPPENED BECAUSE HE DID A GREAT NEGOTIATION JOB. The problem, of course, is that claiming credit is simple, but understanding reality is complex, so Trump may well succeed. In the end, it matters little in comparison to the world's real problems, but that makes it no less maddening. THIS IS A GOON FOR WHOM ONLY 8% OF THOSE WHO KNEW HIM BEST (Manhattan residents) VOTED."

Readers may wish to learn about Hanford, the site of a US nuclear site tunnel collapse in 2017, for reference. Its nuclear history starts in 1943 and continues until today. Here's a background piece: https://www.energy.gov/em/hanford-site.

And here's a story on the collapse of the radioactive materials storage tunnel in May 2017: https://www.washingtonpost.com/news/post-nation/wp/2017/05/09/tunnel-collapses-at-hanford-nuclear-waste-site-in-washington-state-reports-say/?utm_term=.4bae7e6bd069.

We hope for a successful détente. Our view is that any action that reduces the risk of a T-Trap war is an action worth taking. We don't think this is about Trump-hating or Trump-loving. We look beyond the warnings of Thucydides about emotions. It is the outcome we seek. If NK shuts down its nuclear program, the world is a better place. If the Korean peninsula thaws in its version of an East Germany–West Germany détente, the world is a better place. Will America be willing to fund some of the costs? That question is probably coming. Will the Congress have the vision to look beyond hating each other across the Republican-Democrat divide? Sadly, Thucydides' history suggests only maybe and only temporarily.

Thucydides didn't have nuclear weapons to write about. His Peloponnesian War experiences involved ships powered by wind or rowed by slaves, battering rams, the phalanx, the cavalry, archers, mercenaries, and hoplites (spear, shield and helmet-armed infantry). Battle was by sea or land. No satellite imagery. Information was sourced with spies and lookouts. Remember, this was 2500 years ago.

We did find Thucydides' account of a plague that struck Ancient Greece, which may offer instructive parallels to the effects of a potential nuclear disaster in the Korean Peninsula. It happened in 431–430 B.C.E.

Until the time of Thucydides, plagues were attributed to the deities. We see that in the biblical narrative of the Ten Plagues in Egypt and we see it likewise in Homer *(The Iliad)* and Herodotus. That changed with Thucydides. Readers may recall that in part 1, we discussed how Thucydides focused on human behavior. He ignored the gods. He was looking at the methods and decisions of man.

We will end this part 2 with a portion of Thucydides' description of the plague that hit Athens. That plague had spread around the Mediterranean from Egypt and Libya to Greece. It may have weakened Athens to the point where it lost the war with Sparta. We can speculate about that. Thucydides writes that "The plague had indeed begun immediately after the Peloponnesians (Spartans) had invaded, and it never reached the Peloponnese to any significant extent, but spread particularly in Athens…." [1]

We ask that readers think of modern history as they read the following. Contemplate the outcome of a nuclear disaster, whether the massive deaths at Hiroshima or the suffering from Chernobyl. For an American image, research the effects of the 1918 flu epidemic in the United States 100 years ago. (See https://www.smithsonianmag.com/history/journal-plague-year-180965222/.) Use your imagination to move from ancient to modern.

Here is Thucydides:

"Other victims were in good health until, for no apparent cause, they were suddenly afflicted. The first symptoms were a high fever in the head and reddening and inflammation of the eyes; then internally foul smell. There followed sneezing and hoarseness of voice, and shortly the affliction moved down to the chest accompanied by a violent cough. When it settled in the stomach the turmoil caused there led to the voiding of bile in every form for which the doctors have a name, all this with great pain. Most then suffered from an empty retching which brought violent spasms… the surface of the body was not particularly hot to the touch or pallid, but reddish and livid, breaking out in small pustules and ulcers… the sensation of burning heat inside the body was so strong that sufferers could not bear the pressure of even the lightest clothing or sheets, or anything other than going naked, and their greatest wish was to plunge into cold water… many did throw themselves into cisterns, overcome by an insatiable thirst: but as a rule the quantity of water drunk made no difference…constant infliction was desperate restlessness and inability to sleep… the majority died from internal fever after six to eight days… others died from subsequent weakness when the disease spread down to the bowels causing heavy ulceration and the onset of completely liquid diarrhea… symptoms appeared when the disease took hold in their extremities. It attacked genitals, fingers, and toes, and many lived on with those parts lost; some too lost their sight. There were those who on recovery suffered immediate and total loss of memory, not knowing who they were and unable to recognize their friends… the pathology defied explanation… although many bodies lay unburied, the birds and animals which prey on human flesh kept away from them, or, if they did eat, died of it." [1]

Thucydides continues, "Such was the affliction which had come on the Athenians…. For all the time the Peloponnesians were in Athenian territory, the plague continued to take lives both among the expeditionary force and in the city of Athens, so much so that… the Peloponnesians cut short their presence in the country for fear of the disease…." [1]

(For an extensive discussion of plagues in ancient times read "Plague in the Ancient World: A Study from Thucydides to Justinian," by Christine Smith, available here: http://people.loyno.edu/~history/journal/1996-7/Smith.html.)

Has Kim created his own plague in North Korea? What are the true informational asymmetries at work among the key players – North Korea, South Korea, China, and the United States? Has the Thucydides Trap narrative changed in modern times? Are the dangers not greater now than they were in Thucydides' time?

We will wrap up this part 2 with a special note. A very thoughtful reader sent the following:

"An interesting aside: 'In his book titled *The Oracle,* science historian William Broad and his scientist team prove the existence of the crossed fault lines and the presence of an intoxicating gas called ethylene in the rocks below the ancient temple…. The presence of hydrocarbon gases can induce a narcotic state similar to that recorded from the trance state of Pythia." [2]

"If I'm not mistaken, you're suggesting world peace could be obtained through sharing a 'peace pipe,' thus all the focus on medicinal cannabis."

PART THREE

INCOMPLETE INFORMATION HAS GENERATED NEGATIVE OUTCOMES FOR ALL OF RECORDED HISTORY.

In book five of The History of the Peloponnesian War, Thucydides describes how the Athenians sustained surprisingly large losses in battle and how the Spartans prevailed. He also describes what each side didn't know about the condition of the other side. Problems arise when decisions are based on incomplete information.

Athens didn't know of the desertion and revolt by the Spartan-oppressed Helots, who were used as slave fighters (even though the Helots outnumbered the Spartans 7 to 1). For their part, the Spartans didn't know that Athens was under financial pressure because it was using its hoard of gold and silver to pay mercenaries. Athens utilized mercenaries because of population losses from the plague and because it had the money, especially silver from its own mines, but the costs of war were exceeding the incoming revenue.

Thucydides outlines the details of new alliances and why they were made. He lists the changes taking place in, among and between the various city states of ancient Greece, and he names their leaders. He also describes the reasons why those city states made decisions. Thucydides has given us a nuanced record of information asymmetry and what it means in war and diplomacy.

One city state didn't know the full story about the other. Deception and intrigue were part of the mix. Treaties remained in force (until they were broken) even as each antagonist sought advantage – but

without being fully informed. Information incompleteness and asymmetry also explain why the Athens–Sparta treaty dissolved and conflict ensued. Such outcomes have been the case for all of recorded history.

We see the same principles operating today in the news flow about the détente with North Korea. In a previous note we cited Kim Jong Un's father's attempt at the deception of nuclear disarming in order to obtain economic benefits. And we saw what occurred afterwards as the younger Kim expanded his nuclear development program.

The press and the analysts are quiet now on the events that occurred last September at the North Korean nuclear test site and whether its full collapse effectively demolished Kim's nuclear program. Now Kim is inviting foreigners to witness the destruction and closure of the test site. Who is deceiving whom? What is the true backstory? When was it known and by whom?

Here is Fox News reporting on the aftermath of the September North Korean nuclear test: http://www.foxnews.com/tech/2018/05/11/10-times-larger-than-hiroshima-how-north-koreas-huge-nuclear-blast-caused-mountain-to-collapse.html.

Here is a report on academic studies that suggest Kim has no nuclear facility left: http://news.berkeley.edu/2018/05/10/radar-reveals-details-of-mountain-collapse-after-north-koreas-most-recent-nuclear-test/.

Here is a report by Reuters that details the current views on what a North Korean dismantling would entail: https://www.reuters.com/article/us-northkorea-missiles/north-korea-details-plans-to-dismantle-nuclear-test-site-idUSKCN1ID0H5.

So what can we believe? What is the backstory? And how much asymmetry is there in the information that we have by which to evaluate these developments? What do we learn from Thucydides that still applies today? The answer may be found in a quote at the end of this commentary.

We will pause for a moment and share a backstory loaded with asymmetric information. This is about how the United States came to declare war on Germany in 1917. This is a clear example from history, only 100 years ago. It is about decisions made, deception applied, and the outcome determined with absolute clarity.

For the details about a decoded message and its conveyance, see *Breaking the Zimmermann Telegram*, by John Bull, here: https://medium.com/lapsed-historian/breaking-the-zimmermann-telegram-b34ed1d73614.

The aforementioned article offers this summary of the situation: "When World War One broke out, and Britain cut Germany's transatlantic telegraph cable, Germany shifted its diplomatic traffic to the neutral American cable — apparently unaware that the American cable crossed British soil. The British tapped the cable and in 1917 decrypted a German telegram urging Mexico to make war on the United States. This telegram was enough to bring America into the war. But how could the British reveal the telegram, without revealing that they tapped the American cable?" (Hat tip to Politico.)

Here is another take on the Zimmermann telegram story from Smithsonianmag.com and a photo of the telegram: https://www.smithsonianmag.com/history/document-deep-dive-what-did-the-zimmermann-telegram-say-29792028/.

My point about information asymmetry is simply that we really don't know everything there is to know and cannot necessarily believe any of the news sources, including even those that attempt to report neutrally. The neutral or centrist ones are preferred, but they too may not have a full story. And it goes without saying that when we see Fox defend Trump and attack the Democrats and when we see CNN do the opposite, we are really just viewing the polarization of America from one side or the other. These news providers are practicing intentional information asymmetry. Hannity and Maddow are mirror images of intentional asymmetric informational discourse.

But even those who try to be scrupulously centered and factual are exposed to information asymmetries. The World War One story is a good example. The newspapers of the day reported an event that was sourced from one telegram without their knowing that it was a secondary source.

As consumers of news we need to be aware of the risks of such asymmetries. As investors we are required to be vigilant.

Here is another example involving a policy issue that is roiling financial markets. The policy was either the result of poor research by US policy makers during the China trade war rollout, or it was purposely implemented to apply leverage on China. With information asymmetry at work, we will never

know. Apparently, and in a policy reversal, President Trump has now decided not to bankrupt China's second largest telco.

"Trump in Reversal Says U.S. to Help China's ZTE Stay Afloat": https://www.bloomberg.com/politics/articles/2018-05-13/trump-says-he-xi-working-to-bring-back-china-s-banned-zte. I recommend reading the entire Bloomberg report to see the magnitude at which a trade war can operate.

When it comes to the policy-making role, here is Thucydides' warning to us. He is citing a discussion between the Athenians and the Melians about truce negotiations in the year 416 BC. This is the English translation of an ancient Greek text from 2434 years ago. It seems very appropriate today.

"The Athenians said: Well, we shall not bulk out our argument with a lofty language, claiming that our defeat of the Persians gives us the right to rule or that we are now seeking retribution for some wrong done to us. That would not convince you. Similarly we do not expect you to think there is any persuasive power in the protestations that though you (Melians) are a Spartan colony you have never joined their campaigns, or that you have not done us any harm. So keep this discussion practical, within the limits of what we both really think. You know as well as we do that when we are talking on the human plane **questions of justice only arise when there is equal power to compel: in terms of practicality the dominant exact what they can and the weak concede what they must.**" [1]

And there it is: "the dominant exact what they can and the weak concede what they must".

Thucydides has warned us from ancient history. Graham Allison warns us by using the ancient lessons to understand the history of the last 500 years. And Allison is hardly alone as he warns about US-China. We also advise reading Yale University Professor Paul Kennedy's The Rise And Fall of the Great Powers, a discussion of "economic change and military conflict from 1500 to 2000." [9]

PART FOUR

MONEY IS BOTH A TOOL OF WAR AND A TOOL USED TO AVERT WAR; WAR COSTS MONEY AND A LOT OF IT.

In the modern geopolitical world, money and payments are integrated in war (and trade wars) and politics. We see that intrigue in the daily news flow. Some 2400 years after the Peloponnesian War, we can still glean from antiquity lessons to guide us. The Thucydides Trap includes money as a tool of war or as a tool to avert war. History demonstrates that it takes a sound economic program and a well-managed finance model to fight a war or to deter the other side from launching a war against you. Again, we draw upon Graham Allision's excellent work, *Destined For War: Can America and China Escape Thucydides's Trap?* [1]

Today, monetary tools for economic warfare include foreign exchange rates, deployed in currency wars. Fiat money – whether dollars, yen, euros, rubles, or yuan – is the prime payment mechanism that is manipulated. Economic and payment sanctions are also tools of war. Blocking banking system access and freezing individuals' and countries' finances are weapons as well.

Nowadays, cryptocurrencies provide the alternative vehicle used to transfer payments between sanctioned parties. Iran needs a missile part. It cannot pay North Korea through any banking-system transfer, and North Korea has no way to safely receive the payment. Crypto solves this payments problem. It also solves the problem of those who wish to hoard wealth outside scrutiny. Of course, they must not lose their "key."

In the time of Thucydides, money was rather simple, usually coins – gold, silver or copper or an alloy of metals. Money was necessary for war. Greek city states raised money through either taxes or trade tariffs. They also appropriated what they could during wars. To the victor went the spoils, as the saying goes. The losers got death or slavery, and poverty.

Then, as now, war cost money and a lot of it. Thucydides chronicles payments to mercenaries. He even notes how mercenaries hired by one side went to work for the other side if their first employer lost the battle and along with it the ability to pay. The mercenaries were in it for the money. Thucydides notes that certain soldier-mercenaries received a drachma a day. Those payments were probably in Athenian silver coins (owls), since Athens' currency was widely accepted in the Mediterranean region.

Thucydides describes how the costs of war had negative effects. (Think of this as a defense-budget debate 2400 years ago.) Fiscal decisions could determine the outcome of battles. An example from Thucydides' chronicle occurred in connection with Athens' conflict with Sparta in Sicily when, in the summer of 413 BC, a contingent of 1300 Thracian mercenaries arrived in Athens. They were late due to weather delays. We must recall that ship travel in those days was perilous and often unpredictable.

Demosthenes had already sailed for Sicily with his forces. He might well need the Thracians; but since the Athenian leaders couldn't communicate with Demosthenes and lacked information symmetry about battle conditions in Sicily, they had to make a fateful decision. Thucydides reports that they elected to send the mercenaries back to Thrace because "they thought it too expensive to retain them." According to Thucydides, this decision turned out to be a mistake, as the battle over Sicily turned the war in Sparta's favor and cost the Athenians dearly.

The chronicle describes what happened after the decision on the mercenaries was made. He details how murderous the Thracians became. He lists the cities they sacked. Thucydides writes, "These Thracians, when they have nothing to fear, are as bloodthirsty as any other barbarian race, even the worst, when pupils had just come in for their lessons: they butchered the entire school." [1] Thucydides details the Thracian carnage in gory detail. He also chronicles the outcome in Sicily and lists the final losses of the Athenians in citizens, slaves, and money (which meant fewer hired mercenaries in future).

Borrowing for war was not an option in Thucydides' day. You either had the cash or you didn't. Athens was wealthy and had an open form of government thus we can get information from Thucydides' chronicle and from records.

Historians estimate that Athens' defense reserve was between 6000 and 9700 talents. This was a huge sum. Consider the ratios. A drachma in weight was about 1/8 oz. The famous ten drachma coin (tetradrachm) is based on this weight. 100 drachmae equaled 1 mina or approximately a 1 pound weight. 60 minas equaled 1 talent in weight which is about 61 pounds. Thus we can estimate the Athenian coin reserve at about 18 to 28 tons. Most of this reserve was silver. Note that the ratio of gold to silver in those times was about 14 units of silver for each unit of gold. A worker with skills might earn about a drachma a day and an unskilled worker about a half drachma. Soldiers and sailors were paid about a half drachma a day during regular (peaceful) times. That pay doubled to about a drachma a day during battles and other military campaigns.

Sparta was a more closed form of government. Records are less clear and estimates of wealth are much less accurate. We do not know much about acceptance of Sparta's money. Clearly Athens had a huge advantage with its monetary integrity. In the end and after the disastrous campaign in Sicily, the money alone was not enough to prevent a Sparta victory.

Most loans in ancient Greece were personal. There were a few loans to city states, but they came into being in the century after the Peloponnesian War period. Were they the first "municipal bonds"? Often such city-state loans required the guarantee of a prominent citizen. But debt financing came into being after the period chronicled by Thucydides.

Because there was little use of debt- or deficit-financed military appropriations, city states paid cash to fight wars. That meant they needed to keep the cash secure. So this history revolves around where the wealth hoard was kept, who knew about it and who guarded it, how much they had and how much the other side thought they had. They paid spies to find these things out, and they resorted to bribery when they could. All of these money issues went into assessing whether or not to do battle. Some estimates suggest that the cost of a siege or full battle could be 2000 talents. It is not clear how much was in gold or silver. Many scholars believe the references are to silver because it was the basic wealth metal in Athens.

For guidance on coinage we turn to references by Neil Macgregor, written in his capacity as the director of the British Museum. He attributes the first standardized gold coinage to the Lydians. MacGregor cites others' work on how the Lydians purified gold and how King Croesus became the ancient symbol of wealth. "As rich as Croesus" was the phrase for centuries. For history see: https://en.wikipedia.org/wiki/Croesus.

Lydia lost its wars with the Persians and was conquered by Cyrus the Great, who captured King Croesus. According to MacGregor, "Cyrus shrewdly appointed Croesus as an advisor – I like to think, as his financial adviser – and the victorious Persians quickly adopted the Lydian model, spreading Croesus' coins along the routes of the Mediterranean." [10]

So what does this history have to do with the Thucydides Trap and the Peloponnesians War? A lot.

The Persians were eventually defeated by Athens. Athens then added huge amounts of wealth to its hoard, supplemented by production from the Athenian silver mines. Thus Athens became very rich as well as powerful. Sparta did not issue its own coinage to nearly the extent that Athens did – Athenian money was known and accepted throughout the Mediterranean region. The drachma was truly the regional reserve currency of its time. For a detailed discussion of ancient Greek coinage, see https://en.wikipedia.org/wiki/Ancient_Greek_coinage.

So we see Athens triumphing over the Persians and being defeated by Sparta in Sicily; and in both cases economic factors were key.

In this series about the Thucydides Trap we have cited the lessons offered by Graham Allison and others. In this part 4 we wanted to reach into the monetary realm. The words of caution are centuries old. They apply today.

Now to a real treat. At the end of this commentary we want to quote from the famous treatise *A History of Interest Rates, 2000 BC to the Present* by the late Sidney Homer. [8] IMHO, anyone in the bond business who hasn't read this book and doesn't refer to it from time to time is missing a key component in the education required to manage debt instruments.

The marvelous work of Sidney Homer on interest rates includes tables and details on interest rates charged on loans in Ancient Greece. (My copy is the second edition, his own revision before his death.) See pages 40–43. Sydney Homer describes the period that preceded Athenian democracy, and there are lessons in it for the present day Washingtonians who think they know everything. Here are two paragraphs. We suggest reading them in the context of today's debate over loan forgiveness and deficit financing.

"In 508 B.C. democracy was established in Athens. From this time on Athens so rapidly outdistanced other Greek cities in trade and finance that the history of Greek credit and interest rates is largely, but not entirely, a history of Athenian credit and Athenian interest rates." [8]

Homer sagely continues:

"Before the beginning of the fifth century B.C., the minting of money in Greece was hampered by a scarcity of metals. After 483 B.C. a series of marvelous finds occurred, and precious metals spread throughout Greece. Each city struck its own coinage. Every foreign transaction thus required a money-changing transaction. Many cities engaged in unscrupulous alloying, but such frauds could only work internally. A few cities by their integrity gained universal acceptance for their coinage. Athens had the advantage of the silver mines of Laureion. The Athenians took every precaution to maintain the integrity of their famous 'owls'. Even in times of tragic national disaster, when the treasury was empty and Attica occupied by an enemy, Athens refused to debase this silver coinage. As a consequence, the Athenian 'owl' became current in all markets and an article for export. It remained a most acceptable currency throughout the Mediterranean for 600 years, long after the disastrous defeat of Athens in the Peloponnesian War, 431-404 B.C. This tragic event, immortalized by Thucydides and mourned to this day by lovers of human excellence, was not a turning point in the financial history of Greece." [8]

So Sydney Homer establishes that the Athenian drachma was world's first true reserve currency, which dominated for 600 years. He makes clear, too, that Athens' loss of the war was not the loss of the credibility of its coinage. He describes how the cities accumulated treasure before the Peloponnesian War. And he recites how the temples (especially Delphi) acted as banks and as lenders. Homer details these loans and articulates the mechanism used for personal loans, real estate loans and, after the Peloponnesian War, for a few loans to governments.

Here is a quote regarding the latter.

"Loans to states were thus exceptional until the third and second centuries B. C. There were occasional early loans to states, but these were compulsory or of a political character. The famous loans of the Temple of Athena to the city of Athens during the fifth century B.C. were a religious fiction: the money was the war reserve of the people of Athens. Interest on these loans was nominal and was rarely paid, but an effort was made to return the principal to the Temple, that is to say, restore the war reserve." [8]

A century after Thucydides' chronicle, the Greek system endured a series of muni defaults. We can think of this as an ancient version of Stockton, California, or Detroit or Puerto Rico. Here's a final word from Sydney Homer:

"In 377–373 B.C. thirteen states borrowed from the Temple at Delos, and only two proved completely faithful; in all, four-fifths of the money was never repaid. Thereafter the temple preferred loans to individuals, secured by land." [8]

And there it is, an ancient lesson that we go on learning today.

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