July 1, 2011

Mechanical engineers and roboticists created a gripping device that can pick up nearly anything. Using coffee grounds and a latex balloon attached to a robotic arm, objects can be grasped firmly when a vacuum is activated, and released once switched off. The device can help military officials handle dangerous objects or provide improved gripping capabilities for prosthetic limbs.

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ABOUT ROBOTICS: Robots are made of roughly the same components as human beings: a body structure with moveable joints; a muscle system outfitted with motors and actuators to move that body structure; a sensory system to collect information from the surrounding environment; a power source to activate the body; and a computer "brain" system to process sensory information and tell the muscles what to do. Robots are manmade machines intended to replicate human and animal behavior. Roboticists can combine these basic elements with other technological innovations to create some very complex robotic systems. There are plenty of robots doing manual work on factory assembly lines, but while those machines can manipulate objects, they do the same thing, along the same path, every time. The philosophy behind the robot's development is that humans and robots can work together to accomplish tasks that neither could do alone.
MORE ROBOTS THAT COULD HELP AT WORK: MIT researchers are working on a very early version of intelligent, robotic helpers: a humanoid called Domo, who can grasp objects and place them on shelves or counters. Domo is the 'next generation' of two earlier robots built at MIT: Kismet, designed to interact with humans, and Cog, which could learn to manipulate unknown objects. Domo incorporates elements of both. A robot like Domo could help elderly or wheelchair-bound people with simple household tasks like putting away dishes. Other potential applications include agriculture, space travel, and assisting workers on an assembly line.

The Human Factors and Ergonomics Society contributed to the information contained in the TV portion of this report.