MORE is better than less.

Dear Friends:

Artificial intelligence is already all around us, often helping us but sometimes annoying us. Valuable data is the currency that buys success for organizations seeking to sustain and grow their businesses in our competitive world, and AI provides the path to getting it and using it most profitably. In this issue's feature article, we offer clarifications about what AI means today, the benefits and challenges it holds for the future of media in general and specifically for debt collection, and ways to evaluate its value for your particular organization.

We look forward to honoring the achievements of our talented associates at our annual Szabo Quality Awards Banquet on August 26 in Atlanta. Our calendar also includes the MFM Media Outlook 2020, September 12 in New York, New York, and the Georgia Association of Broadcasters GABCON 2019, September 27-29 in Atlanta, Georgia, where Szabo is pleased to sponsor the GABBY Awards afterparty.

Best wishes for a wonderful summer,

Robin Szabo, President
Szabo Associates, Inc.

The Present and Near Future of AI . . . What Media Need to Know Now!

Are the predictions about artificial intelligence the stuff of science fiction? What exactly is it? What is its relevance to the media industry and, specifically, to debt collection? Do we really need to be thinking about this now?

Let's answer the last question first. Media organizations absolutely need to think about AI now. Artificial intelligence technology is rapidly moving from the experimental to the practical, and forward-thinking organizations are implementing AI now at varying levels to increase their efficiencies and profits. More on this later.

AI is no longer solely the subject of science fiction, and the predictions about it are real. While the more entertaining personas of AI—the proper C3PO and chirpy R2D2 of Star Wars, the evil Terminator (until he wasn't anymore), and the likable if annoyingly literal Commander Data of Star Trek—are still the stuff of science fiction, they all have in common the basis of AI today: They are math-based creations designed to help humans achieve a desired result.

AI Defined.
The question seems basic, but the answer is not. In her article for the *MIT Technology Review,* "Is this AI?," artificial intelligence reporter Karen Hao states, "In the broadest sense, AI refers to machines that can learn, reason, and act for themselves. They can make their own decisions when faced with new situations, in the same way that humans and animals can."

Hao goes on to clarify that, as it currently stands, the great majority of AI advancements and applications we hear about today refer to a category of algorithms known as "machine learning," which uses statistics to find patterns from which predictions can be made. Suggestions of programs you might like on Netflix, your voice communications with Alexa, and determinations of whether or not you have cancer based on your MRI are examples of machine learning at work.

Then there is "deep learning," which Hao describes as "basically machine learning on steroids." While deep learning is the basis of many major breakthroughs, such as facial recognition and hyper-realistic photo and voice synthesis, it represents a tiny fraction of the potential of AI. The end game is to develop something resembling human intelligence, but that accomplishment is a very long way off. In real life, C3PO and Data will have to wait awhile to be born.

Reaching AI's full potential in the enterprise was the subject of "AI-fueled Organizations," a January 2019 paper featured in *Deloitte Insights* by Nitin Mittal, David Kuder, and Stir Hans. The authors' opening two statements are powerful in its predictions. "As AI technologies standardize across industries, becoming an AI-fueled organization will likely be table stakes for survival. And that means rethinking the way humans and machines interact within working environments." Mittal, Kuder, and Hans cite

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Deloitte Analytics senior adviser Thomas H. Davenport's new book, *The AI Advantage,* in which he describes three stages in a company's journey toward full realization of AI. The first, "assisted intelligence," involves harnessing large-scale data programs, the power of the cloud, and science-based approaches to make data-driven decisions. Companies at the forefront of the AI revolution are already working toward the second stage, "augmented intelligence," in which machine learning capabilities layered on top of existing information management systems work to augment human analytical competencies. According to Davenport, in the coming years more companies will progress toward "autonomous intelligence," the third stage, in which processes are digitized and automated to the degree that enables machines, bots, and systems to <u>directly</u> <u>act</u> upon intelligence derived from them.

In two consecutive global surveys (2016-17 and 2018) of CIOs conducted by Deloitte, cognitive technologies/AI has consistently topped the list of emerging technologies in which they plan to invest. The obvious, practical, and achievable benefits are increased productivity, greater efficiency, and lower operations costs; however, Mittal, Kuder, and Hans consider these the "low-hanging fruit" of AI opportunities.

How about the moving target of regulatory compliance? Algorithms can interpret and execute according to the literal letter of the law with which they are set up, free of the subjectivity, bias, and mood that can plague humans.

While content, products and services today are largely designed for mass consumption, AI can create "mass personalization," whereby they are customized based on individual users' personas, needs, wishes, and traits. As an example, Netflix is already developing an AI platform that creates personalized movie trailers based on the streaming histories of individual viewers as part of its larger content strategy for using data to inform creative decision-making around genre, casting, and plot development.

Media and AI.
Artificial intelligence promises to transform the media and entertainment business, according to Lindsay James in her article for *The Record,* "How artificial intelligence is transforming the media industry." She quotes Rainer Kellerhals, Microsoft's Media and Entertainment industry lead for the EMEA region, on the role of artificial intelligence. "AI will influence all areas of the media value chain, helping content creators to be more creative, helping content editors to be more productive, and helping content consumers to find the content that matches their interests and current situation," he stated.

Generally, today's AI-powered solutions rely on existing data stores or active input from human sources to form the foundation of their operations, according to internet, marketing, and e-commerce specialist Andre Smith in his January article for *Digitalist* magazine, "Closing the Loop: How AI is Changing Data Collection." He states that the latest generation of chatbots and related systems, however, is becoming far more adept at soliciting information from the people they interact with and can even proactively request needed data without any human surveys. AI-driven online surveys can adapt and react to such factors as sentiment and context to determine how to respond and when to ask more questions. After the data is collected, another class of AI systems can sort through it to classify the information for use further up the chain. The latest systems also have the ability to scan troves of documents for identifying information and contextual clues, recognize patterns, and autonomously verify and cross-reference data.

All of these tasks have previously required large, dedicated staffs and a great deal of time to complete. According to Smith, businesses are getting closer to a time when their AI systems will become far more self-contained—seeking, classifying, and validating data on their own without being prompted to do so. "We may soon see systems that can evolve on their own, free from the shackles of limited or inadequate data input," he states. "Once that happens, business AI systems will be able to grow alongside the companies they serve, offering both insight and innovation, and delivering value on a scale that even the most optimistic technologist may have dismissed as fantasy just a few short years ago."

Shakunt Malhotra, VP Operations at Globecast in Asia, focuses on the broadcast industry in his November 2018 article for *The Globecaster,* "10 Powerful Applications for AI in Broadcast." The first application is quality checking (QC). Traditionally, tasks performed by systems find flaws in a file's technical standards while people find flaws in the viewing experience. Viewing and checking compatibility for various devices are not only tiring and repetitive, but also hugely time consuming. Through symbolic learning and machine learning, AI can handle both.

Another laborious task, searching content, involves marking content through entering metadata manually. Relevant content can easily be missed if search criteria change. Based on image recognition and symbolic learning, AI can create a large inventory of metadata, classify content (happy moment or sad, for example), and identify brand logos in sports events quickly and accurately.

Compliance, the process of identifying events or scenes that may restrict transmission or distribution in specific areas due to regulatory requirements, can be accomplished through AI's supervised learning. Additionally, AI, through neural networks and deep learning, can help rating agencies quickly suggest a rating for a program or movie.

Though editing is very much a creative human skill, there are editorial decisions that are routine, such as compliance, mentioned above. Advanced system functions can identify language that needs to be bleeped and frames that need to be blurred.

Identifying key highlights of sports events can be quickly accomplished through AI symbolic learning, while AI advanced editing

systems can help create them. AI can use search functionality to then quickly provide details of similar events in the past, and create or embed links to make the highlights more interesting.

If advertising appears at an inopportune moment in a program (how about interrupting a romantic interlude with an ad for disposable diapers?), it might irritate the viewer. Through image recognition, AI can identify scene changes and even provide relevant advertisements based on metadata associated with a scene.

Subtitling and closed captioning are often rife with flaws. Through NLP (Natural Learning Process) and RNN (Recurrent Neural Networks), AI can "understand" regional accents and create correct sentence construction and punctuation.

AI can improve supervision practices using reinforced machine learning. By quickly identifying any distribution or content transmission issues, AI can maintain the quality of the viewer's experience.

Finally, robots and the news: A humanoid AI could present scripted news, present visuals from remote locations, and even react to breaking news. So much for hair, makeup, and travel expenses!

AI in Debt Collection.

Collecting debts involves an almost non-stop series of decisions. When should I call? What is the best way to negotiate this payment arrangement? Numerous factors need to be considered, and mistakes can carry serious consequences. But what if your accounts receivable staffers could manage the most tedious tasks by using AI that "thinks" like a collector? For example, what if you had a "virtual agent" to supplement your collection efforts and free up more time to add value in other ways?

As an example, enter Alex, the "virtual assistant" from Quantrax, capable of interacting with consumers in the same manner as human agents, handling a wide range of tasks based on agency preferences.

In his May 2019 article in ACA's *Collector* magazine, "The Robot Revolution," communications consultant and former editor of *Collector* magazine, Tim Dressen, describes the value that an AI-based virtual assistant can bring to accounts receivable management.

The functions and parameters of a virtual agent are specified by A/R, ensuring that it follows company policies, explains Dressen. Common tasks are

assigned, such as verifying identifying information, providing creditor information, confirming account balances, updating contact information, accepting attorney information, requesting bankruptcy details, accepting and processing payments, handling disputes, and negotiating payment plans. If the company does not want the agent to handle certain accounts, such as those that are already in the legal process or that have characteristics indicating they may present a high risk of default, they can be locked down so the debtor is directed to a human collector. Additionally, the virtual agent is conversant in numerous languages, reducing the need for multi-lingual personnel.

In February, HighRadius Corporation launched its Autonomous Receivables solutions, powered by its digital assistant Freeda and its Rivana Artificial Intelligence Engine. Freeda uses natural language processing and AI-based technology to serve as the interaction layer between a human A/R analyst and the core components of its Integrated Receivables platform. The Rivana AI engine supports automation and prediction across the IR platform with machine learning algorithms trained on more than $1 trillion in receivables data.

Imagine this scenario: The collector comes in to work, Freeda greets her with a daily work board with selections: Call accounts Freeda has identified as critical, send some automated email correspondence, review new credit applications or the latest credit risk updates. The collector chooses phone calls, and Freeda brings up the call work board, which shows already prioritized accounts based on her AI-enabled prediction of their aging 30 days from today. The collector chooses an account, and Freeda brings up its details. During the collector's call, Freeda captures the key action items, creates a payment commitment, sets a reminder for the collector's follow up, drafts a summary to send to the debtor, along with relevant invoices to attach. Before delivering each action, Freeda asks permission of the collector.
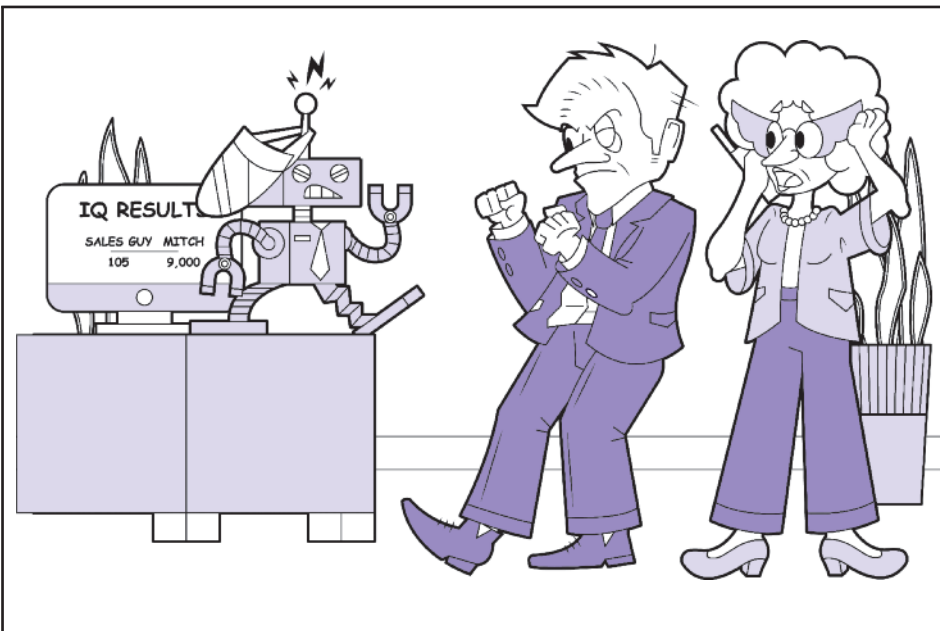
Sales and our new AI assistant Mitch got into it, Boss. Sales didn't like Mitch's data, Mitch told Sales to focus on his own limited skill set, Sales threatened to yank out Mitch's head screws, Mitch challenged Sales to an IQ test competition, and it sorta went downhill from there.

Present & Future of AI —

Is AI for Everyone?

"No two companies adopt a technology trend in the same way," state Mittal, Kuder, and Hans. "Every organization has its own goals, strengths, and weaknesses to ponder before it embarks on its own transformation journey." The authors suggest asking questions, whose answers will clarify what AI can offer your organization. What business objective(s) can we achieve by deploying AI? (Do you want, for example, to pursue solutions that reduce costs? Facilitate a leap in productivity? Monitor compliance? Reduce risk scenarios? Derive greater meaning from more data?) How can we use AI to achieve a competitive advantage? Is our technology adequate for an AI-fueled organization? If not, how do we find the right partners to build our AI ecosystem?

The authors stress that more important than going big or starting small is moving with purpose. Once your organization identifies an opportunity (such as transactional, time-consuming tasks), a cost/benefit analysis can determine whether an AI solution is feasible. They suggest instituting a pilot program that runs four to eight weeks. If the results are positive, you can then determine how to move forward to scale to production, and perhaps subsequently to expand into other areas.

Virtual assistants such as Alex and Freeda (and others) represent a step beyond the AI-based tools commonly used today. One company may use basic automation, while another may venture into more sophisticated applications. Artificial intelligence in one form or another has become so omnipresent in our world that organizations take advantage of AI without even thinking about it. Marketers today are using commercially available AI to identify and segment audiences, build ad creative, improve performance, and optimize spending automatically in real time.

Programmatic platforms often use AI to manage real-time ad buying, selling, and placement.

Today's AI requires human input and interaction. While data-based tools available now can make any credit and collections department more efficient, they generally represent baby steps toward the AI of the future. The grand idea, according to Hao, is to develop AI to the point of resembling human intelligence. Some experts believe, she says, that machine learning and deep learning will eventually get us there with enough data, but most would agree that it is still a long way off.

In the meantime, media should stay informed about the progress of AI—the ways that it can increase efficiencies and profitability now, and what their organizations may need to do in the near future to remain competitive. And who really knows how fast it will progress? Perhaps sooner than we think, R2D2 may be occupying a cubicle near you! ♦