

Ella R. Hough

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Office of the President
300 Day Hall
Cornell University
Ithaca, NY 14853

Dear President Pollack,

Thank you very much for the opportunity to attend Cornell; words don't do justice to the gratitude I wish to express.

My name is Ella Hough, and I am a rising junior in A&S, studying Cognitive Science, Information Science, and Business, who transferred to Cornell last year from NYU Shanghai.

Most relevant for this letter, I am a Bitcoiner.

To this day, I find myself reflecting on the advice you shared in your Fall '22 Convocation address.

1. Engage across difference
2. Develop an appreciation of the importance of free speech
3. Responsible participation in civil discourse

Your encouragement to “speak out for democracy, for equity, and for truth,” to explore and engage with challenges, and to be an active player in the world is why I am reaching out to you. I thank you in advance for your time in reading this (lengthy) letter, which I do apologize for.

I'd be most grateful to meet on campus, via Zoom, or correspond via email to discuss Bitcoin and Cornell's recognition and adoption.

With your background in Computer Science, Information Science, and Linguistics, and how I've witnessed the thought leadership with which you guide the University, **you** are the right leader to recognize and understand Bitcoin's importance.

You understand Cornell was founded to be a place where “truth shall be sought for truth's sake.” You “embrace both the joy of creative discovery and a mission of knowledge with a public purpose.”

As an aside, I'd like to acknowledge that I am not an expert on Bitcoin, I'm hoping to be, but I'm not yet. However, I am connected to most every expert in the Bitcoin community. This summer, I spoke at [Bitcoin Prague](#), the largest Bitcoin conference in Europe. Additionally, I am a contributing author to [Bitcoin Magazine](#) and the Project Lead at [Generation Bitcoin](#). Also, I recognize I'm jumping past quite a few rungs on the ladder, and I apologize for this action.

I care deeply about Cornell, and I wish for us to not only be on the right side of change but lead the change.

Bitcoin is the work I cannot not do.

To begin, I'll share that the reason Bitcoin has captured my time and energy is the wealth of knowledge it inspires, not the monetary wealth it will bring. NGU or “Number Go Up” is a common draw for people to bitcoin. For me, it's FGU and KGU, “Freedom Go Up” and “Knowledge Go Up.”



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Bitcoin encompasses every discipline, and as one falls further down its rabbit hole, they learn about topics they never knew about or knew to question. When I think about Bitcoin, I feel my brain working and growing; I am filled with purpose.

Initially, I came to Cornell as it was the only place where I could pursue Chinese & CS, then on a mission to study if we could embed ethics in computer code as languages such as Chinese are embedded with teachings of ethical actions (inspired by my year abroad in Beijing).

Abstracting, I see that **Cornell aligned and aligns with my values to connect (uncommon) topics across disciplines, to think differently in order to “do the greatest good.”**

Helpful Definitions

Blockchain: is a digital, decentralized, immutable, ordered, append-only, verifiable ledger (more correctly, an ordered data structure because the data is not organized in a table like a ledger is) of information. Often, we see this information being stored as financial information.

At its core, blockchain was created to solve the issue of trust. The solution was presented through the Bitcoin white paper.

Bitcoin is the first blockchain.

Bitcoin (the network):

- Is not crypto
- Allows people to act with a long-term mindset, with empathy, and with inclusion because it is coded for moral soundness
- Is the true invention, not blockchain

bitcoin (the currency):

- Is the first way for humanity to store energy for generations, it's property every person can own, and it's money the whole world can use
- Is economic energy
- Is the best form of money ever created. Money is used to communicate value and to facilitate the exchange of preferences worldwide. Perfect money is one that holds its value and cannot be corrupted by an individual or state.

Today, money is how we coordinate economic activity, not how we store energy for generations, creating generational wealth. Bitcoin is how we do both. Bitcoin gets to the heart of the problem with our money and why humanity is ripe to embrace bitcoin. Economics and, by extension, money “is the foundation layer that gives rise to everything else,” and “abundance in money creates scarcity everywhere else, and scarcity in money creates abundance” ([Booth 1](#), [Booth 2](#)).

While there are many reasons, I'd like to share **3 reasons** which I think might resonate most deeply as to why Cornell **would benefit** from taking a positive stance on Bitcoin.

1) Bitcoin is in Cornell's history:

A.D. White:

The power of discovering truth and the power of imparting it are almost invariably found together.” - A.D. White



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In his book, *Fiat Money Inflation in France: How It Came, What It Brought, and How It Ended*, White writes:

- “I recall, as if it were yesterday, my feeling of regret at being obliged to bestow so much care and labor upon a subject [Fiat Money] to all appearance so utterly devoid of practical value. I am sure that it never occurred, either to my Michigan students or to myself, that it could ever have any bearing on our own country. It certainly never entered into our minds that any such folly as that exhibited in those French documents of the eighteenth century could ever find supporters in the United States of the nineteenth.”
- “It was the opinion which all true statesmen have held, before his time and since,—in his own country, in England, in America, in every modern civilized nation” that “paper money [is]...a nursery of tyranny, corruption and delusion; a veritable debauch of authority in delirium.”
- “We shall see still more clearly the advantage of meeting a financial crisis in an honest and straightforward way, and by methods sanctioned by the world’s most costly experience, rather than by yielding to dreamers, theorists, phrase-mongers, declaimers ...schemers, speculators or to that sort of, “Reform” which is “the last refuge of a scoundrel.” **There is a lesson in all this which it behooves every thinking man to ponder.”**

A.D. White felt inflationary monetary policy was devastating and left us a call to action to think about Fiat Money, warning of the dangers of paper currency inflation in a speech at the Senate of the State of New York, and extrapolating, to think about Bitcoin.

Ezra Cornell:

Cornell made his fortune in the telegraph industry, in the transporting of messages. Furthermore, Cornell was one of the founders of The Western Union Telegraph Company (today called Western Union) and its largest stockholder. Cornell recognized the importance of transferring knowledge-based and monetary wealth and connecting people to each other.

One aspect of Bitcoin is its role as a “digital telegraph,” facilitating peer-to-peer connection of **all 8 billion** people to information, the financial system, and each other, equitably. While modern-day Western Union is failing in its ability to equitably and ethically transfer money worldwide, the Bitcoin Lightning network fixes this through companies such as Strike, whose CEO [presented](#) to the IMF on this topic.

34% of the world does not have access to the financial system. 54% of the world lives under authoritarian rule. Bitcoin fixes this. Knowledge is wealth. Bitcoin connects people worldwide to information, to wealth, to freedom. Cornell was involved in the first iteration of transferring information, of transferring wealth and knowledge; it only makes sense that the University carry on his legacy.

Bitcoin is the largest protector of democracy, equity, truth, difference, and human rights. Bitcoin is freedom. Bitcoin is a Trojan Horse for good. These are conclusions you can only reach after hours of study, after hours of work.

The Bitcoin network runs on a “Proof of Work” (PoW) protocol, as opposed to crypto, which functions on “Proof of Stake” (PoS). In the simplest form, PoW means you actually have to do the work; you have to exert the energy. I’ve been doing my PoW to understand Bitcoin since 2020.

As you would appreciate, every academic lives their life under Proof of Work. I won’t graduate from Cornell by my friends telling you they saw me in the library. No, I have to actually go to the 7th floor of Olin and work, every day.



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A.D. White & Ezra Cornell:

Bitcoin lifts up its network participants, just as Cornell and White sought to do:

“Ezra Cornell... told White, “I have about half a million dollars more than my family needs: what is the best thing I can do for the state?” to which White replied without hesitation: “the best thing you can do with it is to establish or strengthen some institution of higher learning.”

While Cornell University was initially scouted for the location of modern-day Syracuse University, Cornell had his salary robbed there and insisted it be built in Ithaca instead.

With Bitcoin, your property, wealth, and energy can be saved for generations and can never be taken from you. Cornell’s physical location was chosen with this concept in mind. **The founders of Cornell championed the ideals of Bitcoin.**

2) Bitcoin aligns with the reason for Cornell’s founding:

“Any person, any study.” Cornell has a competitive advantage given we are the hub of all knowledge, worldwide. Every other school’s resources pale in comparison to Cornell’s. Cornell is uniquely positioned to lead academia into the future.

The foundations of AI were laid at Cornell through Frank Rosenblatt ’50, Ph.D. ’56, former director of Cornell’s Cognitive Systems Research Program, yet, your alma mater, Dartmouth, is often associated with much of the credit. Professor Rosenblatt, at the U.S. Office of Naval Research, worked “on the “perceptron” – what he described as the first machine “capable of having an original idea.””

At his memorial service, Richard O’Brien, former director of Cornell’s Division of Biological Sciences, described Rosenblatt as “playing a long game.”

“He would never...pick out some small aspect of the physical universe which could be studied and could reasonably be expected to produce solutions in a year or two...Instead, he would reach out and grasp the biggest problems that he could see, and apply himself, throw himself into the study of them, without any recognition of the fact that if he made bad choices, or if he chose, as he usually did, problems which were not likely to yield a solution within 10 or 20 years, that this would redound to his disadvantage. He never worked that way.”

I care deeply about Cornell, its student body now and in the future, and its mission. I’d like to embody Dr. Rosenblatt and “reach out and grasp the biggest problems that [I can] see,” and I think every member of the student body wishes to as well; it’s why you chose us to attend this University.

3) Bitcoin will support Cornell’s Sustainability and Climate Action Plans:

Bitcoin is secured and created through a scarce resource, energy.

An analogy is gold miners expending physical energy to produce gold, with 4 notable exceptions/improvements.

1. There are only 21 million bitcoin; the supply is capped; there is no possibility to create more. Bitcoin is the only asset on Earth with a finite supply.
2. Unlike with gold, the act of mining bitcoin can be done by anyone, anywhere, no land rights or excessive equipment required.
3. Unlike with gold, the act of mining not only leads to the creation of bitcoin, but secures the network as well.
4. In Spring ‘24, bitcoin’s stock-to-flow ratio will be more than double gold’s at 124, a number higher than any previous commodity and programmatically guaranteed to increase as time progresses.



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Mainstream media criticizes Bitcoin for its energy use. They fail to understand that Bitcoin's use of energy is a feature, not a bug. The value of exerting physical energy is not a novel concept. I'll resist the tangent here and instead jump to the fact that Bitcoin mining is the only endeavor to date that can support a sustainable energy transition and address the issues of energy inequity and energy poverty. Energy equity should be a fundamental human right. Bitcoin fixes this.

Here are some quick facts...Bitcoin uses:

- 2% of the world's energy consumption; 55% of that 2% comes from renewable sources
- 56x less energy than the traditional banking system
- Less energy than US Christmas lights

Adopting Bitcoin will be critical for Cornell to achieve our Sustainability and Climate Action Plans.

When Thomas Edison patented the light bulb, he had no idea it would revolutionize so much, leading to flourishing and significant technological innovations.

43 years passed from when the lightbulb was invented to when 50% of all homes used electricity.

We are only 14 years into Bitcoin. We are so early.

When Satoshi Nakamoto created Bitcoin, he knew that Bitcoin's success was binary, and if it worked, it would revolutionize the world's use of and perception of money (and so much more). Bitcoin is modern-day electricity, electrifying and bringing light to our future.

Nobel Laureate Economist Paul Krugman in 1998 said, *"By 2005 or so, it will become clear that the Internet's impact on the economy has been no greater than the fax machine's."* This sentiment might represent most of the world's opinion on Bitcoin now, in 2023, but in 2029, in 2049, and in 2069, I think not. As you would appreciate, there is a history of underestimating the impact of technology that must be corrected.

It is essential for students now and in the future to understand Bitcoin, to think differently, to think about the future, and to think transitively to build a more inclusive, abundant, and democratic world. At Cornell, under your leadership, this task is possible and underway.

Thank you very much, President Pollack, for your time and consideration. I'd be most grateful to work with you.

Best Always,

Ella

