THE UNIVERSITY of NEW MEXICO | Office of the Provost

WEDNESDAY COMMUNIQUÉ

March 30, 2016

Why Humans, Humanity, and the Humanities are necessary:I read recently that while nature does not need humans, humans need nature.True enough, but if humans areto remain around, we must also learn to co-exist with ever more "intelligent machines" and to react in increasingly uncertain environments.In the last few weeks, AlphaGo, the artificial intelligence (AI) algorithm designed by Google's DeepMind team, beat a grandmaster at the ancient and complex game Go.This happened several years earlier than had been predicted.

DeepMind founder DemisHassabisdescribed the significance of the achievement: "The game of Go involves two players placing black and white counters to conquer territory. It is played on a 19 by 19 board, which allows for 10^{171} possible layouts, versus roughly 10^{50} possible configurations on a standard 8 by 8 chessboard. To give you a sense of scale, it's estimated there are 10^{80} atoms in the universe. Go is probably the most complex game ever devised by man."

More importantly, the win was significant becauseof the way the computer beat Mr. Lee Sedol, the human player.Not only did AlphaGo beat Mr. Sedol four games to one, but along the way, the computer displayed "beautiful moves." The video, seen here, shows all five games, including game four, where Mr. Sedol displayed some ingenuity of his own.

Driverless cars have also made the headlines over the past year or more, as Google, Tesla, and many other traditional and non-traditional companies (GM and Apple, for example) have been testing them. This development puts a finer point on general fears that robots are taking over human jobs, because driving is the largest male occupation, and if such jobs are eliminated or drastically reduced, many non-college educated males will find themselves out of work.Robots,AI, and other technologies are no longer only displacing humans in repetitive and physical labor, but are encroaching on non-repetitive and cognitive tasks.There is even now an algorithm that composes music, and others that help doctors, lawyers, and businesses make decisions in the face of uncertainties. Before we despair, however, and despite the mechanical flaws in our physical design, I am confident that there will always be tasks and activities that only humans can manage.

Witness, for example, the recent Microsoft effort to design a smart Twitter bot, and how it quickly became "a racist jerk" by reacting "logically" to human tweets.Humans have intuition and empathy that transcend the advantages of AI: "By winning even in such convincing fashion, AlphaGo has revealed that AI still has a number of shortcomings, particularly when it comes to machine-made intuition."And, "finally, consider AlphaGo's self-training algorithm. Despite having over a thousand years of knowledge of human-played games, AlphaGo's loss was attributed to a misstep when it was caught off guard: Lee played an unexpected move. To make matters worse, AlphaGo responded poorly but did not realize its mistake until many moves later. What's more, even though humans can be more fallible than machines, our strength lies in the ability to recognize our fallibility and improve, just as Lee did. By the time AlphaGo discovered its mistake, it was far too late to correct course."

It is exactly our humanity that cannot (yet) be duplicated, and why we need to continue to learn and teach more than algorithmic thinking, and why rather than idolizing Silicon Valley and its technical prowess, we do better by learning from Florence and its more complete model of innovation in the sciences, arts, and the humanities.

English Stretch and Studio Innovation: Earning well-deserved recognition, UNM assistant professors Bethany Davila and Cristyn Elder will be receiving Inny Awards for their creation of the English Stretch and Studio Composition program. Please join me in congratulating them on their work, which has had a positive impact on the success of first year students.

Global and National Security Symposium:UNM's National Security Studies Program's seventh annual symposium, "Global and National Security: Rapidly Evolving Challenges," begins on Monday, April 4, with noted New York Times national security reporter Scott Shane presenting at the Communications and Journalism Department, followed by a lunch-time panel at the Student Union Building, focusing on National Security and Muslim Communities.Mr. Shane will also present at 12:30 on April 5 in SUB Ballroom A, where he will discuss Anwar al-Awlaki and the blowback in the war on terror.A full agenda is available here.

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