Auto Casualty

Cobotics, a New Type of Man-Machine Collaboration

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The robot revolution is well underway, and far from science fiction narratives where malicious robot overlords render people obsolete, robots are here to do something surprisingly human: collaborate. Cobots, short for collaborative robots, share another human trait: with the help of artificial intelligence, they can learn on the job. They differ from traditional industrial robots, however, in that they are intended to work side-by-side with humans, not replace them. Today, they are going to work in verticals as disparate as automotive manufacturing and healthcare, often in jobs that are difficult, dangerous, or otherwise undesirable for humans.

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Hamburger chain Caliburger provides an example of how companies are using cobots to augment their human workforce. When the company was having trouble retaining cooks—they literally couldn't take the heat in the kitchen—they turned to an artificial intelligence-enabled robot named Flippy to do the job. After a rough start, the company realized that since Flippy can't quickly respond to changes in its environment, much less respond to verbal cues, Caliburger's human employees needed more training to learn how to interact with their new robotic colleague. Today, Flippy and its human coworkers are taking and filling orders like—for a lack of a better phrase—a well-oiled machine.

Cobotics: Transforming Automotive Manufacturing, Healthcare and More

The automotive industry was an early adopter of robotics in manufacturing, so it is no surprise that cobots continue to make inroads in vehicle manufacturing. BMW, Ford, GM, and Volkswagen are just a handful of the companies that use them to handle some of the physically demanding work in building cars. For instance, cobots can work with high-temperature adhesives or lift heavy, awkward components and put them into place.

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While cobots are widely used in automotive manufacturing, they haven't yet made the leap to collision repair. Australian company Tradiebot does, however, envision a future where that might be possible. According to their website, they are developing robotic technology for repetitive processes like parts preparation and plastics repairs. Like other cobotic technology, it will require skilled human supervision. Another way cobots are contributing is in retail fulfillment centers, and Amazon is leading the way. In 2012, they purchased Kiva Systems, later naming it Amazon Robotics, and today, the company employs more than 100,000 cobots in its fulfillment centers. Zappos, widely known for their commitment to "surprise and delight customers" relies heavily on cobots, too. Even Gap is getting in on the action, using cobotic arms to help fulfill orders.

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Cobotics are also coming to healthcare. Today, fleets of Tug autonomous robots that look a bit like filing cabinets on wheels, are roaming hospitals, delivering drugs, fresh linens, and other supplies to medical staff. In doing so, they are sparing skilled healthcare workers from time-consuming, routine tasks, freeing them to focus on higher-value tasks like patient interactions and care.

Making the Case for Humans in a Cobotics-Driven World

It is important to note that despite their willingness to put in long hours on difficult jobs without complaint, cobots are not intended to replace humans in the workplace. They are, instead, meant to work alongside them, doing tasks that are dangerous or otherwise undesireable to humans.

> Cobots do tasks that are dangerous or otherwise undesireable to humans.

In many cases, humans still have the upper hand. Cobots can require a costly up-front investment. While they might not require paid time off, or even lunch breaks, they do still require downtime for software updates, maintenance, and repair—often overseen and implemented by a human. For the time being, humans are still the robots' overlords. In addition, cobots do not make for a particularly flexible workforce since they are often purpose-built for highly specific, predictable and repeatable tasks. Take Flippy, the hamburger-flipping robot: there's no holding the pickles or the lettuce. He can only make hamburgers one way—for special orders, you still have to go to Burger King or at least get help from a human.

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While not specifically relying on cobots, when Tesla was failing to meet Model 3 production goals, Elon Musk attributed issues to overly complex, automated processes. Ultimately, he replaced some of those automated systems with old-school—that is to say human—technology, enabling the company to ramp up production. Musk is quoted as having said about the experience, "humans are underrated."

Cobots Bring New Risks and Opportunities to Insurers

While cobots might not be coming for our jobs any time soon, Property and Casualty insurers and the collision repair ecosystem would do well to stay informed: the increasing prevalence of cobots in the workplace presents new risks and opportunities. The most significant impact will be in how cobots, like other forms of automation, will affect the nature of work. Cobots themselves do not require workers' compensation as their human counterparts do, and with cobots taking over high-risk jobs, it could mean a reduction in injuries to humans. It

could also mean new types of jobs being created, as people are needed to manage their work and maintain them. Cobots themselves are expensive pieces of equipment—Flippy is estimated to cost $60,000—that require insurance, just as other heavy machinery does.

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Cobotic Automation: Freeing Workers from Routine Tasks

Again, cobots, as their name suggestions, are intended to collaborate with humans, not replace them. As they become more prevalent and humans become more comfortable in interacting with them, we may see more general acceptance of machines in the workplace and greater trust in artificial intelligence in all areas of the workforce. Ultimately, the value of cobots rests in their ability to augment human activity, just as the value of artificial intelligence is to augment human intelligence. Cobots can spare humans from routine tasks or work that is difficult or dangerous. And in some cases, as we see with the Tug cobot that supports healthcare providers in hospitals, it frees up skilled workers for innately human activities, like caring for other people.



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