Review of *The Myth of Artificial Intelligence: Why Computers Can't Think the Way We Do*, by Erik J. Larson

Noreen L. Herzfeld
College of Saint Benedict/Saint John's University, nherzfeld@csbsju.edu

Noreen Herzfeld, Nicholas and Bernice Reuter Professor of Science and Religion at St. John's
University and the College of St. Benedict and research associate with ZRS Koper, Slovenia.

Is AI on its way to human-like intelligence? Consider ChatGPT, a large language model (LLM)
developed by OpenAI that generates text that has passed university level law, business, and
medical exams. A work of art generated by a similar AI, Midjourney, recently won first prize at
the Colorado State Fair and OpenAI's DALL-E seems poised to put a number of graphic
designers out of business. These programs, and others like them, demonstrate significant
advancements in the field of AI and represent a new generation of machine learning models
that can generate highly sophisticated outputs that can rival human-generated content. These
models and their capabilities represent a shift in the field towards models that can perform
more diverse tasks and have a greater understanding of the world.

And ChatGPT wrote most of the preceding paragraph. After a conversation on identity and
death with the LLM LaMDA, Google engineer Blake Lemoine claimed the program must be
sentient (a claim Google promptly denied). Still, are we seeing the first glimmers of an Artificial
General Intelligence (AGI)? Is the Singularity near?

According to Erik J. Larson, that answer is a clear no. However, Larson published *The Myth of
Artificial Intelligence: Why Computer Can't Think the Way We Do* in 2021, just prior to the
advent of these programs. Does his evaluation still hold?   According to Larson, founder of two

AI startups and writer for a variety of journals such as *The Atlantic* and *The Los Angeles Review of Books*, while these programs show stunning results that may force us to change ways in which we work, teach, and publish, they are nowhere near showing human-level intelligence: "Everywhere, AI is breaking. And everywhere, it's breaking us. . . AI finds itself looking at the world through errant eyes . . . [and] doesn't realize its worldview is cracked" (*Wired*, 1/25/22). According to Larson, research in AI is barreling down the wrong path if we wish to develop truly intelligent machines. And we currently have no idea where the right path might be.

The problem lies in our mistaken understandings of human intelligence. Larson takes us on an engaging romp through the history of AI, showing how we have continually misunderstood and limited intelligence. AI pioneers in the 1950s and 60s modeled their programs on deductive reasoning, assuming intelligence meant applying the rules of logic to reach conclusions. This worked well in limited and rule-based domains and soon computers were passing the MIT calculus exam and winning at chess. But they failed at the "simpler" tasks such as understanding a story, translating languages, or recognizing faces. The advent of faster processors, gigantic memories, and the Internet moved research from modeling deductive reasoning to inductive reasoning. LLMs and other machine learning programs now crunch through massive data sets, looking for patterns and predicting what to do next based on statistical probabilities. They have conquered facial recognition, text generation, language translation, and a host of business problems previously impervious to computation.

But, Larson contends, this is still not how humans think. We make multiple conjectures based on observation and experience, playing with counterfactuals and imagination, and then contextualize these conjectures, looking for the best fit with both the observable data and the

mental model of the world that we hold in our subconscious minds. Larson calls this mode of

thinking abduction. Our inductive computers have lots of data that they can piece together in

both predictable and novel ways. But they lack both the creativity to come up with something

totally new and the mental models that alert them when what they have come up with is total

bullshit. They are like parrots, repeating what they have gleaned from us humans. Without a

model of the world, they have no way of telling truth from falsity. Nor can they produce the

truly novel. Larson notes that, "intelligent thought involves knowledge that outstrips what we

can bluntly observe, but it's a mystery how we come to acquire this knowledge, and even

further, how we apply the right knowledge to a problem at the right time. Neither deduction

nor induction illuminates this core mystery of human intelligence" (189-90).

Larson does not claim to know how to program abductive knowledge. But he warns us that

mistaking induction for abduction is not just a dead end; it is also a dangerous path. As we

glorify AIs "narrow but flashy" successes, we risk demoting ourselves. He worries that "the

Promethean myth of astonishing innovation by individuals is disappearing from cultural

archetypes in research and the broader culture. In its place we have a passive-evolution

mythology about AI that grows as belief in human potential shrinks" (239).

Microsoft guru Jaron Lanier agrees. He has suggested that, should we ever conclude that a

machine has passed the Turing Test (as some, such as Lemione, already do), it will be not

because the machine has gained human-like intelligence but because we have adapted

ourselves to our ever-present mechanical companions and become more machine-like. While

Larson confines his argument to intelligence, in his final pages he raises this larger question

Lanier touches on, noting that "the deepest questions embodied in the AI myth are not technical

or even scientific—they involve our own ongoing attempts to find meaning and to forge future paths for ourselves in an ever-changing world" (280). What those questions might be and where we might best find meaning today, Larson leaves to philosophers and theologians to explore.