

Advantages and disadvantages of technology replacing manual jobs



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In a study that was performed by Norrish (2006, 987), the robots cannot match breadth and depth of the human perception. Even though simple geometric identification is significantly mature due to the fast development of the sophisticated lasers and sensors, evident challenges are still complicated perception tasks. This includes identification of objects as well as their properties within a cluttered viewing field. As such, the tasks that link to the unstructured work surrounding have the ability to make jobs minimally susceptible to the computerization. For instance, many homes are usually unstructured hence they require an identification of the many irregular objects which inhibit wheeled objects from being mobile.

Consequently, the factories, supermarkets, hospitals, warehouses, and hospitals are specifically designed to accommodate objects with larger wheels which make it simpler for the robots to carry out navigation while performing non-routine manual work. However, the problems of perception may at times be sidestepped by the clever task design. For instance, Amazon. om acquired Kiva Systems in 2012 and this solved the issue of warehouse navigation because bar-code stickers were placed on the floor and this informed the robots of their exact location (Shally-Jensen, 2016, 677).

Alternately, Stair & Reynolds (2016, 78) believe that the challenges in perception could have ramifications for the manipulation tasks especially handling irregular objects because the robots cannot reach human aptitude levels. Evidently, this factor was seen as during the formulation of robots which interact with the human environments and objects. Even though there are advancements that have been applied, the proposed solutions could be <https://assignbuster.com/advantages-and-disadvantages-of-technology-replacing-manual-jobs/>

unreliable depending on myriad smaller variations when it comes to doing one task which is repeated countless times each day; this is what most applications attain. Suh (2008, 242) adds that the related issue is the failure recovery which is the identification and rectification of mistakes done by a robot; for example, if it drops an object. Furthermore, the manipulation could be limited by planning difficulties when it comes to action sequences need to move a particular object from point to point. Wilson (2015, 98) agrees with this notion and adds that more issues can be seen when designing the manipulators which just like the human limbs, have dynamics that are compliant, are soft, and give significant tactile feedback. Therefore, the major challenges of the robotic computerization, manipulation, and perception may or may not be resolved fully for several years to come.

The International Federation of Robotics claims that the general paid employment rose in many countries that include China, Brazil, United States of America, Germany and Republic of Korea. Recent statistics have revealed that there has been a decline in the employment process particularly in the manufacturing sector in developed countries. However, this coincides with the increase in the utilization of robotics and output. According to Aldrich & Auret (2013, 45), the robot industry is believed to generate 170, 000 to 190, 000 jobs all over the world; this includes the operators and support staff. Even though there has been a significant increase in utilization of robots, the United States has almost half the robots that are usually used in Germany. Moreover, Germany is ranked third when it comes to the use of robotics following Japan and Korea.

Consequently, Bock & Linner (2015, 65) argues that the 'jobless recovery' concept whereby an industry pulls away from the recession leaner may require less employees but it is only for a short while. Therefore, there is a chance that more jobs can be created due to the leaner and more competitive organizations. At this exact time, the service industry employs most of the manual workers that have been displaced. This means that some of the new employees taken in by the service sector owe it to the robotics driven industry. Boekholt (2000, 768) further shows that even though the automation process displaces the manufacturing manual workers, it also increases the production output.

Bourlakis et al., (2011, 89) believes agrees with the notion by stating that this offers an opportunity to enhance production as well as the decrease that is related to the unit price; this leads to the creation of a new market as well as generates the necessity for the downstream jobs in order to take the products to the customers. Therefore, this releases the manual workers to new jobs which are not linked with manufacturing. The other alternative is that future displacement could be harder to place because the service robotics could overtake most or some of these new job vacancies with regards to human tasks like fast food chains, banking or retailing the petrol forecourts.

Marlin Steel is an American based company that manufactures sheet metal and wire basket products and its president, Drew Greenblatt, has praised the manner in which robots have assisted in the growth of the company by almost 25 percent as well as the operational safety. Currently, the robots could produce five times the products every second in a precise manner and <https://assignbuster.com/advantages-and-disadvantages-of-technology-replacing-manual-jobs/>

this is an improvement as compared to the past. He further claims that robots have the ability to make the manual workers significantly valuable by getting higher pay than other industry sectors.

Nonetheless, the automation boom critics suggest that technological advancements like these are reducing middle-class jobs. The automated systems and robots have not just eliminated the highway toll-collectors and the elevator operators, but it has also promoted high-skilled job functions as well as long-term impacting the job losses among the human workers which could be even more severe.

Caldwell (2013, 989) stated that even though the robots could perform certain jobs better, faster and cheaper than the humans especially in the manufacturing and service sector, a lot of care has to be taken with regards to the risk that it presents to the manual workers. Thus, viable focus should be placed on the development and training of the employees so that they can meet future issues posed through robotics introduction. This researcher's aim is to show that an organization's service or manufacturing sector could enhance the employees' performance by creating emphasis on the human resource procedures like motivation and employment.

Generally, automaton has the ability to enhance repeatability of tasks, reduce the required skill (this lowers costs, and eliminate individuals from hazardous environments (this enhances safety). Furthermore, automation may also become inflexible, rapidly obsolete as well as hide internal operations from the users; this may result in unexpected outcomes

(Canadian Chamber Of Commerce, 2014, 76). Poorly-designed or excessive automation could lead to the complacency of the workers.

According to Cohn (2007, 56), robots are not really cost effective especially when it comes to the applications of mass production because the specialized machinery for mass production could do the operation in an efficient manner. Hard automation or Mass Production Machinery is usually highly specialized when it comes to repeating a high-speed operation sequence at very high speeds for an extended period of time. Therefore, the technology of hard automation is a cheap procedure of production mainly due to the fact that every element within this system is committed to one function that it is optimized for.

Cohn (2007, 567) believes that the manufacturing technology revolution could increase efficiency greatly when it comes to the use of machinery in the batch production. Therefore, the utilization of computer control and robots means that the new capital products will have enhanced productivity as compared to older equipment. Naturally, if the manufactured goods are produced at a cheaper cost, then their cost in the market will be significantly lower.