

Hey! What's New? 2025-96

Data Is Risky Business: The Risk of AI Atrophy

An article in the latest issue of *The Data Administration Newsletter*, written by Daragh O'Brien, says that, right now, organizations are experimenting with and adopting various forms of AI, GenAI and agentic AI. "We are seeing the impact of this...as company leadership seeks the short-term dopamine hit of improved profit in a quarter or fiscal year. And it may be that we are laying the foundations for a problematic future."

While the traditional organizational structure has been a pyramid, O'Brien writes, "the shifts in recruitment suggest that organizations are moving toward either a diamond-shaped model with a small junior level, a larger middle management level, and a small senior leadership team or an 'hour-glass' model where there are a large number of junior staff who have more autonomy in their work, a smaller middle management layer, and a broader senior management function."

The promise is that generative AI and agentic AI will support this shift, he says, "by allowing the entry-level grunt work to be handed over to the machines that can do it (it's claimed) faster, cheaper and more accurately."

O'Brien argues "that this creates a short-term challenge for organizations relating to the recruitment and training of staff and an even longer-term challenge in terms of promotion and succession planning. The problem is simple and comes in two parts."

First, he says, "the adoption of generative AI tools and the automation of traditional entry-level cognitive and creative roles has the practical impact of cutting away the 'learning ladder' that people have traditionally climbed in their career paths. If we are going to expect entry-level staff in an organization to become reviewers of outputs and to be capable and competent to evaluate those outputs, make decisions based on those outputs, or take actions informed by those outputs, organizations will need to ensure that there is adequate investment in appropriate training, development, and coaching of those entry-level staff, and an investment in formalizing and structuring knowledge management in the organization."

A second, and related issue, he adds, "is a question for the future of organizations. Simply put: What is the planned pipeline for middle and senior management and leadership in the organization if we are reducing the number of entry-level and junior-level roles while also reducing the opportunities for experiential learning to develop the kind of knowledge and skills that are needed to operate effectively at those middle and senior levels?"

A third problem in the context of the human factors impact on the organization, O'Brien says, "is the increasingly well-established impact on human cognition and thought processes that arises when people use generative AI to perform tasks involving cognition, analysis and creative thought. In short, generative AI is profoundly different from previous technologies such as desktop computers and spreadsheets at the dawn of the information age, or the advent of the mechanical loom in the industrial revolution. The key difference is that GenAI represents a fundamental shift in how we cognitively engage with a task."

He points out that "among the issues identified in research by prominent critics of generative AI such as Microsoft is that higher confidence in GenAI is associated with less critical thinking,

whereas higher confidence in the individual's own capabilities was associated with more critical thinking. Others raise concerns about the impact on quality of analysis and depth of understanding."

As part of our work with clients and our internal R&D on how to use AI responsibly, O'Brien notes, "my company is developing an approach to help promote and maintain human engagement with AI and generative AI processes, and also to ensure that organizations avoid tunnel vision on the technology and consider broader issues and antecedents such as data quality, metadata quality, data access and permissions and human oversight and control in their planning and execution of these tools in a way that accentuates the positives of both human and tool in practice."

Rather than focusing on a GenAI process life cycle defined by the prompt, its output, and the outcome, he adds, "we encourage clients (and ourselves) to think of some additional lifecycle stages where we may need to invest in people, process, or data capabilities to mitigate risk and improve the quality of implementations."

For a whole lot more, read [Data Is Risky Business: The Risk of AI Atrophy – TDAN.com](#).