

5

The Attention Economy Is Coming (Fast)

I must warn the reader that this chapter should be read with care, for I have not the skill to make myself clear to those who do not wish to concentrate their attention.

Jean-Jacques Rousseau, *The Social Contract*, 1762



5.1 Drawing High Attention to Low Attention

5.1.1 Human Capacity

Have you ever walked into a shopping centre to buy a pair of jeans and walked out with two pair of shoes and a new best friend from the cosmetics pop-up counter? That's okay, turns out you are normal. We live in an age of extreme distraction where our capacity to process in a world of unrivalled distraction is limited. So, to efficiently avoid attention overwhelm, our cognitive limits force us to take decision shortcuts. And it seems that the human mind is content with decisions that are simply 'good enough', so it allocates just enough attention to achieve that end. It's called 'satisficing', a term coined by Nobel award economist, Herbert Simon, to communicate the combination of satisfy and suffice. The reality check is that 'satisficing'

falls far short of the zealous undivided attention that marketers (and philosophical writers like Jean-Jacques Rousseau) idealise and chase.

Consumer buying behaviour is largely habitual and trivial, that we know from decades of consumer behaviour research. When you combine that with a limited human capacity to pay attention, the stark reality is that advertising is incidental in our lives. It's just not as important to people as AdLand had imagined. Another Factfulness moment. That alone is enough to create a crisis of attention, regardless of the ever-increasing demands on the human mind. Marketers are forced to re-think how to create advertising for greater attentiveness. What mechanisms they might need to engage to capture more attention. How to better optimise the media buy for greater attentive reach.

But to be quite frank, how well do we really understand the complex notion of attention?

REMEMBER THIS SIMPLE TRUTH

We are overloaded and take decision shortcuts. This 'satisficing' means that our level of attention to advertising is far short of the undivided version most marketers idealise and chase.

QUICK EXPLAINER

Satisficing and bounded rationality

Herbert Simon (1916–2001) was awarded the Nobel Prize in Economics in 1978 for his pioneering research into the decision-making process within economic organisations. His research ranged across the fields of cognitive psychology, computer science, public administration, economics, management, philosophy of science and sociology.

Simon is most famous for what is known to economists as the theory of 'bounded rationality'; a theory about economic decision-making that Simon famously called 'satisficing', a combination of satisfy and suffice.

The theory suggests the rationality of actual human behaviour is always partial or 'bounded' by human limitations. These limitations come from three contributions: available information (too little or too much), the inherent cognitive capabilities or processing power of the human mind, and the finite amount of time humans have to make a decision. Simon suggests that the combination of these components push decision-making to be done in haste due to the 'need of the hour'. Therefore the human mind, in many different situations, necessarily restricts itself and seeks something that is 'good enough', something that is satisfactory but not always optimal.

This aligns with how consumers buy today and in particular Andrew Ehrenberg's theory of consumer behaviour. Buying is not rational, rather we habitually buy from a small repertoire of brands favouring one over the others in our repertoire (in line with market share). Occasionally we might try new things but we do not, week to week, seek a better taste, more practical packaging, improved ethical sourcing, a higher proportion of Omega-3 fatty acids, regardless of what the ad tells us we should do. We stick to the products we have bought before because it is easy and we are time poor. For goods that we don't buy habitually we might aspire to find something optimal but when we come across an item that meets our level of 'good enough', and we need it to be delivered in time for the weekend, we go for it.

Satisficing is how the real world shapes our behaviour.

5.1.2 Not All Attention is the Same

In the vast array of attention theory literature, we found there was some consensus among scholars of both attention and, more broadly, dual processing. That consensus relates to what is happening to attention during subconscious and conscious states. It seems humans have a default state of subconsciousness where we have a broad and un-specific focus to everything around us. When we are exposed to certain stimuli (or in this context advertising content), our state of consciousness, and our subsequent level of attention, can change depending on the guidance triggers within. There are two types of guidance triggers mentioned in the literature: top-down and bottom-up. Top-down triggers are considered to be personal and goal-oriented (also referred to as endogenous). For example, when we deliberately search for something online or see a personally relevant ad on a digital platform, we pay high and controlled attention. With high and controlled attention, the ad becomes our primary focus and requires us to think on a fully conscious level.

External and stimulus-driven triggers (also referred to as exogenous) are categorised as bottom-up triggers. For example, when an ad delivers unexpectedness, such as high emotion, animation or high sound, we pay low and automatic attention. With low and automatic attention, the ad becomes our incidental focus which commands less demanding semi-conscious processing. Stimulus-driven bottom-up attention is also known to have a sharp and fast rise (and fall), which has implications for advertisers in developing unexpectedness into content.

REMEMBER THIS SIMPLE TRUTH

Humans have a default state of subconsciousness where we have a broad and un-specific focus to everything around us.

Nothing lasts forever, and high attention to advertising is hard to sustain. Like the vacillating creatures that we are, humans tend to switch between attention levels. And the more hours we clock up of divided attention practice, the more fluid our switching becomes. When the information we are actively searching for turns out to be irrelevant we switch back to either low or pre-attentive levels. When an overtly loud ad bears personal relevancy, our attention level turns to high.

We don't just save the special attention switching skill for advertising. Take a stroll to the shops, for example. We tend not to think too hard while we're walking, we just stroll along in a subconscious state until something triggers our attention. This could be either the signals at a railway crossing up ahead (bottom-up trigger) or a friend honking their horn as they drive past (top-down trigger). Once the train has passed and the friend has driven off, the attentional importance diminishes. We return to subconsciousness and think about getting milk and bread.

QUICK EXPLAINER**Defining our measure of attention**

At Amplified Intelligence our attention measure is produced by transposing recorded webcam/mobile camera footage (from a view collected via our real-time collection app) to a second-by-second attention score via a custom machine learning model. Our model processes the video footage of a person's face looking at the screen at five times per second, which significantly increases its depth as a measure of attention. The attention data is then matched with product choice, viewability metrics (connected to a reference point via an ad tag) and sound at the individual view level.

We built the gaze model to consider three types of known viewing in line with literature. In particular we consider:

1. Active viewing (high attention): Was the respondent looking directly at the test ad-frame?
2. Passive viewing (low attention): Was the respondent in eye shot, but not directly looking at the test ad-frame?
3. Non-attention: Had the respondent walked away from the TV during the test ad-frame, or looked completely away from the mobile screen?

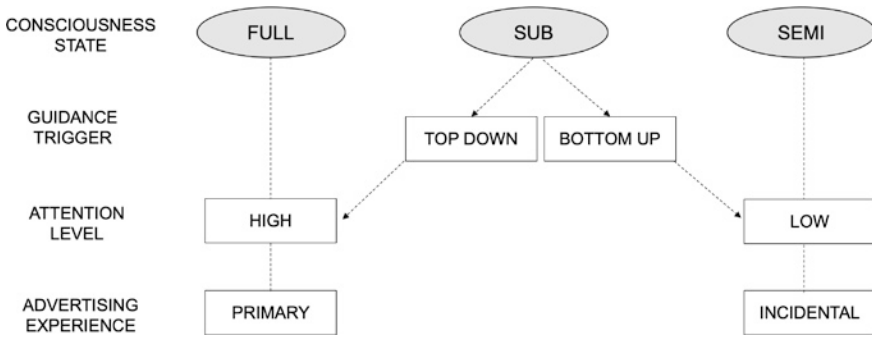


Fig. 5.1 Nelson-Field and Ewens conceptual model of Advertising Attention Processing (WARC, 2019)

There are literally dozens of terms, often used interchangeably, to essentially codify what psychologists call System 1 and System 2 thinking. Figure 5.1 attempts to summarise the expansive literature in a way that shows both the interrelatedness between the terms and the connection to advertising impact. This model attempts to describe the levels and grades that occur within both consciousness and attention. In referring to these levels, Demasio (2000) states ‘...both consciousness and attention occur in levels and grades, they are not monoliths, and they influence each other in a sort of upward spiral.’

5.1.3 The Value of Divided Attention

Attention research has established that in our cluttered environment we typically process advertising in a low or pre-attentive state. Given this, we wanted to know: in an age where advertising is incidental, can incidental advertising exposure deliver impact?

Over 2018–2019, we had the opportunity to work with Dentsu Aegis Network Global on their ambitious *Attention Economy Initiative*. Their project, backed by a cross-section of TV broadcasters, social media and video-sharing platforms, was designed to challenge how the industry thinks about, measures, plans and trades media, based on a measure of attention. We gathered screen data (viewability/time on screen/sound), eye-gaze tracking and Short Term Advertising Strength (STAS) measures from 17,000 video views in the UK, US and Australia (16 sets of data). This data enabled us to look deeper into the nature of low-attention processing and its relationship to sales.

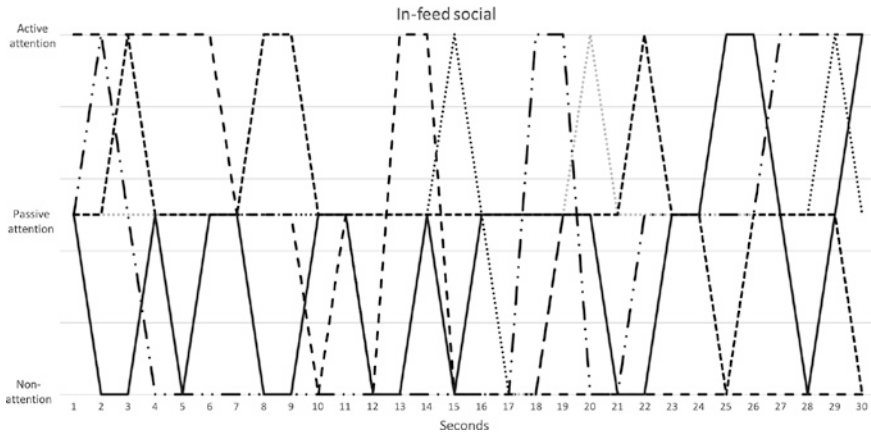


Fig. 5.2 Demonstration of attention switching on in-feed social formats

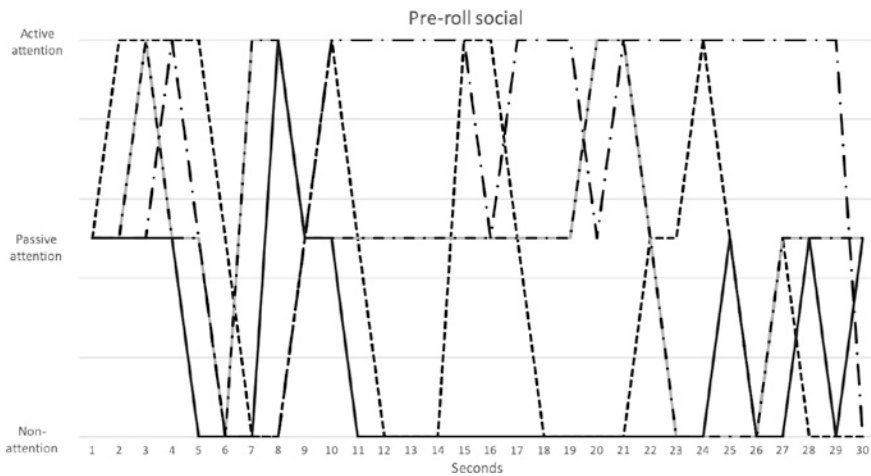


Fig. 5.3 Demonstration of attention switching on pre-roll social formats

It's important to note that the data we collected for this study replicates what is reflected in the greater literature. Firstly, we see that the greater majority of viewing does occur at a low level of attention, irrespective of the platform or device on which the view was consumed. On average 54% (± 7) of all attention paid to advertising was low, while only 32% (± 8) was high. The remaining proportion being non-attention. In our data we can see that the vast majority of the sample switched between attention levels over the course of ad seconds in view. Figures 5.2 and 5.3 demonstrate the degree of switching between the three types of attention with a small snapshot of

our data. It also demonstrates that while the proportion of overall switching is consistent across all platforms, the patterns vary slightly depending on the media type. For example, switching out to avoidance happens earlier on in-feed social than it does pre-roll social.

REMEMBER THIS SIMPLE TRUTH

Viewers switch focus easily. Advertisers need to understand the guidance triggers that snap them out of their normative zombie state.

Next we consider the STAS score by attention level. STAS is a sales proxy calculated from data collected from participants after they choose a test brand from our virtual store (see Quick Explainer). The importance of using brand choice for this type of research is two-fold (greater detail in Chapter 2). Firstly, recall measures are noted to be ineffective for indirect or subconscious exposure given cognitive effort is required to be able to recall and retrieve memory (whereas choice simply calls on increased familiarity without having to be aware of previous exposure to the product message). And secondly, accounting for baseline buying is vital in ensuring that any observed heightened brand choice truly reflects that the ad was noticed, and is not simply a reflection of the brand's market share.

QUICK EXPLAINER

Short Term Advertising Strength as an impact measure

After gathering choice data from a viewer session (as discussed in Chapter 2), we transpose this data to a measure of sales uplift called Short Term Advertising Strength (STAS). STAS is calculated by determining the proportion of category buyers who bought a specific brand having NOT been exposed to brand advertising (control group), and comparing it to the proportion of category buyers who WERE exposed to the same brand advertising (test group). By collecting buying data from a non-exposed control group of participants we can differentiate between real advertising effects and the impact of brand size on buying propensity. This is a key differentiator to the many sales or brand lift studies in the market today.

A STAS score of 100 indicates no advertising impact in that those who were exposed to the advertising were just as likely to purchase as those who were not. A score above 100 indicates that the advertising had a real incremental impact on sales.

Figure 5.4 shows STAS by attention level across all groups. Firstly, this tells us that attention is related to sales, a finding consistent with the 30-plus

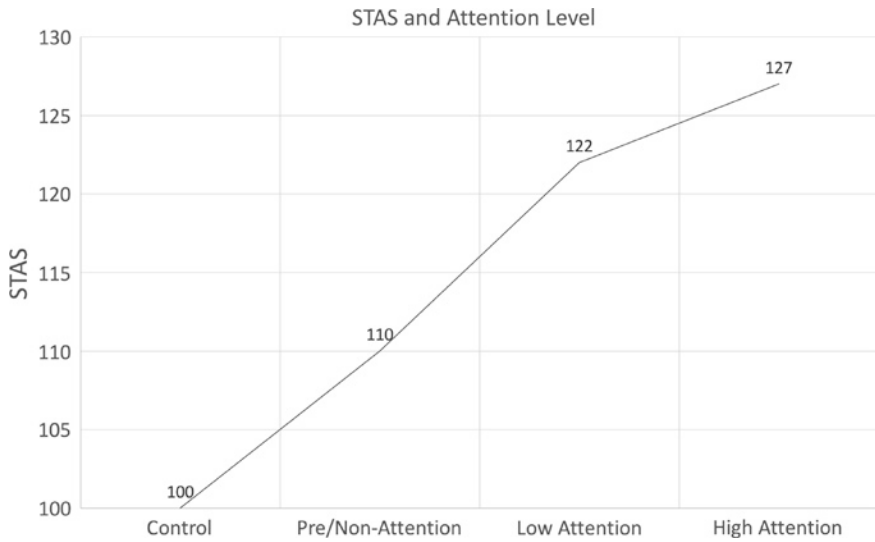


Fig. 5.4 STAS by attention level

studies we have run prior to this collection. But diving deeper tells us more. It tells us that low-attention processing delivers more value than most people give it credit. We found that the greatest uplift in sales impact occurs when a viewer moves from a pre-attentive state (non-attention) to low attention.

Let's be clear here, high attention still drives the greatest impact in absolute terms, but we find that the increase in STAS from low attention is incremental (meaning the biggest jump in STAS happens between no attention and low attention).

These findings echo other studies on low-attention processing and impact in that high-attention processing is rare, that low-attention processing does have an impact and that incidental ad exposure can influence consumer decisions and support the formation of consideration sets. Our work extends previous work on linear TV and gaming into platforms such as Twitter, Facebook, YouTube, Instagram, Youku Tudou, linear TV and BVOD. The nature of our technology and broader methodology in its ability to collect passively and at such scale, is groundbreaking (for the moment). This is a very large single-source collection not restricted by location or sample size or any other biases we speak of in Chapter 2. This work offers modern generalisability and makes a case for cross-platform measurement that truly reflects modal differences and guarantees human presence.

REMEMBER THIS SIMPLE TRUTH

The news is not all bad for advertisers. Low-attention processing punches above its weight in terms of impact.

It is true though, and also important to note, that at the individual platform level, the amount of STAS delivered relative to the different levels of attention does vary. This means that while we can see that low attention does consistently punch above its weight, we find mediating factors can impact how much value low attention (and high attention) returns. This is why we see some platforms are better at fostering attention and delivering sales to advertisers than others. While I do try to remain impartial and not go down the ‘who rates as the best platform’ discussion, in the following chapters I discuss such mediating factors so that advertisers can do their own math.

5.2 A New Economy Is Dawning

People understand the world through stories. Shared stories create brands, shape culture and fuel politics. But a story only has power when it is given attention. The competition for people’s attention is called the Attention Economy.

Joe Marchese, CEO, Attention Capital

5.2.1 A Shifting Paradigm

There is a program on Australian TV, a Network Ten program called *Have you been paying attention?* (2013–) which is a spoof on what, in reality, is taking its toll on our economic and social systems—inattention. Every week the host, Tom Gleisner, quizzes five guests about the previous week’s events only to find many fail to recall events correctly. While the program is clearly comedy, the rising cost of in-attention is no laughing matter and it drives the study of attention economics.

Attention economics is an approach to the management of information overload and its consequences on our economic and social systems. It dates back to World War 2 where concern over the distracting effect of noise on radar operators forced inquiry. Today, scholars consider consequences of inattention on learning behaviours, peer relationships, human burnout, organisational productivity, social behaviour, even road fatalities. In the advertising ecosystem the noise may be different to waveform from radar

technology, but the level of distraction is still there with an increased number of ads, ad formats and media types. Not to mention second screening, emails, texting, instant messaging, Alto's Odyssey, Candy Crush Soda Saga, Fortnite and everything else in between. Noise is causing significant in-attention to advertising and it's costing marketers billions of dollars each year in wasted resources.

And while the problem of reduced attention to advertising is not going away any time soon, the way traditional impressions are bought and sold makes the issue of waste far worse. Media is sold on opportunity or potential to view and tells us nothing of whether someone has actually seen the ad or not. In this age of significant distraction our current trading currency fails advertisers. It's like going to the store and buying a packet of biscuits not knowing if it will be half empty yet still paying for the full packet. And making matters worse, each media type has their own packet of biscuits which cannot be compared. All of this adds to our declining trust in the system.

Biscuits aside, the simple truth is this: buying on traditional impressions is based on an incomparable, impure and watered down product. Media regulators know this and are trying to work towards improved viewable cross-platform impression standards (more in Chapter 6). But this approach is a long way from perfect and, ultimately, still has the characteristics of a traditional impression. That is, an improved measure of whether the ad had the potential to be viewed, not whether the ad was actually viewed.

REMEMBER THIS SIMPLE TRUTH

Buying on traditional impressions is based on an incomparable, impure and watered down product. Our current trading currency fails advertisers.

Advertisers are rising up and the era of the attention economy is fast approaching; an economy that will see human attention traded as the scarce and valuable commodity it is. The industry has moved from conversations at Cannes to action and applicability. Currencies are starting to form, the nature of measurement is becoming more advanced, capital investment is starting to flow and the study of attention is a growing field. Our own research shows, along with work from credible others, that attention:

- a. is linked to real impact (this means real business outcomes like sales, forming of consideration sets, memory)
- b. when measured properly, does reflect actual human viewing

- c. does inherently reflect the vast modal differences of different platforms (such as pixels in view, levels of clutter etc.)
- d. is comparable across platforms.

This makes an economy where media impressions are based on attention, a sensible one.

5.2.2 The Rise of the qCPM

During the American Revolutionary War (1775) the American Congress issued paper money to its colonies as a new independent currency called The Continental. Within five years the currency had dropped in value and was said to be worth only about 1% of face value, causing chaos for the newly independent American people. By 1785 congress issued a new currency, the US dollar. But Americans were spooked from the collapse of The Continental and started trading whatever they had: individual states starting issuing their own bills of credit ignoring the federal government. By late 1792 the Coinage Act was passed to regulate the currency of the United States, and the silver dollar became the only lawful tender. A decimal system followed shortly after.

My point? New economies, and new currencies, take time to establish and they require a unified approach. At the moment the divide between advertisers, agencies and media owners still seems large, but this is not overly surprising given the redefinition of our industry currency will likely result in commercial adversity for some. Nevertheless, attention trading has begun albeit still in its infancy. Unity on the other hand, might take a little longer. It is heartening to see that measures of quality cost per thousand views (qCPM) are on the rise. The qCPM is based on a sensible premise that quality inventory is more valuable because it drives greater impact for the advertiser. Greater impact is worth paying more for, while lower quality inventory is not worth as much.

Understanding the monetary value of an impression relative to platform performance is something we have looked at in our own research over the past couple of years. Our 2018 ROI study used the data from our Australian ThinkTV collection (3 groups, 6500 ad views). It was prompted by the proponents of online platforms (which consistently performed worse on attention and STAS than TV) suggesting that online advertising could deliver better, or at least comparable, ROI to TV because it is less expensive.

This started to form our research question: are the performance differences between platforms accounted for by the cost? Or put another way: how much cheaper do online ads need to be to reflect their underperformance?

Answering this question here doesn't require any reference to what the real CPMs are for the different platforms (although our model did input real CPMs so that we could report STAS uplift for each dollar spent by platform). It required quite simply the application of basic algebra to discern the proportional difference in STAS impact between platforms, indicating what the price difference should be. In short, we found that a Facebook impression needs to be one-third of the price of a TV impression (.34) and YouTube needs to be two-thirds of the price (.61) to generate a comparative ROI to TV (in Australia). We found that these lower performing platforms were way overpriced relative to their return. STAS is not scalable in a real trading sense, but STAS is a quality proxy for attention. The point here being that qCPMs are a good step forward only when q = (real) quality.

REMEMBER THIS SIMPLE TRUTH

Quality CPMs are a good step forward, only when the 'Q' actually means real quality.

Keeping the quality conversation going, some of the earlier qCPMs wrongly optimise for immediate engagement tied to interaction. Riding on the back of the attention movement this 'fracking for attention' (Weigel 2015; Marchese 2019) brought with it a new era of propaganda-based sites (ok, let's call it fake news), poor quality content, clutter, pop-ups and a focus on short-termism. Plus, interaction-based metrics are known to capture a very, very small number of people. Even if the numbers were greater we know this only captures high-attention processing, leaving low-attention impact on the table.

Things are moving quickly, and in 2019 we can see a select number of players building actual 'quality' qCPMs with more robust approaches based on an array of variables, such as duration, viewability, pixels/size, brand safe environment, and optimal frequency. Some of these variables have been empirically linked to attention (and to sales). And some of the applications have now moved from post-campaign analysis to real-time optimisation based on attentive reach. This is one step closer to a true trading market.

We are still in the early stages of currency development. We need a single qCPM to standardise, but there is no unified approach around what

the industry wants. Something that's reflected in the varying options we currently see, such as: cost per completed view (CPCV), viewable cost per thousand (vCPM), audible and visible on complete (AVOC), and many more. It's important that we move away from assumed attention units to actual attention units. While we know that things like duration, pixels, coverage/clutter, sound, ad position and content type increase the likelihood of consumer attention, it is still only likelihood. If a human presence is not quantified we are still only working with an improved version of opportunity to see (OTS). Some companies are integrating anti-fraud services, such as, invalid traffic monitoring, while qCPMs such as human, audible and visible on completion (HAVOC) are starting to surface. It's a good start and in the right direction, but not a silver bullet (see Chapter 8, and Dr Augustine Fou in Chapter 9 for more on ad fraud).

The reality check is that none of these are universally accepted (yet) and none of these can spread across all media types, although the industry is working towards this. To quote a founder in this space: 'Changing a 100 billion dollar plus industry is hard...human and viewable has to be the first step...' (Goodhart, Moat Co-founder, 2015).

We ultimately need to work towards a place where an accurate, theoretically grounded, independent 'true north' measurement is created for trading. Where gaze data from real humans (who experience all levels of attention across all boundary conditions) provides continuous learning to the model. That day will come. In the meantime, we need unity before we can move from our own version of The Continental to the attention equivalent of the US Dollar. Once such a currency is established, and a level of trust is restored, we can finally say the paradigm has shifted.

REMEMBER THIS SIMPLE TRUTH

The attention economy is coming where a 'true north' impression will be based on attention, not some made-up concept that bears no resemblance to human presence.

5.2.3 The Wrap up

Most marketers accept that attention is a vital part of advertising success, but many still wrongly believe that fully supercharged eyeballs-on attention will result in cognitive processing and subsequent behavioural outcome. In this age of distraction, the old definition of attention 'taking full possession

of the mind' is best left for *The Exorcist* (Warner Bros, 1973). This hypnotic notion is just not reality. But before you call the undertaker for advertising, remember that low attention can be valuable.

Advertisers will need to understand: (a) how to create ads based on the mechanisms known to foster attention, (b) how to buy media that support modal qualities known to foster attention, and (c) how to switch from legacy measurement that only considers high attention, to measures that better reflect the reality of human attention.

Don't panic, the attention economy future looks bright, with less guessing on whether attention is being paid, and far more certainty.

MEANWHILE IN THE REAL WORLD

Putting your money where your mouth is

When Joe Marchese was the President of Ad Revenue for Fox Networks he said the best thing that has happened to the internet is ad blockers. An unusual statement for someone in charge of ad revenue. Marchese thinks (quite publicly) that advertising is fundamentally broken, and the internet broke it. He says that sellers of attention (online properties) don't value human attention; what they value is the potential to make money from the potential of human attention. Every AdTech out there is built for 'tonnage' not quality attention, which in turn is causing consumers' attention to diminish with ad blocking, DVR, ad active avoidance etc. And don't get him started on plummeting CPMs caused by the ad fraud ecosystem in which he says quality content simply cannot survive.

According to Marchese the advertising industry is fuelling its own demise. He warns that either the market fix itself, or there will be no ads. The market will crash.

Marchese has been a loud voice in his tenure at Fox on the value of an attention economy, but his public perspective is not typical of others in similar positions. His solution at Fox? To reduce advertising. He says the answer is 'guaranteed' attention where there are fewer ads that deliver a better experience for the consumer that can command higher CPMs. A win-win. So, he introduced new ad products that respect viewers' time, including giving them an option to watch programming uninterrupted from commercials. Uninterrupted programming is delivered in exchange for their full attention for one long-form ad (that they choose) before programming begins. Others followed suit with similar products including Turner, NBCUniversal, Spotify, Hulu, YouTube and Amazon Prime. These products give the consumer the power to decide how much their own attention is worth.

CPMs should ultimately reflect this, and they do! At Cannes 2019, NBCUniversal presented research findings comparing traditional advertising to ‘commercial innovation’ ads. 92% of viewers said they appreciate commercial innovation ads more, 76% were less likely to change channels and 85% were more likely to remember the brand. In our own research, which is actual attention via gaze (not stated metrics), we can see that consumers do pay significantly more attention to ads when fewer ads are present. In fact, we found a two-third decrease in the sheer volume of ads, produces around a 20% uplift in both attention and sales. So the concept of pay more (CPM) get more (attention) works.

But who’s brave enough to put their money where their mouth is quite like Joe Marchese? In late 2019 Marchese launched a new holding company in the US. The firm hopes to raise between US\$400 million and US\$500 million to fund the next generation of media and technology companies who properly measure and value human attention. He is literally banking on the next wave of innovation. When it comes to food we’ve been watching what we put in our mouths for a while, now it’s time as consumers to consider what we feed our brains.

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