Being Human in an Unprecedented Period of Rapid Change

The White Rabbit put on his spectacles. **"Where shall I begin, please your Majesty?"** he asked.
"Begin at the beginning," the King said gravely, **"and go on till you come to the end: then stop."**

Welcome back to *BIS 201 Intellectual Fusion!* Now that you have some introductory background perspective under your belt, let's get this show on the road! But… Where to begin?

I know! Let's begin at the beginning – which is generally a very good place to start! (If you followed the above link, you'll see a good example of how ideas can be borrowed from one context into another – a key idea associated with intellectual fusion!)

***One quick note before we get started*:** You have probably already noticed there are many hyperlinks embedded into my narratives throughout this course. Those of you who are really awesome, mastery-oriented students will explore these hyperlinks (some of which are small cul-de-sacs, while others are likely to take you down a rabbit hole of great intrigue)! By the way, if you see that I have **BOLDED** a hyperlink, that

means that I *REALLY* want you to check it out! (Hint! Hint! Meaning you might see it again somewhere – perhaps on a quiz!)
OK, so when I said we would *begin at the beginning*, I'm being a little more literal than you might have imagined. I'd like to take you on a voyage through the brief history of time, the evolution of our species, and what the future may hold for us… All within the context of this brief narrative!

In doing so, it's my hope that you'll gain some valuable insights:

- Experience the challenge of taking yourself out of your own frame of reference in order to imagine something on a completely different scale. *(Being able to step outside of your ordinary frame(s) of reference, and understanding that it's sometimes difficult to do so is a skill associated with intellectual fusion.)*

- Make a connection between the evolution of the universe and the very beginnings of some of the foundational **disciplines** that we will draw on throughout this very unique course! *(Notice that hyperlink was **bolded**, which means that clicking on it – and exploring the content presented there – should be a priority. In this case, read the definition of academic disciplines and scroll through the various lists of disciplines. Notice how disciplines are organized, humanities, social sciences, natural sciences, etc. Click through some of those and see what you can learn about the "structure" of knowledge – and about your own disciplines of interest. We'll circle back to the landscape of academic disciplines the next module of the course.)*

- Begin to appreciate that we are living in *unprecedented times* – if the human race is around 500 years from now, the late 20th century and early 21st century will mark a turning point for out species, the likes of which we can't even imagine. *(During times of accelerating change, it's critical that we develop perspective and master the tools that will help us succeed and contribute to the betterment of society. Insights and skills associated with intellectual fusion are critical tools in that regard.)*

In a moment, you'll be taking a look at a mesmerizing little video titled *"Timelapse of the Entire Universe."*

> On a cosmic time scale, human history is as brief as the blink of an eye. By compressing all 13.8 billion years of time into a 10-minute scale, this video shows just how young we truly are, and just how ancient and vast our universe is. Starting with the big bang and culminating in the appearance of homo sapiens, this experience follows the unfolding of time at 22 million years per second, adhering closely to current scientific understanding.

But first, some context: This video represents "time" in the broadest possible sense – from the beginning of time (as we know it) all the way up to "when" we are right now. We humans show up only in the last fractions of a second on this scale of time. Long before that, we witness the origins of the "oldest" disciplines that we study. About 13.5 billion years ago, with the Big Bang, matter and energy appear, thus marking the beginning of **physics**. Atoms and molecules appear, thus marking the beginning of **chemistry**.

Earth forms about nine billion years later (at about minute 7:00 in the video). The first living organisms appear on Earth about 700 million years after that, thus marking the beginning of the discipline of **biology** (on Earth anyway) at about minute 7:50 in the video).

The first members of the genus Homo appear in Africa about 3,979,500,000 after that. On the time scale of this video, that's the last fraction of a second. **Oh, be sure view this in "full screen" mode, so that you can take note of the countdown timer and the events that are transpiring at those various times!**

Sit comfortably, take a deep breath, and enjoy the ride…

Time Lapse of the Entire Universe:

https://www.youtube.com/watch?v=TBikbn5XJhg&feature=youtu.be

Woah! What did you think? Hopefully, your mind is now blown, and you're wondering what could possibly follow that! In a moment, we'll take a look at the history of the universe from a different point of view with another intriguing video that I hope you will enjoy.

We humans don't do very well at grasping the immensely large or the infinitesimally small, so coming at it from *multiple perspectives* helps us see the picture more clearly. *(By the way, the idea of employing multiple*

perspectives to understand an issue more clearly is also a central element in intellectual fusion, as you'll discover later! Also, in the case of this next video, you'll see that the "timeline" is reversed – starting with the present day and moving back in time from there. By the way, the concept of reversals (or inversion) is one of the ideas we'll also be discussing later in the course.)

If we take the final second of the video you just watched, and expand it, the discipline of **history** really begins within a fraction of that last fraction of a second (a mere 70,000 years ago), with the beginning of the **"Cognitive Revolution"** – when our pernicious little species developed fictive language capabilities, or the ability to tell stories – and all sorts of other amazing (and sometimes horrific) things began to happen thanks to our newfound and unique cognitive abilities.

This was really the beginning of *our story,* even though Homo Sapiens had been around for quite some time (about 130,000 years before the beginning of the cognitive revolution), the story of human history really starts here.

Note: Sometimes I'll provide a note contextualizing what you will read when you click on a hyperlink, such as this one: The "**Cognitive Revolution**" hyperlink (referenced above, for example) discusses the cognitive revolution in more detail and is worth a careful read. The article also references an incredible book, on which much of my narrative here is based, Sapiens A Brief History of Humankind, by Yuval Noah Harari. If you really want to understand the nature of our species (whence we came, how we developed into the creatures we are today, and where we may be heading), this book is a "must read." This book may change your outlook on life forever – it did for me! Incidentally, the "*cognitive revolution*" we are talking about here is not to be confused with the much more recent movement in psychology toward cognitive science also coined the cognitive revolution.

Starting about 70,000 years ago, the first of three revolutions (the cognitive revolution, the agricultural revolution, and the scientific revolution) began. These revolutions could be considered seminal periods in the evolution of human thinking, and the catalyzing periods in human history that catapulted us to the top of the food chain… and into a position of dominance over every other lifeform on the planet.

It would be close to 60,000 years later that we started domesticating plants and animals and settling down into permanent settlements, thus marking the beginning of the Agricultural Revolution. Hurray! But wait, that critically important step in our evolution wasn't without its costs. (As you'll see if you click on that Agricultural Revolution hyperlink provided above!)

It wasn't until about 500 years ago that Homo Sapiens began to admit our ignorance and start systematically exploring the nature of the world in which we live, thus marking the beginning of the rise to the unprecedented power of our species – a power that would allow us to both split open an atom (with devastating results) and land a man on the moon. This, of course, was the Scientific Revolution. Again, I ask you to sit comfortably, take a deep breath, and enjoy this video.

The History and Future of Everything:

https://www.youtube.com/watch?v=2XkV6IpV2Y0&feature=youtu.be

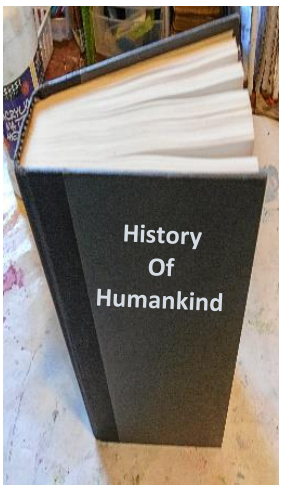
Now that you have watched both of those (very different) approaches to representing the history of time, I'm sure you noticed that the second one expanded a great deal on the timeline of *human* history.

Now check out a post by blogger Tim Urban, which basically covers the same territory of the video you just watched, but with some interesting additions.

https://waitbutwhy.com/2013/08/putting-time-in-perspective.html

Pretty mind blowing, huh? You might now be saying to yourself, *"This is some really cool stuff, Dave, but what does it have to do with this course?"*

That's a really good question! My intent here is to get you thinking about the radical acceleration of change that's happening in our lifetimes, compared with other periods of human history – you'll understand why in a bit.



Toward that end, take a listen to a piece of the Tim Ferriss Show podcast, which features Tim Urban again, talking about this acceleration of change in the times that we are living. Part of what you will hear in this discussion is Tim Urban talking about the idea that if an alien were reading a *700-page book* that encompassed the entire history of humans on Earth, how that content may flow. It's brilliant and enlightening, as are his insights and opinions about the near future. *(There's a reason why Elon Musk sought Tim Urban out to help chronicle his own story and the story of Tesla and Space-X.)*

Click **here** for the episode, and you can fast forward to the 42:37 minute mark. Listen from that point through to the 48:00 minute mark (unless, of course, you are so riveted by the content that you just have to keep listening)!

I have one additional (optional) Tim Urban resource for you if you find this topic as fascinating as I do, and especially if you're interested in the future of AI. It's a longer talk that Tim did for a *Finovate Conference* in 2017. It's about 40 minutes in length, and it's really cool!

If you are so inclined, you can catch it here:

https://www.youtube.com/watch?v=FvbnCM39PUw

So, let me ask you… Did I accomplish my goal? Do you have a deeper appreciation for the radical acceleration of change that's happening in the times in which we live? I hope so!

Now, why is this important? Quite simply: *If we hope to evolve to be better, more integrative learners and thinkers over the course of this semester, I believe it's important to know where we're coming from, what we have to work with, and where the future may take us.* Radical times call for radical approaches to deal with the crazy shit that's coming at us in

the future. Within the domain of intellectual fusion (and this course) you'll find those radical perspectives and ideas, and begin to forge a brave new world with them. But we are not without our handicaps…

As Homo Sapiens living in the current time, it's really the hunter-gatherer environment that has formed our basic nature. If you were to get into a time machine, go back 100,000 years, pluck a newborn baby from a hunter-gatherer tribe, and bring that baby back to our current time to grow up into an adult – that person would be indistinguishable from anyone else, physically and intellectually. In fact, humans have spent 99% of our evolutionary history in primitive hunter-gatherer environments! Our brains are optimized for that environment, not for the world in which we find ourselves now. That realization is important because, as modern day humans with the brains of hunter-gatherers in this unprecedented period of technological change, it behooves us to understand the nature of our cognitive weaknesses so that we might better understand how to compensate for these biases as we consider the big questions associated with intellectual fusion.

> *How can you most effectively harness the cognitive tools you inherited from your hunter-gatherer ancestors in order to think more effectively and lead a richer, more fulfilling life?*
>
> *What approaches, tools, and techniques should you learn deeply if you hope to make significant contributions to solving some of the world's most complex and pressing problems?*
>
> *How might you most effectively develop both significant discipline-specific expertise as well as the domain-general skills necessary to think rationally, sidestep misjudgments, and collaborate effectively across disciplines? How do you become a world-class "**T-Shaped**" individual?*
>
> *How do you most effectively bring together expertise from across different domains to create a "whole that is truly greater than the sum of the individual parts?"*

These are some of the big questions and broad ideas we will explore as we move through this course. While a single semester is enough to introduce you to a good cross-section of the literature that addresses different aspects

of these big questions, it will ultimately be up to you to take the tools you will be given here, learn how to use them, and then go about building the future you desire.

Best wishes for massive success!