Struggling Against Dogma: Exposing the Fanaticism Undermining Scientific Progress in Software and AI

The most deplorable situation in software, computer science, and artificial intelligence is this: Since the 1980s, the software research community has been striving to invent better components and to develop improved methods and mechanisms for Component-Based Engineering (CBE), as well as to design and build software products as Component-Based Products (CBPs)—all while persistently refusing to confront and understand the objective reality and foundational truths about physical components and other types of parts, as revealed through the discipline of Componentology. This includes a wilful disregard for their nature, essential properties, and intrinsic characteristics, as well as the anatomy, structure, design, and construction of real Component-Based Products—and the scientifically established principles that underpin authentic CBE.

A parallel tragedy is unfolding in the pursuit of Artificial General Intelligence (AGI): Researchers attempt to model intelligence using neurons and neural networks—without a genuine understanding of the objective nature, essential properties, or actual mechanisms of biological neurons and neural systems—as can only be achieved through the emerging scientific discipline of Neuronology. Instead, they rely on abstract mathematical constructs and metaphorical analogies, rather than on scientifically grounded, empirically testable insights into how real neurons function, interact, and give rise to cognition. This misguided approach risks building AGI on a foundation of fiction rather than fact—on entrenched metaphors rather than falsifiable, measurable reality.

This is analogous to attempting to draw an accurate picture of an elephant while refusing to learn what an elephant actually is—whether it is a bird, a tree, a

fruit, a flower, a fish, a landmark, or a mammal. Without knowing its true identity, any representation becomes a product of imagination rather than reality—just as attempts to model intelligence without understanding real neurons inevitably result in fictional constructs, not scientific breakthroughs.

Even if, by random chance, one painter happens to draw a picture that resembles an elephant, he has no way of knowing that he has achieved the goal—because he still doesn't know what an elephant is. Similarly, I have encountered software engineers who inadvertently created components that were nearly equivalent to real software components, yet they failed to recognize the significance of what they had achieved. Without a foundational understanding of the objective reality they were approximating, even genuine breakthroughs remain invisible to their creators—lost amid a landscape dominated by metaphors and misconceptions.

Even the greatest painter cannot draw a picture of an elephant without knowing what an elephant is—while even elementary school children can draw one if they do. This illustrates a fundamental truth: no amount of talent or technique can compensate for ignorance of the subject (e.g., Componentology). For example, in software engineering, brilliance and expertise are rendered futile when the foundational understanding of reality of real components is absent—even if such components are simple to create and use, once properly understood.

To offer yet another analogy: imagine an alien sent from another planet with a mission to retrieve the DNA of an elephant. However, lacking any understanding of what an elephant is, the alien would be unable to recognize it—even if he landed in a forest right next to a herd of elephants. Without the necessary conceptual framework or reference, he would remain oblivious to the very object of his quest—just as researchers today remain blind to the real nature of components or neurons, even when they are in plain sight.