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# WE'RE DOOMED: ROBOTS CAN NOW LEARN TO ADAPT TO INJURIES

A NEW STUDY SHOWS HOW ROBOTS CAN USE AN "EVOLUTIONARY ALGORITHM" TO FIX THEMSELVES.

BY JOHN PAUL TITLOW

In case you had any doubts that we will one day be annihilated by invincible robots, science has a new, sobering reality for you: Robots can now learn to adapt to injuries on the fly.

A new study published today in *Nature* explains how robots can use a sort of "evolutionary algorithm" to learn new ways of operating after being injured, according to the *MIT Technology Review*. Take out one of its legs, and the robot uses rapid-fire calculations to figure out how to keep moving.

The *MIT Technology Review* lays it out in horrifying detail, reminiscent of a certain *Toy Story* character:

In a video accompanying the paper, researchers show a spider-like robot that suffers an injury to one of its six legs. The creature starts trying new ways of moving, and in about 40 seconds regains 96 percent of its speed, looking less like a broken toy and more like a wounded animal crawling away.

In a less sinister example, researchers damaged a simple, arm-like mechanical robot by compromising one of its motors. "In less than a minute the simple robot figured out how to compensate for the broken joint and correctly place a ball inside a can."

That sounds innocuous enough, but just wait until robots are intelligent and autonomous enough to decide that they no longer need their human overlords to

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dictate their every move. Combine that with [coming advances in 4-D printing](#)—the fabrication of materials that can change shape and form on their own over time—and you're probably looking at an army of smart, self-healing robots, hell-bent on our destruction.

On a less apocalyptic note, this is a pretty useful innovation that can have all kinds of real-world benefits. It means that a robot sent into a war zone or the aftermath of a natural disaster can better withstand those harsh environments and finish whatever job we've programmed it do. If [factory-based robots like Baxter](#) can learn to adapt to damage sustained on the job, that's one less reason for a human to intervene, risking their own safety to try and fix the issue. It will also probably cost less to maintain these autonomous androids, which looks good for the short term.

In the long run, it might not matter all that much. Because clearly, we are doomed.

*[Photo: Flickr user Ariel Waldman]*

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By the time we have to worry about androids taking over, they'll be smart enough not to want to. Intelligence leads to altruism.



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Although, they probably will destroy Fox News.



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