Put **Uncle Google** and **Auntie Alexa** to work in your library

*D*oes your workplace use a chatbot? In this piece INDRA MCKIE and BHUVA NARAYAN, academics at the University of Technology Sydney, look at the research around chatbots and discuss how libraries can use them to streamline their workplace.

Libraries are increasingly using chatbots to provide services to clients. They are referred to variously as digital assistants, virtual agents, or intelligent agents (Vincze 2017). These chatbots are robotic software that respond to customer requests through predefined rules and questions and are based on a flowchart of expected questions and built-in replies (if this, then that or 'IFTTT'). Often, this interaction is via a live chat window on the library's website. In this article, we look at some research around chatbots and discuss how libraries can use them to streamline the workplace.

Voice user interfaces such as *Alexa, Echo, Siri, Cortana* and *OK Google* are ubiquitous in society now, and can potentially provide greater access and inclusivity for people with cognitive and physical limitations, but their level of actual use is varied, as they are yet to follow and maintain the flow of naturalistic conversation. They have anti-narrative affordances wherein every object in the database has equal value or follows a database logic rather than human logic (Manovich 2001). As a result, although users engage with the designed humanness (Smestad 2018) they are also aware of the presence of something else, leading to an 'uncanny valley effect' of unease and discomfort (MacDorman & Ishiguro 2006). Nevertheless, it is also true that this designed humanness can unwittingly take on a social role in our lives. The authors of this piece recently witnessed this 'crossing' when we observed a two-year-old refer to the device-based chatbots she interacts with in her home as *Uncle Google* and *Auntie Alexa*, thus associating them with members of her family. The question arises: what must be done for us to bring this level of ease of everyday interaction and familiarity with chatbots to our library users?

Research has shown that there are two demographics that have adopted chatbot technology with ease: millennials globally, and the Chinese, who have quickly adopted *WeChat* and other voice messaging platforms as their core form of communication (Vincze 2017). As our university libraries cater to both these demographics (according to the June 2018 report from the [Department of Education and Training](#), Chinese students form upwards of 30% of all international students in Australia), it is time for libraries to integrate these technologies into our services.

Unlike a live chat service (with a human) offered by most libraries, chatbots have no constraints around office hours, do not need supervision, can scale to handling a large volume of requests, and can even handle multi-language support. This automation will not get rid of library and information

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jobs, but instead allow busy library staff the opportunity to focus on innovative library services. The responses created for a chatbot can augment or enhance existing library services and can include answering queries; finding and accessing materials, library spaces and services; as well as upskilling and assignment support. A user can find the answer to most of these queries almost instantly using a chatbot, for a request that might otherwise take up five minutes or more of a library staff member's time.

Research into data from one of the earliest library chatbots in service in the United States from 2009–2012 (named Emma the Catalog Bot, or *CatBot*) shows that clients feel more confident in interacting with chatbots due to their anonymity, patience, politeness, and consistency (Vincze 2017). Additionally, they provide a means for us to document and understand the types of questions and resources requested to allocate resources for library patrons.

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REFERENCES:
MacDorman, K. F., & Ishiguro, H. (2006) The uncanny advantage of using androids in cognitive and social science research. *Interaction Studies*, 7(3), 297-337.

Manovich, L. (2001) *The Language of New Media*. MIT Press.

Smestad, T. (2018) Personality matters! *Improving the user experience of chatbot interfaces*, Master thesis, Norwegian University of Science and Technology, Department of Design, Norway.

Vincze, J. (2017) Virtual reference librarians (Chatbots), *Library Hi Tech News*, 34 (4), 5-8.