



Who's afraid of the robo-consultant?

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Around 66% of Americans believe that artificial intelligence (AI) will soon replace most of the work that is currently completed by humans. However, only 20% believe their jobs will be affected by this. A survey of management consultants would likely show even greater disparity between the expected impact of AI and the perceived threat to the profession. While consultants have not yet been significantly affected by AI, some highly educated professionals – like medical doctors and financial advisors – are already experiencing the impact in their practices. Machine learning systems are now capable of diagnosing diseases to specialist levels. Robo-advisor services are expected to manage almost \$450 billion in financial assets by 2018. So, should the masters of the PowerPoint slide be afraid of the robo-consultant?

Consultants often say that barriers to AI disruption include the highly diverse nature of consulting engagements, the ambiguity and complexity of top-level business management, and the weight of human factors in their activities. All these factors limit, in principle, the capacity of a software system to replicate and outperform human-led consulting work. They seem correct, in theory.

For now, and for the foreseeable future, the power of machine learning systems is constrained to narrow tasks – known in the field as ‘weak AI’. To predict and support decision-making, machine learning algorithms must process relatively large data sets that are focused on a chosen task. A computer can be trained to diagnose lung cancer by comparing CT lung scans from both healthy and sick individuals. An algorithm can buy and sell stocks according to changes in a company’s financial ratios, which it derives from annual reports. But how do you train an algorithm to define and evaluate, for example, market entry strategies for varying geographies, industries, corporations and products? It seems very hard to apply computational and statistical methods to professions in which every case is unique.

The AI answer comes from three approaches. First, AI can scalp the margins of the complete consulting value chain. Initial analytic activities (like data collection and modeling) and late-stage tasks (like slide preparation and aesthetical adjustments), which are already outsourced to specialists today, can be efficiently automated through computational methods. Successful automation of the hedges of the consulting value chain would progressively give algorithms access to sections of higher added value – i.e. insight integration and strategy formulation.

Second, machine learning methods can leverage the vast amount of increasingly interrelated data that is available today to automate the processes of insight generation and strategy

development. Capturing and linking the full business environment as digital data might allow computers to automatically derive corporate strategy from statistical learning. As strategic predictions and recommendations are proved to be correct, the prestige factor associated with high-end consulting services can be undermined. Even the revenues derived from the core of the consulting value proposition would thus be threatened.

And, third, AI systems do not need to replicate the flexible skill set of management consultants in order to substitute them – a task that would probably require developing ‘general AI’. They just need to develop a long tail approach to disrupting the profession. AI algorithms that are used in place of doctors are not trained to diagnose all tumor cases, but to focus on very specific types. What actually replaces medical professionals is not a specific algorithm, but the machine learning approach itself. The same logic can be applied to the highly diverse set of consulting projects. While the complexity of the task might seem overwhelming, computational approaches have one card under their sleeve: the development of a long tail of project-tailored strategies can also be automated once able to mine the wealth of data stored within business intelligence systems.

To substitute consulting services with AI systems is a formidable challenge. However, if successful, how should human consultants react? On the one hand, they could leverage AI to increase productivity so that reductions in billed hours due to automation can be compensated by an increase in the number of clients served. Large management consulting firms are making significant investments in AI, which will allow them to benefit from AI efficiency gains. How can independent consultants compete? By taking advantage of AI-as-a-Service (AlaaS) systems.

Network-based consulting firms like [a-connect](#) are in the right position to provide AlaaS solutions to their freelance and boutique consulting base, leveling the playing field through economies of scale. In line with this need, a-connect has established certace, a data scientist network for digital strategy projects with strong capabilities in the machine learning field.

On the other hand, to hedge the impact of AI, consultants should cherish and refine skills associated with the management of tacit knowledge, subjective experience and interpersonal conflict. As long as companies are run by humans, there will be company politics. And as long as humans define markets, there will be aspects of their individual experiences that cannot be digitalized. The increased recruitment of experts in anthropology by technology firms shows the value of skill sets that allow the analysis of hard-to-quantify business insights.

There is still a final challenge. If AI progressively takes over business management and execution, the associated reduction of human headcount within corporations would shrink the need for a consultant’s capacity to elicit tacit knowledge and understand other humans. Automation success might lead to further automation. Finally, within a business system that is devoid of human intervention, the triumph of the robo-consultant will be complete.

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