Smart Libraries: A "Smart" Decision?

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The adoption of "smart" technologies is central to the fourth industrial revolution or Industry 4.0, where integrated and collaborative systems use big data and IoT devices to address the real-time changing demands of their users (APICS, 2015; Walder, 2021). There is ample literature on smart homes and smart cities as well as smart technologies, including smart devices and sensors in various areas of society, such as the household, education, and urban planning (Bowers, 2019). However, there is a gap in understanding the opportunities that smart technologies present for the creation of "smart libraries."

Smart libraries, that is, the application of perceptive and intelligent technologies in libraries to improve the quality of patron and worker experiences while increasing administrative and environmental efficiency, is part of a growing movement towards digitization (Yu et al., 2019). Rooted in the proliferation of computers in the early 2000s and coined by Finnish scholar Markus Aittola in 2003, the "smart library" is not a novel phenomenon (Baryshev et al., 2018; Yu et al., 2019). But the current literature does not have a consensus for what constitutes a smart library. Rather, its description of smart infrastructure ranges from virtual shelves and augmented reality for navigating collections to occupancy sensors and electrochromic lights that adjust for users (Hoy, 2016; Yu et al., 2019).

Smart libraries are driven towards implementing digital technologies in an age where traditional approaches to information access and management are contested and slowly becoming obsolete (Schöpfel, 2018). Yet smart technologies, riddled with privacy and surveillance issues bring forth concerns which threaten patron trust in libraries—spaces perceived as safe by the community. Smart technologies also involve artificial intelligence, often designed for "cisgender, white, able-bodied, neurotypical, and male" individuals (Swauger, 2020), which contradict with the mission of libraries to support equity, diversity, and inclusivity (EDI). If smart technologies are implemented in libraries, they may negatively impact the acceptance, respect, and participation of their patrons, all integral to EDI.

More recently, there has been an urgent push towards ensuring the principles of EDI in academic libraries, seen in the emergence of strategic plans, initiatives, and councils (Schonfeld & Sweeney, 2017; OCUL Research, 2021). Libraries have to contend with the conflicting societal movement towards smartness amidst growing awareness of the need for EDI. Using a political economy approach, we examine the following question: is it desirable for Canadian academic libraries to evolve alongside the smart movement to support EDI for patrons and library staff?

In particular, we will focus on the impact of smart technologies on the social capital of libraries, i.e., tangible and intangible resources that work towards supporting an individual's interests (Bourdieu, 1986), demonstrated by the experience and the knowledge patrons take away. Alongside this discussion, we will present an analysis of digital labour by examining the work conducted by patrons and how smart technologies impact the roles and responsibilities of library staff.

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