The Hunt for Ancient DNA – Natural & Artificial

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The following is a direct response to the specific work cited below that describes the breakthrough scientific discoveries by Professor Eske Willerslev.

"The Hunt for the Oldest DNA" documentary 2025 Public Broadcasting Station, NOVA.

By the writer, director, executive producer: **Niobe Thompson**

Abstract: The recently released documentary titled "The Hunt for the Oldest DNA" was the inspiration for the writing of this paper. It is because Professor Eske Willerslev and I, David R. Wood, are both peers in two mirror fields of evolutionary science achieving similar breakthrough results using similar techniques to unconceal ancient DNA – natural and artificial. This paper goes through the documentary section by section to describe how Willerslev's and my journey of exploration to make breakthrough scientific discoveries follow literally the same pattern. The reason is that hunting for ancient natural DNA and artificial DNA which are variations of each other requires the same adaptations to align with the value stream demanded to make our respective scientific discoveries. And the paper concludes with a call for the integration of these two distinct research efforts in two peer fields of evolutionary science. To integrate the cross-interdisciplinary information, perspectives, and techniques to enhance both research efforts. This will predictably enable accelerated scientific discoveries in both evolutionary fields in the future.

Keywords: Cultural evolution, natural evolution, artificial evolution, cultural selection, artificial selection, natural selection, cultural information, artificial genome, natural genome, cultural adaptation, artificial adaptation, natural adaptation, cultural reproduction, artificial reproduction, natural reproduction, natural mutation, artificial mutation, individual learning, artificial punctuated equilibrium, natural punctuated equilibrium, Thomas Kuhn, Paradigm Shift, Philosophy of Science, ancient DNA, The Hunt for the Oldest DNA, ancient natural DNA, ancient artificial DNA, Eske Willerslev, David R. Wood, imagination, NOVA, PBS, shotgun sequencing

Section 1: Introduction

"There is nothing impossible to him who will try."

Alexander the Great

Professor Eske Willerslev and his team have recently made historically groundbreaking discoveries in the newly created field of Ancient Environmental DNA. This field was brought into existence by a self-proclaimed "failure" of a student. However, Willerslev possessed a unique set of adaptations – an intense curiosity, humility, and a powerful imagination. He had a burning desire to explore his world like Hanno the Navigator, Columbus, Magellan, etc. before him. This drove him to imagine a new paradigm shifting idea that changed his entire scientific field. An idea that was first thought of as a very stupid one. This idea enabled Willerslev to successfully mine ancient natural DNA in a way, and to a degree, once thought impossible. He literally achieved mission impossible.

I was also a "failure" of a student in high school finishing one spot below the middle of my class. It wasn't until U.S. Army basic training straightened me out that I became a disciplined and successful student. However, I too always possessed an intense curiosity, humility, and a powerful imagination. This caused me to study a broad number of scientific fields independent of my formal education – politics, warfare, information technology, diplomacy, digital transformation, psychology, philosophy, history, economics, religion, nature, etc. This prepared me to make the interdisciplinary discovery of The Unified Framework of Evolution – Natural & Artificial. This idea might seem "crazy" to others, but it enabled me to successfully mine ancient artificial DNA (i.e., ancient concepts) in a way, and to a degree, once thought impossible. I also literally achieved mission impossible.

It is because Willerslev and I view reality through the same lens as Alexander the Great who was trained as a youth by the father of rhetoric and natural biology – Aristotle. Alexander was trained to leverage his creative imagination to do the impossible. And Alexander is attributed expressing the same attitude in the quotation above as Willerslev repeatedly exemplifies throughout the documentary, *The Hunt for the Oldest DNA*.

This paper is being written to document the two variations of the same pattern of scientific inquiry being conducted in the two different fields of evolutionary science – natural & artificial. And to point out that both efforts are literally working to achieve a similar result utilizing similar techniques in their respective evolutionary fields. In fact, Willerslev himself described the challenge I overcame to unconceal artificial DNA as an analog for how he was unconcealing secrets of natural DNA in the documentary. For this reason, I strongly believe that collaboration between these two research efforts can be enhanced with cross-interdisciplinary integration. And this will then predictably lead to accelerated discovery for both fields in future.

Section 2: The Art of Scientific Discovery

The greatest form of scientific inquiry is not that of the empirical scientific method – but that of artistic scientific discovery. In chapter twenty-two of my third book, *The Artist of Evolution – Sun Tzu (2025a)*, titled "*The Art of Scientific Discovery*" I document for the first time the artistic scientific process wielded by Professor Eske Willerslev in the PBS NOVA documentary, *The Hunt for the Oldest DNA*. And I did so almost a year before this documentary aired when I submitted the final manuscript to Archway Publishing summer 2024. However, the entire story of Willerslev's discovery fits the conceptual pattern I described in that chapter to a tee. It is because the pattern in nature of Willerslev, the scientific discoverer, has repeated many times in different variations.

2.1: Eske Willerslev – Ancient Environmental DNA

Professor Eske Willerslev is not an empirical scientist – he is an artist. His intuition is what guides the evolution of his thinking, not just existing knowledge. This fits the pattern of the other genius artists in the field of scientific inquiry – Ramanujan, Einstein, Newton, Darwin, Machiavelli, Sun Tzu, etc. For artists of science such as Willerslev there is nothing impossible if he can imagine it. Willerslev wielded his creative imagination to intellectually leap out beyond the constraints of existing human knowledge – a Kuhnsian paradigm shifter. He is like the great explorers of yore who audaciously sailed out beyond the edge of the map of the world. And then documented the newly discovered geography for others to follow in his footsteps. In so doing, Willerslev not only disrupted the prevailing scientific paradigm but also created the new scientific field of ancient environmental DNA.

2.2: David R. Wood – Unified Framework of Evolution – Natural & Artificial

I also am not an empirical scientist – I am also an artist. I wielded the power of human imagination to discover **The Unified Framework of Evolution – Natural & Artificial**. This completed the work begun by the greatest philosophers in history such as Machiavelli, Sun Tzu, Laozi, Parmenides, Aristotle, Plato, Darwin, etc. And my scientific discovery has been guided by my intuition just like Willerslev. This enabled me to remove the constraints of existing human knowledge every step along the way. My creative imagination enabled me to leap out beyond existing human knowledge – a Kuhnsian paradigm shift. In so doing, I not only subsumed the prevailing paradigm of cultural evolutionary science but also created the new field of unified evolutionary science – natural & artificial.

Section 3: Evolutionary DNA – Natural & Artificial

DNA at its most basic sense is simply information utilized to produce adaptations. In **The Unified Framework of Evolution – Natural & Artificial** information performs this same basic

purpose to produce both natural and artificial adaptations. For example, natural DNA is instructional information for producing a natural organism while source code is instructional information for producing software.

3.1: Eske Willerslev – Natural DNA

Willerslev performs his research in the context of natural evolutionary science. His process of discovery involves working with natural DNA. He hunts for sources of ancient natural DNA to reassemble the fragmented natural genomes of naturally extinct organisms. Willerslev does so by matching the patterns of natural genotypes for known natural organisms stored in databases. The key to this process is to match the patterns of natural genes present in the soil. If you have existing natural genotypes to match against, then you can reconstruct fragmented natural DNA of natural organisms that lived millions of years ago.

3.2: David R. Wood – Artificial DNA

I perform my research in the context of artificial evolutionary science. In this new field human information is reframed as a variation of natural DNA – artificial DNA (Wood 2023). The raw information produced by humanity is an artificial variation of natural DNA and concepts are an artificial variation of natural genes. And a conceptual model is just an artificial variation of a natural genotype. I hunt for fragmented and roughly expressed evolutionary artificial genes (i.e., concepts) embedded in historical texts such as *The Prince*, *The Art of War*, *Nichomachean Ethics*, *The Republic*, etc. (Wood 2024, Wood 2025a, Wood 2025b). These historical texts are the artificial variation of Willerslev's soil. This makes my research efforts the literal artificial variation of the hunt for historical evolutionary genomic information conducted by Willerslev. The only reason the public is unaware of my discovery and research is the academic community's cultural prejudice against non-academics.

Section 4: Challenges of Recovering Ancient DNA – Natural & Artificial

DNA information, whether natural or artificial, deteriorates over time. The natural DNA of natural organisms and modern artificial DNA produced today is fresh and easy to resurrect the original patterns they expressed. So, the enemy of recovering lost DNA, natural or artificial, is time itself. The longer the evolutionary DNA exists then the greater the probability of the information will be contaminated or destroyed.

4.1: Challenges of Recovering Ancient Natural DNA from Soil

Different natural species are born with different blueprints (i.e., natural DNA codes) for producing individual natural organisms. Fragmented pieces of the individual natural DNA code

patterns can be matched to all other known natural DNA codes to determine which natural organism produced it. However, there is a certain point where the fragmented natural DNA is too difficult to read, and therefore, to match with other natural DNA codes.

During a natural organism's lifetime its own body's processes repair its own natural DNA codes (i.e., proofread and correct) from the effects of environmental factors such as ultraviolet radiation. However, once the natural organism dies the repair of the natural DNA code ceases. So, the longer the natural DNA code exists after the natural organism's death, the greater the increase in the damage to the DNA code due to lack of repair over time. This makes searching for useful ancient natural DNA like searching for a needle in a haystack.

Scientists long thought that natural DNA could only continue to exist, however fragmented, in the preserved soft tissue (i.e., mummies, frozen mammoths, etc.) of natural organisms. However, scientists discovered that fossil teeth and bones of natural organisms could also preserve ancient natural DNA – although this was very rare. Willerslev wanted to conduct research on these very rare fossils but was only a student at the time. The university system reserved access to such scarce resources for only the most qualified academics as a practical necessity. So, no one would provide him with fossils to conduct his research. It was an evolutionary constraint on Willerslev's desire to evolutionarily expand professionally.

Willerslev's desire placed a 'demand' on his imaginative capacity exactly as my scientific discovery documented. His creative imagination produced a random mutation of thought regarding the object of his emotional obsession. This is the artificial evolutionary variation of a random genetic mutation in natural evolution. Willerslev was randomly staring out a window at a dog "pooping" in the rain outside his flat window. In that moment it then occurred to him that feces also possessed natural DNA. He wondered if the natural DNA in the feces would be preserved in the soil over time or not. If so, then there would then be an overabundance of natural DNA for him to conduct his research. It was just as Plato asserted "Our need will be the real creator".

Willerslev, still a student, then approached his academic supervising professor with the idea of searching in soil for natural DNA. The supervisor, amid his academic peers' laughter at the lunch table, stated the following when the idea was presented to him: "I never heard anything as stupid in my life". This simply happened because Willerslev was the first person known in history to ever consider this possibility.

The reason was due to the academic group assumption, not a fact, that natural DNA was too unstable to be preserved in the soil. And all the knowledge being taught at the university supported the scientific validity of the group assumption. So, just as Machiavelli anticipated, the academic establishment was incredulous to ideas with which they were not long familiar. The idea was literally thought crazy when first shared within the scientific community. Willerslev's breakthrough scientific discovery was not met with curiosity or humility, but instead hubris and ridicule.

The logical challenge to Willerslev's new innovative idea was that of natural DNA contamination. All the natural DNA that entered the environment from animals and plants was all

jumbled up together as well as being fragmented/corrupted over time. And the longer the time horizon the worse the state of the natural DNA. This made the recovery of ancient DNA a veritable mission impossible. This is why his supervisor, and his peers laughed at the idea of recovering ancient natural DNA from soil.

So, Willerslev resolved, just as Hannibal Barca did just before crossing the Alps in the Second Punic War, to either find a way or make one. In that moment, Willerslev may have been physically operating inside the university's campus, but he was socially and scientifically operating outside the academic community. He even resorted to extreme measures unapproved by his academic department to prepare an uncontaminated lab environment for his research. In this act he was like a man sailing to the new world without a royal charter legitimizing his exploratory expedition.

The first test of his new theory was to analyze the natural DNA of fungi trapped in the ice of Greenland for over two thousand years without contamination. Once that proved successful, then the big step was to test for environmental ancient natural DNA successfully for the first time in history. The feces of the large mammals preserved in Siberian permafrost presented the chance to prove his idea could work. The hope that the small fragments of ancient natural DNA could be reassembled to identify enough to match with the natural DNA sequences of all known natural species in the world.

It worked even better than he thought possible. And it was an extraordinary success beyond Willerslev's wildest dreams. He was able to match dozens ancient natural species DNA sequences, including extinct natural species, to those stored in the global database – Bang! Bang! Bang! It was a global and historical breakthrough in evolutionary science. The discovery of a student then caused the emergence of a new field of evolutionary science – that of ancient environmental DNA.

Willerslev did so just like Alexander the Great. He reframed the problem of a ton of contaminated natural DNA present in the environment as an opportunity rather than a problem. This then renders the original constraint of a scarcity of ancient natural DNA irrelevant. This is exactly like how Alexander at the Siege of Tyre made an island not an island anymore. Willerslev proved there really was no scientific constraint to utilizing ancient environmental natural DNA, but only a social constraint of the academic community to imagine it could be possible. This is the exact type of scientific paradigm shift Thomas Kuhn envisioned in his text, *The Structure of Scientific Revolutions*.

4.2: Challenges of Recovering Ancient Artificial DNA from Texts

The ancient philosophers had previously discovered the two processes of evolution – natural and artificial. However, this artificial DNA produced primarily by human creative imagination had been lost to history. The ancient texts that survived until the dawn of the Scientific Revolution were all severely degraded (i.e., accidentally mistranslated, intentionally mistranslated, misinterpreted, missing proper context, etc.). And the perspectives necessary to

properly unconceal the evolutionary patterns in the underlying conceptual patterns of the original texts were lost to history during the Dark Ages.

This fragmented ancient artificial DNA was passed down to us in philosophical texts such as the *Nichomachean Ethics*, *The Art of War*, *The Republic*, etc. However, most, if not all, of these ancient texts are too degraded (i.e., mistranslated, improperly framed, lost point of view, etc.) and fragmented to accurately discern the underlying conceptual pattern. Therefore, academics have either been unable to interpret or have interpreted incorrectly the ancient artificial DNA expressed in those texts.

During the time in which these texts were originally written contemporaries could have been able to repair any recent degradation of the artificial DNA. However, once those humans who lived in that period pass away, there is no one left with the contextual understanding of what was meant to be expressed by those underlying conceptual patterns. And the longer the period of time that elapses since the original creation of the text, the higher the probability that the artificial DNA has degraded. This makes attempting to accurately translate or interpret these ancients' text and their underlying conceptual patterns so difficult – mission impossible. The academic community may hold educated group assumptions of what the ancient philosophers knew or didn't know, but technically they could never assert their position as fact. This is due to the very destroyed and degraded nature of the historical record and its texts (Wood 2023).

Academics have long believed that the only way to accurately understand these ancient texts is through the lens of the knowledge generated using those exact same ancient texts. And that the interpretations of those texts can only be done by highly credentialed academics with expert training in that very knowledge. This has been, and still is, the academic community's group assumption regarding this subject. This does not, however, amount to a logically proven scientific fact (Wood 2025b).

Then I accidentally stumbled into this academia's circular logic system regarding itself and its accumulated knowledge. I was conducting an intellectual property research effort to gain competitive advantage in business competition. The intent of my effort was practically no different than Willerslev's. I too sought to remove a constraint on my professional expansion in another competitive field – business.

This led me to studying Thomas Siebel's book, *Digital Transformation* (Siebel 2019). In this book Siebel compared extreme digital disruption as an analog for natural punctuated equilibrium (Gould 1972). This then led me to execute an unanticipated pivot for my research into evolutionary theory. And to be very professionally thorough, I went straight to the horse's mouth of evolutionary science – Charles Darwin's text, *On the Origin of Species* (Darwin 1859). I read that book in rapid succession over fifteen times to master its underlying conceptual pattern.

My desire to succeed professionally also placed a 'demand' on my imaginative capacity just as my scientific discovery documented. My creative imagination produced a random mutation of thought regarding the object of my emotional obsession. In fact, I too was staring out into the rain at natural organisms in the forest behind my home in April 2023. I was thinking that

it was odd that the concept of artificial selection was the only artificial concept in a book of natural concepts. The artificial concept was an anomaly in Darwin's text that only existed because homo sapiens are an anomaly in earth's history (Darwin 1859).

The concept of artificial selection in Darwin's book caused me to perceive a dog. But in my case, I saw the dog in my imagination. It was the dog that didn't bark in the night in the Sherlock Holmes detective story *Silver Blaze* (Doyle 1892). Sherlock Holmes concluded that the dog not barking was an inexplicable piece of information in the existing fact pattern. This then caused another random mutation of thought in my mind – Darwin repeatedly stated that nature was infinite in variety and low on innovation. And that many facts become explicable on this theory and instead of being thought strange should have been anticipated.

So, Sherlock realized the dog not barking wasn't strange if the dog knew the person who committed the crime. And I realized that the concept of artificial selection wasn't strange when placed in the conceptual pattern of the ITIL 4 Foundation publication (PeopleCert 2019). A framework that possessed variations of all the concepts described in Darwin's text. A framework that also transformed information (i.e., artificial DNA) into services/products (i.e., artificial adaptations). The concept of artificial selection really was just a variation of the concept of natural selection. Both those concepts are really about the selection of adaptations – natural or artificial. One mechanism unintentionally selects adaptations as a function with a purpose while the other mechanism is the intentional selection of adaptations by homo sapiens with purpose to their desired conscious end. I then went on to write and publish my first book, *On the Origin of Artificial Species*, to document this breakthrough scientific discovery (Wood 2023).

However, unlike Willerslev, I am prejudicially not considered a scientist. This is despite the fact that such a distinction is purely an artificial construct of the last few centuries. And the fact that I am an acknowledged expert in the applied science of IT service management. In addition, Darwin wasn't a scientist either when he made his discovery because the term had not yet been invented. And neither was Aristotle, who is considered the father of natural biology. So, since my scientific discovery was just as revolutionary as Willerslev's, I experienced a dismissive reception to my discovery just like him. In November of 2023 I attempted to hand a copy of my first book to William Friedman, a natural evolutionary scientist at Harvard University, at an event in Georgetown Washington, DC. He was so contemptuous of the idea that he attempted to hand it right back to me. It was one of the most insulting experiences of my entire professional career. This simply happened because I was the first person known in history to ever consider the possibility Darwin got the concept of artificial selection wrong.

The reason was due to the academic group assumption, not a fact, that Darwin had made his scientific discovery correctly the first time. And all the knowledge being taught at the university supported the scientific validity of the group assumption. Indeed, the event in Georgetown was a form of cult like fawning over Darwin the man and his discovery. So, just as Machiavelli anticipated, the academic establishment was incredulous to ideas with which they were not long familiar. The idea was literally thought crazy when first shared within the scientific community. And just as with Willerslev, my breakthrough scientific discovery was not met with curiosity or humility, but instead hubris and ridicule.

The logical challenge to my new innovative idea was that of artificial DNA contamination. All the artificial DNA that was passed on in ancient texts was all fragmented/corrupted over time. The longer the time horizon the worse the state of the artificial DNA. This made the recovery of ancient DNA a veritable mission impossible. And since they were the academic insiders of the establishment and I, in their irrational opinion, the uncredentialed outsider, then their group assumption was always going to be selected over my new theory. This is despite the fact that my discovery literally matched the self-evident observable patterns of human activity on earth. And met the logical criteria of Occam's Razor.

So, I resolved, just like Hannibal Barca and Willerslev, to either find a way or make one. In that moment, I may have been physically operating outside the university's campus, but I was socially and scientifically operating inside the academic community. It was if a Native American traveled east across the Atlantic as part of an exploratory expedition to discover geography in Europe missed by the Europeans themselves. And the academics viewed me and my ideas with just as much prejudice as the Europeans would have viewed the Native Americans upon their arrival in Europe.

The first test of new theory was to analyze the artificial DNA embedded in ancient Greek philosophical texts for over two thousand years. I leveraged the abstracted conceptual pattern of Darwin's text as the cipher by which to decode, not translate, the underlying conceptual patterns in those ancient texts. This was an exact match confirming this is partially how Darwin worked out the conceptual pattern in the first place (Wood 2023). In fact, there was a specific passage in Aristotle's text, *Physics*, that roughly described and contrasted the two processes of evolution – natural & artificial. And the ancient Greek myths of Prometheus and Eros & Psyche also fit that exact same conceptual pattern. It was clear the ancient Greeks were well aware of the existence of the two processes of evolution enacted at the individual level and how they practically functioned.

It was an extraordinary success beyond my wildest dreams. I was able to match dozens of ancient artificial species of conceptual DNA sequences, including extinct artificial species of ideas, to those expressed in texts describing the evolutionary patterns of activity of the natural species homo sapiens – Bang! Bang! Bang! It was a global and historical breakthrough in evolutionary science. The discovery of a non-academic had initiated the emergence of a new field of evolutionary science – artificial evolution by means of artificial selection.

I did so by leveraging my creative imagination just like Alexander the Great and Willerslev. I reframed the problem of a ton of contaminated artificial DNA present in ancient texts as an opportunity rather than a problem (Burke 2004). I did this by leveraging the abstracted conceptual pattern of Darwin's text as my cipher to decode the conceptual patterns in those texts (Darwin 1859). This then rendered the original constraint sufficient accurately translated ancient artificial DNA irrelevant. This is exactly like how Alexander at the Siege of Tyre made an island not an island anymore (Burke 2004). Willerslev and I proved there really was no scientific constraint to achieving our respective results, but only a social constraint of the academic community to imagine it could be possible. My discovery is the exact type of scientific

paradigm shift Thomas Kuhn envisioned in his text, *The Structure of Scientific Revolutions* (Kuhn 1962).

Section 5: Searching for Ancient DNA – Natural & Artificial

The hunt for ancient natural and artificial are just variations of the same activity. Therefore, it is logical that both activities would leverage variations of the same techniques to make their discoveries. The reason is because both are attempting to achieve a similar result so the activities will possess similar evolutionary value streams. These two variations of the same value stream would then lead to two variations of similar adaptations – just as happens in natural evolution (Wood 2025b). And this is exactly what occurred in practical reality just as Darwin would have anticipated (Darwin 1859)

5.1: Searching for Ancient Natural DNA (i.e., Animal/Plant) in Greenland

Then immediately following the solving of one problem, Willerslev then targeted removing the constraint of another problem – time. Now that the scientists have an overabundance of natural DNA, the question then became how long could the natural DNA be preserved in the environment? How far back in time could they go to reassemble the fragmented natural DNA sequences left behind by dead natural organisms? Were the limits scientists thought time was placed on the recovery of ancient natural DNA accurate? Or could they push through these preconceived notions of the time limitations placed on research just like contaminated natural DNA? Preconceived notions that thought going back millions of years was impossible. Could they go back before the Ice Age to recover the ancient natural DNA of extinct Pliocene natural species?

Willerslev was now a professor, not a student. His intuition pointed him to a very dry and cold region of Greenland that was an artic desert. So, he believed it was the right place to search for ancient natural DNA preserved over time. The earth you walk over is dirt that existed before the Ice Age. Logically, it had to be the best place for ancient natural DNA to be preserved on earth. Willerslev simply dug into this ancient earth to obtain his soil sample. A soil sample that might enable scientists to reassemble natural DNA fragments of natural organisms that existed more than one million years ago. He called them his “crazy samples”.

However, this time the constraint was not so easily removed. The natural DNA sequences in the samples from Greenland were severely degraded. The fragmented sections of natural DNA were too old and too short. The scientific technology of that time did not allow for the successful reading of the natural DNA sequences. The researchers needed sufficiently long enough natural DNA sequence fragments they called “bar codes” to identify which natural organism it came from. These bar codes were found in specific parts of the natural DNA sequence for each natural organism. Think of it like the different bar codes as the grocery store for each food item. So, successive waves of students attempted as technology and methods improved, but to no avail – the effort proved unsuccessful for over fifteen years.

This led to the professional failure of the students that attempted to reassemble the "cursed samples" Willerslev collected in Greenland. These students' failures forced them to change careers since the academic tenure of a professor was not attainable. This is exactly as I document in my fourth book, *The Last of the Greco-Romans*. Most students do not take risks to innovate too far from the knowledge of their academic supervisors. This is since competition for tenured academic positions is fierce and risk taking is punished if unsuccessful. This stands in stark contrast to the entrepreneurial risk-taking of Willerslev himself that led to the initial breakthrough scientific discovery.

Then another student, Mikkel Winthel Pederson, took up the gauntlet to try once again to reassemble the soil sample's fragmented ancient natural DNA sequences. He was on what Sun Tzu would call "death ground" professionally with this being his last chance to make a mark in his academic career as a PhD student. This need to succeed fueled his creative imagination just like Willerslev's desire did during his initial discovery (Wood 2025a).

The technology has been enhanced since previous failures. It no longer requires a natural DNA sequence fragment to work with. This allowed for new possibilities of methods to tackle the problem. Pederson identified an existing technique, natural DNA shotgun sequencing, that had never been used on ancient natural DNA samples from dirt. This allowed for the much smaller Greenland ancient natural DNA fragments to be reassembled successfully. The reason is that the shotgun approach targeted the entire natural DNA sequence, not just the precise section researchers were previously focused on. They then matched every piece of natural DNA sequence against all available natural DNA sequences in their databases. This is an example of one best practice being leveraged across fields to achieve a similar result.

Willerslev described this as like shredding the book *War And Peace* into tiny sentence fragments. And then searching in millions of books in the U.S. Library of Congress to match the exact tiny sentence fragments to reconstruct the entire novel again. The technique combined with the newly available computing power led to another extraordinary scientific breakthrough. Willerslev described this event as being like "magic" – Bang! Bang! Bang! The ancient natural DNA of an entire forest ecosystem of natural organisms was discovered.

5.2: Searching for Ancient Artificial DNA (i.e., conceptual patterns) in Texts

Then immediately following solving one problem, I then targeted removing the constraint of another problem – time. The ancient Greek texts were foundational to western thought so it was likely their conceptual patterns would be present throughout Western texts. However, much of those ancient texts were destroyed or contaminated due to mistranslation and/or misinterpretation. So, how far back could I go in time to successfully evolutionarily reframe an entire text of one of the greatest philosophers in history? Did the Dark Ages destroy all the artificial DNA of evolutionary concepts in those texts? Or would the conceptual patterns still be present roughly expressed in the texts?

My intuition pointed me to a philosophic text that was produced at the start of the scientific revolution – *The Prince* by Niccolo Machiavelli (Machiavelli 1532). I had either read or listened to that text over a hundred times in my lifetime. So, I knew Machiavelli had broken with the artificial DNA produced by the Christian church during the Dark Age and Middle Ages. And he also reframed Aristotle's concepts of virtues and vices while also critiquing Plato's Republic in the process.

This made Machiavelli's text an intersection of ancient classical concepts and modern scientific revolution concepts produced by the Italian Renaissance. In addition, Machiavelli simply described the repetitive patterns of homo sapiens natural evolutionary competition at the intersection of society and warfare. This made Machiavelli's text, *The Prince*, the ideal text for the first attempt to validate what academics would likely assess as my "crazy" scientific assumption.

However, this first attempt would not be so easy. If the conceptual patterns of Darwin's concepts were to be found in Machiavelli's text, then they would be only partially and roughly described. This is because Machiavelli had no knowledge of evolutionary science. Any evolutionary concept embedded in his text would be there without his own conscious knowledge. So, this would make them difficult to perceive as they would not be precisely defined as in Darwin's text. But I did have the "bar codes" of Darwin's evolutionary concepts with which to match the conceptual pattern of Machiavelli's text.

The technique I used to reframe Machiavelli's text was literally a variation of the shotgun sequencing technique leveraged by Mikkel and Willerslev. I assumed any evolutionary concepts in the text would be present like they had been "shotgunned" into the text haphazardly. But if my assumption was correct, then I would be able to evolutionarily reframe the concepts in each chapter to reassemble Darwin's conceptual pattern expressed out of order. And I had to assume that not every concept would be completely expressed in a single passage, paragraph, or chapter. So, I would have to use my imagination to resurrect Machiavelli's worldview to add back in the missing meaning to the roughly and partially expressed concepts.

The best practice I leveraged was also an interdisciplinary best practice breakthrough. I adapted the technique used in the movie *The Imitation Game* by the father of artificial intelligence, Alan Turing. He used his understanding of the general pattern of how weather reports were structured to provide the initial starting point to decrypt messages of the German Reich. I knew the conceptual pattern of Charles Darwin text and used it as my cipher to decrypt and decode Machiavelli's underlying conceptual pattern. This is an example of one best practice being leveraged across fields to achieve a similar result.

I was able to reassemble most of Darwin's text within Machiavelli's text successfully. So, these techniques combined with the powerful adaptation of imagination led to another extraordinary scientific breakthrough. It worked like "magic" – Bang! Bang! Bang! In fact, since it was my first attempt I missed some evolutionary conceptual patterns that were present. I only discovered this later as I evolutionarily reframed additional best practice texts.

The ancient artificial DNA of evolutionary concepts embedded within a single historical philosophic text was discovered. It turned out that the concepts expressed in Machiavelli's text, *The Prince*, were universally effective for use in homo sapiens competition specifically because they were roughly described evolutionary concepts (Wood 2024). Darwin would have observed this wasn't strange but should have been anticipated – nature is big on variety and low on innovation after all.

Section 6: Confirming the Accuracy of Evolutionary DNA

Once the initial discovery was made, both Willerslev and Wood needed to confirm the accuracy of their respective discoveries. Willerslev needed to confirm the accuracy of the date of the ancient natural DNA fragments he had reassembled. And Wood needed to confirm the accuracy of his evolutionary reframing of Machiavelli's conceptual pattern. As Willerslev stated in the documentary – "extraordinary claims require extraordinary evidence."

6.1: Accurately Dating the Ancient Natural DNA

Willerslev and his team now had to confirm the accurate dating of the natural DNA sequences for different natural organisms they had matched in their database. This included using three different independent methods to validate their scientific discovery. This proved that the natural DNA sequences they identified were at least two and a half million years old. This is the scientific unconcealment of "The Lost World" of pre-Ice Age Greenland. This shattered the previous achievement of up to one million years old. The scientific community was stunned by this revelation. In addition, the existence of Mastodon ancient natural DNA was a new and unexpected discovery so far north.

6.2: Validating the Accuracy of the Unconcealed Artificial DNA

To confirm the accuracy of my evolutionary reframing of *The Prince* I had to replicate my discovery again with two more texts. And the texts had to be two texts that were before the Dark Ages and after the Italian Renaissance. They also had to be from two different time periods and two different cultures. This would ensure if I was able to do the same thing on two very different texts it could not be considered a coincidence.

I selected the *ITIL 4 Foundation* text published by PeopleCert first. This was a text produced in London, Great Britain at the end of the 20th century. The reason is that I, as an ITIL Master, had already perceived most of Darwin's conceptual pattern roughly expressed in that text. It was an exact match to Darwin's conceptual pattern because both were effectively doing the same thing – transforming information (i.e., genotype vs service design) into adaptations (i.e., homo sapiens vs software system). And then evolving those sets of adaptations under competitive/environmental pressure over time. I presented this information to the publisher of

ITIL 4, PeopleCert, and they have already moved forward with evolving the ITIL Framework to become a universal framework for use across all human activity.

The third text I selected was from another field where I am an acknowledged expert in the applied science of military science. I selected Sun Tzu's *The Art of War* as it is a foundational text for military science. And because it was produced over two thousand years ago in ancient China. This is placed the production of this text thousands of years and thousands of miles away from where/when ITIL 4 was produced by PeopleCert. Again, it was an exact match to Darwin's conceptual pattern. In fact, just like Machiavelli and ITIL, a core concept in Sun Tzu's text was evolutionary value streaming (Machiavelli 1532, PeopleCert 2019). In addition, Sun Tzu literally advised commanders to leverage the attack pattern of predators for military best practice. Military best practices in which I was already intimately familiar and understood were generally the attack pattern of a predator.

However, I also discovered things unexpectedly. The first was the art of scientific discovery. This is the pattern of artistic discovery both Willerslev and I leveraged to make our respective discoveries. It is Sun Tzu's framework of integrating artistry and science to maximize the use of human imagination in any field – including scientific inquiry. The second was that I had conceptually subsumed the entire field of cultural evolutionary science. I then documented this formally in my fourth book, *The Last of the Greco-Romans*. That book ends the Scientific Revolution and initiates the Dawn of the Age of Light envisioned by Plato. In this future scientific inquiry is conducted leveraging The Unified Framework of Evolution and the imaginative process enacted by Willerslev and myself. This will eventually digitally disrupt the entire scientific process and the university system with it.

Section 7: How Did DNA Survive So Long?

In order for ancient DNA, natural or artificial, to survive it must be bound to some other entity. Otherwise the information will rapidly degrade to the point where it disappears from the evolutionary record of the earth. Both natural DNA and artificial DNA have found an entity to bind themselves to and therefore enabled the information they possess to survive across geological time on earth.

7.1: How Did Natural DNA Survive So Long?

Then immediately following the solving of one problem, then Willerslev then targeted removing the constraint of another problem – how does such ancient natural DNA survive so long? The answer was that minerals in the earth helped preserve the natural DNA. The natural DNA fragments and the minerals are both electrically charged. This causes the natural DNA to bind itself to the minerals – especially certain types of quartz and clay. This then slows the process of natural DNA degradation. This is why the ancient natural DNA from before the Ice Age was preserved.

7.2: How Did Artificial DNA Survive So Long?

My discovery then caused me to ask another question: how did no one notice this before? The answer was that scientists didn't perceive natural evolution for what it really is – a best practice framework that produces unintentionally best practice adaptations. So, the greatest philosophical minds in history were those minds able to discern the evolutionary concepts for use in human activity. For these evolutionary concepts were the ultimate set of best practices produced by billions of years of fierce competition. If nature could have improved on these best practices nature would have already.

This meant that now no matter how degraded the best practice texts of our ancient ancestors had become they could be decoded. If we just understood that the underlying conceptual pattern being expressed were evolutionary concepts from Dawin's text. And it was the value of these best practices that had caused many people throughout history to maintain and restore them for us to evolutionarily reframe. It was the evolutionary concepts' usefulness to humanity that led to it surviving for so long – we binded ourselves to these best practices. And this prevented it from degrading completely to the point where it became extinct in the historical record. This is just as the natural DNA and quartz were binded which slowed the degradation of the DNA fragments over time.

Section 8: What was Earth Like Before the Last Age?

The hunt for ancient DNA, natural and artificial, also caused a variation of the same result. See the table below that frame the patterns that are just variations of each other:

Natural DNA Age	Artificial DNA Age
Holocene	The Scientific Revolution
The Ice Ages	The Dark Ages
Pliocene	Ancient Classical Period

Both Willerslev and Wood were able to go back further in time to recover information than scientists thought practically possible. And they were able to do so using similar techniques during the process of their scientific inquiry.

8.1: What Was Earth Like Before the Ice Age?

Before this recovery of ancient natural DNA in Greenland, only sparse fossils excavated gave a small glimpse into the pre-Ice Age world. Now scientists can utilize this information to reimagine the patterns of the pre-Ice Age natural ecosystems. The existence of these many natural organisms in the natural ecosystem, confirmed by the presence of their natural DNA, now makes this possible.

8.2: What Was Earth Like Before the Dark Ages?

The society in Western Europe before the Dark Ages was a Greco-Roman one that had evolved to fuse the artificial genomes of Latin, Greek, Pagan, and Christian concepts as a perceptive framework for perceiving reality. This perceptive framework, just like the DNA from before the Ice Age, was lost to the historical record with the fall of the Western Roman Empire. Now, with the subsuming and correction of cultural evolution Wood resurrected the ancient Greco-Roman worldview that understood the existence of the two patterns of evolution – natural and artificial.

Section 9: Lessons Learned from Before the Last Age

The ability to gain an understanding of the patterns of the ecosystems, natural and artificial, unconcealed by Willerslev and myself is a breakthrough moment in history. Now we can use both to unconceal even more ancient information whether expressed in evolutionary DNA, natural or artificial, or not. For these evolutionary patterns are timeless and once understood allow for further logical inferences to be made. This can be done using these evolutionary patterns as the starting point of reference for deductive reasoning chains.

9.1: Lessons Learned from the Pliocene

The climate of the Pliocene, the age before the last Ice Age, was much like the warming climate of earth today. The natural DNA sequences of natural organisms that once existed in a warmer age can be leveraged to our advantage. A natural gene of a poplar tree discovered in the Greenland sample has been used to do just that. The gene was put into a modern barley plant to give it a chance to survive in the Northern Hemisphere as the climate changes. This is using the knowledge of ancient natural DNA to help us survive now and into the future. It is the initiation of an industrial revolution in ancient natural DNA sequencing. A revolution that might one day ensure our natural species very survival.

9.2: Lessons Learned from the Ancients

The ancient societies of Rome, Greece, and China were all based on naturalist faiths. And this caused them to worship, discover, and imitate the divine patterns in the natural world for practice advantage. These societies fundamentally understood these evolutionary conceptual patterns and documented them in their best practice texts. This is why can eternally gain value from these texts no matter how degraded the content by which it is expressed. So, as long as the underlying conceptual pattern is preserved, then we continue to gain value by applying them. In fact, the entire Roman society was organized as a group level framework for enacting both processes of evolution at the group level. This now makes possible the process of reversing the

degradation of knowledge caused by the Dark Ages. And rediscovering the powerful wisdom of our ancestors. Philosophers who knew things we had yet to understand today despite all the gains of the Scientific Revolution.

I believe that this scientific discovery is the key to evolutionary reframing the creation of new technologies like artificial intelligence systems, mirror life, artificial viruses etc. Scientists are uncertain about the implications and risks of these new scientific possibilities. And this has made the global public uneasy with how fast those new human creations, especially AI, are evolving. The Unified Framework of Evolution – Natural & Artificial is the exact philosophical framework that the CEO Google Deepmind, Demis Hassabis is anticipating will emerge to help humanity understand the possible opportunities and potential threats posed by AI. So, just like Willerslev, I believe that the unconcealment of the information of our societal past can be the key to ensuring the survival of our natural species in the future.

Section 10: Conclusion

"We can, in short, see why nature is prodigal in variety, though niggard in innovation. But why this should be a law of nature if each species has been independently created no man can explain...Many other facts are, as it seem to me, explicable on this theory…these facts cease to be strange, or might even have been anticipated."

Charles Darwin, *On the Origin of Species*

Professor Willerslev and I are two variations of the same pattern of scientific explorers using their imaginations to achieve the similar result of recovering lost ancient DNA natural and artificial. And we are doing so in two different patterns of evolution – natural & artificial. This represents a historic opportunity to not just integrate our research efforts but also begin the process of integrating the two different fields of evolutionary science into **The Unified Framework of Evolution – Natural & Artificial**. This will subsume the field of cultural evolution into a single framework with two processes of evolution that are two variations of Darwin's simple conceptual pattern as expressed in *On the Origin of Species* (Darwin 1859).

The character of us both as people is also incredibly important. We both possess the traits of intense curiosity, humility, and a powerful imagination necessary to exploit this historic opportunity. For my scientific discovery has unconcealed that a lot of scientific discovery involves unlearning what you have learned, just as Willerslev did that rainy day, as the starting point for breakthrough scientific discovery – completing mission impossible. So, it is essential that the two leaders for the integration of these two distinct evolutionary fields possess these qualities to ensure their success. This is because as Plato once asserted – there are no teachers and no students of imagination just as Willerslev's and my discoveries practically demonstrate.

So, this paper is being written to document the two variations of the same pattern of scientific inquiry being conducted in the two different fields of evolutionary science – natural &

artificial. And to point out that both efforts are literally working to achieve a similar result utilizing similar techniques in their respective evolutionary fields. For this reason, I strongly believe that collaboration between these two research efforts can be enhanced with cross-interdisciplinary integration. And this will then predictably lead to accelerated discovery for both efforts in the future.

And this can be achieved if this integrated effort is led by two scientists who operate not like scientists, but like our hunter ancestors. For that is what the minds of Willerslev and I were born to do – to hunt. This is why the title of the documentary is so logically accurate in describing how Willerslev operates. He and I weren't born to sit passively in a classroom, but to explore unknown territory creatively just as our ancient ancestors did every time they went hunting in a new valley. It is an elegant symmetry that to unconceal ancient DNA, natural or artificial, you need the mind of an ancient hunter. Hunters who perceive reality through the wise prism that Alexander the Great's mind once did:

"There is nothing impossible to him who will try."

Alexander the Great

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