

Strategy elevated by technology



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When I started in the business, media planning was enjoying the recent introduction of software that could work out the combined reach of the chosen publications, programmes, etc. A few years earlier, planners had to work this out manually, using the mathematical approach of standard deviation – with a paper and pen. For these proto-channel planners, the prospect of software doing this for them would have seemed remarkable. It

would have also likely made a few of them a little anxious: would this replace them?

However, what happened in this shift, which happens in each incremental technological development, is that a form of leverage is gained that allows us to elevate. And with each successive elevation comes an increase in the scope that we can influence.

We can start to see the next major elevation – and it will most likely be driven by reinforcement learning, an emerging area of artificial intelligence.

Advances in technology such as AI will mean for planners a move from the free-associating, subjective approach to a more empirical, objective and advisory role. Future strategists will therefore come in two different forms – strategic technologists and strategic advisors – ushering in a more solid, empirical, tangible and business-centric discipline

Currently, reinforcement learning is still in its infancy. Like any child, it has, to date, mostly been playing computer games, and only recently progressed to board games – notably beating the world champion of the Chinese board game, Go. But it is about to head off to university – carrying out scientific research in a simulated version of the real world, with all of the known physical laws. What will it discover that humans haven't?

What reinforcement learning needs in order to work is a closed system – where the action and the outcome are inextricably linked. This is actually hard to achieve in the area of marketing planning and implementation as the outcome of an action

often doesn't result in a directly attributable result. The closest thing we have to a closed system is planning digital-only channels for advertisers that transact exclusively online. And this is the doorway through which reinforcement learning will enter our industry.

To open the door, the crucial event that needs to happen is the coming together of attribution modelling (the 'decisioning' component) and the demand-side platform (the execution component). At present, users log in to the former to pull out insights and then log in to the latter to execute their strategies. When they are finally joined up, this will create the first closed system our industry has ever experienced, and with this the basis into which we can drop a reinforcement learning algorithm. To start with, we will have it running in a simulated environment, allowing it to cut its teeth. And then, when it is outperforming the planners, we will allow it to take over. This will be a landmark moment for strategy.

It will start by making millions of micro decisions on site, position, media unit size, creative work, frequency, investment level and device. It will be a self-optimising system, working 24 hours a day. Crucially, it will be able to work in parallel with itself, through parallel processing software, and therefore able to make hundreds of thousands of improvements every single second. Therefore, even just a few days after handing over control to it, performance will be increasing so dramatically that clients will see an

unprecedented ramping up of their business performance. Which will, in a short space of time, cause ripples in the fabric of share-of-investment-share-of-market reality. Every digitally transacting business will have to follow suit, or face inevitable decline.

This will happen in the next five years. And then, the next wave will start.

Plugging into this closed system will be all of the other advanced forms of marketing technology – customer management software, data management platforms, programmatic creative technology (including

'robo-writing' technologies, so that headlines and body copy can be written specifically to the individual that is being targeted), specialist DSPs (e.g. a native DSP), search bid management technology, etc.

With the exception of the reducing component of offline channels and the indirect effects of marketing investment, an increasing bulk of the client's marketing activity will be self-optimising and self-implementing within what will feel like a marketing central nervous system. We will be witnessing media strategies, creativity and CRM initiatives being created before our very eyes – strategies and ads will be an epiphenomenon of the system – as in, they will emerge from it.

We will be pinning these strategies and ads onto the walls, after they have already been running in the real world. And there will be lots of them – as headlines will be written based on the data signals of the user IDs. Communicating the optimally motivating messages to people, moments before they are in-market.

Sounds implausible? It shouldn't. A precedent already exists. The trading floors of the major financial hubs are a good early forerunner for where media is heading. The

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movement to a live trading exchange in the 1980s is analogous to the movement media agencies made to programmatic buying. And now it is all about algo-trading. Using algorithms to trade is proven to be more effective than the existing traders – with trading patterns and strategies that emerge out of the algorithms (and given names such as 'The Boston Shuffler').

This will happen to our industry.

Subjective judgement will be sharp-elbowed out of the way. For people working in marketing for businesses, where the

transaction happens exclusively online, the industry will fundamentally be a software automation business.

Depressed? Don't be. As this will not lead to the death of strategy, merely the next elevation.

THE ELEVATED ROLE OF THE STRATEGIST

In this new world, the role of the individual will simply move up. This technology will be an extension of us. We will be in control of it. And, therefore, we will tend to it the way people tend to a garden.

In the same way that a gardener designs the layout of the garden, waters it, plants new plants, trims existing plants, removes weeds and erects a trellis, the strategist will tend to the marketing ecosystem. They will design the marketing technology stack, plugging in/out new technologies as they develop, feeding in new data sources gained through strategic second-party data deals, and so on.

Strategists will simply need to know about data and marketing technology, and its interoperability, as much as they, today, know about media. They will talk a different language – and the output will be much more tangible and demonstrative. They will be amused by the PowerPoint charts we create today, with all the subjective rationale that is so natural to our current way of working. They won't need to sell. They will advise.

These future strategists exist right now – they are the 22-year-old executives that have just started work in the data science departments of media agencies or marketing- and ad-technology companies. One of them will replace me at some point in the next ten to twenty years.

My guess is that you are now thinking you will never be one of those types of strategists. Again, don't worry, as it is looking increasingly likely that there will be another type of strategist.

For the foreseeable future, with everything we currently know about what reinforcement

learning could achieve, it is hard to see how the indirect effects of marketing investment (brand-based activity that aims to influence equity measures) and/or businesses that do not transact with a digital data signal could ever be part of this central nervous system. And I am referring here to significant super-categories, such as FMCG, where the payback from marketing investment isn't directly linked to a purchase event.

Clearly, there will be a ramping up of accuracy and sophistication within econometric models utilising the single-source view of digital exposure and purchase; this is currently being developed by Dunnhumby. But this will still require modelling – when the exposure results not in a purchase but an elevated chance of purchase, some months later. A modelled approach is the only way to isolate and attribute the contribution of marketing activities.

This is important, as this means that this indirect/time-shifted area of marketing will not be able to function as a closed-looped system. And therefore reinforcement learning will not be able to take over the running of things, from you. Strategic decision making, within this area, will continue to be made based on human judgement. Albeit judgement that is augmented by another, broader area of AI – that of deep learning.

Different from reinforcement learning, deep learning is able to look at all data points and try to make sense of them. Looking for correlations. And then making suggestions on what to do. This is exactly what Google and IBM are working on for the medical profession – a cognitive computer that has read every single medical journal and media research paper ever published. It can also read every paper produced, as it is produced. From this it can, with eerie accuracy, predict the likely illness from reported symptoms. This resource will advise GPs. Similar AI-driven cognitive advisors are being created for other industries – such as the legal profession, where the AI algorithm is now a legal expert, there to advise.

It feels inevitable that a similar resource will spring up for marketers – when it is so possible and yet, at the same time, so valuable. A system that will work alongside strategists, helping them make informed judgements.



Imagine a deep-learning algorithm that has ingested every single *Admap* article ever written. Add to that all 3,000 econometric model results, all of the 4,000 attribution models and any other ad hoc result from your agency network. Now add to that every IPA Effectiveness Awards paper, every paper within Warc, Mintel, nVision, Euromonitor, etc. Throw in all of the Ehrenberg Bass white papers and you have the most incredible marketing advisor sitting right next to you.

Strategists will be able to talk to it about the brief and it will be able to guide thinking – what has been proved to work and what hasn't. Working on a new car brief, it may ask a series of important questions that have implications for effectiveness, such as if the car is visually distinctive. If you reply 'no', it may steer you away from digital OOH and other static visual channels, as this will always provide a low RoI. It may suggest you are overspending in a channel, suggest a better flighting approach – taking into consideration events you hadn't realised will shift up category consideration and therefore attention to the message.

The crucial difference for the indirect/time-shifted area of marketing planning is that the strategist remains as the ultimate decision maker. However, in contrast to today, the

strategists of the future are likely to be more empirically based in their approach. They will construct their recommendations with reference to meta-studies that have teased out law-like relationships on how the physics of marketing actually works.

Including a new body of insights gleaned from the individual cookie/device-ID level, these will emerge out of the aforementioned reinforcement learning marketing systems. In fact, these deep learning cognitive advisors will, in a sense, peer into the marketing technology stacks and pull out new, exotic marketing laws. For example, humour-based ads for financial services must be avoided within social channels in the early part of the week – they typically cause a decline in sentiment. Imagine tens of thousands of very specific insights that can be

'surfaced up' for strategists when they are working on a plan.

So, therefore, the future strategists will come in two different forms: a strategic technologist that constructs and develops the marketing engine that automatically carries out all marketing activity; and a strategic advisor that uses AI to help make decisions.

The common ground that underpins both of these future strategic roles should be a guiding light for the direction of travel for our discipline. And that is the move on from the free-associating, subjective approach – where the planner has an opinion and then tries to sell it in – to a more empirical, objective and advisory role. Where we build marketing strategies using the building bricks of the marketing laws that have emerged from marketing science, through to advising clients on how to improve the engineering of their marketing technology, with a real grasp of the tangible implications of our recommendations.

That, for me, is the next big shift.

And that, for me, is the future of strategy – a more solid, empirical, tangible and business-centric discipline.

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