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AI vs AI Hype

Is AI over-hyped? There is certainly plenty of buzz out there about the opportunities and threats of artificial intelligence. But particularly in the marketing and analytics worlds, the bigger question is perhaps what AI actually represents in terms of practical change and impact.

AI vs AI Hype

Baked into the definition of AI is a human perception of "smartness", which is subjective and evolving. The AI Effect[1] suggests that once AI has achieved something previously unachievable (e.g. computer beats chess champion) then it becomes old hat and is no longer considered to be AI.

Conveniently that means there is no correct answer to the question of what AI is, other than a point-in-time assessment of the views of the collective minds of the world! A philosophical rather than a scientific challenge.

And while those close to the technology might debate whether if-then-else algorithms, propensity models, expert systems and/or deep learning fall in or out of the AI bucket, the reality is that the outcomes generated might be completely indistinguishable to the end user.

Econsultancy and Adobe's 2019 Digital Trends Report[2] highlights "There's a buzz around cutting-edge technology: 36% of larger organisations are now using AI, particularly to enhance data analysis – 50% more than last year".

How should we interpret that apparently dramatic increase? It's certainly tricky if you take the same view of the AI Effect as its formulator Tesler that "[artificial] intelligence is whatever machines haven't done yet".[3]

Is it "AI" whenever a computer is faster than a human in finding a pattern in some data? It certainly sounds useful irrespective of whether it ticks the AI box or not.

Realistically one might wager that the question people are really answering in this kind of survey is more along the lines of: "Is your organisation using smart technology to enhance data analysis?". And "smart" could mean a lot of different things depending on perception.

So, the next time you see a product or service or solution that is presented as being AI enabled or powered, try swapping in the word "smart": AI tool becomes smart tool, powered-by-AI becomes powered-by-smarts.

And that will probably then prompt some questions around exactly what makes it smart, and indeed smarter than what exactly?

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1 https://en.wikipedia.org/wiki/AI_effect

2 https://www.adobe.com/au/modal-offers/econsultancy_digital_trends_2019_report.html

3 http://www.nomodes.com/Larry_Tesler_Consulting/Adages_and_Coinages.html

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"36% of larger organisations are now using AI... 50% more than last year"

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Supervised vs Unsupervised Learning

In some analytics forums "AI" has become simply another way of describing machine learning, or in particular deep learning using algorithms like artificial neural networks that conceptually seem more "human brain" in structure.

Just like neural networks, the distinction between machine learning algorithms that are explicitly trained to recognise or predict a given outcome (supervised learning) versus those that are left to roam free to find patterns (unsupervised learning) is not new.

However, as the sophistication of approach and application increases, some of the implications of the differences in approach can become stronger.

Do self-driving cars need to run over some people to learn how not to run over people? Is an insurance pricing algorithm racist because it has been fed a data set influenced by historical racism, or because nobody taught the algorithm not to be racist?

From a marketing perspective, algorithms can seem to be at their most powerful when they are unsupervised and plugged directly into decisioning. However, that "power" (which is often a false panacea for "stuff happening without us doing anything") can be at the expense of control and influence over outcome.

The cycle of teaching and learning needs careful and considered stewardship, and the blend of technical, mathematical, ethical and commercial thinking required to sustain good results means we are likely to see an increase rather than a decrease in human resourcing requirements in the immediate term.

Intelligence vs Automation

There is always a risk of conflation between artificial intelligence and automation. It is automation that takes the human out of the equation, and if that automation is predominantly doing rather than deciding there may be limited (if any) intelligence involved.

The trend of automation taking away jobs is not going away. Artificial intelligence may well impact the areas in which those jobs are affected however.

In data analytics, there has always been a critical blending of human insight and algorithms to generate value. The understanding and application of business context has consistently proved hard to automate effectively; the surfacing of patterns and trends in large datasets has consistently benefitted from advances in technology (whether increases in sophistication or simply dramatic decreases in the cost of processing power).

Terms like Augmented Analytics[4] potentially heighten that sense whereby more of the "intelligent" aspects of the analytics lifecycle can be automated. However, in reality data scientists have simply an increasingly powerful toolbox that can help speed-up tasks – and that increase in power is a consistent long-term trend rather than a sudden revolution.

Meanwhile, the skill and responsibility to interpret and apply in context, critically validate results and indeed successfully evaluate and select the right approach to take in the first place remain firmly human. The trend of working smarter is unlikely to go away, and neither will the importance of those analytics roles.

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4 https://whatis.techtarget.com/definition/augmented-analytics

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Food for Thought

Whatever the level of sophistication of the intelligence, the outputs are only ever as good as the inputs. When algorithms spit out the wrong outcome, it's often easier to blame the thought rather than the food: "it" made the wrong decision.

Recent fatalities from crashing Boeing 737 Max 8s have been pinpointed on the "smart" MCAS algorithm designed to make the plane feel like a previous version for transitioning pilots. But there is evidence that suggests a single faulty sensor could have fed incorrect data to that "smart" system[5] - a fundamental control system design failure.

From a marketing standpoint, the training and application of algorithms presents several data challenges:

1. Starvation – a lack of clean data to feed an algorithm with in the first place.

2. Malnutrition – datasets with explicit or implicit bias that generate an unhealthy result.

3. Lack of Invention – algorithms tend to reference historical behaviours, stifling creativity.

While algorithms might help to automate some aspects of data cleansing, there is a risk of lack of focus on decent raw materials.

It's not just the technical and manual cost and effort of collecting accurate and relevant data; regulations like GDPR rightly impose the requirement to assess why and how data is being used to make decisions that affect the ultimate owners of those data points[6].

Mad Men, meet Dr Watson

The whisky and cigar fueled patriarchy of advertising ideas may be largely dead; but equally the automation of genuine creativity is still quite a pipe dream.

Algorithms like referencing history and converging on trends: the exact opposite of standing out from the crowd.

While it is true in some ways that AI could in itself represent a competitive advantage, that assumes either a superior algorithm or a superior deployment. A race-to-the-top of pure algorithmic supremacy hints at an end game that effectively paralyses the levers of differentiation.

Would we really hand over the long-term values of a brand to an algorithm to optimise? Or indeed trust one to converge on an agreeable meaning of "positive customer experience"?

The reality is that right now a lot of the power of transistors is simply around making testing and exploration faster; the commercial imperative of creative human-sourced hypotheses remains.

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5 https://edition.cnn.com/2019/04/30/politics/boeing-sensor-737-max-faa/index.html

6 https://iapp.org/news/a/why-controllers-are-accountable-for-automatic-decision-making-under-the-gdpr/

"Would we really hand over the long-term values of a brand to an algorithm to optimise? "

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Where Next?

Often as hype peaks, it masks underlying practical trends that are equally significant and important to watch. Technology will undoubtedly continue to disrupt analytics and marketing, so it seems important to close on some practical points to watch.

Working smarter: both human intelligence/ wisdom and the speed and scalability of technology are important partners, but equally important is being clear on setting and measuring our expectations for both.

A focus on clear outcomes: teams and algorithms need to be commercially accountable, and accountable to the right set of measures – watch out for short-term optimisation at the expense of long-term success.

A healthy diet: data is not the "new oil"; it's simply food for thought. So a focus on having the right raw materials is as critical as the hard work further along the analytical lifecycle.

Challenging convergence: algorithms or approaches that converge purely on repeating history (and its potential biases) or the average "off-the-shelf" response for a market need to be challenged to keep brands and experiences truly relevant and differentiated.

And then, irrespective of any hype, we should hope to see significant practical progress in our collective usage of data to improve important things like customer experience and commercial success.

About Lynchpin:

Lynchpin Analytics is an independent analytics consultancy that has been providing Data Science and Data Strategy services to clients across a wide range of industries since 2005.

Lynchpin combines the best of modern Data Science with practicality and experience to help organisations make the best possible use of their data.

Our purpose is straightforward: turning data into actionable insight.

Our analytics services across Data Science, Data Strategy & Data Engineering allow us to help organisations uncover insights from their past, take action to drive performance in the present and use data science to anticipate the future, building competitive advantage.
We do that by helping you to find the analytics strategy that works best for your business, building the robust data platform to support that and using it to create actionable Business Intelligence and Machine Learning to fuel business decisions.

We believe that each organisation is unique, rich with data at every level, and therefore needing bespoke analytical solutions to maximise its opportunities. We know that good people and processes are critical, supported by the right analytics & technologies. Combining these to allow effective decision-making is central to our approach, as is an unwavering focus on results.

We are trusted by Emirates, Allergan, John Lewis, Canon, HSBC, Hotel Chocolat, MTV, Ticketmaster, London Stock Exchange Group and more.

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