

7. Collective Intelligence: Why Organizations Need to Bring the Human Function Back to the Center of the AI Revolution

Peter Waser, Starmind International, Künsnacht



Humans have been dreaming and toying with the idea of objects coming to life as intelligent beings for centuries. The ancient Greeks dreamt of myths about robots — and Chinese and Egyptian engineers built androids.

However, AI (Artificial Intelligence) as we understand it today was defined when a handful of computer scientists rallied around the term at the Dartmouth Conferences in 1956 and birthed the field. Ever since, AI has been envisioned as either the driver of the brightest and happiest of futures, or as the overreaching and delusional dreams of crazy scientists with nothing better to do.

And let's be honest, it might have been a bit of both. In any case, AI has grown since to become a large part of our lives.

For the longest time, the growth of AI came through the expansion of machine learning. Using algorithms to parse data and learn from it — to then take that information and make a determination or prediction. The basis is training rather than coding, so the machine learns how to perform a task rather than be taught.

AI experienced steady growth as even more complex algorithms were built: Decision tree learning, inductive logic programming, clustering, reinforcement learning— to name a few. However, none achieved the ultimate goal of General AI, and even Narrow AI was mostly out of reach with early machine learning approaches.

Switch gears to right now — and in the last few years we have watched AI explode. The innovations in deep learning are bringing immense advances that get us closer to the happy, ideal future of machines working for us — the human.

Deep learning enables analysis and erudition of massive amounts of unsupervised data to extract complex patterns, create semantic indexing, produce data tagging, allow for fast information retrieval and the simplifying of discriminative tasks.

Much of this unrivalled advancement in technology has to do with the wide availability of processing power that make parallel processing ever faster, cheaper, and more powerful. It also has to do with the simultaneous one-two punch of practically infinite storage and a flood of data of every stripe (that whole Big Data movement) — images, text, transactions, mapping data, you name it.

Machines are getting closer and closer to the human mind's ability to learn from its environment by the processing of data — this process has been focusing on replacing the human intelligence in the performance of any task in an organization.

But despite the significant progress of machine and deep learning during the last five years, these systems have not come close to the ability of a person in understanding context from small data — in one word, intuition. Let me give you an example.

Face recognition has evolved massively as a consequence of the advancements in deep learning. With a large enough number of pictures, machines are now able to discern faces and identify individual people. It will tell you who the person is and give you a complete list of their actions in the past. When entering a location of a major retail store it might be

able to tell you what this person is about to purchase. Can you envision this?

Obviously, for the retailer, this is invaluable information. The organization might be able to feed targeted offers in advance, and will be somehow able to provide a bespoke experience based on the accumulated data from the target that is being “read.” However, what the machine is not able to do is to sense the mood of the person, and most importantly, how this might affect his behavior.

We are still far away from creating a machine that can apply intuition (not just predictive skills) in the decision-making process. In order to create true AI, we can alter the way in which we are developing it — moving from a training first approach, to a learning by doing approach, which will take a huge leap in our understanding of technology. Or, we can simply connect AI with human intelligence to create “collective intelligence” and bring the human intelligence back into the game.

How can Organizations Harness the Power of Intuition?

Organizations are made of employees. Each of them holds valuable intuition and ingenuity that helps them make decisions in environments with limited sources of information. This means, that every employee in an organization is a treasure trove of knowledge — knowledge that is latent, unstructured and incredibly valuable: Tacit Knowledge.

It's easy to conduct a search in a knowledge community and find the company's standard procedures or rules on a certain topic. But it's not as simple to understand specifically how someone worked through the process or overcame challenges that arose.

Most of these ideas, thoughts and experiences are gathered by each individual employee and reside only in their minds. But as they are registered and stored in a place hardly reachable by any machine, it is virtually impossible to analyze, process, index or retrieve.

AI is unable to access the intuition stored in the mind of the employees to process data. So why not use the immense power of learning and data analysis that's embedded in AI to predict where the intuition is stored? In other words: Who knows what?

By analyzing existing interactions in an organization, AI can predict who holds that valuable piece of information, who could solve a question, and who can add value to the germination of an innovation thought.

Mimicking the human brain, the connection between AI and human intelligence creates a collective brain that maps out the combined intelligence of each and every one of the employees in the organization. It's like having 1,000 brains in your pocket.

Once a question arises, the collective brain turns to AI to locate exactly where the answer is stored. When the answer is already stored in the collective brain, it is immediately delivered. If it's not available, the right person to answer the question is

located within the organization. The answer is then added to the collective brain. AI will then take the answer, learn from it, alter old stored information and keep the stored knowledge up to date in the process.

A Collective Brain Right When You Need It

Most employees in an organization deal in complex work environments. However, employees need to be agile to navigate through quickly evolving markets. Collective intelligence turns into a powerful tool in any organization. The combination of AI with the capabilities of the human brain are the starting platform for innovation and creativity, but only when it can be accessed at any time and any place. Again, the human needs to take center stage when it comes to developing AI.

When employees have questions, or need to find information, they should be able to access the collective intelligence with the lowest possible number of steps to avoid interrupting their through process.

When working online, an overlay question interface will allow employees to access the collective brain independently of what they are doing in that precise moment - whether they are analyzing the state of the sales funnel through the CRM tool, accessing the latest stock count through their retail store application, or simply navigating the company intranet.

Even better, before a question arises, the collective brain can propose solutions based on context awareness. When writing emails, chatting on the enterprise social media channels or creating a complex process document, employees have suggested solutions and content offered in an unobtrusive way.

In addition, chatbots are easily integrated to allow for direct speech-based access to the collective brain. People can audibly ask questions during meetings or during a conversation, and the answers would be delivered straight away or redirected to be used at a later stage.

AI and Human Intelligence are Working Together Today. The J. Walter Thompson Pangaea

We have proven the value of people's talent in any organization. This is more so at the world's best known marketing communications brand in the world, J. Walter Thompson. J. Walter Thompson has been pioneering brands that connect people, change culture and drive commerce for more than 150 years. A true global network, J. Walter Thompson has more than 200 offices in over 90 countries and employs nearly 12,000 marketing professionals. They face the everyday challenge of keeping their global community connected to achieve their goal of pioneering forward and keeping their clients on the leading edge.

Naturally, their first instinct when looking for a new and innovative solution was to go straight to AI. But they needed AI that would connect people and transform the experience of sharing information between specialists. AI where the user becomes the center of all communication and, therefore, information and intuition is spread in a cyclic way to every employee at the exact moment when it is needed. Essentially, they needed AI connected to human intelligence to create the collective brain of the organization.

In their own words: "Artificial Intelligence that connects everyone at the J. Walter Thompson Company"

And so, Pangaea was created based on Starmind AI brain technology. Very similar to the supercontinent that existed on earth millions of years ago that connected all the landmasses, Pangaea connects each employee and all the knowledge in the organization, independently of their location.

Different locations are brought together, departmental divisions are eradicated, and hierarchies are avoided so that every em-

ployee of the organization has direct and untethered access to the knowledge, experience, intuition, ingenuity and talent of their colleagues worldwide.

Project groups are staffed with the best possible members, and cutting edge ideas are shared among departments without the need to document or edit content. Even multimillion deals are closed with the unexpected help from agencies located thousands of kilometers away, by simply answering a short but vital question.

By bringing back the human into the AI evolution, we are a step closer to the ultimate goal of creating the greatest future for humankind.

About the author:

Peter Waser is CEO at Starmind International in Küsnacht. He is a member of the Chapter Board Doing Business in USA of the Swiss-American Chamber of Commerce.