# The realities of living with bionic limbs: insights from Sarah de Lagarde



In a revealing account within the Financial Times, Sarah de Lagarde, the global head of corporate affairs at asset management firm Janus Henderson Investors, sheds light on her experiences following a tragic accident that resulted in the loss of both limbs. In 2022, De Lagarde fell onto the tracks of London’s Northern Line, where two trains ran over her, leading to the amputation of her right arm and significant injury to her leg. She now joins the ranks of approximately 60 million people globally living with some form of amputation due to traumatic causes.

Adjusting to life with bionic limbs, De Lagarde noted the crucial role that her employer played in her reintegration into office life. She remarked that the support from her workplace was just as vital as the advancements in technology that now aid her daily existence. Prior to her accident, De Lagarde held a romanticised view of prosthetics, but she quickly learned that the realities of living with them often diverged from expectations. “The reality is that this image can be quite misleading and we’re not done perfecting technologies or medical prosthetics," she stated, highlighting the ongoing challenges faced by amputees.

The market for bionic limbs remains relatively small, and ongoing research is impeded by a lack of user involvement, data, and adequate representation of disabled individuals. A report from the University of Utah in 2022 indicated that many current prosthetic devices are cumbersome, leading to a significant number of users abandoning them altogether. De Lagarde herself is actively involved in testing new prosthetic adaptations and providing feedback on her experiences. After her first bionic arm exhibited issues such as overheating and inadequate battery life, she proposed various improvements.

Despite her proactive approach, the reality of living with prosthetics involves substantial financial and mental strain. Regular replacements, ongoing physiotherapy, and weekly fittings contribute to the burdens faced by individuals who must navigate the healthcare system for their needs.

According to a United Nations study, people with disabilities comprise the world's largest and fastest-growing minority, with over 2.5 billion requiring assistive products—a number projected to increase by a billion by 2050, as noted by the World Health Organization. In the United States alone, around 5.6 million individuals live with limb loss or difference, according to the Amputee Coalition, a non-profit organisation.

As technology advances, AI-driven assistive technologies have emerged, promising to enhance the lives of disabled individuals through innovations such as prosthetic limbs and transcription applications. However, high costs remain a significant barrier. For instance, Coapt Engineering revealed that a bionic hand can cost up to $45,000. Jacob George, director of the University of Utah’s NeuroRobotics Lab, is at the forefront of developing a motorised limb that can be controlled through thought. Named the "Luke" arm, after the iconic prosthetic of Star Wars fame, it aims to offer users a sense of touch and improved functionality. However, despite its advancements, only a limited number of these devices are currently available.

The potential for transformative solutions exists, but there is caution concerning the reliance on advanced technology. Britt H Young, a lecturer who was born without most of her left forearm, expressed scepticism about high-tech prosthetics. After many trials with various devices, she stopped using prosthetic arms altogether during her graduate studies, questioning the design priorities that often overlook the needs of disabled users.

As highlighted by Gordon McCullough, chief executive of the Research Institute for Disabled Consumers, involving disabled individuals in the design process from the outset is critical. His organisation stresses the need for assistive care to be regarded as a fundamental human right, alongside ethical considerations in the application of AI. De Lagarde, advocating for a more inclusive approach, remarked, “It’s not a luxury to want an arm that functions. These costs need to be democratised," indicating a belief that technological advancements could ultimately make these essential devices more accessible.

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