Jason McCoy

Biography

Jason McCoy has spent much of his life asking a deceptively simple question:

> *“How does this work?”*

For him, the question rarely ends with the first answer.

If a computer stores information as ones and zeros, what causes the one or zero? If a television receives a picture, where does the signal originate? If a document establishes a rule, who authorized the document? If someone possesses authority, what process granted it — and what gave that process its authority?

That habit of following a question beneath its first apparent answer has carried McCoy through more than four decades of work, research, technology, religion, institutional systems, and personal experience. It eventually became central to the work he does today through Pre-Failure Research Group LLC (PFRG): examining the distance between what systems say they do and what can actually be observed.

But it began long before PFRG had a name.

Learning by Taking Things Apart

McCoy’s interest in computing began around age six.

His stepfather, Richard Klein, brought home an older IBM computer acquired from Drake University in Des Moines, Iowa. McCoy does not remember the exact model, only that it was a programming computer and came with a box of floppy disks. He was essentially told to have fun with it. He did.

Using BASIC, one of the first things that fascinated him was the simple fact that he could write something, save it, turn back to it later, and find that the information was still there. That immediately produced more questions.

He became interested not only in what computers could do, but in how information was represented, stored, transmitted, compressed and compiled. ASCII fascinated him. Eventually the question went beneath even the representation of information: what physically caused a machine’s binary state to change?

Electronics received much the same treatment. McCoy remembers repeatedly dismantling a 12-inch color television down to every component he could remove and then putting it back together. He did this roughly four times without a service manual. The television continued working.

But the repeated disassembly was partly the result of looking for an answer in the wrong place. He wanted to understand how television broadcasting worked. The television itself could not give him that answer.

Around age thirteen, learning about frequency, radio waves and the ionosphere finally expanded the boundary of the problem enough for the transmission system to make sense. Almost immediately, another question appeared:

> *"What creates the radio wave?"*

That pattern — reaching an apparent bottom and then discovering another layer underneath it — would persist.

McCoy also repurposed technology rather than merely disassembling it. Around 1987, when he was approximately eight years old, he converted a remote-controlled car into a remote-controlled serving table using thick construction insulation foam available from his parents' house-building work. He cut recesses into the foam for a plate and cup so they would remain stable while moving. It was useful. His parents called him lazy. Both descriptions may have been accurate.

Rules, Authority and Questions

McCoy's questions were never limited to machines.

As a child, when confronted with a rule, he wanted to know why the rule existed and who had given the person enforcing it the authority to do so. "Because I said so" was not a particularly useful answer. An actual explanation was different. An explanation gave him something to investigate.

That distinction would eventually become important to the way he evaluates institutions. Authority, in McCoy's view, cannot be established merely because someone asserts it. A document can be authentic while the authority claimed within it remains questionable. When examining such a claim, he follows the chain backward: authenticate the documentation, identify its source, establish the authority of that source, examine the process that granted the authority, and then ask what authorized that process.

The same tendency appeared in a very different part of his childhood. Between approximately six and twelve years old, despite growing up in a family that was not particularly religious, McCoy independently attended church after church. He wanted to understand religion from as many directions as possible. At one point he wrote a sermon and considered becoming a minister.

His major rupture with religion did not occur at twelve, however. It came at seventeen. A minister told him that God did not need or want people like him. McCoy's eventual response was not simply to reject God. The encounter caused him to recognize a question he had not been asking:

> *"What is the purpose of religion?"*

That question opened others. One of the most consequential conclusions for McCoy was that he did not have to perform. If some conception of God were real, he questioned why such a being would require continual demonstrations of devotion, praise or prescribed behavior. To McCoy, a being requiring that kind of validation seemed extraordinarily vain. Removing the requirement to perform changed everything.

Religion became one of many subjects he could examine from outside its own assumptions. The process snowballed into investigation of other systems, other claims and other forms of authority. Decades later, those questions would contribute to what McCoy calls Lumnira.

Lumnira is not, in his conception, a god or a religion. Rather, he describes it as an attempt to represent more accurately the underlying reality that people have historically tried to describe through concepts such as God, divinity, Source and religion. The name and formal structure are recent. The questions behind them are not.

Forty-Plus Jobs, One Recurring Pattern

McCoy estimates that he has held more than forty jobs spanning multiple domains. The importance of that history is not simply the number of employers. Those environments provided samples.

At seventeen, McCoy applied to Bridgestone Firestone in Des Moines during a labor strike. He says he did not understand the dynamics of crossing a picket line at the time and would view that decision differently today.

During the hiring process, applicants were given a physical problem: transport a raw egg through a conveyor-based process involving a drop without breaking it. McCoy solved it within minutes. Using the foam available to him, he created a pocket that encapsulated and securely held the egg. Rather than treating the landing alone as the problem, the egg and its protective material effectively became one controlled object. Company representatives pulled him aside after the exercise, spoke with him and hired him.

McCoy was seventeen. According to his recollection, the company knew he was underage and instructed him to conceal that fact.

His experience inside the plant became considerably less positive. While working on "tuber six," McCoy became repeatedly ill. He says the company suspected drug use and was not helpful in

determining the cause. He eventually sought an outside physician, who attributed the illness to chemicals used in painting the edges of the tubes. McCoy does not want to pursue the remaining events from that period, and decades later has little interest in turning the experience into a grievance. It is one episode among many.

He later worked in manufacturing environments where engineers sought his assistance with machinery problems. At a small Iowa noodle manufacturer, two maintenance engineers were developing a system to transfer round cheese portions from a hopper onto round noodles. Familiar with the consistency of the product from production work, McCoy proposed a conveyor arrangement and synchronization approach. The engineers subsequently asked him to participate, and he spent roughly two weeks helping test and refine the machinery.

His work history has also included painting, warehousing and management, heavy-equipment training, workplace safety, emergency response and wildland firefighting. Through Mingo Job Corps in Missouri, McCoy trained as a Type 2 wildland firefighter. During one training exercise, a rapid wind change required deployment of his fire shelter. What stayed with him was not heroism but respect for how quickly physical conditions can invalidate assumptions.

He had begun painting as a child, later completed the painter's trade at Job Corps and eventually spent years in the field, including operating his own painting business. He had started his first small lawn-mowing business at seven.

Asked which of more than forty jobs changed his understanding of systems, however, McCoy rejects the premise. The jobs didn't create the understanding.

> *"They showed him the pattern."*

The Failure

Asked to name that pattern in its simplest form, McCoy uses two words: "the failure."

More specifically, he notices the point at which observed behavior stops matching documented behavior. That mismatch does not automatically prove that the documentation is wrong. Nor does it prove that the observer is right. It is the point where investigation begins.

McCoy examines the accuracy and authenticity of the documentation, its provenance, the authority behind it, and the processes through which that authority was established. New environments gave him additional opportunities to encounter those discrepancies. Each observation allowed him to refine the questions.

That distinction is important to understanding his later technical work. McCoy did not arrive one day at the idea that documented constraints should be compared against observed behavior. Long

before he had software intended to perform such analysis, he had been doing a human version of that comparison across unrelated environments.

That line of inquiry eventually became central to OmniSniffer, a PFRG project concerned with detecting divergence between stated constraints and observed behavior while preserving evidence of how that determination was reached. The software is newer than the question.

Receipts

There is an unusual difficulty in explaining how McCoy reaches conclusions. He often cannot show someone the internal work. He can show them the receipt.

Patterns, relationships, inconsistencies and prior observations can apparently converge for him without producing a clean verbal transcript of every intermediate step. The result may arrive before he can explain the path that produced it. To another person, that can look like jumping from A directly to Z. For McCoy, B through Y may have happened, but not in a form he can easily replay in language. That has caused misunderstanding throughout his life.

It has also contributed to his insistence on evidence. When sound evidence establishes something, McCoy accepts it even when he dislikes the answer. A conclusion remains his current understanding until better evidence replaces it. Contradictory evidence is not something he believes should simply disappear; neither is evidence that later proves inadequate. Both can matter when reconstructing how an understanding changed.

His method when blocked follows a similar pattern. He changes the question without abandoning the target. If one route fails, he approaches from another direction. Failure is therefore not merely an undesirable outcome. It contains information. That principle is now captured in a creed associated with his work:

> *Pattern finds the question. Failure tests the answer. Evidence decides what survives. Truth remembers the path.*

Being Understood

Not every important influence in McCoy’s life came from a system, machine or document. A special-education teacher who became a family friend was among the relatively few people he felt came close to understanding him. McCoy struggled significantly with conventional spelling and describes himself as a phonetic speller. He independently sought help from special-education teachers to understand techniques they used with their students.

Years later, that teacher told him that he did not have to live according to the labels other people had placed on him. She admitted that she did not completely understand him either. He was more

complicated than that. McCoy still struggles with being different. His eventual answer is considerably shorter:

> *“I am me.”*

There have also been a handful of people capable of challenging his conclusions with reasoning strong enough to make him reconsider them. He remembers those relationships fondly — not because those people agreed with him, but because they could engage him at the level of the question.

And then there was Sue.

Sue

Sue, McCoy’s late wife, was his best friend. Their relationship occupied roughly twelve years of his life. When she struggled to understand how to communicate with him around his mental-health difficulties, she did something that has remained profoundly important to him.

She went to the public library. She checked out books. And she learned.

She did not demand perfection from him. McCoy remembers what she wanted much more simply: that he try to be a little better than he had been the day before.

When asked how Sue demonstrated love, McCoy does not describe an extraordinary gesture.

> *“She showed up.”*

He remembers ordinary moments, including things she found hilarious that he did not find particularly funny. Her happiness was enough to make him happy anyway.

Asked which moment he would choose if he could have one ordinary moment with her again, McCoy rejected the premise that it needed to be a good one. He would take their worst day. Just to have one more.

> *“I will continue to love that woman for the rest of this life.”*

Pre-Failure

Today, McCoy is the founder of Pre-Failure Research Group LLC. The name fits a life spent looking at systems before their failures become irreversible.

PFRG’s work spans governance, technology, evidence preservation, education, verification and institutional failure. Its projects include OmniSniffer and ongoing work involving mobile

credentials, zero-knowledge and zero-trust verification architectures, alongside research into governance and preservation of evidence.

Not every idea is a finished technology, and McCoy is careful about that distinction. Concepts, hypotheses, prototypes, implemented systems and verified findings are not interchangeable categories.

Much of PFRG's research is intended to remain openly accessible. McCoy has increasingly favored licensing that allows others to use, challenge and improve work, asking only that they credit the source and say what they changed. That, too, connects to Lumnira.

Not as religion. Not as a demand for belief. But as an attempt to formalize something McCoy has spent most of his life approaching from different directions: that individual perspectives matter, that no single observer possesses the whole, and that understanding grows through what each perspective contributes.

His recent mathematical/philosophical model of Source deliberately separates established mathematics from the postulates of his model and from metaphysical belief. He does not claim that mathematics proves his beliefs. That separation is itself characteristic.

Label what is known. Label what is calculated. Label what is believed. Keep the receipts. And keep asking the next question.

Jason McCoy's story is not really about having answers unusually early. It is about refusing to stop at an answer merely because an answer has been provided.

At six, the question was about a computer. At thirteen, it was about a television signal. At seventeen, it was about religion, authority and an egg on a conveyor belt. Across more than forty jobs, it became a question about why documented systems so often diverge from observed reality.

Today, some of those questions have become research programs, software architectures and governance models. But the underlying question has barely changed.

> *"How does this work?"*

And when the answer arrives:

> *"Okay. But how does that work?"*