50 Posts

On Marketing, Media, and Data Science

from the Croft Blog

CROFT
ANALYTICS
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JULY 2021

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INTRODUCTION

The COVID-19 pandemic has disrupted the lives of everyone on the planet, upending governments, economies, businesses, and society. It has accelerated many underlying trends, particularly the shift to digital services, in a new 'punctured equilibrium'.

We are now in a different world, with much change that will endure beyond the pandemic. Many of the old rules will persist, but how best to execute them has changed. More than ever, marketers need advice and guidance for how to navigate the new world.

The pages in this booklet are sourced from the Croft Blog, a weekly series of posts on marketing, media and data science topics. The fifty posts that follow cover a wide range of subjects; exploring the relevance of long-established fundamentals for brand growth, delving into big data science, providing tips on how to extract signals from the growing cacophony of digital noise.

I hope you will enjoy these pages. For more on Croft Analytics, and to view the Blog, please visit https://www.croftanalytics.com

Frank Harrison
Croft Analytics
July 2021

BRANDS GROW BY BALANCING LONG AND SHORT-TERM GOALS

10 July 2020 | Brand Science, Brands, Data, Data Science, Emotion, Growing Brands, Long Term, Loyalty, Mass marketing, Promotion, Reach, Systems 1 & 2

Brands are the feelings we have about products and companies, cumulatively built over time. Branding helps to drive sales by making brands salient at the moment of category purchase. Brands appeal to our emotional sub-conscious: the super-fast 'System 1' primary driver of our decisions. Brands are vital for business success.

Unfortunately for many companies, attention to branding and building brands over the long term has taken a back seat in recent times, exchanged for a short-term sales imperative that has increased during tough and uncertain times. This has led to an over-focus on promotional advertising that targets our 'System 2' rational (and slow) conscious mind. Over-focusing on short term sales activation, at the expense of long-term demand generation, is leading to commoditisation, stripping margins out of brands, de-branding, and ultimately unselling brands.

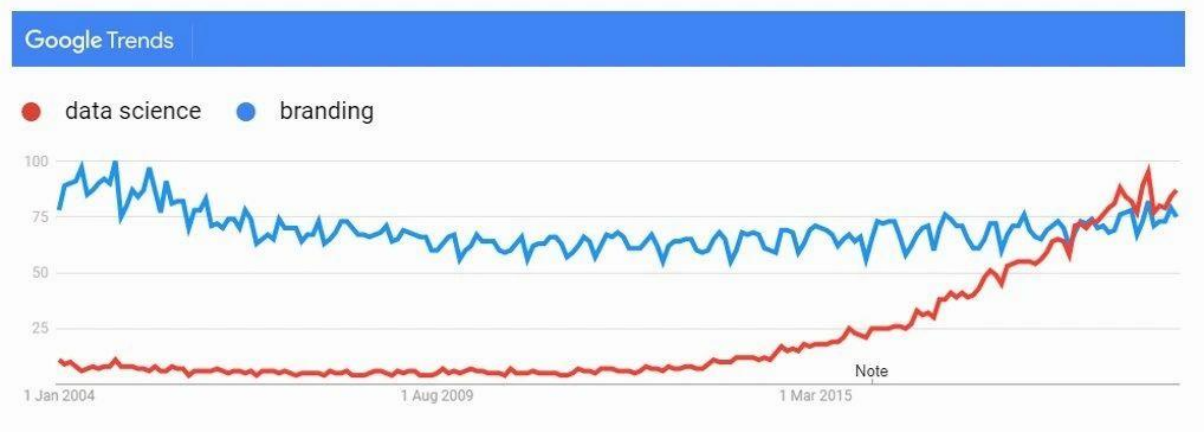
This is not to say that promotions are wrong: the opportunity to maximise the short-term effectiveness of promotions has never been greater. Myriad opportunities to sell directly to consumers, to build and learn from first party customer data, to measure minute-by-minute online behaviour, are fuelling more effective and efficient short-term sales. These data also create powerful new customer insight, and an online environment where every tactic can be tested and refined in real time. Programmatic advertising, using machine learned algorithms, can target those consumers who are most likely to buy, and serve them ads they are most likely to respond to. It not surprising that companies strive to maximise this

opportunity. However, and here is the rub, at any one time most category buyers are not buying in the category, and those that are most likely to buy a brand are the existing heavy buyers of that brand. Over-focusing on targeted promotions to most likely buyers reduces brand exposure to a smaller number of people who are more likely to be existing customers (who would have bought the brand anyway without the promotion). This reduces exposure of the brand, excluding category buyers who do not buy the brand: the people who are needed to grow the penetration of the brand over the long term. And penetration growth, increasing the number people who buy the brand, is the single most important cause of brand and business growth.

Brands maximise potential for growth by balancing marketing effort across three goals and their associated audiences: 1) generating long term demand among non-buyers of the brand, 2) building loyalty among existing customers, and 3) driving immediate sales activation among current buyers in the category. The most effective balance for long term sustainable growth is unique to each brand, dependent on individual circumstance, there is no one size fits all. The evidence suggests that, to maximise growth, there is a need for many companies to adjust their marketing focus to balance long as well as short term goals.

THOUGHT FOR THE DAY: WHERE IS THE SCIENCE?

17 July 2020 | Data Science, Programmatic



Despite the huge rise in data science (see the chart), the exponential growth of data, and the sterling efforts of Byron Sharp, Les Binet, Peter Field, and Mark Ritson, the advertising world is sadly lacking major new theories that explain how brands grow in the digital age.

Yes, brands grow by getting more buyers and, yes, the five Ps of marketing are as relevant as ever and, yes, behavioural economics is terrific. But, as programmatic advertising grows ever larger and machine learned algorithms increasingly dictate who is exposed to what machine learned ad – where is the new science that explains what works and what doesn't. How do the algorithms know?

There is plenty of scope for the AI to get it wrong. Here is an example:

Let's say that the goal for the programmatic advertising algorithm (and there must always be a human defined goal for machines to target) is to reduce the cost per sale. A machine learned algorithm, using clickstream data and not limited in any other way, will 'learn' that some people are more likely to buy than others so will increasingly target those people with the highest probability to buy. Increasingly exposing higher probability buyers to the ad will result in a higher sales conversion per person exposed and successfully deliver a lower cost per sale. Unfortunately, while the goal will be met, this will not be good for the sales of the brand because of two things:

1. The people who have the highest probability of buying a brand are the heaviest existing buyers of that brand. They are more likely to buy the brand next time around, without being exposed to the ad, than someone who does not buy the brand. So targeting highest probability buyers is actually an unnecessary waste of money – they are existing customers with high loyalty.

2. Failing to target lower probability buyers, people who do not buy the brand but who do buy other brands in the category, cuts the brand off from its acquisition target, reducing its reach and potential for penetration growth.

Programmatically targeting higher probability buyers will reduce the reach of a campaign, it will waste exposure on people who are most likely to buy the brand, it will (slowly) unsell the brand – but it will reduce the cost per sale. As sales go down!

So, where is debate and the new science that shows how to programmatically maximise sales? – predictably, over the long term. Where is the new theory that explains how to grow brands in the digital age?

Here's my theory: the best way to grow a brand through programmatic advertising is to target category buyers who do not already buy the brand. What do you think? Worth testing?

ON SUSTAINABILITY

18 July 2020 | Fashion, Sustainability

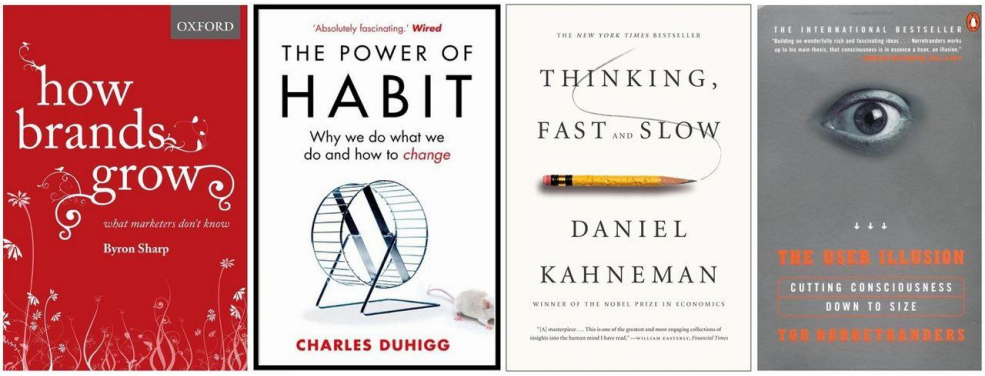
One of the big long-term trends that has been accelerated by Covid-19 is the growing interest that consumers have in sustainability, and the efforts that brands are making to use sustainable materials. Covid-19 has brought a new emphasis on establishing brand trust through communicating quality, ethical practices, environmental impact, safety, hygiene, and health.

Here is an interesting new report from McKinsey - '**Consumer Sentiment on Sustainability in Fashion**' - that argues "Engagement in sustainability has deepened during the COVID-19 crisis, with European consumers wanting fashion players to act responsibly and consider the social and environmental impacts of their businesses."

GROWING BRANDS: ESSENTIAL READING

22 July 2020 | Consciousness, Decision Making, Emotion, Habit, Systems 1 & 2

Here are four books that I recommend reading: they provide some of the most useful scientific findings of value to marketers.



How Brands Grow is by Byron Sharp, Professor of Marketing Science at the University of South Australia and Director of the Ehrenberg-Bass Institute for Marketing Science. The rules for brand growth in this book are based on empirical generalisations sourced from a large base of data over many years, categories and countries. It is a "must read" for anyone who is interested to discover fundamental rules that describe how brands grow.

The Power of Habit is by Charles Duhigg, a Pulitzer-prize winning reporter and author. This book shows that humans have brains that are always trying to shift our repeated conscious actions (like driving and a lot of shopping) into unconscious habits and routines. It includes terrific advice for marketers on how to reinforce as well as disrupt habits.

Thinking Fast and Slow is by Daniel Kahneman, a psychologist and the corecipient of the Nobel Prize for Economics in 2002 for his integration of psychological research into economic science. This book is packed full of wonderful insights into how our brains work. It explains that humans have a super-fast 'System 1' sub-conscious (highly emotional) brain and a very slow 'System 2' conscious brain. Full of scientific insight of great value to marketers.

The User Illusion is by Tor Nørretranders, an author of popular science. This book provides a detailed scientific examination of human consciousness. It explains that in any given second we consciously process only sixteen of the eleven million bits of information our senses pass on to our brains. We operate - living and making our decisions - almost entirely unconsciously. Our brains are sub-conscious reduction engines, filtering information out and only feeding 'important' information to our conscious brain. The most important message for marketers: to influence human motivation and behaviour you need to understand how the unconscious brain works.

DATA: A CAUTIONARY TALE

23 July 2020 | Data Science, Forecasts

In 1983 I wrote a computer programme on a first-generation IBM PC that predicted the incidence of flu in the UK over the next week with 95% accuracy, every week. I was working at a company that manufactured flu remedies and the flu forecast was used to determine manufacturing volumes at the factory each week.

In 2008 the chief economist at Google, Hal Varian, published a paper revealing that Google search data could be used to estimate the incidence of flu. This was the start of Google Flu Trends, estimates of flu incidence that were published for 29 countries. Unfortunately it turned out that using flu-related search data could not accurately determine the incidence of flu so the estimates were stopped in 2015.

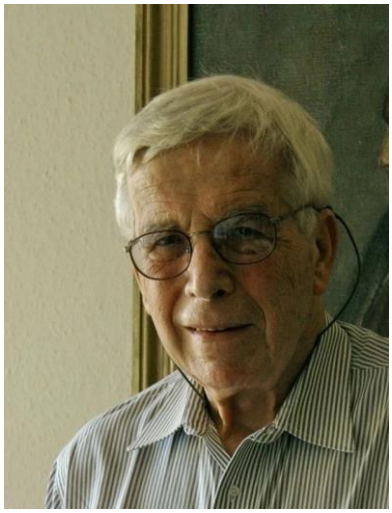
The flu incidence forecast that I made in 1983 used a small amount of weather data, particularly temperature forecasts, to predict the incidence of flu in the UK. It turned out that there was a specific temperature below which the incidence of flu accelerated rapidly in the UK. I imagine that the same programme would probably work well today.

Using a small volume of relevant data (in this case UK weather forecasts) can result in a prediction (UK flu incidence) that is more accurate than using a huge volume of less relevant data (billions of flu related searches).

The lesson is to question the suitability of data to answer a question. Using less relevant data can result in chasing solutions down rabbit holes. It is also important to consider the spectrum of data that is likely to be relevant. Limiting (and shoehorning) to those data that are most readily available and voluminous can lead to misleading and inaccurate results, simply because the relevance was inferred rather than determined. Big data is terrific when it is applied to relevant questions.

ON A GENERAL THEORY OF CONSUMER BEHAVIOUR

29 July 2020 | Brand Science, Brands, Data Science, Forecasts, Insight, Research



Can buyer behaviour, like the behaviour of planets, be determined and predicted by general theory? Andrew Ehrenberg (see photo), who made most of his discoveries fifty years ago, published general theories of buyer behaviour that are turning out to be as resilient for marketers as those of Einstein for physicists.

In 2006 Ehrenberg wrote an article, 'My Research in Marketing: How it Happened', summarising laws of buyer behaviour that, remarkably, persist today. These empirically grounded theories describe "how many people buy any brand and how often":

1. The Negative Binomial Distribution describes the frequency of purchase of brands. This frequency of purchase pattern is repeated for all brands in all categories. It shows that most buyers of brands are light buyers, very irregularly buying the brand.

2. The average buying rate for brands in a category is much the same for every brand, regardless of how big the brand, decreasing slightly with the brands' market shares. Small brands not only have fewer buyers than big brands, they also have a slightly lower level of purchase frequency – a "double jeopardy" for smaller brands.

3. Brand buyers are polygamous, buying several brands in a category, some more often than others. Very few customers of a brand are 100% loyal to it over a series of category purchases.

4. How many customers of brand A also buy brands B or C in a period varies directly with how many then buy B at all, or C at all. This is known as the Duplication of Purchase Law.

5. The Dirichlet model describes patterns of repeat purchases of brands within a category. It models the counts of the number of purchases of each brand over a period of time, describing purchase frequency and brand choice at the same time. Dirichlet repeat-buying and brand-switching patterns recur, and can be predicted, in every category.

6. Attitudes about brands change after behaviour, after buying and using the brand, not before. Behaviour changes attitudes. Consumers' expressed intentions-to-buy a

reflect past purchases of it, and hence also their future ones if they are, as usual, much the same. But not any future changes.

7. Different competitive brands appeal to much the same kinds of consumers. There is very little brand segmentation within a category.

Ehrenberg argues that commonly used statistical techniques ("eg. Gaussian least-squares regression or multiple factor analysis") are of no use in determining buyer behaviour, comparing them to "blood-letting or cupping". He states, "these techniques have not led to a single lasting scientific discovery over the last 100 years or more, or even to mere claims to that effect". He says that scientific results on buyer behaviour should be "empirically replicated by hard slog, for different brands, products, countries, analysts, points in time, etc.". Findings should be "simple and generalizable". I agree.

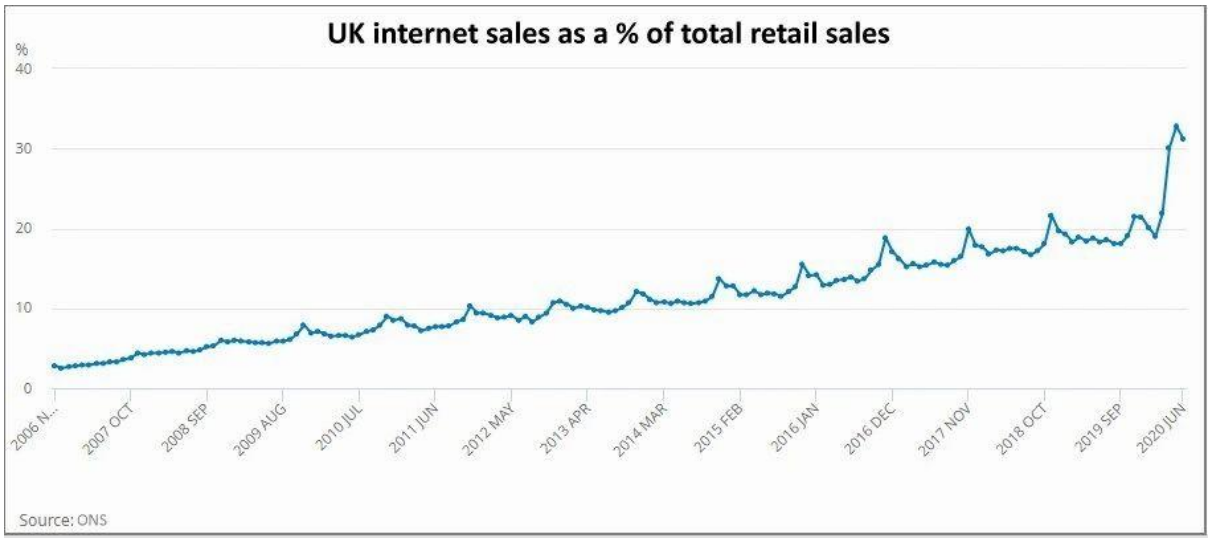
The challenge now is to replicate or refute or replace these laws using new data.

THE 5 PS IN TRANSFORMATION: PRODUCT

4 August 2020 | Data Science, Forecasts, Sustainability, Transformation

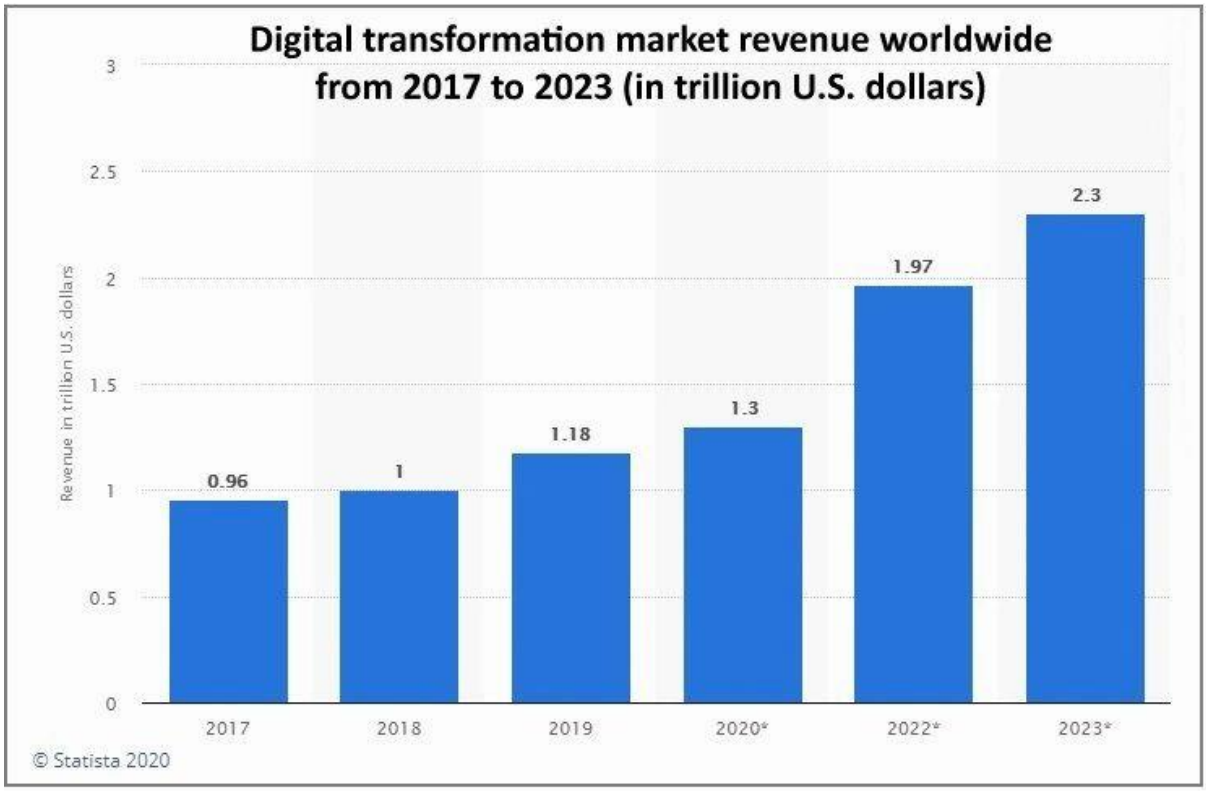
The five Ps of marketing - product, price, promotion, place, and people – are as vital to business success today as they were when first conceived fifty years ago, but after a long period of relative stasis they are now in flux as companies adapt to the digital age. The coronavirus pandemic has accelerated many of the trends. Understanding long term trends in the transformation of the five Ps helps marketers plan for more effective brand growth. Product is the P that is changing the most. Companies are transforming their products. Three clear changes are well underway for most consumer products:

1. Direct to consumer



Selling products and services through e-commerce sites and platforms such as Amazon is rapidly becoming the norm (to the detriment of physical retail outlets). In the UK, the internet today accounts for almost a third of total retail sales according to the Office for National Statistics, up from 6% ten years ago. This trend has accelerated rapidly (see the chart) during the COVID-19 lockdown as households source more products online. The shift to online sales has multiple causes: the rise of Amazon and growing consumer demand for lower cost, faster delivery, wider choice online; the need for live first party data to inform machine learned algorithms and to test product and service changes; the rise of direct to consumer and the growing desire (and need) for businesses to control their relationship with customers.

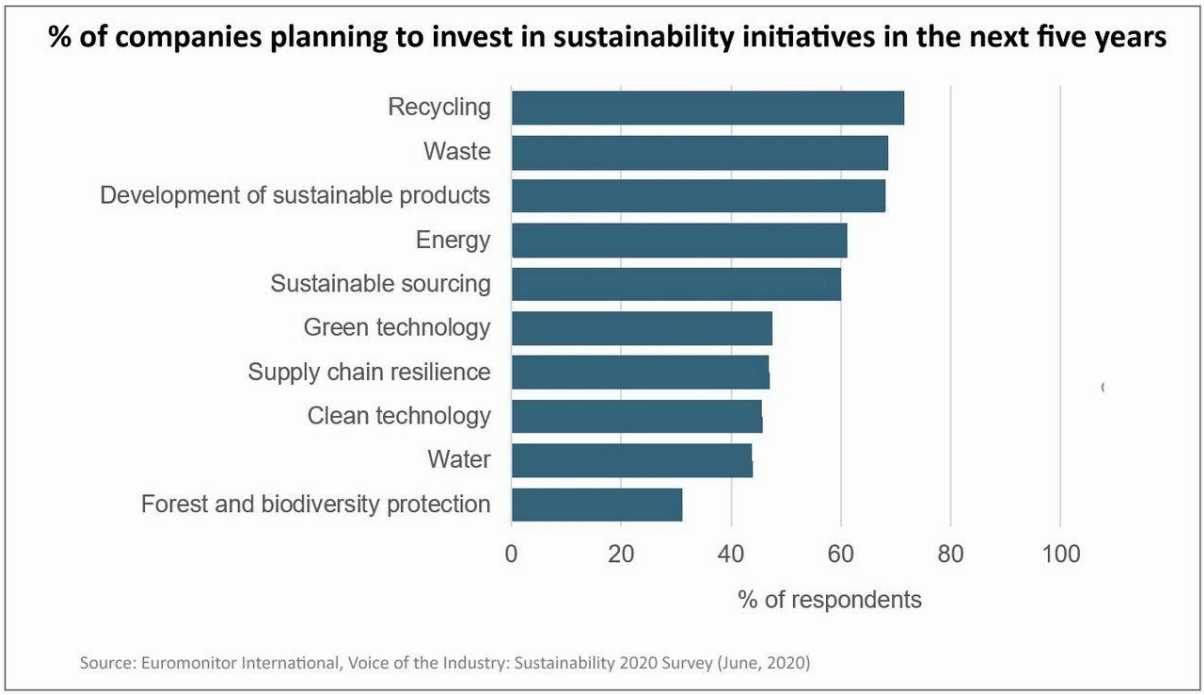
2. Digital services that expand and enhance products



Businesses today are transforming their products by adding digital services. In addition to providing e-commerce sales and home delivery, companies are:

- Using data to personalise customer experiences
- Building subscription and automated repeat purchase options
- Enhancing and customising loyalty programmes
- Providing online customer service options including automated chatbots
- Creating customer communities
- Providing 'how to' videos and platforms for customers to share product experiences
- Delivering faster and better response to customer questions and complaints
- Partnering with third parties to enhance products and services

3. Sustainable, healthy, environmentally friendly products



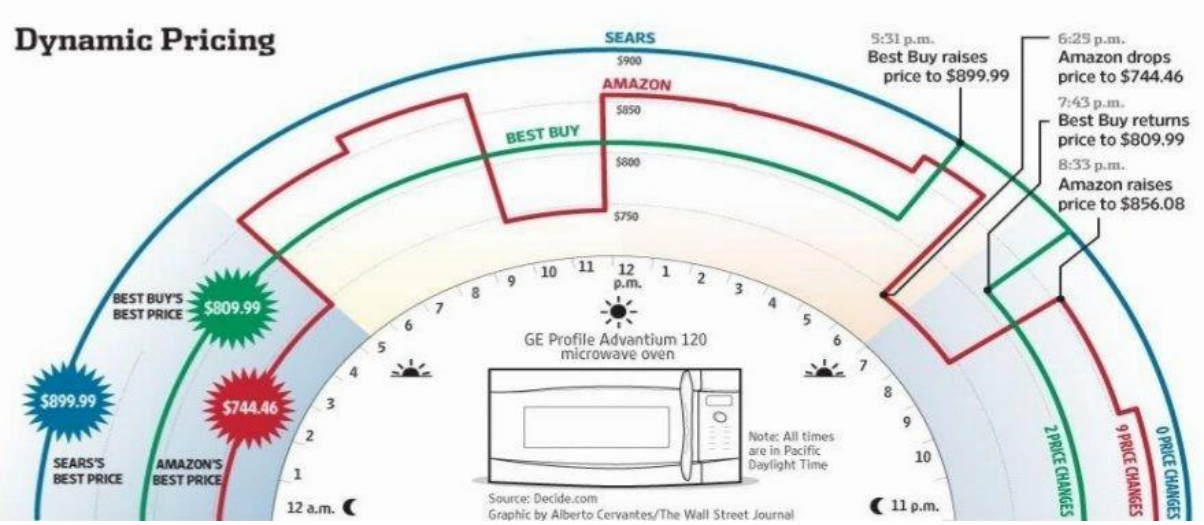
The coronavirus pandemic has accelerated this trend: consumers are increasingly turning to products that prove and demonstrate: a sustainable manufacturing process, from start to finish; a high-quality product that is healthy; a product that does not damage, rather improves, the environment.

According to Euromonitor's 'Voice of the Industry: Sustainability' survey, fielded in June 2020, more than 40% of all the respondents globally are planning investments in various sustainability-related initiatives in their company, with waste and recycling being at the top of the potential future investment lists.

THE 5 PS IN TRANSFORMATION: PRICE

5 August 2020 | AI and Machine Learning, Brand Science, Data Science, Pricing, Programmatic, Transformation

In the days before online sales, changing the price of a consumer product was a lengthy affair, requiring alterations to signage in bricks and mortar stores. Measuring the effect of price changes on sales took weeks. Econometric modelling was used to determine optimal pricing strategies, but these models required historic time series data, typically over multiple years with multiple price points, to be effective, and the work and analysis often took months to complete, ultimately delivering a retrospective look at pricing. Pricing was slow.



Today, e-commerce platforms allow price changes to happen immediately, frictionlessly, and automatically. Machine learned algorithms can be deployed to determine optimal pricing, not only in the general, but on a continuously changing basis depending on demand and other factors. Pricing can be at the level of the individual buyer at a single point in time and be based on a combination of factors likely to impact the potential buyer's demand at that moment. The transformation in the use of AI for dynamic pricing is the norm in online service sectors such as travel and transport (eg. airline and hotel ticketing and Uber) and event ticketing, and increasingly being deployed to drive revenue for packaged goods sold online. Online retailers, Amazon in the lead, are experimenting with a wide range of automated pricing models. Dynamic pricing can take into account a number of real-time factors such as: competitor pricing, level of demand, location of the buyer, day of the week, and time of the day.

Automated dynamic pricing can be a terrific way to drive revenue. However, online selling also provides pricing transparency for consumers, the ability to instantly compare prices across multiple sellers, and this can lead to price wars that strip brands of their margins

leading to wholesale commoditisation of product categories. Premium sellers in particular can find it hard to maintain or increase their pricing.

THE 5 PS IN TRANSFORMATION: PROMOTION

6 August 2020 | AI and Machine Learning, Brand Science, Data, Data Science, Emotion, Long Term, Programmatic, Promotion, Transformation

The big transformation in promotion is being driven through the use of online data, specifically clickstream data and (increasingly) customer data, to programmatically determine the who, what, and where of advertising. Digital data is the new currency for planning and placing ads.

While the programmatic use of data presents a terrific new opportunity for advertisers, over-focusing on online data can threaten advertising and business success. Challenges and 'watch-outs' include:

1. **Limited contact.** Consumers' contacts with brands impacts their propensity to buy the brand, so businesses should consider and invest in all forms of contact that category buyers have with their brands, not only digital contacts (the majority of consumer contact with brands is not digital). Over-focusing on digital contacts means that companies risk narrowing connections with potential buyers, limiting and reducing potential for growth. Brand managers need to take a wide holistic view of their consumers.

2. **Talking to the converted.** There is a seduction that grows with increased availability of customer data sourced online from websites, e-commerce platforms, social pages, email, user forums etc. Using customer data to build machine learned algorithms that target ads to those most likely to respond leads to an over-focus on heaviest most loyal buyers: the group of people most likely to buy the brand (without being exposed to any ads). In addition to campaigns that aim to increase customer retention and loyalty, brand managers should maximise the use of data to target

category buyers who do not buy the brand, the acquisition audience that represents the greatest potential for brand growth over the long term.

3. **Short termism.** The use of digital data has (so far) resulted in great success from, but also an over-focus on, short term direct response advertising – immediate, measurable, behavioural, response to online ads. Seductive, but not necessarily in the best interests of the brand. The internet has replaced, and far surpassed, the print medium in its ability to deliver more effective and efficient direct response through relevant targeting at the time of need or desire. However, short term sales activation as an exclusive focus runs a risk of un-branding and ultimately un-selling the brands that businesses depend on for long term success. Brand managers need to balance long term demand generation, through brand building (mainly appealing to an emotional 'system 1' brain), alongside short-term sales activation and (also short term) customer loyalty.

4. **An abundance of noise over signal.** While growth in the number of data points is the primary reason why weather forecasts have improved in recent years, the rise in the volume of clickstream data has not led to big leaps in the ability of businesses to predict human behaviour and to harness data learning to drive business growth – at least not for most businesses. Unfortunately, despite its abundance, the data is too disconnected (generally not cross-platform), too limited in scope (generally not accounting for non-digital factors), just too noisy. There are some exceptions, perhaps most notably at Amazon, where the use of data has led to significant business growth for Amazon. Brand managers need to step back and consider and harness all the data (regardless of source) that may impact category buyer purchase decisions in the short and long term for their brand. Predictive signals need to be extracted from the noisy cacophony of available data.

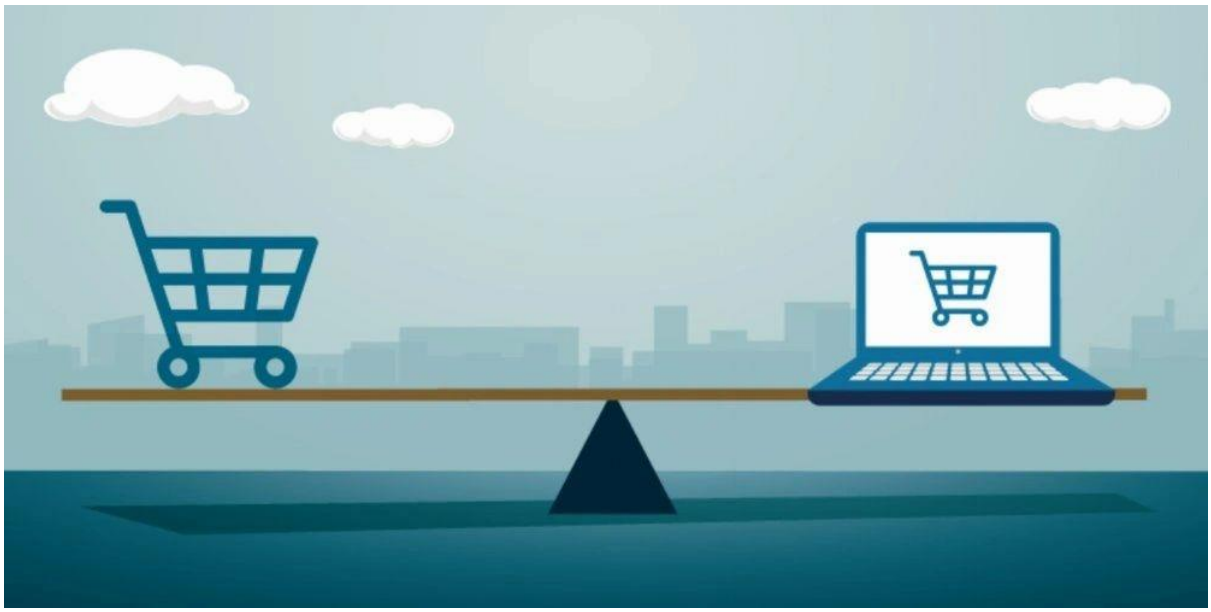
5. **Limited data access.** A huge and growing number of businesses sell their products and services through Amazon. It is the online retail platform that more people choose first in most categories. However, the immense volume of first party data that Amazon captures and uses – the knowledge of individual buyer behaviour - is not available to the businesses that sell through the platform. Because of the great success that Amazon has made of user data streaming through its platform, algorithms that ensure that most relevant products are shown to buyers at price points most likely to trigger purchase, businesses and consumers have increasingly come to depend on Amazon. While this has led to the phenomenal growth of Amazon, it has not helped businesses to improve their own promotions outside the Amazon platform. The most valuable first party data is walled off, out of reach, in the hands of the small number of platforms that advertisers increasingly depend on.

6. **Over-reliance on first party data.** As the opportunity and desire to make use of third-party cookies declines, businesses are turning to their own first party data. Unfortunately, by definition, the majority of these data are from existing customers. While these data are most useful for building knowledge around and guiding customer retention and loyalty activities, they can lead to an over-focus on customers and a failure to address the group of people that are vital for long term business success – those category buyers who do not buy the brand.

A key message for businesses and their brand managers is that brand growth depends on a vital balancing act that is unique for each brand: between short term and long term; between sales activation and demand generation; between customers and non-customers; between online and offline; between rational and emotional advertising. The new fuel that is data is wonderful, presenting terrific opportunities for business growth and driving the necessity for transformation. However, brands need to avoid over-focusing on the short term, on direct response, on customers. Brand growth in all categories is ultimately built through the acquisition of new buyers, by increasing penetration over the long term.

THE 5 PS IN TRANSFORMATION: PLACE

7 August 2020 | Distribution, Place, Retail



Place, where products and services are produced and made available for buyers, has been transforming from offline to online for almost thirty years. This trend has been accelerated by the global COVID-19 pandemic, with many businesses speeding up plans to move online as lockdown measures have been implemented.

Service businesses were the first to switch from physical to digital - travel agents, banks, all forms of professional service migrating from customer-facing stores and offices to cloud based services and e-commerce platforms. One of the big long-term changes, dramatically accelerated by social distancing measures during the pandemic, has been the migration from office working to home based working, spawning and boosting many cloud services including Zoom, Microsoft Teams, and Google Meet. Eventually, when coronavirus is no longer present, will home working be a much larger element of the normal pattern of work? Is office space on the same downward path as retail space?

The Place for physical products - across manufacturing and distribution - has also been in flux, with an ever increasing level of digitisation and growth in online sales. Again, this trend has been accelerated by the coronavirus pandemic. The big rise in home delivery is causing dramatic shift in the nature of distribution for manufacturers.

What will be offline in the future? Which products and services are best located in physical outlets? For many businesses there will be a balance. Offline environments can provide a much more immersive and emotional experience for buyers, valuable for band building and recommendation, boosting online sales. Apple Store was created with this objective, to provide consumers with a terrific and uniquely distinctive experience that could not exist

online, in flagship stores that caused buzz and became a magnet for buyers, showcasing the leading designs in Apple products. Growing numbers of businesses are following the Apple example.

THE 5 PS IN TRANSFORMATION: PEOPLE

9 August 2020 | AI and Machine Learning, Brand Science, Data, Data Science, Forecasts, Long Term, People

Of the five marketing Ps, the transformation of People is perhaps the greatest: for workers, for customers, for the world's population. This has been driven by seismic change across society, economy, and government as the world is transformed by the greatest revolution of all: the digital revolution. We are experiencing and adapting to a time of 'punctured equilibrium'. Looking over our shoulder at the changes of the recent past can be helpful, but predicting where the world will be, even in just a short-range future, is proving to be harder than ever. Here are some of the People changes, and some thoughts on more persistent trends.

Workers

The digital revolution has spawned one of the biggest changes in the structure of work: the gig (or contract) economy. Platform technologies have created new jobs and a new way of working for up to 30% of the workforce in the USA and Europe who today work in the gig economy. Growing fluidity and flexibility in working practices is a long-term trend. Upsides for workers can include the freedom to choose where and when to work and for how long, and reduced entry and operating costs for businesses. Potential downsides include the loss of benefits and security that come with traditional employment, with blurring of legal rights that can result in low incomes, social isolation, overwork, unsocial hours, and other deprivations. With continued growth in platform technologies, and ever more opportunities for emerging platform businesses, the gig economy is a trend that is likely to continue to grow.

Other big changes in how we work include the shift to open plan offices, hot-desking, flexible working hours and working from home. Of course, the COVID-19 pandemic has forced most people, who are able to continue working, to work from home. The longer that

the pandemic persists the more that working from home becomes normalised, for workers and for companies. The pandemic is causing a reappraisal of working practice with businesses reviewing opportunities to change the balance between office and home working and to reconsider office requirements and use of office space. For some service sectors there may be long term change, with increased numbers working effectively from home.

Another significant change is the increasing focus on social justice, equal opportunity, and transparency for workers, with diversity of all kinds within organisations driving greater creativity, innovation, commitment, and productivity - vital to sustain companies through times of change. Research has shown that heterogeneous teams consistently out-perform homogeneous teams.

Customers

Data, digital data, is transforming how companies are able to connect with, provide for, and respond to their customers, with myriad opportunities to customise and personalise customer interactions online - driving sales more effectively and efficiently than before. The emerging science that is 'Artificial Intelligence', the science of machine learned algorithms, has the potential to discover patterns in data that can lead to new products and services and innovation. Customer experience mapping, at each point on the customer journey (before buying, during the purchase, and when the product is used), is a growing focus for most businesses. Customer data mining and analysis can help to smooth out bumps in the experience, enhance the experience, build loyalty and sell across and upwards within product and service portfolios.

The continuous transformation of the other '5 Ps' (see earlier blog posts) is driven by one long term trend - the increasing digitisation of everything - and this is leading to ever greater volume and analysis of customer data. The growing focus of attention on customers is likely to continue. However, as mentioned in earlier posts, while optimising customer experience

is an imperative, there is also a vital need to maintain balance of marketing to non-customers (potential customers of the future) as well as existing customers.

ON DATA AND DATA SCIENCE

12 August 2020 | AI and Machine Learning, Brand Science, Data, Data Science

Firstly, some definitions.

Data are all around us, and always have been, forever helping us to understand the world around us. Data are observed units of information, such as the current temperature, or the height of Everest.

When data is processed, organized, structured, or presented in a given context so as to make it useful, it becomes **information**.

Knowledge is understanding of, or information about, a subject that you get through experience or study.

Insight is having a clear, deep, and sometimes sudden understanding of a complicated problem or situation, such as the understanding of a specific cause and effect within a particular context.

Science is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the physical and natural world through observation and experiment. It is a systematically organized body of knowledge on a particular subject.

Data science uses scientific methods, processes, algorithms and systems to extract *knowledge* and *insight* from data. The crucial word is 'science' not 'data'. Without the science the data is meaningless. In the digital world, data is plentiful, but science is scarce.

Data science is often wrongly interpreted as the process or algorithm or system, with little (if any) attention to the extraction of knowledge or understanding. To my mind, data

scientists should focus efforts on insight from application of scientific method and, in the true pursuit of a body of scientific knowledge, share findings for peer review. Data science should strive to build knowledge through theories that can be openly tested.

Data science should uncover and publicise rules, systemic predictions about how things work (and don't work) built from empirical generalisations – these rules should apply repeatedly, systemically. The rules can then be used to predict effects from specific actions. In this way the science of data helps the world to progress.

Unfortunately, too much data science is hidden from public view, too "valuable" to emerge from corporate walled gardens. So, here is my plea to data scientists, from this tiny corner of the web – please publish your findings on new scientific rules, open them up for peer review, help to build new knowledge and insight about what works and what doesn't in the digital age. Share the science, as well as the data.

ON CUSTOMERS AND NON-CUSTOMERS

18 August 2020 | Advertising, AI and Machine Learning, Customers, Data, Decision Making, Familiarity, Growing Brands, Habit, Long Term, Programmatic

Think about the brands that you don't buy in a category. Most people don't think about brands they don't buy. Thinking about brands that you don't buy just isn't important, so you don't. For most people, as non-buyers, there is close to zero thought for the brands that they don't buy. Other, much more important aspects of our lives capture our thoughts: our family, our jobs, our passions, our day-to-day lives.

Now think about the brands that you do buy in a category. They pop to mind easily. You know what toothpaste you buy, your coffee, your car. You know them well. As a buyer you pay much more attention to the brands that you buy. On average, your ability to recall brands you buy is almost three times higher than your recall for brands that you don't buy in the same category.

Now consider that every time you use a brand that you have bought, your perceptions of it, your thoughts and feelings about it, are repeatedly being reinforced – every day your toothpaste, coffee, car is reminding you about that brand whenever you see and use it. Your repeated use of the brand informs you cumulatively about that brand. The contact you have with the brands you have bought is very much greater than for the brands that you don't buy, and every time you use a brand the experience impacts your likelihood to buy the brand again the next time you buy in the category. The brands you don't buy don't have the luxury of your use.

Also, consider that our brains like the things that are familiar to us (e.g. our family, our friends, our home, and the brands that we buy), because they are known, and our brains do not like things that we are not familiar with (e.g. the brands we don't buy) because we don't know them so well. We are biased, without being consciously aware of it, in favour of the

brands we buy, and we are biased against the brands we don't buy. Familiarity is an important driver of our motivation and behaviour, influencing what we think and what we do.

Now think about advertising to people who are non-buyers of a brand compared to advertising to the current users of that brand. Engaging with non-buyers, attracting their attention (either consciously or sub-consciously), is much harder and much less likely to result in a purchase of the brand, than amongst existing buyers. Penetrating the wall of indifference amongst non-buyers is difficult. Connecting with buyers, with existing customers, is much easier.

So, it is not surprising in the digital age that customers and customer data are a great seduction for businesses. Customer data is growing rapidly, in line with the growth of e-commerce and other digital services. First party customer data can feed algorithms that automatically find more effective and efficient ways to sell to customers. Customers are much more likely to respond than non-buyers. Algorithms can automatically seek out people with a higher probability to buy right now – the existing most loyal buyers of the brand. Non-customers are much less likely to be attentive and much less like to buy the brands they don't buy, so they are more likely to be excluded by algorithms that seek out high probability buyers.

But brands grow by acquiring new customers, the non-buyers of the brand, not by increasing loyalty amongst existing customers. The evidence for this is overwhelming, a substantial and growing body of proof that has been popularised by Byron Sharp and the Ehrenberg-Bass Institute for Marketing Science, and repeatedly proven by comparing brand penetration levels to brand loyalty levels within any category. Penetration (having more buyers) always trumps loyalty (customer purchase levels) as a descriptor of brand size and as a driver of brand growth. Big brands, in any category, have many more buyers than small brands (over any timescale) and variance in penetration accounts for differences in market share to a far greater degree than variance in loyalty (even though bigger brands generally have a slightly higher level of average purchase frequency than smaller brands).

Given the wall of indifference that non-customers have for the brands they don't buy, most contacts that brands have with non-buyers are mainly soft nudges, contributing to a generally sub-conscious and slow-growing cumulative familiarity with the brand that gradually increases propensity to purchase the brand in the future, possibly taking many years. Every contact of the brand amongst non-buyers has a positive contribution to future sales but the effect is slow, much slower than contact effect amongst customers. Acquiring new buyers takes time, it requires long term thinking, long term planning, long term measures, and acceptance that acquisition of non-buyers over the long term is the way that most brands grow, by reaching and nudging non-buyers repeatedly over time. Very few

small brands rapidly grow to become category leaders in established categories. This is because we don't think about the brands that we don't buy.

ON THE CHALLENGE OF REACH AND FREQUENCY

21 August 2020 | Advertising, Brand Science, Consciousness, Data, Data Science, Familiarity, Frequency, Growing Brands, Habit, Long Term, People, Reach, Systems 1 & 2

If you want to sell more of your product or service, it is a good idea to make sure that your brand reaches a lot of people, lots of times. Reach and frequency make sense. However, measuring and planning and controlling the reach and frequency of exposure for a brand, something that used to be relatively straight forward, has become increasingly complicated and challenging (arguably impossible) for brand managers.

Why is the measurement and control of reach and frequency so important?

Read 'How Brands Grow' by Byron Sharp to find out that all brands grow by increasing penetration of category buyers, by attracting new buyers to the brand, and that reaching as many non-buyers of the brand as possible is the approach you should adopt to increase penetration by nudging non-buyer propensities to buy your brand. Mr Sharp argues that brands should target widely, reaching all category buyers. People who have not heard of your brand will not buy it. Reaching lots of people makes sense.

Frequency is also important. The science of the human brain shows that two things happen in our brains sub-consciously when we are exposed to something repeatedly (regardless of what it is) without us being able to do anything about these effects: firstly, whether we like it or not, we become familiar with it; secondly, with continued repetition, we become increasingly positive towards it because our brains are biased in favour of what we are familiar with. Frequency drives familiarity and positivity, two vital ingredients for long term sales growth.

Now consider this. Every type of contact that consumers have with a brand contributes to that brand's reach and frequency and (to varying degrees) to sales: seeing the brand on the

shelf in a store; hearing about it from a friend; seeing it on a Facebook timeline; seeing someone using it; seeing an ad on TV for it; using the brand yourself; reading an article that mentions it; and so on. Every one of our exposures to a brand contribute (mostly sub-consciously) to our associative memories about that brand, creating the sense of 'brand' in our brain. Each exposure, every one of them, influences our likelihood to buy the brand the next time we buy in the category, cumulatively and over the long term.

The probability that someone will buy a brand is much more complex than reach and frequency of exposure to that brand. How we respond to a brand in a buying situation is dependent on many factors (contextual, economic, social etc.) that vary from person to person and from moment to moment. However, we can be sure that someone who has been repeatedly exposed to a brand over time (particularly if they have previously used the brand) will be more likely to buy that brand than someone who has no prior exposure to the brand. Reaching lots of people lots of times is a good idea.

Now, the challenge. Meaningful measurement of reach and frequency requires timely and accurate measurement across all forms of exposure that people have of the brand. You need to measure the net total reach and frequency of your brand across all channels. Measuring reach and frequency solely within one channel or platform provides an inaccurate (potentially misleading) measure of consumer exposure to the brand. Our brains do not compartmentalise brand memories by channel, they combine exposures across channels to form associative memories that cannot be untangled. Single channel measures don't show the net total exposure of a brand across all channels (paid, owned and earned, offline and online). Knowing that the reach of an ad in a single channel across a week was x% and the average frequency was y does little to inform marketers how many people were exposed to their brand how many times - in total, across all channels - during the week.

Measuring reach and frequency accurately has become increasing difficult in recent years. Historically, when there were far fewer media choices (five major media) and shopping options (physical stores, supermarkets), brand managers were able to measure and control most of the exposure to their brand. Not anymore.

The internet has created so many news ways to expose people to brands: through websites, search engines, social pages, forums, video channels, apps, video games, virtual assistants, streamed events, SMS, email, etc. The list of options, and the reach of the internet, gets larger every year. However, while many of the owners of digital platforms provide their own measures of reach and frequency for their platform (often using different, non-comparable methodologies), there is no way currently to measure reach and frequency across the major competing digital platforms. Even within a platform, measuring net reach and frequency accurately across devices is extremely difficult if not impossible. But this is only part of the problem: marketers need to combine digital exposure with non-digital exposure. Measuring

reach and frequency of exposure, the net total exposure of a brand amongst a group of people across all forms of contact, is becoming harder and harder.

How can marketers measure, plan, and control the net cross-channel reach and frequency of their brands today? While it may be possible to obtain (variable) measures within most channels, granular and timely cross-channel net reach and frequency is not currently measurable, becoming less measurable, and becoming more complex as the fragmentation of audiences across paid, owned and earned channels continues to grow. Marketers and channel owners need to find and agree a methodology that provides accurate (enough) cross channel reach and frequency for brands across all paid, owned and earned contacts, offline and online. Excluding any relevant contact types risks excluding important sales drivers. This is the big challenge of reach and frequency.

ON THE LEGACY OF THE PANDEMIC

26 August 2020 | COVID-19, Long Term, Transformation

"Those who cannot remember the past are condemned to repeat it." George Santayana, 1905

Looking back from the future, in a post-pandemic world, how will people judge the current government and society response to the COVID-19 pandemic? Will the world be better prepared for the next pandemic? What will the legacy of this pandemic be?

In an uncertain world, one thing is certain: the current pandemic was predicted eleven years ago. In December 2007, the United Nations published '39 Steps Governments Should Take to Prepare for a Pandemic', stating that "Experts at WHO believe the world is closer to an influenza pandemic than at any time since 1968."

In 2008, the World Health Organization published the 'Pandemic influenza preparedness and mitigation in refugee and displaced populations' report, estimating that a future influenza pandemic could infect up to 35% of the world's population (2.7 billion people) and that up to 2% of those infected could die (55 million people). The report states "Once a fully contagious virus emerges, its global spread is considered inevitable. The pandemics of the previous century encircled the globe in 6–9 months. Given the speed and volume of international air travel today, the virus could spread more rapidly, possibly reaching all continents in less than 3 months. The pandemic is likely to return to a region in 2–3 waves, for example for 2–3 months each year over 2–3 years."

During the 20th century there were three significant influenza pandemics. In 1918/19 'Spanish Flu' resulted in 50 million deaths worldwide. In 1957/58 'Asian Flu' killed 1.1 million people. The 1968/70 'Hong Kong Flu' killed one million. Then, after a thirty-year gap, came

SARS in 2002/03, resulting in a total of 770 deaths, 'Swine Flu' in 2009/10 killed 200,000 people, and MERS in 2012 killed 850 people.

Despite the 'highly likely' prediction of a pandemic from WHO in 2007, we now know that governments were slow to respond effectively to the emergence of the COVID-19 virus. Why did they delay? One reason may be because there had not been a major global pandemic for fifty years, and SARS, MERS and 'Swine Flu' did not spread to become the major threat to the world's population that was anticipated. Additionally, WHO estimates that between 290,000 and 650,000 respiratory deaths occur each year due to 'normal' seasonal influenza, so none of the early 21st Century outbreaks exceeded the annual impact of flu. It seems that many governments took a 'let's wait and see' approach to COVID-19, hoping it might 'fizzle out' before it became a major global threat. With hindsight, we know that delaying the closing of borders and delayed imposition of social isolation lockdowns allowed the COVID-19 virus to spread rapidly and dramatically around the world. So far, COVID-19 has killed 814,000 and infected 24 million people worldwide. Nobody is predicting that the pandemic will be over soon.

COVID-19 has changed the world, the legacy will not solely be one of high mortality. Globally, government and civic society will be different in the post-pandemic world. The memory and lessons of this pandemic will persist. We can expect major long-term change to the world's economies, governments, and societies. My next blog post will explore post-pandemic category and consumer changes. A number of major shifts are already likely.

ON THE POST-PANDEMIC WORLD

27 August 2020 | COVID-19, Forecasts, Habit, Long Term, People, Place, Promotion, Sustainability, Transformation

The post-COVID-19 world will be different in many ways from the pre-pandemic world of just nine months ago. Too much has changed, and will yet change, to allow the world to slip back to the pandemic-free life that we all enjoyed between 1968 (the last major global pandemic) and 2019.

Many long term societal and business trends that were already progressing steadily before the pandemic have been dramatically accelerated in the last eight months. These trends are likely to persist and continue to grow, impacting businesses, their products and services, and how they market their brands. Here are some of my best guesses for “new normal” trends after the pandemic.

Working From Home

There have been big changes in the way that people work for a number of years. Initially there was a shift to open plan offices and hot-desking, then flexi-working and a rise in working hours that took place from home rather than from an office. The WFH trend was well underway before the pandemic.

Today most workers have been forced to work from home and businesses have adapted to this change by adjusting processes, people management, and how work is done individually and collaboratively. Some studies have shown there has been a big increase in productivity and businesses benefiting from hours swapped from commuting to working. After the pandemic will businesses reduce their office costs and base more of their workers at home? It seems likely that many will and that the WFH trend will continue.

There will be a large knock-on effect from the rise in working from home. It means fewer commuters, less pollution from cars, less need for petrol, a decline in the business sector dependent on commuters, fewer and smaller offices, a potential hollowing out of urban centres, and population migration from urban to rural. It also means more businesses that cater to people working at home and growth in technologies for home workers. Marketers need to consider the growing WFH population, how to adapt products and services and marketing for home workers.

Healthier, Safer, More Protected Planet

These are long-term trends that were well underway before COVID-19 emerged, now accelerated by the pandemic. Consumers in the post-pandemic world are likely to be more conscious (and sub-consciously biased) about the quality of products they buy, how healthy they are, and their impact on the planet. A large and growing population is increasingly concerned about the planet, climate change, damaged rainforests, decline in species, pollution, globalisation, sustainability, and inequality (of many kinds). After the pandemic, businesses will increasingly focus on these trends, demonstrating the quality, safety, sustainability, and planet-friendliness of their brands.

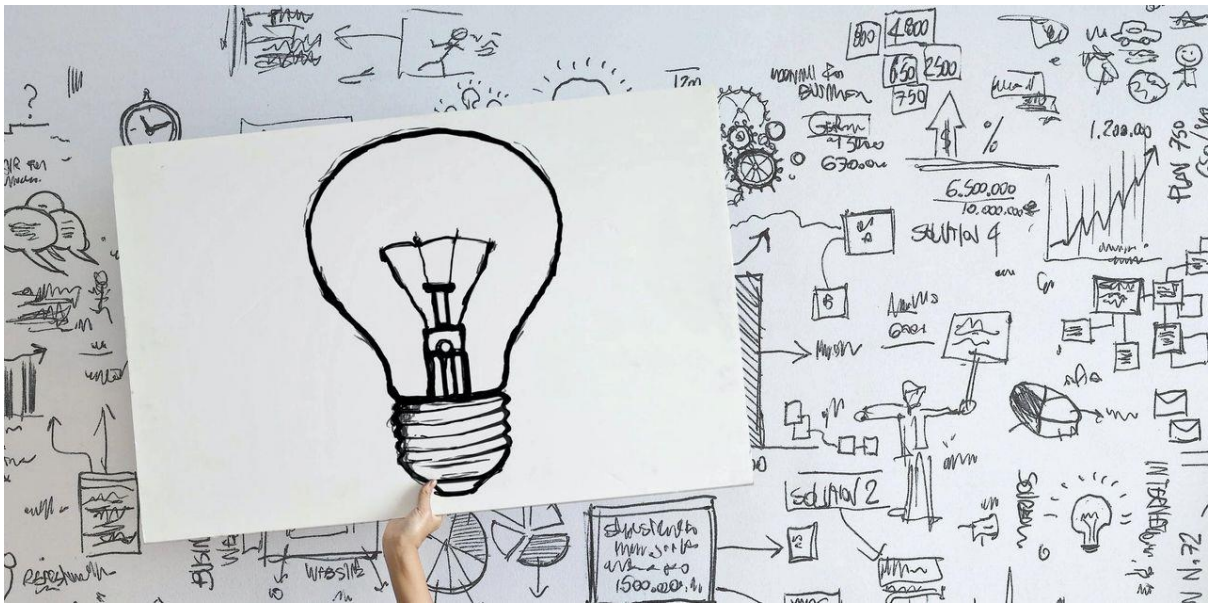
Disrupted Habits and the Need for Trust

Humans are habitual, we like to have routines and habits that we stick to. Our brains are wired to habituate our behaviour and our day-to-day life. Breaking habits is hard for marketers. However, at times of major change in our lives (such as moving home, getting married, having children etc.) our brains and our habits are disrupted. During these times we are much more likely to review and change our habits and the brands that we buy. The COVID-19 pandemic has (brutally and suddenly) disrupted the habits of the world's population. We are now in a time of extraordinary change. Sub-consciously driven habits are all up for review and potential change. In the post-pandemic world, our minds and behaviours will begin to habituate again, but changed, newly oriented to products and services that best fit with our post-COVID outlook on life.

Humans have an innate need to trust, our sub-consciously driven attitudes and decisions are based on trust. COVID-19 has disrupted trust at many levels: in government, politicians, experts, and in the products and services that surround us. In the post-pandemic world brands need to work harder to be trusted, to establish trust, to demonstrate that they can be trusted.

ON THEORY > DATA > INSIGHT > EUREKA

2 September 2020 | Advertising, Data, Emotion, Growing Brands, Insight



If you want to make the most of data, it is a good idea to start with a theory. That way you have a reference point for data that either supports or disproves the theory. Here is a good example.

THE THEORY

A planner that I once met told me a theory, based on her personal experience. Her theory was that girls suffer from a crisis of confidence at puberty that, combined with gender stereotyping at that vulnerable time, lowers their self-confidence throughout their lives.

THE DATA

A long search online uncovered an extraordinary piece of evidence about self-esteem – see the chart below - that was based on a global survey of 327,000 people. The chart shows the following for girls/women:

- self-esteem in girls is high (and the same as in boys) when they are 11 years old, but as they go through puberty
- there is a big and continuous drop in self-esteem in girls that reaches a low point when they are 20,
- remaining at this low level until they are 39,

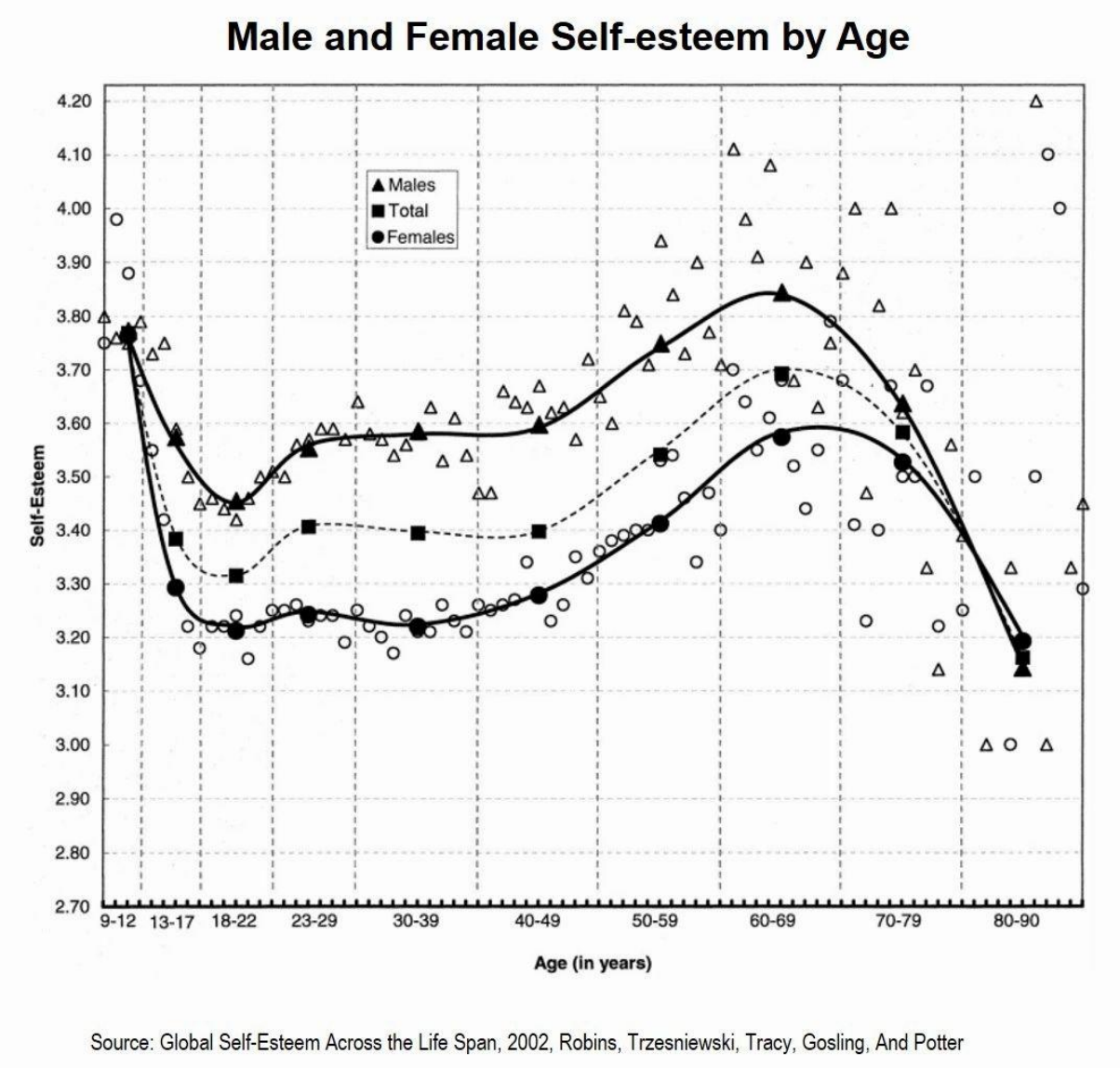
- then rising slowly until they are 68,
- but never returning to the high level of self-esteem that girls had when they were 11

The data tells a different story for boys/men:

- self-esteem in boys also falls between 11 and 20, but to lesser degree than in girls,
- then rises sharply during their 20s
- then rises slowly until they are 45
- then increases to match the high self-esteem of 11-year-olds by the time they are 55
- and continues rising until a higher peak is reached aged 65

Throughout their lives, boys/men have higher self-esteem than girls/women after the age of 11.

Here is the chart.



Source: Global Self-Esteem Across the Life Span, 2002, Robins, Trzesniewski, Tracy, Gosling, And Potter

THE INSIGHT

These data, together with other points of reference, led to this insight: gender stereotyping of girls severely damages their self-confidence in a way that persists throughout their lives.

THE EUREKA MOMENT

The ad that was created from the theory, supported by data and insight into loss of self-esteem amongst girls led to one of the most awarded and successful ads of all time: Like A Girl.

The paper that the chart came from is here

The case study, written by the planner that I met - Anna Coscia - is here

ON THE IMPORTANCE OF BEING FAMOUS AND PERSONAL

11 September 2020 | Advertising, Fame, Familiarity, Growing Brands, Long Term, Personalised, Trust

When it comes to buying anything, trust is perhaps the most important factor. If you don't trust something, you won't buy it. There is a lot rolled up in 'trust': credibility, authenticity, reliability, safety, security, quality. If you trust it you are much more likely to buy it.

A good way for a brand to be trusted is to be famous, to "be known about by many people", and, *more importantly*, to ensure that many people know that many other people also know the brand. Fame requires a collective (rather than individual) experience. Everyone knows that everyone else knows. Fame creates trust. If everyone else knows about it and is buying it then it can be trusted.

Traditional mass media, by its nature, can be used to create trust. It can reach large numbers of people collectively. Everyone sees the same thing. The same editorial and advertising. You know that everyone else is seeing the same as you. TV advertising has historically been used by companies to create trust through fame. Large numbers of people seeing the same ad at the same time - collectively knowing that many others are seeing the same ad - can be a powerful way to build trust. A key element is that the limited nature of the available media delivers a collective viewing/hearing experience rather than one that is fragmented. This is why Super Bowl ads remain so popular today.

Digital advertising, by its nature, is not a collective experience. When you see an online ad you don't know that everyone else is seeing the same ad as you. The ad might be

personalised; different people might see different ads at different times. Even if a digital ad reaches a large population, you have no sense of the size of the audience. It could just be you. So, the creation of trust through known collective fame is much diminished. Digital advertising - what you see and when you see it - is fragmented to the level of the individual. Digital advertising is personal.

Personalised advertising has a different purpose that can, when combined with fame, help brands to grow. It makes advertising more relevant, appropriate, specific to a particular moment of individual need or want. It is more likely to trigger a sale than an ad that is less relevant. But the brand must also be trusted.

To grow, brands need to be famous and personal.

ON THE WONDER OF SCIENTIFIC DISCOVERY

18 September 2020 | Advertising, AI and Machine Learning, Brand Science, Data, Data Science, Scientific rules, Transformation

One of the greatest books ever written, at least to my mind, is ***The Ancestor's Tale*** by Richard Dawkins. The book describes the wonder of evolution by tracing each genetic ancestor of humans, chapter by chapter (40 chapters!), all the way back to eubacteria, the origin of life and common ancestor of all living things. This genetic tree of ancestral life is a wonder that took philosophers and scientists well over 2,000 years to fully discover, finally immortalised by Darwin.

The scientific path that applies in marketing, the science of human behaviour and motivation, appears to be moot today. The internet has caused such change in consumer behaviour, of buying and selling, from offline to online, that many believe the "old" rules no longer apply, that all in the world is new.

In 1923 Claude Hopkins wrote ***Scientific Advertising***, an early attempt to describe "laws of advertising" – the opening paragraph of the book states "The time has come when advertising has in some hands reached the status of a science. It is based on fixed principles and is reasonably exact." Much of the content in this book continues to have relevance today (it is well worth reading). For example, "Human nature is perpetual. In most respects it is the same today as in the time of Caesar. So, the principles of psychology are fixed and enduring. You will never need to unlearn what you learn about them."

In 2010 Byron Sharp wrote ***How Brands Grow***, presenting "scientific laws about buying and marketing performance". The rules in this book, described as "myth-busting", are based on data from sixty years of research. It just took someone to make them more visible - to market them. When it was first published many marketers (perhaps most) were not convinced by the laws it advocates. Today, while it has probably become the most followed guide for marketers, its laws remain much contested.

There have, of course, been many other books published on behavioural science, most based on long term learnings from psychology. However, it is hard to find a consensus in the marketing community regarding the application of learnings from behavioural science. Marketing opinion is splintered.

The science of human behaviour and motivation should be enjoying dramatic growth as the computation power and AI available today can now be used to extract new learnings from the vast array of available data. Yet, so far, despite the phenomenal size and power of companies such as Amazon, Google and Facebook, very little (if anything) has been published that could be described as new scientific discovery – new rules that describe human behaviour and motivation predictably, systemically, permanently. In reality, the marketing science learnings and rules that apply today were discovered many years ago. The question is whether the new era of data will bring wonderous new scientific learnings to light for marketers.

ON USING GOOGLE SEARCH TO PREDICT THE FUTURE

25 September 2020 | AI and Machine Learning, Data, Data Science, Forecasts, Scientific rules, Search

About 15 years ago, three executives from Google visited me to ask about advertising. While they appeared to be intelligent engineering types, they seemed to know very little about advertising or marketing. They wanted to know all about it in one hour. I told them what I could in such a short time. They tapped away on their laptop keyboards like stenographers, trying to capture every word.

One of the things I told them was that Google could help companies to predict trends in their category. They tapped away. I told them that a machine learned algorithm could be tasked to identify rising and falling trends (predicting the future) in a category based on some simple rules:

1. ***Track search word and phrase volumes*** that relate broadly to a category or to a topic on a daily/weekly/4-weekly basis.

2. Set a ***minimum search volume*** within a country – perhaps a million searches per day or week, or a minimum per capita volume. Use this to exclude any high indexing 'trends' based on small volumes that are noise rather than signal.

3. Set a ***minimum rise or fall level*** per day/week that must persist for a minimum number of days/weeks – perhaps for 12 weeks – before search patterns (up or down) can be determined to be a trend. The continuous change in the volume must continue in every week. Adjust the minimum rise/fall level so that it is not linear but a diminishing curve over time.

4. ***Estimate search volume*** for the next day/week/4-weeks based on the persistent trend over the prior weeks. The algorithm should improve the prediction over time.

5. Each day retrospectively check the actual volume for the prior day/week/4 weeks against the estimated volume and ***adjust the algorithm*** to improve the prediction for the next day/week/4 weeks.

6. If the prediction is accurate, ***publish the trends*** for companies in the category.

This machine learning method should result in an accurate prediction of a persistent trend (up or down) in a category. Publishing category trends for companies in the category would be immensely useful for marketers and business planners.

ON BRAND LOYALTY

2 October 2020 | Advertising, Brand Science, Customers, Data Science, Growing Brands, Long Term, Loyalty, Scientific rules

General definitions of loyalty include "the quality of staying firm in your friendship or support for someone or something" and "feelings of friendship, support, or duty towards someone or something". However, when it comes to brands, loyalty has a different meaning that is well defined as "purchasing the same product or service repeatedly". For consumers, brand loyalty has little to do with emotions and feelings, more to do with habits and routines. The level of brand loyalty is the frequency of purchase of a brand within a defined period.

A large and growing global body of evidence shows that brands have very few loyal (e.g. regular repeating) purchasers and that all brands exhibit the same frequency of purchase pattern, irrespective of brand size – the Negative Binomial Distribution - with a long tail of very light purchasers. Kantar has published some interesting empirical generalisations on brand loyalty for CPG/FMCG brands:

- About half of the buyers of a brand in a year will no longer be buying it in the following year.
- About half the buyers of a brand in a year did not buy it in the previous year.
- The most popular purchase behaviour amongst buyers of a brand in a year is to buy it only once in the year.

- People buying only once or twice in a year account for about half of all buyers of a brand.
- Over five years, about 80% of CPG brand buyers buy once a year or less - delivering 40% of sales.
- Penetration is broadly predictable, doubling from a quarter to a year, and from one year to five.
- Shoppers are typically disloyal to brands. Buyers of a brand in a category are similar to the buyers of other brands in the category.
- The largest brands in a category have marginally higher frequency of purchase than the smallest brands, but a much larger number of buyers.
- Price promotions have no impact, in the longer term, on market share or penetration for a brand.
- For most of its customer base, a CPG brand is rarely bought and easily forgotten.

The evidence shows that, rather than focusing on regular purchasers, brands should target non-buyers and infrequent buyers. With half of buyers leaving each year this is vital just to maintain existing penetration levels. To grow, brands need to convert a large number of buyers who did not buy in the last year. The evidence shows that most brands grow, not by increasing repeat buying from existing customers, but mostly by attracting new, largely very light, buyers.

ON ADVERTISING IN A RECESSION

9 October 2020 | Advertising, COVID-19, Familiarity, Growing Brands, Long Term

In a normal recession people have complete freedom to travel around, see their friends, fly around the world, go on holidays, go to restaurants, gyms, the cinema, sport events etc. In normal recessions, despite the economic dip, most people go about their daily business much as before. Almost all products and services are still available to buy in the normal way.

There is a mountain of evidence that, in normal recessions, brands that maintain or increase advertising spend relative to competitors typically benefit from a long-term increase in market share after the return to economic growth. Brands that reduce or stop their adspend typically lose share relative to those that don't.

The current pandemic-induced recession is different, unique, with no lessons from history to guide advertisers. What should a business spend on advertising if they are not able to sell at all? For some major categories (eg. travel, live events..) enforced restrictions have reduced the ability of companies to sell to zero, or close to zero. For many others, sales have been dramatically reduced. A handful of businesses (Amazon springs to mind) are thriving. So, what should businesses spend on advertising during the pandemic?

Byron Sharp, in his book How Brands Grow, argues that – to grow - brands need to maximise their physical and mental availability. This pre-supposes that growth is a possibility. During this recession, for many businesses, growth may not be an option and survival may be the goal. Limited resources are more likely to be spent on staff than on advertising. However, one thing is certain: the world will eventually recover from the pandemic, either through population immunity or as a result of a successful vaccine. So, the pandemic is temporary.

Businesses with no/low sales need to consider whether they need brand visibility of some sort, whether through advertising or by other means, to ensure that they remain salient and 'available' in the minds of consumers when the pandemic and its recession come to an end.

The internet provides many opportunities for businesses to build low-cost visibility through websites and social media. A good example is the Dettol **#HandWashChallenge** on TikTok, now with over 125 billion views.

ON RESEARCH

16 October 2020 | Brand Science, Data Science, Insight, Research

When I present research data, occasionally some people say to me "is that data behavioural or declarative?". When I say "declarative" their eyes glaze over, their ears stop working, I lose their trust. They don't believe that research can be based on asking people anything. They don't believe that people can answer questions accurately. They only believe in data based on internet clicks. They believe that clickstream data is the only reliable data to inform about human behaviour.

I am the first person to agree that humans are biased, that our decisions are driven by a largely subconscious brain, that a lot of what we say is not what we do. However, dismissing all declarative research is not wise. There are many questions, and question methods, that are likely to elicit accurate responses from respondents. Along with a robust sample size and representative sample of the intended population, declarative research can be a terrific, and often the only, way to reveal human motivations and behaviours. Remember that most of our lives, and our interactions with brands, exist offline - so clicks can only describe a small part of all that we do.

Declarative research, by asking a sample of respondents to answer questions (typically using self-completion online questionnaires), has its pitfalls, but most of them are well known and there is a large body of best practice method and questioning technique for researchers to follow. Common sense is also required (e.g. don't ask people things they are unlikely to be able to answer accurately, don't ask them to overthink, avoid known biases). There are also many ways to validate declarative research, to prove its accuracy.

Behavioural research, sourced from clickstream data, also has its pitfalls, with much less established best practice to guide researchers. Clicks are useful in many areas – informing us about online behaviour – but they are often used incorrectly and misleadingly. One example

is in the area of multi-touch attribution where clicks have been used to attribute the effectiveness of different online channels on the sales of a product or service. The assumption is that clicks describe all the possible influences on sales when, in reality, they are likely to account for only a part (often a small part) of the many factors that impact sales. Factors such as all the offline brand contacts and other offline influences on our choice of a brand. Failing to account for the full range of influences on sales can lead to very wrong attributions.

Declarative and behavioural research both have their uses. Understanding their boundaries, limits, and scope of use is vital when deciding which is the best approach to deploy.

ON BRANDS AND MASS MARKETING

23 October 2020 | Advertising, AI and Machine Learning, Brands, Fame, Familiarity, Growing Brands, Mass marketing, Programmatic, Reach

In the rapidly growing age of e-commerce and algorithms, are brands and mass market advertising necessary for consumers and businesses anymore? Or is the only 'brand' needed – trusted, credible, famous – Amazon? Do consumers need brands to choose products and services, or do they just need to select from a trusted e-commerce platform, without any need to be previously aware of the brand they are buying? Algorithms can match products to the needs and desires of the consumer. Reviews do the rest. No need for brands. No need for advertising. No need for mass marketing. Is this true?

Consider what you buy, and why you buy it. How much of your shopping is of brands that are already familiar to you, how much is of products or services you had never previously heard of. Think about groceries, appliances, cars, mobile phones, shoes, clothes. How important is brand familiarity? Without doubt, the great % of what you buy is branded, with advertising playing a part in your prior experience of most purchases. Online purchases are an increasing proportion of what we all buy, accelerated by the pandemic, but this does not mean that branding is no longer relevant, in fact branding remains vital for business success.

Here are two sides of the argument:

- Scott Galloway, a professor of marketing at the New York University Stern School of Business, recently argued that "There's the CMO who came from the world of Don Draper and wants to spend money on marketing… uses the term 'brand' every other sentence and wants a bigger budget for marketing and advertising. I don't think

those CMOs last. The CMOs who are thriving are the ones that say 'I'm your link to the market, I understand strategy, and I am informing every piece of the supply chain. I understand where we're getting products and services, where we can save money, where we lose money."

- Shann Biglione, head of strategy at Publicis Media in New York, counters Galloway's view by arguing "Advertising is a competitive edge. It allows to be seen relatively more or less than the competition. We've seen this in regulated markets where access to broadcast media was prohibited – eg smoking brands in many countries, movies in France, condoms in China. In none of those cases did we see the importance of brand reduce – quite the opposite. Brands may revert to different tactics, but the strategic value of a strong brand will likely survive. Go to China, and watch a brand like Three Squirrels, who have become one of the largest food brands in the country simply by repackaging wholesale nuts at a premium under a cute brand umbrella and some fun little bits of packaging. An explosive growth that all happened on – wait for it – e-commerce websites! The very tools that are supposedly reducing the value of brands."

Brands will continue to be important for consumers and businesses, most likely into the distant future. How brands are created, the contacts and experiences that we have with brands over time, is changing and will continue to evolve. However, the value of a brand reaching large numbers of people (particularly non-buyers), building associations and familiarity, however that is achieved, will remain vital to its success. The use of advertising through media channels, reaching large numbers of potential buyers (eg. mass marketing), will continue to be a valuable tool for businesses to help build their brands.

ON LOOK-ALIKE MODELING

30 October 2020 | Brand Science, Modeling, Promotion, Scientific rules

Let's say you want to grow your business by increasing the penetration of your brand. You decide to do this by targeting people who buy in the category but do not buy your brand – your non-buyers – with promotions they are likely respond to. You are a packaged goods manufacturer who wants to target non-buyers online. One of your options may be to obtain a sample of data about your non-buyers that you might get from a retailer (from loyalty card data) or from a research company that has a panel of people who scan their purchases each day. Either way you start with a sample of people that you wish to scale up to target online, as non-buyers of your brand, with promotions. You want to avoid targeting existing buyers with promotions as they are more likely to buy your brand anyway (and more likely to respond to promotions), so reaching them will only reduce the margin of your brand. Scaling a target of non-buyers is the objective. Look-alike modeling is a technique that you might consider to do the scaling from a small sample to a large group of people to target online. But, does it work?

Look-alike modeling works by taking the online clicks of a sample of people and mathematically selecting a much larger group of people based on the similarity of their online clicks. So, for example, if my brand is Pepsi and I want to target non-Pepsi buyers then I need to look at the clicks of a sample of Pepsi non-buyers and then find lots more people with similar clicks. Theoretically I would then scale to many more non-buyers of Pepsi. But what if the clicks of non-buyers of Pepsi are similar to the clicks of buyers of Pepsi, so the scaling ends up with a mix of buyers and non-buyers, and I end up targeting my promotions to my buyers as well as non-buyers? This would defeat the objective of targeting non-buyers and potentially reduce the margin for the brand.

In packaged goods (and in most other categories), the buyers of a brand in a category are similar to the non-buyers of that brand who buy other brands in the category. Typically, half of the buyers of any brand in a year will be buying a different brand the next year. Buyers of brands in most packaged goods categories are similar to each other. They are also similar in their online behaviour. The online clicks of non-buyers of a brand are similar to the clicks of the buyers. So, look-alike modeling typically fails to effectively isolate non-buyers of brands. In fact, it can end up over-targeting existing buyers because of a lack of discrimination between online behaviours of buyers and non-buyers.

ON SHARE OF SEARCH

6 November 2020 | Advertising, Brand Science, Brands, Data, Data Science, Decision Making, Forecasts, Growing Brands, Scientific rules, Search

There has been quite a bit of chatter lately amongst marketing academics/experts about share of search and its link to market share. This is not new. Over ten years ago a team of analysts showed me how a brand's share of search in the automotive sector could be used to predict its market share – accurately, in every country. Subsequently the team proved the same case in other categories.

Recent chatter argues that share of search should replace share of voice as a metric for setting budgets and predicting growth.

The use of 'share of search' data to predict market shares is likely to be possible in some categories, particularly where search is a major activity in the process of deciding what to buy. It is less clear whether the method can be used for low interest, low involvement packaged goods categories, particularly where category boundaries (substitutable products at point of purchase) are not easy to determine.

A question is whether brand owners should specifically target growth in share of search in order to grow share of market. The direction of causality needs to be established. Do brands with high market share simply have more buyers, and therefore more people searching for their brand, than small brands with fewer buyers? Causality could be one way: higher market share leads to higher share of search, not the other way round. This is likely to be true for some (lower interest, lower involvement) categories where search is not much used to find out about and compare and buy products. But in others, where search is a key part of the buying process – automotive, finance, electronics etc. – it is likely that share of search can be used to predict share of market….with a lag between searching and buying. For these categories, increasing share of search could be a sensible objective, and a metric for measuring marketing success.

Excess share of search (ESOS), where a brand's share of search is greater than its share of market, is being touted as a possible way to predict market share: brands with relatively high ESOS will gain market share versus those with relatively low ESOS. In 1990, John Philip Jones, a professor at of Public Communications at Syracuse University in New York, introduced the concept of excess share of voice (ESOV) and The Jones Curve (or Advertising Intensiveness Curve), a way of examining the relationship between ESOV and future market share. At the time this method was largely applied to packaged goods categories. An equivalent curve today, that shows the relationship between ESOS and market share, could be used to predict market shares in categories where search plays a big role in the purchase process.

ON AUDIENCE MEASUREMENT

13 November 2020 | Advertising, Audience, Brand Science, Brands, Data, Data Science, Growing Brands, Mass marketing, Personalised, Reach, Research, Trust

Advertisers need to know the audience to their ads. Knowing the size of the audience to ads, and its composition, is fundamental for assessing the value and performance of advertising. It is fundamental for planning and buying advertising.

There are two elements to audience measurement that form the foundation of a successful advertising environment for media owners and for advertisers and their agents:

1. A single agreed definition of what constitutes opportunity to see or hear advertising that is applied equally, without variance, for all companies selling and buying ads. This ensures a level playing field to assess the relative worth of media providers and the advertising placed with them.

2. A single, and independent (of buyers and sellers), source of OTS/OTH data that provides buyers and sellers of advertising with a universally trusted and credible currency.

These elements have been successfully in play globally for almost 100 years, delivering largely credible and trusted audience metrics for planning and buying advertising in the five traditional media: TV, print, outdoor, radio and cinema. In most countries a system of joint industry committees (sellers + buyers + agencies) has agreed and managed the appointment and funding of independent research contracts to deliver industry measurement of advertising audiences. This approach has ensured a relatively harmonious trading environment in these media.

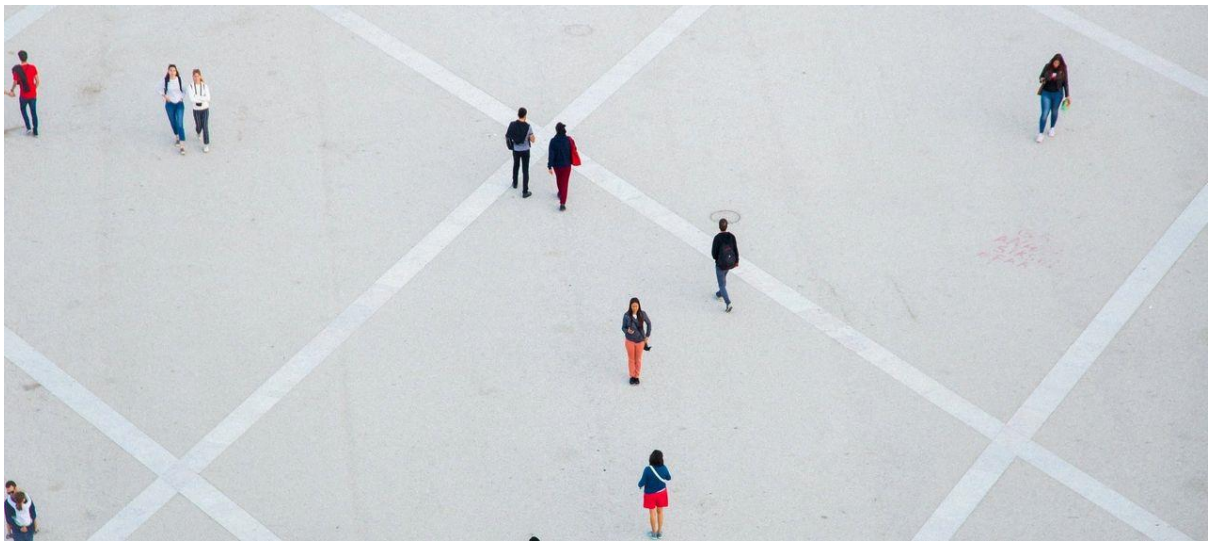
This does not mean that measurement of audiences for traditional media has been without its challenges and issues. Nor does it mean that the audience measurement has delivered wholly accurate audience data. However, what matters is that the audience measurement has been agreed by all parties, that the data adequately reflect the relative delivery of audiences across media providers within each medium, and that the data provide a level playing field for trading ads. This approach has ensured trust between buyers and sellers.

The arrival of the internet 26 years ago created a new digital advertising environment that brought with it the promise of an entirely new, altogether better, way to measure and plan and buy advertising audiences. The promise was simple: every person using the internet could be measured, every ad they were exposed to could be measured, advertisers would know the audience to their ads accurately for the first time. Today the size of the internet medium eclipses every other medium; in advertising spend terms it is already 80% larger than traditional TV. However, despite the passing of a quarter century, debate around the measurement of internet audiences remains in turmoil, with lack of trust between buyers and sellers. There is no single agreed definition of OTS/OTH, there is no single independent source of OTS/OTH data, the playing field is not even across providers, control over the trading currency sits firmly with the media owners. An environment where media owners grade their own homework, without independent verification, inevitably leads to loss of trust.

Because of the immense (and fast growing) global size and power of the largest internet players, each with their own tightly protected walled gardens, the path to a fully trusted trading currency for internet advertising audiences is neither clear nor likely to be swift. This has led advertisers to increasingly rely on their own first party data – the clicks that occur on their own digital properties – for assessing the effectiveness of their online ads, and this has skewed online advertising to be direct response, promotional, with solely a short-term goal. Are we in a new era of direct response advertising? Does this reduce the potential for businesses to grow their brands? There are huge technical, financial, political and commercial barriers to progressing a globally agreed standard for measuring and trading internet audiences. Finding the way through requires all parties to compromise but not to lose sight of the fundamental elements of a successful trading environment: a single agreed definition of the advertising audience, and independent measurement or verification of that audience.

ON CONSUMER JOURNEYS

27 November 2020 | Advertising, Audience, Brand Science, Consumer journey, Customers, Growing Brands, Insight, Long Term, People



What is a customer or consumer journey? Ryte Wiki defines it as “the customer’s path, via touchpoints, to their decision to purchase an item.”

Consider the purchase journey for your toothpaste brand. My toothpaste ‘journey’ includes seeing the tube of toothpaste twice each day when I brush my teeth, squeezing the tube and slowly heading towards the next purchase. Every few weeks I buy another one or two packs in my local shop – the decision to buy occurs when I have nearly run out and I barely think about the purchase process, just going to the shop and buying a new pack of the same brand of toothpaste. Apart from this I very occasionally see my brand of toothpaste in TV and print ads. I don’t ever remember seeing my brand online, whether through website ads or social media or on streamed video sites, and I never see it in search because I never search for toothpaste. My toothpaste purchase journey is simple, with the only touchpoint on the decision to purchase being the shelf in the store and my repetitive use of the brand each day.

Consider a different purchase journey, this time for a holiday. I normally spend quite a long time online searching for and comparing destinations, car hire and flights. This can go on, iteratively, for some days, occasionally weeks. Almost all my holiday purchase journey touchpoints are online, mainly using search and websites of travel aggregators, booking sites, airline sites, car hire sites, and quite a lot of general travel destination sites. It is mainly an online journey.

There are many different journeys for all the variety of product and service brands that we buy. For the great majority of packaged goods categories, the purchase journeys for most

people are offline and simple. For many other categories the journeys can include a mix of online and offline touchpoints. For a few (mainly e-commerce) categories the journeys are almost entirely online. Everyone has their own unique and generally non-linear purchase journey for each brand that they buy.

Here is another way to think of the consumer journey, not as a path but as a type of experience that you have with a brand. Consider these six types of brand experience:

1. **Unaware of the brand**: you have never heard of it. This is the experience type that you probably have with most brands. If you think about it, you have probably not heard of most of the brands that exist. For most brands, the first task on the path to purchase is to make people (as many people as possible who buy in the category) aware of the brand. If you have not heard of it, you will not buy it. Creating awareness requires deep knowledge of potential consumers and finding creative ways to tap into human emotions, layering memories and associations about your brand over time.

2. **Vaguely familiar with the brand, but not a buyer of it**. This is the experience that you have of most of the larger brands in categories that you buy in. You are probably aware, to a limited extent, of the larger brands of toothpaste, cars, mobile phones, etc. that you don't buy. In many categories you will be buying brands habitually, often as part of a routine, with very little thought. Brand managers need to find ways to bring their brand to the front of your mind when you next buy in the category. They need to get you to consider their brand.

3. **Considering the brand, but not yet a buyer**. This experience occurs when you are close to the moment of purchase in the category. Brands need to spring to mind when you think about your next purchase. You may have noticed your gums bleeding when you recently brushed your teeth and a toothpaste brand that tackles gum problems might spring to mind. An ad may have been the cause. Brand saliency – the brands that spring to mind at the time of category purchase – is the brand manager's goal for this group of people.

4. **Just bought the brand**. This is the goal for every brand manager – a sale! At this moment your brain trips a switch, without any conscious thought you suddenly change your attitude to the brand you have just bought. You pay much more attention to it, wherever and whenever you see it. You become biased in favour of it, and biased against any other brands that you didn't buy. The job of the brand manager now is to tap into this peak in positivity, reminding you that your decision was the right one. This is the moment when you are most receptive to cross-selling and up-selling. A moment of opportunity.

5. **Using the brand**, between category purchases. Most experiences of brands between purchases are based on the occasional (daily for some brands) use of the brand, driving the car, brushing your teeth, using your phone, and so on. These experiences define, to the greatest degree, your sub-conscious memories of the brand. Brand managers need to find ways to maximise visibility of their brand for its buyers, not only through packaging but by finding ways to add to the experience, whether online or offline.

6. **Re-considering the brand, as an existing buyer of it**. At the moment of category purchase you are most likely to default to the brand that you have been using most recently. In many cases, habit will dictate what you buy next. However, there are many reasons why you may re-consider what you buy. In fact, in packaged goods, about half of all buyers of a brand in one year will have switched to another brand the following year. The task for brand managers is to reinforce habits amongst existing customers, and break habits for non-customers.

Consumer (or customer) journeys are not easily defined linear paths, with points of brand contact that occur one after the other in a definable sequence. The route to brand purchasing is not a predictable or measurable path. Everyone has unique brand contacts over their lifetime that influence which brands they buy, some of these are immediately effective but many contribute cumulatively over time. Too many consumer journey 'maps' consider only a few recent contacts that may account for only a fraction of the influences on brand choice. An alternative approach is to measure the mutually exclusive experience stages or types of experience that people have with a brand and to focus marketing efforts on these groups of people, determining the optimal balance of activity for each group depending on the unique circumstances of each brand.

ON THE NEED TO RECLASSIFY ADVERTISING

4 December 2020 | Advertising, Data, Forecasts, Research

Media classifications for advertising need to be redefined. Currently most reports split ad spend into seven media: TV, newspapers, magazines, radio, outdoor, cinema, and digital (or internet). The issues with this classification are easy to define:

- The first six media are defined as 'analogue' non-digital media when, in fact, most of the media providers in these groups have significant and growing digital revenue from internet channels that they either own or are included in. Almost all analogue media providers are becoming digital.
- 'Digital' is not a medium, it is a catch-all description for all media types and channels that are delivered via the internet.

However, while this classification no longer makes much sense, defining new meaningful and measurable media types for ad spend is not simple for a few reasons:

- Media providers no longer operate within a single media type. They increasingly generate revenue from other digital services including e-commerce. Isolating advertising revenue from other sources can be difficult/impossible.
- The definition of what constitutes 'media' is no longer straight forward. Is Google a media provider or a tech platform? What about Facebook, Twitter and Amazon? If Google is a media provider, into which buckets can/should its' ad spend be classified?

- It is not currently possible to accurately source digital ad spend data, either in total or sub-classified. This is because the ad revenues of digital providers and platforms are either not reported or not classified in a standard way, and digital ad revenues are not independently measurable (accurately) or verifiable.

So, while current classifications are making less sense, there is no obvious alternative. Digital is already over 50% of all adspend worldwide and will grow within only a few years to almost 100%. All ads, at least almost all, will soon be digital. A new group of standard classifications for digital adspend, that can be credibly and accurately reported and verified, is now needed.

Media types for digital advertising that are often named include paid search, paid social, video, display, mobile/in-app, e-commerce, SMS/MMS, email, banners, rich media, sponsorships etc. A potential issue with these definitions is that they can overlap (eg. video ads are a subset of display ads) so can lead to double-counting digital ad spend. More importantly, due to political, technical, financial and commercial reasons, there is little collective will to redefine ad spend classifications. At some point the charts that show splits of ad spend by six analogue media and one 'digital' medium will be so absurd that they may disappear entirely. What then?

ON MAXIMISING SALES FROM ADVERTISING

11 December 2020 | Advertising, AI and Machine Learning, Audience, Consumer journey, Data, Data Science, Distribution, Growing Brands, Modeling, People, Personalised, Place, Programmatic, Scientific rules, Transformation

One of the great opportunities of the digital age is to use machine learning (ML) to increase sales from online advertising. The opportunity is for machines to 'learn' from a closed loop of inter-dependent data, as described below, to adjust elements that cause sales growth.

Given the right data, ML algorithms can be tasked to iterate four components within a closed loop, fine-tuning each individually and in combination to achieve an improved sales outcome. Using algorithms, machine adjustments can be made to each of the following:

1. Creative: the ad, its messaging and display elements.
2. Media: the contextual (including editorial) environment that the ad appears in.
3. Audience: the people exposed to the ad.
4. Point of sale: the contextual environment where the product or service is bought.

If the machine task is to increase sales for a fixed or fluid amount of advertising money, with the ability to adjust algorithms that can 'see' the sales effect of the four components above, machines can steadily improve ads, the context surrounding ads, the audience exposed to ads, and the context surrounding the purchase. This dynamic machine learned loop can maximise sales from advertising.

However, be in no doubt that machines cannot 'learn' or be 'intelligent' (in the sense that we understand as humans), but they can iterate human-designed algorithms that can lead to improved results for defined tasks set by humans. The human element, setting components and boundaries and rules, dictates the level of success as much as the machine.

A vital ingredient is to embed a structured approach for continuous testing of the components (individually and in combination) within the loop. This requires significant human intervention to define which elements the machine has control over, and the scope of that control. Taking ad creative as an example, which ad message elements and display options can the machine iterate? Can it change copy, colours, logo positions, video components, language, etc.? Each of these needs to be human defined and the boundaries of control for adjustments also need to be defined. The structure for testing adjustments must additionally be determined, with method for testing to ensure isolation of signal from noise.

Achieving control over the closed loop, with all four components tracking and feeding ML in real time, is an immense challenge. Most companies have control over only one or two of the components, dependent on others for the remainder. However, without direct line of sight from advertising to sales all bets are off. Amazon is currently one of only a few companies in the world that has control over all four of these elements within its own platform, while also reaching high proportions of the population.

Transforming business for the digital age is the focus of most boardrooms today. In addition to control over the product/service offered to buyers, which historically was the primary focus, the new challenge and competitive arena is to also control all intermediate steps through to purchase, harnessing the full loop of data to increase sales. When it comes to advertising, this means control over the creative, media, audience, and point of sale.

ON CORRELATION AND CAUSALITY

18 December 2020 | Advertising, AI and Machine Learning, Brand Science, Causality, Correlation, Data, Data Science, Insight, Modeling, Search

Data scientists are always on the hunt for patterns in data, particularly where there is evidence of causality, for example showing that factor A causes outcome B. Sometimes this is simple: we all know that higher temperatures in the summer cause higher ice cream sales, and lower temperatures in winter cause more colds. However, correlation does not infer causality. While there may be correlation where causality exists, often there is correlation but no causality. Common sense is the first filter: is causality likely (or just co-incidental correlation) and, if the answer is "yes", what is the likely direction (possibly bi-direction) of the causal effect? The next thing is to consider why there is causality. It is worth thinking about the following:

- Does A cause B, or does B cause A, or is the causation in both directions, possibly with one factor having a greater effect than the other?
- Is there another factor C that is causing A and B to be correlated?
- Does A does cause B but only so long as D happens?

- Is there is a chain reaction, for example where A causes E, which then leads E to cause B (but you only saw that A causes B from your own eyes)?

In 2011 Google released a very useful free tool called Google Correlate. This tool allowed users to enter a search term to discover highest correlating search terms over time – terms with a search pattern that most closely matched the search pattern of the entered term. Often this threw up fascinating correlations, many co-incidental and unlikely to be causal, but also others that were not immediately intuitive but, on consideration, could be causal. These were gold dust for further exploration. The tool also allowed users to draw their own pattern to discover search terms that most closely matched that pattern. This could be used to find out rising and falling trends. Extremely useful. Unfortunately, Google decided to close Google Correlate in December 2019 due to "low usage". Given its high value to data scientists, and the many potential beneficiaries around the world, there is good argument to ask Google to bring it back.

There are various ways to determine causality. One way is to use statistical modelling, for example econometrics or Bayesian modelling, to mathematically determine likely causality. Another way is to use A/B Testing, a controlled experiment that is well suited to the digital environment to determine, through iterative testing, which variants of an ad or web page have the greatest effect. A/B testing can be automated in a closed loop, using machine learned algorithms, and can steadily improve outcomes (often on a diminishing return curve).

ON THE SHARE-OF-SEARCHING APP AND ITS VALUE FOR MARKETERS

19 January 2021|Brand Science, Brands, Consumer journey, Data, Data Science, Forecasts, Insight, Research, Scientific rules, Search

This week Croft Analytics has launched **Share-Of-Searching**, a free app that can be used to chart Google search volumes and share of search trends for up to 40 brands (or other search terms) back to 2004 in any country. **You can access the app here.**

This blog post explains more about the app, the search data it uses, and the value of share of search data for marketers.

THE DATA IN THE SHARE-OF-SEARCH APP

The Share-Of-Searching app sources data directly from Google Trends, with trends in search volumes for any search terms back to January 2004. These data come with an important caveat: they are based on a **random sample** of search requests made on the Google search platform. This means that each time the sample is taken the results can be slightly different. The larger the volume of the search data the smaller the variation in the sample results. This means that the data is better (more robust and reflective of the universe of all Google searches) when looking at search terms that have higher volumes of search.

Google does not publish actual search volumes in Google Trends, instead showing an index of the relative volume of search for each search term, indexed against the term that attracted the highest volume in any of the reported days/weeks/months. This volume is

reported as 100 with other reported volumes indexed against the volume for that search term on that date.

Searches on the Google platform are categorized by Google into a standard set of macro-categories and sub-categories. This (very helpful) categorisation means that you can contextualise the volumes for a search term to the category you are interested in. For example, you can see search volumes for 'Orange' in the 'Food & Drink' category and separately in the 'Internet & Telecom' category. You can also filter results by country.

Having retrieved the index data on relative search volumes for a list of search terms, the app calculates share of search data for the reported days/weeks/months and for the whole period.

A final note on the data: whenever looking at search data it is important to consider the likely reasons that people may have for entering a particular search term in Google. When considering searches for brands, is it likely that the reason for searching is because people are interested in buying the brand? Or are there other possible reasons for the search (for example because the brand is in the news) that may skew the searching away from purchase interest? Purchase interest searching varies by category. Some categories, such as cars and financial services, are more likely to have searches tied to purchase interest than other categories.

THE VALUE OF SHARE-OF-SEARCH DATA

There is a large and growing body of evidence showing, for many categories where people search for brands they might buy, that there is a close and predictive relationship between a brand's share of category search and its market share. For example, share of search for car brands can be used to predict new car sales for each brand in a few months' time. This is also the case in lots of other categories, particularly those where search plays a significant part in consumer consideration and comparison of available brands, for example financial services, apparel, electronic goods, travel, telecoms, retail, and utilites.

Here are some links to various presentation, articles and videos that demonstrate the value of share of search data for marketers:

- Presentation: The most important metric you've never heard of , James Hankins, Nov 2020
- Article: The most important metric you've never heard of , James Hankins, Aug 2020
- Video: Share of Search as a Predictive Measure , Les Binet, Nov 2020
- Presentation: A New Way To Track Consumer Demand , Les Binet, Aug 2020

- Video: A New Way To Track Consumer Demand , Les Binet, Nov 2020
- Article: Why marketers should embrace Share of Search as a metric , WARC, Aug 2020
- Article: Share of Search, your moment has arrived , Kantar, Oct 2020
- Article: It's time for 'share of search' to replace 'share of voice' , Mark Ritson, Sep 2020

USING THE SHARE-OF-SEARCHING APP

The Share-Of-Searching app is free for anyone to use for seven days and then requires a £50 payment to unlock 12 months use. You can quickly and easily retrieve Google Trends search data spanning any period over the last 16 years for up to 40 brands (or other search terms) in any category within any country. The app includes drop down boxes for selecting category, country, and start/end dates for the search period. Users can enter up to 40 brand names as a list which is then used to retrieve the index of search volumes from Google Trends within the selected country, category, and search period. The app generates four charts of these data:

1. Trend in Search Volume: trend in the volume of search for each search term (shown as a volume index).

2. Trend in % Share of Search: trend in the % share of search for each search term, shown as a line chart.

3. Trend in % Share of Search (stacked bar chart): trend in the % share of search for each search term, shown as a stacked bar chart.

4. Total % Share of Search (bar chart): the total % share of search for each search term across the selected period

Users can export the search volume and share of search data into CSV files that can be loaded in Excel for further analysis, for example to compare market share and share of search.

The Share-Of-Searching app is not limited to exploring brands, you can enter any search terms. For example, try entering:

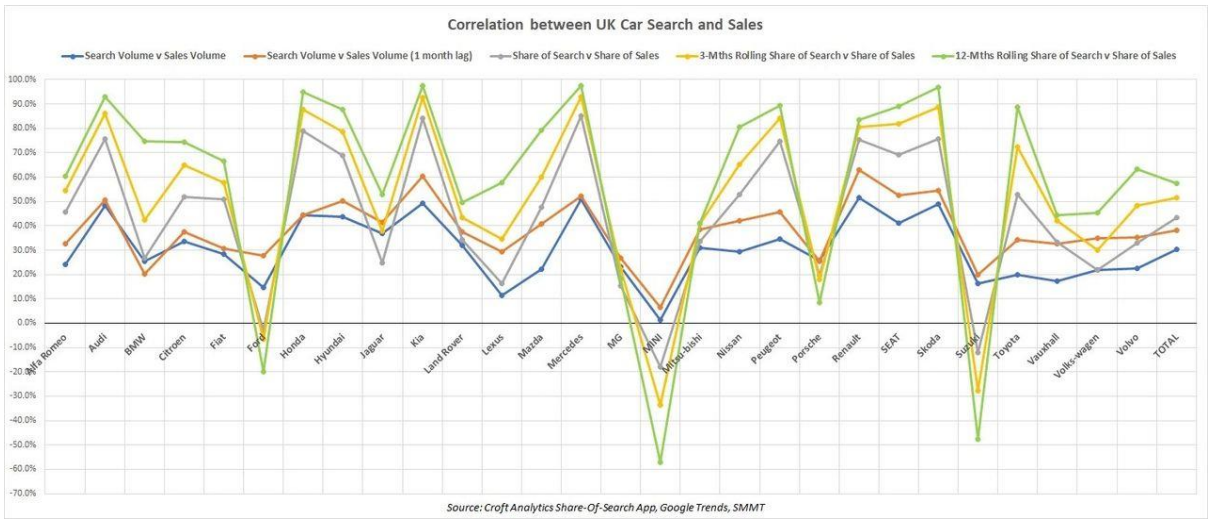
- Trump, Biden
- Hybrid, Electric, Diesel (select 'Autos & Vehicles' as the category)
- Environment, Climate, Sustainability

- USA, China, UK, Germany, France, Italy, Spain, Australia, Canada, India, Russia, Japan

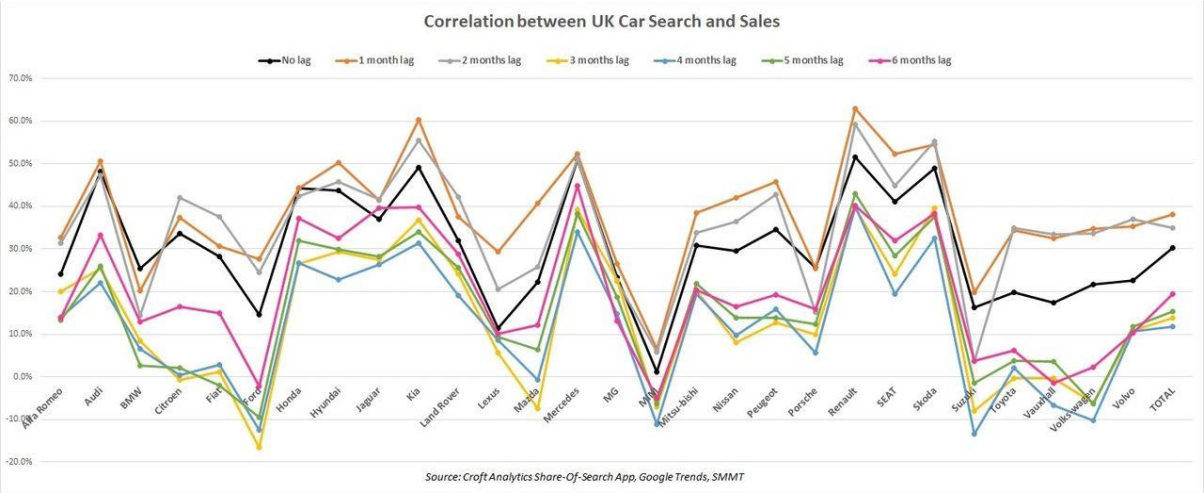
ON SHARE OF SEARCH V SHARE OF SALES IN THE UK CAR CATEGORY

29 January 2021|Brand Science, Brands, Causality, Consumer journey, Correlation, Data, Data Science, Forecasts, Growing Brands, Insight, Modeling, Scientific rules, Search

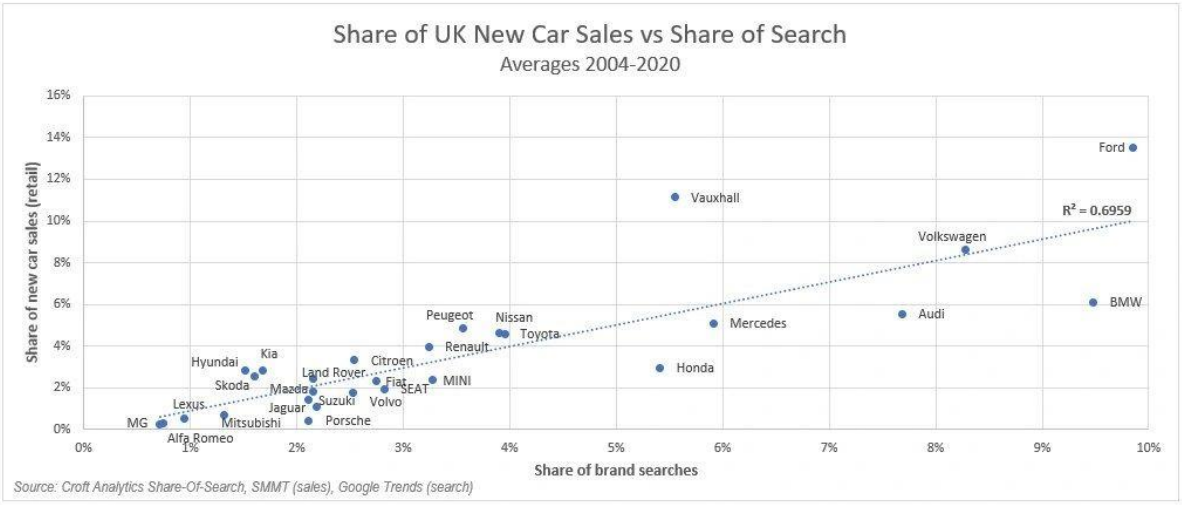
I have been digging into UK car data over the last 17 years to explore the link between Google search volumes and new car registrations. Is there a predictive link between car searching and subsequent sales? In summary, the relationship between share of search and share of sales is variable by car brand. The data for several brands suggest a strong link between search volume and sales (eg. Mercedes, Audi, Kia, Skoda), while the relationship for other car brands appears to be low (eg. Ford, MG, MINI, Porsche, Suzuki).



Share of Search v Share of Sale Correlations



Share of Search v Share of Sale Correlations



Share of Search v Share of Sale Correlations

I have looked at trends in monthly UK sales (new car registrations) and share of sales for 28 car brands compared to trends in search volume and share of search for the same brands. You can download an Excel sheet with the monthly car registrations and search data (and the analyses I have made so far) back to January 2004 here. Use the tabs and scroll down and right to see the extent of these data. The sources are:

1. Monthly UK new car registrations for 28 car brands from the **SMMT site here** back to January 2003.

2. Monthly UK Google search volumes for the same 28 car brands from the **Share-Of-Searching app here** back to January 2004

Comparing volume of car brand searching with volume of new car registrations from Jan 2004 to Dec 2020 reveals the following:

CORRELATION BETWEEN MONTHLY SALES (NEW CAR REGISTRATIONS) AND SEARCH VOLUMES

- On average, across all 28 brands, the correlation between the monthly volume of new car registrations and monthly search volumes is low at only 30%, but with a lot of variance in the correlation from brand to brand. The lowest correlation is for MINI at 1% and the highest for Renault at 52%.

- Lagging the correlation by one month (comparing search one month ahead of sales) the average correlation goes up but is still low at 38%. Again, although correlations increase for 26 of the 28 brands, there is a lot of variation with the lowest for Suzuki at 20% and the highest for Renault at 63%.

- Lagging correlation beyond one month results in falling average correlations.

CORRELATION BETWEEN MONTHLY SHARE OF SALES AND SHARE OF SEARCH

- On average, the correlation between monthly share of sales and share of search is 43% but with a lot of variance: the lowest correlation is for Ford at -3% (this suggests that a lot of Ford searching is not related to purchase) and the highest for Mercedes at 85%.

- Lagging the correlation by one month (comparing share of search one month ahead of share of new car registrations) results in a slightly lower average correlation of 42%, although seven brands had higher 1-month lagged correlations.

- Lagging the correlation beyond one month results in slightly lower average correlations.

CORRELATION BETWEEN 3-MONTH ROLLING SHARE OF SALES AND SHARE OF SEARCH

- On average, the correlation between 3-month rolling share of market and share of search is 51%, again with big variation in correlations across the brands: the lowest for Ford at -7% and the highest for Mercedes at 93%.

- Lagging the correlation results in falling average correlations although for some brands the correlations increase.

CORRELATION BETWEEN 12-MONTH ROLLING SHARE OF SALES AND SHARE OF SEARCH

- On average, the correlation between 12-month rolling share of market and share of search is 58%, with big variation in correlations across the brands: the lowest for Porsche at -6% and the highest for Kia at 98%.

- Lagging the correlation results in falling average correlations although for some brands the correlations increase by lagging the correlation.

This analysis suggests that, for some car brands, the volume of searching on Google reflects subsequent sales and that search levels may be helpful in predicting sales with a variable lag effect. For other car brands the relationship between search levels and sales appears to be weak.

ON THE END OF THIRD-PARTY COOKIES AND THE RISE OF 1ST PARTY DATA

5 February 2021|Advertising, AI and Machine Learning, Audience, Data, Data Science, Modeling, People, Personalised, Programmatic

Preservation of personal privacy and security, and how personal data is used by third parties, is a big issue for most internet users. It is also the issue that resulted in the EU's GDPR regulation in 2018 and California's CCPA in 2020. The next step towards a more secure and privacy-respecting internet is the phasing out of third-party cookies. Next year, Google will "deprecate" the use of third-party cookies in Chrome, the last of the main browser providers to block use of third-party cookies. In 2017, Apple's Safari became the first major browser to block third-party cookies by default, followed by Mozilla's Firefox in 2019. The impact on publishers and advertisers is the subject of this blog post.

THE END OF THIRD-PARTY COOKIES

In August 2019, Google announced their Privacy Sandbox initiative, a set of open standards "to make the web more private and secure for users while also supporting publishers". Central to this initiative is the removal of third-party cookies from Chrome during 2022.

Third-party cookies do not belong to the owner of the site that the user is visiting. They are widely used by ad tech providers for cross-site tracking (web-wide) of individuals, and they play a big role in how ads are targeted and served on the internet. Removing third-party cookies, without a suitable replacement, runs the risk of dramatically reducing the ad revenues of most online publishers. A Google study, published in 2019, of 500 of the largest publisher web sites found that cookie-less traffic resulted in 52% less revenue for the publishers than traffic where a cookie was present.

Google's plan is to replace the use of third-party cookies in Chrome with FLoC, a new approach for targeting ads based on grouping users into interest 'cohorts' based on their browsing habits

GOOGLE'S FEDERATED LEARNING OF COHORTS (FLoC)

Starting in 2022, Google plans to tap into the Chrome browser history for each user and apply machine learning to place people into groups alongside others with similar interests based on their browsing habits. All the data used to determine which groups someone is in will be processed and stored locally by the users' Chrome browser. Advertisers will be able to target these groups. Third parties will no longer be able to track and target individuals using cookie profiles. So, from 2022, Google targeting will be based on interest groups of people who visit similar sites to each other. This is Google's Federated Learning of Cohorts (FLoC) approach.

Using FLoC, ad tech companies can target the habits of large groups of people instead of the activity of individuals. Ad targeting can be based on what group a person falls into. Each FLoC group (cohort) will contain, at minimum, "thousands of people". As users browse the web their FLoC groups will be changed by machine learned algorithms that use their browsing history of visited URLs, content on visited pages, and "other factors". The inputs for the algorithm, including web history, are kept local on the browser and are not uploaded elsewhere — the browser only exposes the generated cohorts. Users will be able to turn off their FLoC visibility, sending a random FLoC to ad servers instead of one that describes their interests.

There may continue to be privacy concerns and issues with this approach as FLoCs could be used to augment first-party PII profiles with additional information about an individual's interest. There may also be issues relating to algorithm bias, discrimination, and fairness. Google is also prohibiting a number of 'sensitive' categories that fall within personal hardship, identity and beliefs, sexual interests, and access to opportunities.

Google claims that tests have so far shown that FLoC targeting is 95% as effective as targeting ads using third-party cookies. Trials of FLoC will start in March.

THE RISE OF FIRST-PARTY DATA AND CONTEXTUAL TARGETING

The end of third-party cookies will result in a big rise in the use of first-party data for targeting advertising (as well as for other uses). First-party data, including first-party cookies, belong to the owner of the site that the user is visiting. For publishers, first-party data is all data associated with user log-ins (subscriber/user registrations and subscriptions) and user profiles and all first-party cookies that can be used to capture what people visit and do on their owned sites. Publishers can use their own first-party data to target

advertising for visitors to their sites based on the content that they view and the actions they take. Contextual targeting will grow rapidly from 2022.

The rise of first-party data may deliver benefits for both publishers and advertisers. Some of these could be:

• Less fraud, greater transparency and accountability.

• Greater user privacy and personal control over privacy.

• Greater brand safety.

• Less spam for users.

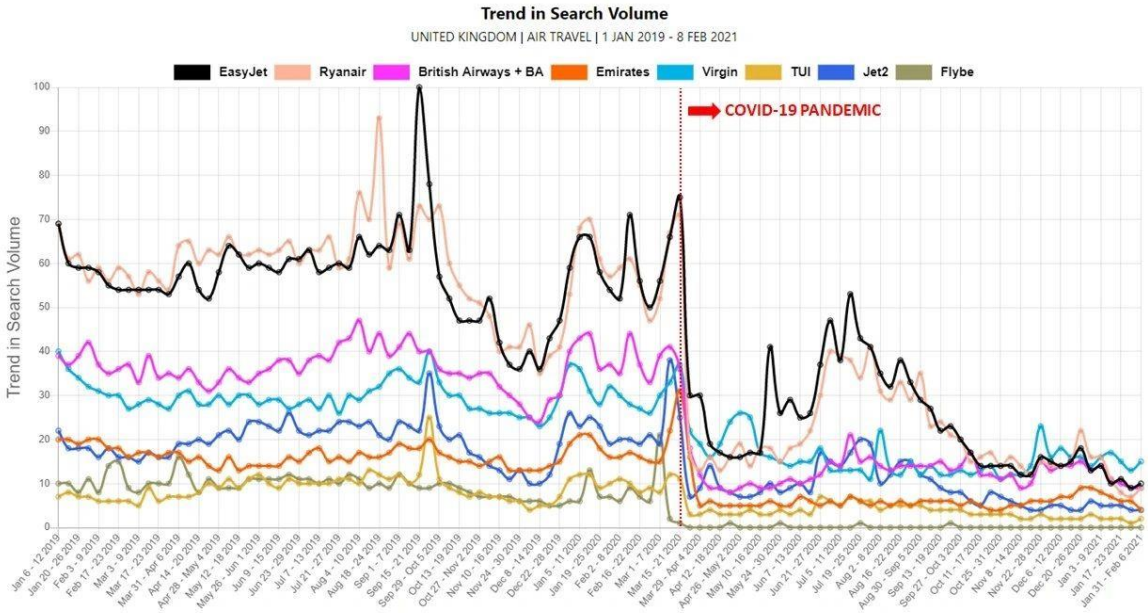
• Greater/easier compliance with regulation.

• Content improvement, a growing focus on premium content, a better and safer context for ads

ON THE IMPACT OF THE PANDEMIC ON SEARCHING FOR AIRLINES

8 February 2021|Brands, Data, Data Science, Long Term, Research, Search, Share of Search

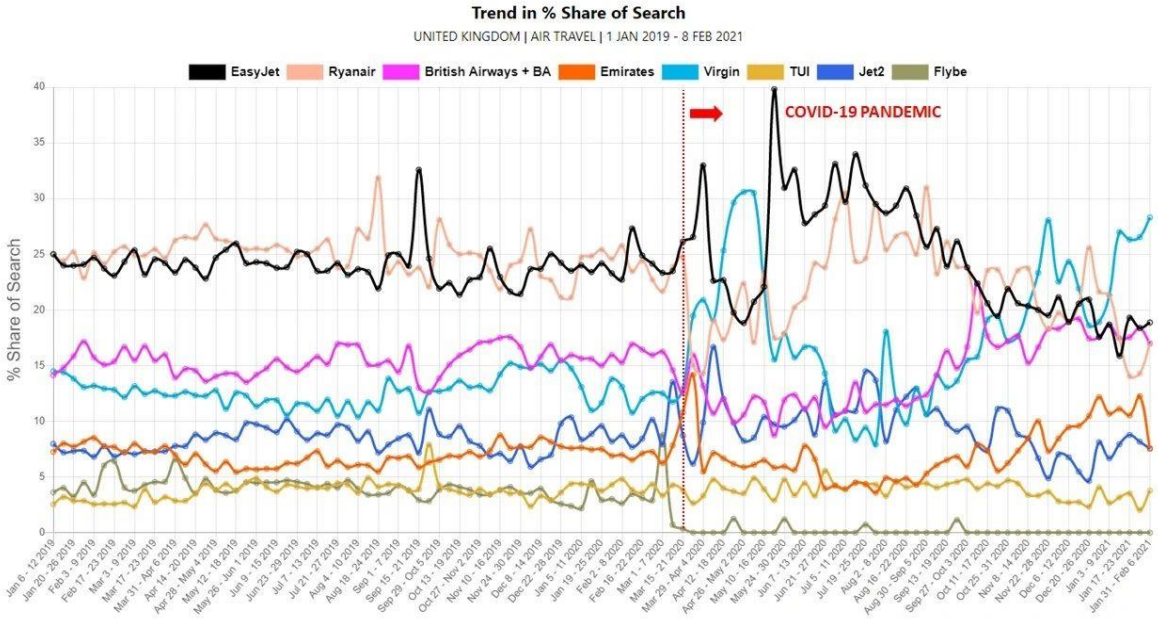
Here are two charts from the Croft Analytics **Share-Of-Searching app** that show what has been happening to levels of searching for airlines on Google in the UK over the last 24 months. These highlight the impact of the Covid-19 pandemic and travel restrictions on the sector. The first chart shows the trend in search volume (relative volume index) for the eight most searched airlines in the UK since January 2019:



On March 11th 2020 the World Health Organisation declared Covid-19 a global pandemic. From that date, airline searching fell rapidly. In the 47 weeks since then, there has been a 60% decline in UK searching for these airlines. One of the airlines, Flybe, ceased trading on

March 5th 2020. The decline in airline searching was rapid during the first lockdown but, as restrictions eased, search levels rose a bit (particularly for EasyJet and Ryanair) during the summer months last year. However, levels during this winter have fallen to an all-time low as the second lockdown and further travel restrictions have come to bear on the sector.

The second chart shows the % share of search volume for the eight airlines.



This chart shows that, while EasyJet and Ryanair gained share during the summer last year, subsequently their share has fallen. Conversely, Virgin has seen its share rise from a low of 8% in July last year to 28% last week. British Airways and Emirates have also gained share of search versus the low-cost carriers over the last six months.

Use the **Share-Of-Search app** to explore Google search trends since 2004, with side-by-side comparisons for up to 40 search terms. Charts of trends can be generated for many types of search: for brands, topics, celebrities, sports teams, politicians, countries etc. - any type of interest. You can filter results by country, category and date period. Take a look here at **shareofsearching.com**

ON THE INS AND OUTS OF ADVERTISING TECHNOLOGY

12 February 2021|Advertising, Data, Data Science, Personalised, Programmatic

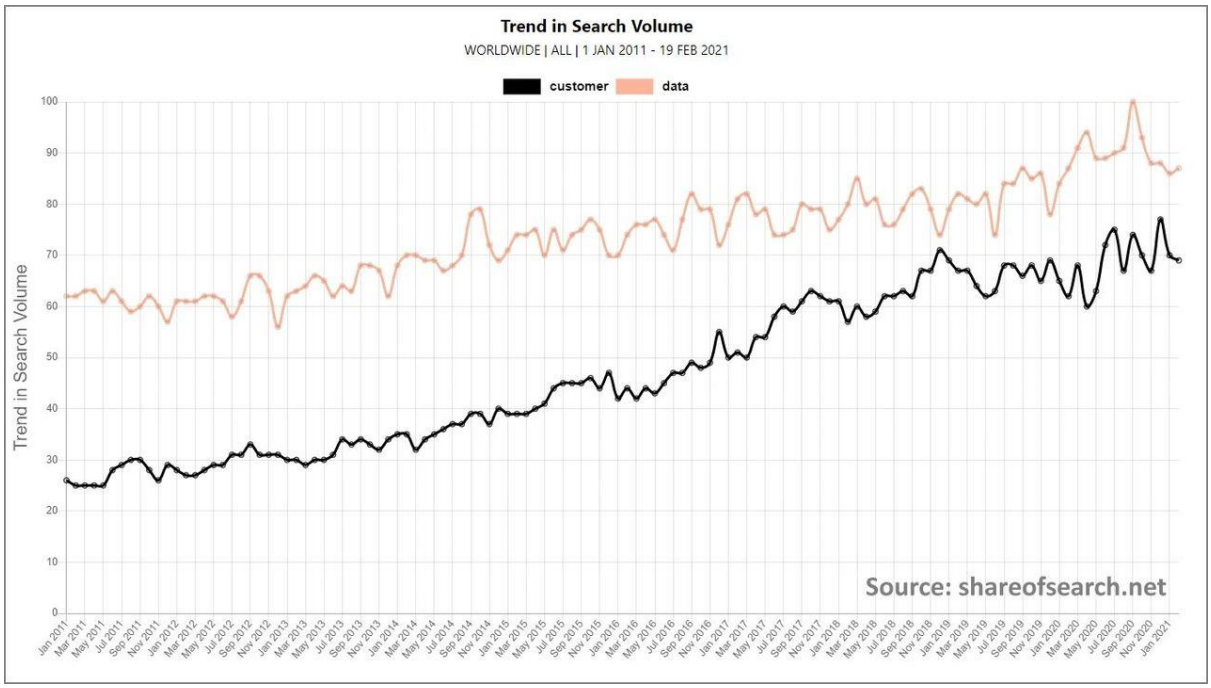
The ad tech sector is complex, rapidly evolving, and hard to understand fully – not just the technology, but also the power-plays, politics, stakeholders, regulators, and geo-political landscape. There are many ins and outs, and pros and cons.

Occasionally I come across an independent report that provides extensive and clear information about the ad tech sector – this is one of them: the Australian Competition & Consumer Commission's '**Digital advertising services enquiry**' report, published in December 2020. The 222-page report "focuses on concerns identified by online publishers, advertisers, industry groups, academics and ad tech providers with the supply of ad tech services in Australia".

This report is particularly useful in its detailed explanation of a wide spectrum of relevant topics including the role and use of data, tracking and ad targeting, ad attribution, use of cookies, the ad tech supply chain, data portability and interoperability, first-party data, third-party data, privacy issues, and the impact of data use and regulation on businesses and consumers. The topics covered have relevance in all countries.

ON CUSTOMERS AND THEIR DATA

19 February 2021|Customers, Data, First-party data



In pre-internet days, for most companies, data about customers were few and far between. Data about the end consumer (that could be stored and used for direct marketing) was largely limited to services such as utilities, airlines, telcos, and banks. Manufacturers had "customers" too, but they were intermediaries such as retailers and car dealerships. And those middlemen owned the rather patchy data about the end-consumer. For most packaged goods companies, the end customer was unknown. In those days, the CRM business was relatively small and niche, focused on cleaning customer lists and executing direct mail campaigns for the companies that had CRM databases.

Not anymore. The internet has spawned a vast array of companies claiming to track and optimise customer experiences, extracting their data to maximise loyalty and retention. Most businesses today are building customer databases sourced from online visits to their websites, social media, and ecommerce properties. This is a fast-growing trend. However, there are issues.

One problem is that customers are fickle. For packaged goods companies, about 50% of customers (the end buyers) disappear each year, and half of them are new customers. The leaky bucket syndrome is as big an issue today as it ever was. Customers are, simply, not loyal. They like to try other products. So, customer data tends to be transient when half of your customer base leaves to buy competitor products each year.

Another issue is that customers are complex, with brains that continuously filter a cacophony of offline and online noise. Influences on buying decisions come from many

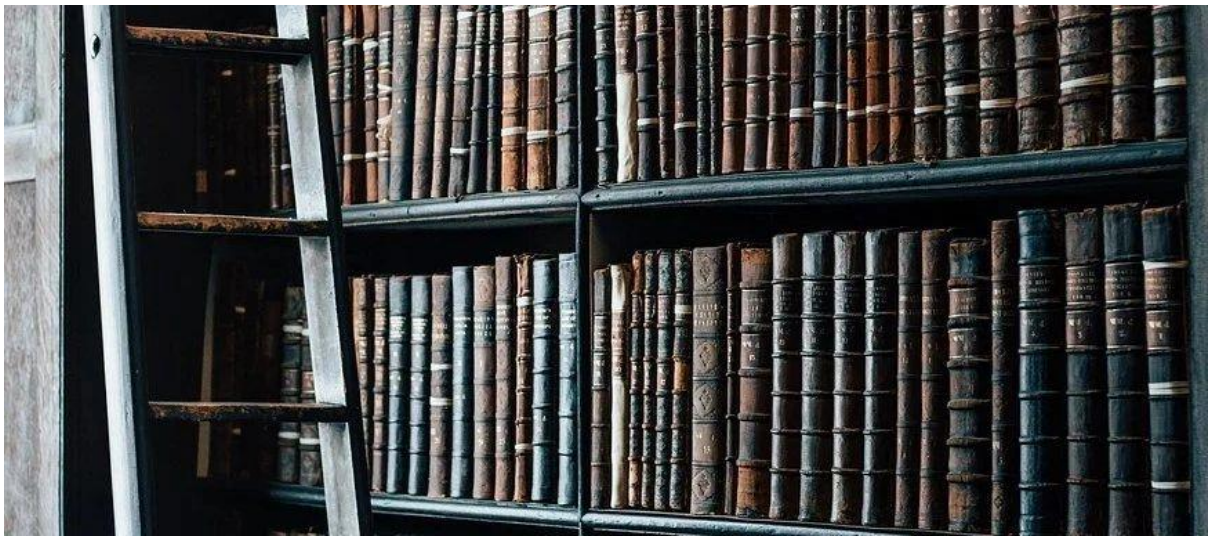
areas that cannot be tracked online. Machine learned algorithms that rely solely on data from the internet can easily be confounded by untracked influences from the physical world (for example the sudden emergence of a pandemic). Additionally, most packaged goods are still sold through retailers who are as protective of their own data as ever. So, customer data tends to be partial and limited. Sourcing customer data from websites and social media pages tells only a small part of the story about the customer.

Ideally (from a customer data perspective), everything would be done online. Customers would be prospected online, they would buy online, they would be retained online. They would log-in and be happy to be tracked and sold personalised offers. The Direct To Consumer (D2C) world, so long enjoyed by the service sector, is now a possibility also for manufacturers. Removing the intermediaries is a trend. Unbundling inter-dependencies to go direct to the consumer, and enjoy the benefits of first-party data, is a growing strategic focus for brand manufacturers.

However, the great walled gardens of first-party data - Google, Facebook, and Amazon – continue to grow ever larger estates. As the owners of those "customer" data, they are as protective of their end consumers as bricks and mortar retailers ever were. In the world of first-party data, volume, the number of customers, is everything. Manufacturers, even the largest, simply don't have the wide and deep insight that Google or Amazon has into the lives of the millions of people logging-in and using their platforms every minute. And remember that a brand's customer data is limited to their customers, with no data about the arguably more important group of people that will grow the brand: the non-customers, the prospects. For those data, dependency on the platforms will inevitably continue.

ON TALES FROM THE PAST: INTERNET ADVERTISING IN 1998

24 February 2021|Advertising, Audience, Mass marketing, Promotion, Reach, Transformation



Here is an article that I wrote for Media Week in October 1998 about advertising on the internet. Despite the passing of 22 years, several of the issues that I mentioned then have not been resolved. See if you can spot them. One thing I got completely wrong was my belief that these old issues needed to be fixed for growth in web advertising to keep pace with the wider growth of the internet. Ah, the benefit of hindsight.

Wired World (October 1998)

The vast majority of British advertisers are not advertising on the Internet. Only a handful are prepared to spend even paltry amounts experimenting with the medium. Most advertisers are treating the Internet as an interactive Yellow Pages, publishing their own product sites, but there's little confidence in using the Internet to advertise them. Why? I think there may be many reasons for hesitance including the low numbers of Internet users, poor targeting, inadequate audience research, and limited creative possibilities.

Low audiences are possibly the main reason. Although Internet media owners tout page impression figures in the millions, the actual number of their readers is very much smaller. For example, although the Electronic Telegraph's ABC audit counted 7.3 million monthly page impressions, these originated from only 36,000 average daily readers - lower than the

average issue readership of any title on the National Readership Survey, and only 1.5% of the average daily readership of the printed version of The Daily Telegraph. While about 15% of the population in the UK qualify as Internet users, most go online infrequently, and with literally millions of sites to choose from (and thousands more being launched every day), it's not surprising that audiences to individual sites are low.

Targeting on the Internet is very limited, with sites often selected simply on the basis of their editorial context and publisher estimates of page impression counts. The great majority of media owners have almost no knowledge of who their users are, other than what they can glean from their site's log files, such as country of origin, name of the user's service provider and, for a few, the company they work at. For sites selling targeting based on user registration details there's the problem, maybe only perceived, of a large percentage of false and duplicate entries. However, until their accuracy is independently proved, advertisers are right to be wary of targeting promises based on registration details from free-access sites.

Strangely, for a medium that is already tracing the second-by-second activity of every user to every site, the Internet remains largely unaccountable. While audits can provide independent page impression and user counts, Internet sites still lack the essential data for advertisers to effectively plan, buy and evaluate their online campaigns - industry standard research into who those users are. Without an independent trading currency, advertisers have to rely on media owner figures and until such data exists, the unaccountability of the medium will continue to limit advertising growth.

Finally, the low and unreliable bandwidth of the Internet restricts what advertisers can do creatively. Small oblong banners provide relatively limited opportunity to attract attention and interest, while other advertising formats, such as interstitials, tend to use up precious bandwidth and risk annoying users through being too intrusive.

None of this detracts from my certainty that the Internet represents a major opportunity for advertisers in the future, possibly cutting across the entire marketing function for most. I am constantly reminded that the Internet is just a few years old (actually it was born in 1968), and that it's growing incredibly fast. I agree its getting faster and better. However, if online advertising is to keep pace with this growth there has to be equally rapid progress on the issues I've raised here.

ON THE JOYS OF BUSINESS TRAVEL

24 February 2021|Consumer journey

Here is an article that I wrote for Media Week in June 2005 about my life as a frequent business traveller....

Travel narrows the mind of a media man

It's 4am in Singapore. I'm in The Gallery hotel – "invented by students" according to the proud receptionist. Very hi-tech, apparently.

Anyway, I get out of bed heading for the bathroom and, hey presto, all the lights come on as a movement sensor picks up my feet hitting the ground. Returning, I try to switch the lights off. No joy. All buttons pressed, lights still on. Must be the movement sensor. I lie motionless on the bed, praying that the bright lights turn off. Twenty minutes later, still motionless, they're beaming away. I fall asleep.

They're still on when I wake up. Boy, do I hate business travel.

I seem to be travelling all the time. In the past 12 months, I've accumulated more than 300,000 air miles. I'm a BA Gold Card member twice over. I've been everywhere, lounged in every lounge (JFK's the best by the way), and drizzled a thousand salads with BA's Lemon Spicy Dressing. The more I travel, the fussier I get.

Short haul to Europe is scary. I feel like a hard-nosed businessman clone. Ninety five per cent of business travellers are men in suits with BlackBerrys, thinning hair and mobile phones and they all have those roll along black cases that just fit in the overhead lockers... just like me.

Getting on the plane is always a bun fight – first come, first served on the locker space.

After landing, while taxiing to the gate, the cabin is always full of the "beepity-beeps" of just switched-on mobiles receiving those interminable text messages from local mobile networks. Everyone's checking their e-mails before we get off the plane. Then the mad rush to the taxi rank.

When it comes to long haul, there's a different but equally well-trodden pattern. After check-in, it's straight to the lounge, which is normally packed. Once again, very nearly all the people there are men aged 30 to 50. BlackBerrys and mobiles and laptops all round. On the plane, I've discovered that some business class seats are better than others. Seat 64A is a particular favourite on jumbos. It's on the upper deck, so has additional locker space between the seat and the window (for laptops, books, etc.) and, big bonus, its own little walkway that means you don't have to climb over anyone's legs to get to the loo. Arriving at the other end is again a bun fight, as everyone dashes to be at the front of passport control.

New York is always a race as passport control now involves fingerprinting and taking a photo of every non-resident every time.

My BlackBerry is both my saviour and the bane of my life. Saviour because, without it, I would return from every trip to an impossible mountain of e-mail. Bane because, like growing numbers of business travellers, it occupies much of my waking hours. It is in fact a brilliant invention, very cleverly designed to do just about everything you want it to do. I'm a big advocate. If you travel on business and don't have one now you probably will fairly soon – I notice that more and more travellers are getting "BlackBerried".

I've come across people who travel very much more than me and found that these people are the fussiest travellers of all. On arrival at Heathrow once, the man sitting beside me demanded to know what gate the plane was pulling up to. When he found out, he embarked on an outpouring of vitriol to the poor stewardess, complaining that he had to walk too far from the gate and why couldn't the pilot find a closer gate, and how he was a Black Card holder and spent five days each week flying around the world. Fusspot.

I'm heading in that direction.

Finally, I have to squeeze in a word about advertising to the business traveller. There is no more potentially captive audience than this niche consumer segment. I've found myself staring at the 3D Volvo TV in the lounge at Heathrow and JFK – several times. I've read the

BA inflight magazines from cover to cover – and looked at all the ads as they are all targeting me. I look forward to each new edition.

I read the ads on the long walkways at airports.

I read any texts I get on my mobile. I notice special promotions and displays in the departures lounges. Bottom line, I'm a sucker for all the relevant marketing going on at airports and on planes that is targeting me. But I still hate business travel.

This article can also be viewed **here**

ON OUR REDUCTION ENGINES AND THE NEED FOR DISTINCTIVE ASSETS

5 March 2021|Advertising, Brand Science, Brands, Consciousness, Decision Making, Familiarity, Frequency, Habit, Systems 1 & 2

Every second, your brain receives about eleven million bits of information from your sensory organs. 91% of these bits, ten million of them, come through your eyes. Another one million are signals from your skin. Your ears and nose contribute a further 100,000 bits each. And your taste buds send about 1,000 bits per second to your brain.

What your brain does with all these bits of information every second is quite incredible. It makes 100 billion unconscious operations to reduce them, filter them, process them, and finally, after about half a second operating mainly as a data reduction engine, it sends no more than **50 bits** of information to your conscious brain. Almost all of the processing of information by your brain happens outside your conscious notice, and most of your body's activities take place outside your conscious control.

Our brains are not stupid. They have evolved to use shortcuts that minimise the need to process the raw data they receive. These shortcuts include a 'brain directive' that makes us become habitual, to prefer routines, preferring things we do repeatedly, biased in favour of what we already know and biased against the unfamiliar. Our brains insist that we use memory cues to reduce the need for processing. As we get older, memory cues play an increasingly important role in our lives and our decisions.

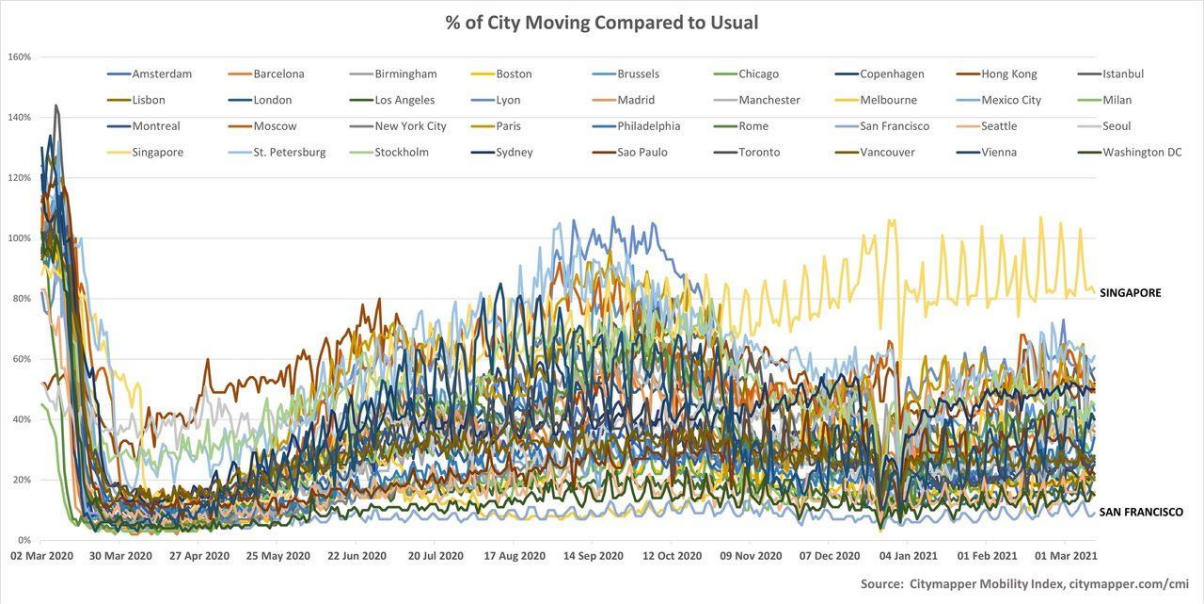
This is why brands (and anything else that depends on memory) need distinctive assets – memory cues for overloaded brains. Distinctive assets are Trojan horses for brains to smuggle the brand into our consciousness. They come in various forms – logos, jingles, shapes, colours, characters – but all have the same task: to build, through continuous repetition of the same asset everywhere, a shortcut for the brain to recognise the brand whenever it is encountered. Think of the Nike swoosh or the Coca-Cola bottle – distinctive

assets that are instantly (after 0.5 seconds of tinkering by our subconscious brain) recognisable. Instant recognition is the goal for the brand, for all potential buyers whenever and wherever they come across the brand.

Brands need to become habitual for their buyers, training circuits in brains that result in "automatic" use and purchase, without conscious interference. That is what our brains like, it is what they are tuned to do. Creating and maintaining a distinctive asset makes it easier for our reduction engine to surface the brand when we are at the point of purchase.

ON THE IMPACT OF THE COVID PANDEMIC ON POPULATION MOBILITY

12 March 2021|COVID-19, Data, Insight, Mobility



While the pandemic has changed the lives of everyone on the planet, timing and impact levels have varied from country to country. One aspect has been the effect of restrictions on the movement of populations, with numerous lockdowns forcing millions to stay at home. Population mobility has been dramatically curtailed by the Covid virus. However, levels of mobility have varied throughout the pandemic depending on where you live.

The chart above, using data from the **Citymapper Mobility Index**, shows levels of population mobility each day over the last year for a number of cities around the world. The Index is calculated by comparing trips planned in the Citymapper app, by its millions of users, to typical (pre-pandemic) usage. The app measures use of public transport, walking, cycling, and other micro-mobility activities (but not driving). It provides a large sample that reflects general mobility level.

The chart shows that population mobility was at its lowest level globally in April last year, as the pandemic took hold globally, reducing movement to below 20% of usual levels in most parts of the world. Since then, levels of mobility have varied in most cities, rising and falling in line with the imposition and relaxation of government restrictions. For most of the world, population movement has remained below 50% of usual levels throughout the pandemic.

Singapore, however, is an extraordinary outlier, with remarkably high levels of mobility in the last six months. Population movement in Singapore has been 80%+ of usual levels, much higher than all other cities measured, and rising back up to pre-pandemic movement levels every weekend. At the other end of the scale is San Francisco - with about 10% of usual

mobility it has consistently been the city with the lowest level of population movement throughout the pandemic.

The chart below shows mobility levels from a year ago compared to now -

Citymapper Mobility Index

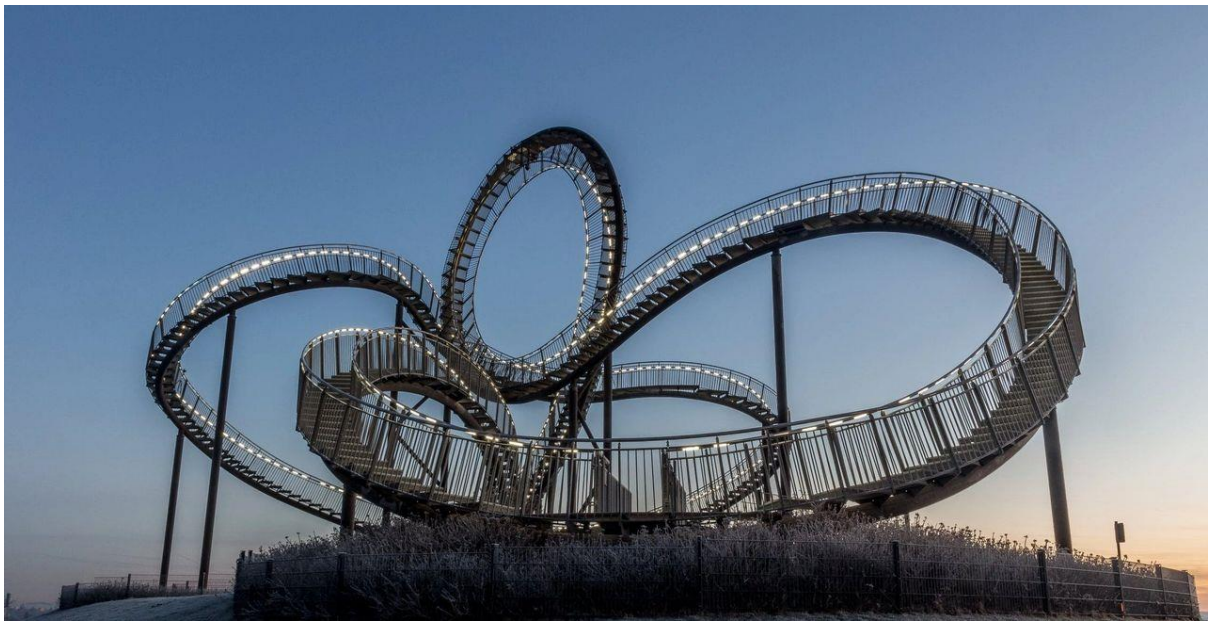
% of city moving compared to usual

Week ending Sun 15th March 2020		Week ending Sun 7th March 2021	
Milan >	9%	San Francisco >	10%
Rome >	16%	Washington DC >	14%
Seoul >	42%	Amsterdam >	16%
Madrid >	46%	Los Angeles >	17%
Seattle >	47%	Seattle >	17%
Copenhagen >	54%	Lisbon >	20%
Hong Kong >	54%	Copenhagen >	21%
San Francisco >	57%	Boston >	22%
Barcelona >	61%	Chicago >	23%
Boston >	64%	Mexico City >	25%
Washington DC >	66%	Montréal >	26%
New York City >	67%	Toronto >	26%
Amsterdam >	68%	London >	26%
Vienna >	69%	Vancouver >	27%
Philadelphia >	70%	New York City >	27%
Brussels >	71%	São Paulo >	31%
Los Angeles >	71%	Milan >	31%
Stockholm >	73%	Philadelphia >	31%
Paris >	77%	Barcelona >	35%
Chicago >	78%	Birmingham >	35%
Vancouver >	83%	Manchester >	35%
London >	83%	Vienna >	37%
Toronto >	84%	Rome >	39%
Lyon >	86%	Seoul >	39%
Singapore >	86%	Melbourne >	40%
Lisbon >	87%	Brussels >	44%
Manchester >	89%	Stockholm >	44%
Montréal >	91%	Hong Kong >	49%
Birmingham >	91%	Istanbul >	49%
Sydney >	93%	Sydney >	51%
Istanbul >	93%	Madrid >	53%
Mexico City >	95%	Paris >	55%
Melbourne >	97%	Moscow >	59%
Moscow >	98%	Lyon >	60%
St. Petersburg >	101%	St. Petersburg >	64%
São Paulo >	104%	Singapore >	87%

The **Citymapper Mobility Index** is a terrific tool for tracking the impact of the pandemic on the mobility of populations around the world on a daily basis.

ON CLOSING THE LOOP WITH FIRST PARTY DATA

26 March 2021|Advertising, AI and Machine Learning, Audience, Causality, Consumer journey, Customers, Data, Data Science, First-party data



For those responsible for online content of any kind, editorial or advertising, one of the great tools to use - to find out what works best by determining cause and effect - is A/B testing. Unsurprisingly, use of A/B testing is growing fast as publishers and advertisers seek to raise levels of user engagement with their pages and ads.

A/B tests are controlled experiments involving an existing content layout (editorial/advertising) that is shown to a Control group of users, and a variant layout that is shown to a Test group. Users are randomly split (persistently) between the two groups. The process requires decisions on what to test (the hypothesis), the user sample size needed for a robust result (within a confidence level), the test period required to achieve the sample, and the outcome metric for the test.

A/B testing can be used to determine the effect of a wide range of content changes, such as:

- Editorial: copy, length, headlines, fonts, colours, layout, image, video, links etc.
- Advertising: ad copy, size, format, colour, font, image, video etc.
- Ecommerce: page layout, navigation, copy, offers, checkout, images, call-to-action etc.

An issue with A/B testing is that it can take a long time to discover content changes that make a predictive and significant difference (signal rather than noise). Many tests are cull-

de-sacs, with lower or no discernible effects. When tests are run sequentially the discovery process can be slow and laborious.

A potential solution is to deploy machine learning that automates iterative and concurrent testing of content changes. For example, a font/colour change or copy/format change can be tested using a matrix of possible combinations. The automated system could iterate test combinations, and concurrently evaluate multiple tests through automated selection of user samples. This much faster approach can discover content change combinations that have significant predictive effects.

From an advertiser perspective, the best outcome metric for an A/B test is sales. Advertisers want to know the effect of editorial and advertising changes on their sales. However, this requires combining editorial + advertising + ecommerce into a single 'closed loop' system to determine the effect of context/ad changes on sales. To close the loop, the system needs visibility of users across editorial, advertising, and ecommerce environments.

As third-party cookies come to an end, look out for the companies best placed to use their own first-party data (customers with log in identities) to maximise the effect of combined editorial, advertising and ecommerce environments. Machine learning may soon discover new rules for how brands grow.

ON GROSS RATING POINTS

16 April 2021|Advertising, Audience, Frequency, Reach

In the land of tech stack storytelling the tale of the emperor's new clothes is alive and kicking. Bandwagons are dangerous things, the lure of novelty drawing like moths to the flame, often without any sign of a band or a wagon. Eventually, belief in the wisdom of the growing crowd can cause collective blindness to reality. Hold this thought.

What do marketers need and expect from vendors of media? In an ideal world, they want to know the effect of money they spend with the vendor on the sales of their products and services. That way they can determine return on investment. However, without a media-owned 'closed loop' technology in place (see my last blog post) that can manage and measure context, advertising and sales (ecommerce), claimed effects of advertising on sales are often questioned estimates. There are too many confounding factors at play that are not in the control of the media owner. Marketers cannot expect media vendors to be accountable for sales if they are not also accountable for the product, its pricing, and its distribution (let alone extraneous influences such as competitors and the economy, and pandemics) – all factors that may have a much greater impact on sales than advertising. Which brings me to GRPs.

Media owners can control, and be expected to deliver, gross rating points and their constituent elements of reach and frequency. Advertisers buy audiences from media owners. Audiences are the currency of media buying. At minimum, media owners should provide a credible (independently validated) measure of the audiences they deliver for advertisers. A good long lasting metric that reflects the total audience exposed to advertising is gross rating points. However, this age-old audience measure seems to be waning in popularity, when its relevance for advertisers, particularly in digital channels, is more important than ever as third-party cookies disappear from the web. It is easy to be seduced by measures of clicks and clickstreams, forgetting that advertising works by publicising products and services to audiences, most of whom will not click but will be nudged by the advertising every time they see/hear it. For the great majority of the exposed audience, advertising works by nudging propensity to purchase over the long term. For a small minority there may be a click.

Advertisers should be able to know the reach of their advertising (the number and % of people that had the opportunity to see or hear their ad) and also the frequency of exposure (how many people had the opportunity to see the ad once, twice etc.). These building blocks of GRPs should be available for a wide range of audience definitions – at minimum all individuals and any age/gender demographics – where it is possible to determine a universe (the total number of people in the population) for the audience definition. Non-demographic audiences, such as people who have particular interests (eg. who like fishing), are harder to measure accurately and credibly (particularly their universes) which is why contextual advertising is a good way to reach them (most people who read editorial about fishing are interested in fishing). The end of third party cookies is already causing a resurgence of contextual advertising.

GRPs combine reach and frequency (by simple formula) to provide a universal audience measure and media buying currency that can be used for all advertising, regardless of channel. Delivering GRPs for advertisers requires collective will and action across media owners to measure audience universes, reach, and frequency in a standard and credible way across all channels. Such a clear, simple and effective measure of the audience for advertising is the minimum that marketers should expect from media vendors as third-party cookies come to an end.

ON THE NEW SHARE-OF-SEARCHING APP (AND THE BOND FRANCHISE)

21 May 2021|Brands, Data, Data Science, Insight, Long Term, Research, Search, Share of Search

[CORRECTION - THERE IS AN ERROR IN THIS POST. PLEASE TAKE A LOOK AT THE NEXT POST HERE]

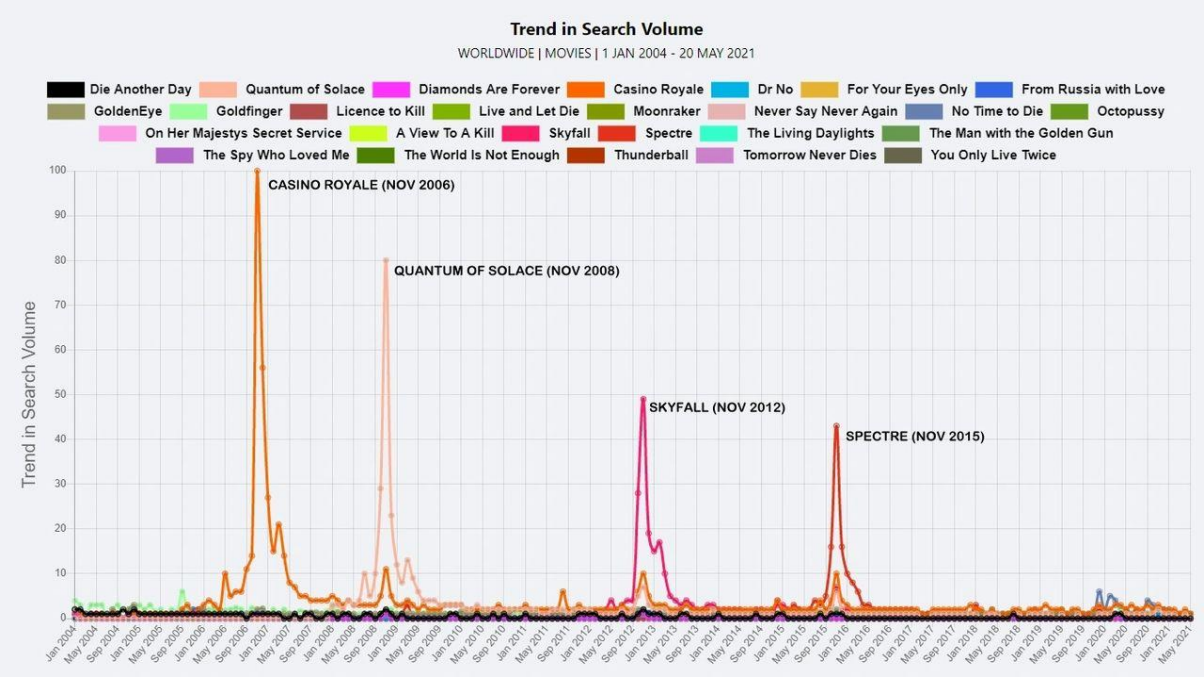
This week Croft Analytics released a new 'Share-Of-Searching' app at **https://www.shareofsearching.com** - users can use the app to view charts showing relative search volumes and share of search for up to 40 entered search terms (for example a list of brands in a category, or topics, or people, events etc.) with data sourced from Google Trends. The data and charts can be filtered to individual countries and categories (301 Google categories to choose from) to reveal differences in search interest.

In addition to showing share of search for category brands (covered in prior blog posts), the app can be used to discover trends in levels of search interest for any topics/events/people etc. - from 2004 through to today. Search interest in movies and TV shows is a good example where the app can show rising and falling interest, with comparisons across multiple movies/TV shows, over time. Here is a movies example…

Using the app I have taken a look Google search volumes for all 26 movies in the Bond franchise, spanning movies released from 1962 (Dr. No) to 2021 (No Time To Die). The data shows that interest (at least search interest) in Bond movies has been in steady decline for some time.

The chart below shows the relative search volumes for all of the Bond movies from 2004 through to today. During these 17 years four Bond movies were released - Casino Royale (2006), Quantum Of Solace (2008), Skyfall (2012), Spectre (2015) - and No Time To Die is expected to be released later in 2021.

CHART 1: GLOBAL SEARCH INTEREST IN BOND FRANCHISE MOVIES FROM 2004 to 2021



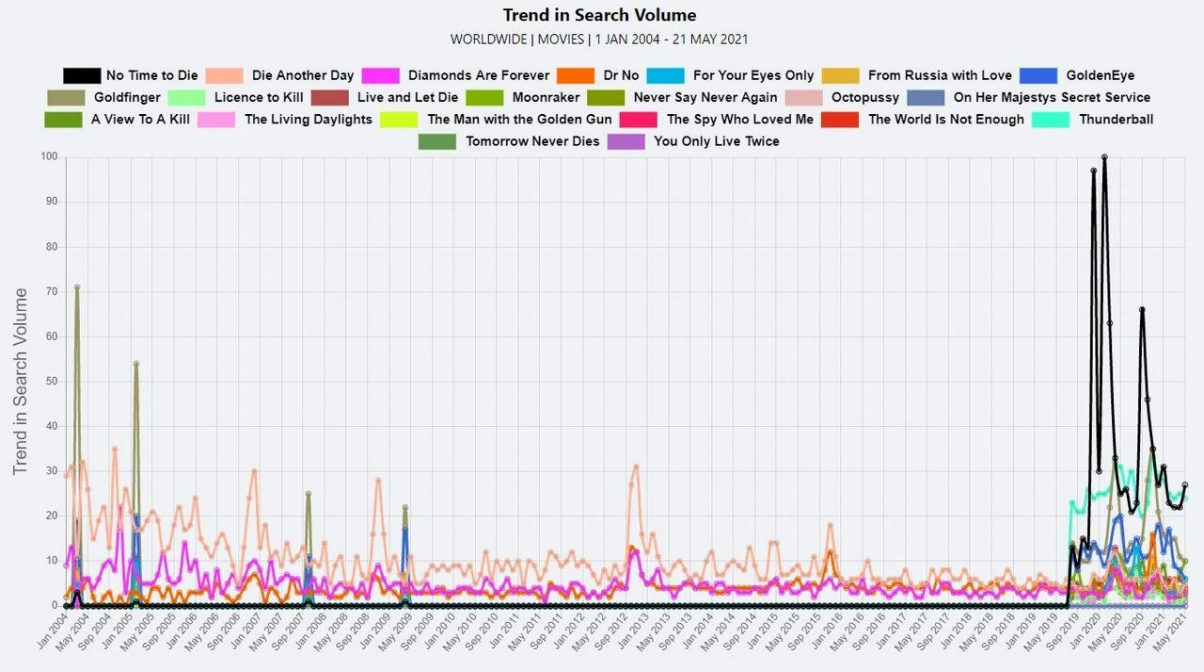
The chart clearly shows that there has been a big drop in the total level of searching for each of the last four released Bond movies – at a global level there was a 56% drop in searching when comparing the release of Casino Royale in 2006 and Spectre in 2015. In the UK the drop was even greater, with a decline of 68%, and in the USA the decline was 67%. This indicates that the Bond franchise may be in long term decline.

[CORRECTION - THERE IS AN ERROR IN THIS POST. PLEASE TAKE A LOOK AT THE NEXT POST HERE]

However, the Covid pandemic may be helping to revive interest...

If the four releases of the last 15 years are removed from the chart, the data – see the chart below – shows that there was a steady global decline in searching for all the other Bond movies between 2004 and 2019, but there has since been a revival of search interest during the Covid-19 pandemic, not solely because of interest in the yet to be released No Time To Die movie, but there has also been a rise in search interest for all the other Bond movies.

CHART 2: GLOBAL SEARCH INTEREST IN BOND MOVIES, EXCLUDING LAST FOUR RELEASES, FROM 2004 to 2021

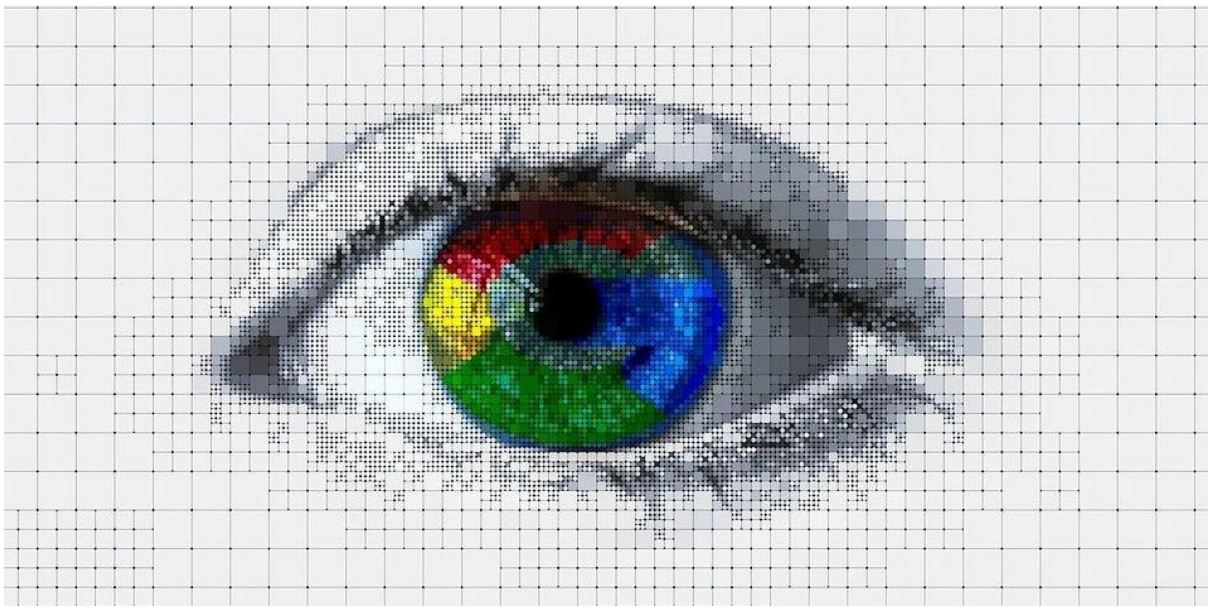


The data also show that whenever a Bond movie is released, in addition to the spike in searching for the new movie there is also a mini-spike in interest for other Bond movies, particularly the most recent prior releases.

To start using the Share-Of-Searching app, click **here**

ON SHARE-OF-SEARCHING AND THE BOND FRANCHISE: TAKE TWO

24 May 2021|Data, Data Science, Forecasts, Insight, Modeling, Search, Share of Search

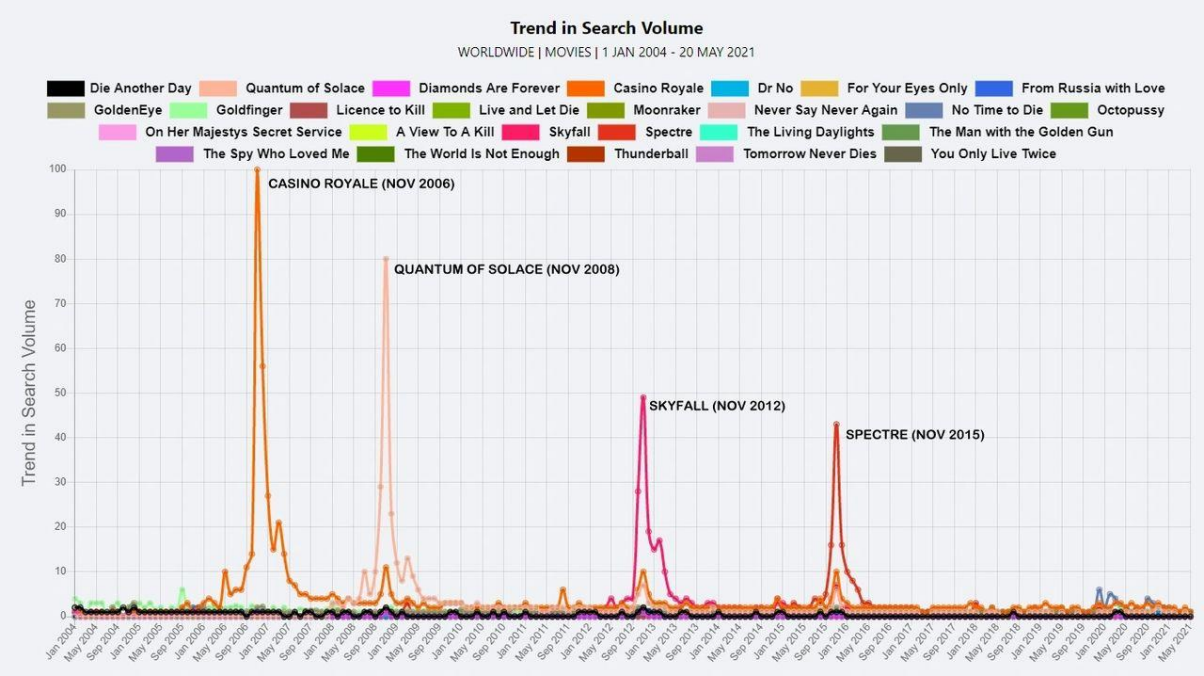


One of the maxims of a data scientist should be to always question data, and to change opinion when new data provides evidence that the original opinion was wrong. That happened to me yesterday thanks to a fortuitous **comment on LinkedIn** from (my ex-colleague) Chris Arnold in response to my blog post from last week examining search trends for the Bond franchise. It turns out that, contrary to what I said in the post, the Bond franchise is very much alive and kicking, certainly not "in long term decline". Here's the story…

WHERE I WENT WRONG

In my **Croft Analytics** blog post of 21 May **here** I used the new **Share-Of-Searching** app to take a look Google search volumes for all 26 movies in the Bond franchise. Wrongly (I discovered yesterday), I said that "the data shows that interest (at least search interest) in Bond movies has been in steady decline for some time."

Unfortunately, and I guess reasonably, I had decided to look at the search data for Bond movies by filtering the data to Google's 'Movies' category. As Google says **here** "If you're using Trends to search for a word that has multiple meanings, you can filter your results to a certain category to get data for the right version of the word" – so I reasoned that some of the movie names, such as "Spectre", could have been searched for in contexts outside the Bond movie. I used the app to chart the trend in relative search volumes and share of search for all the Bond movies based on Worldwide data filtered for the Movies category since 2004. This was the result:

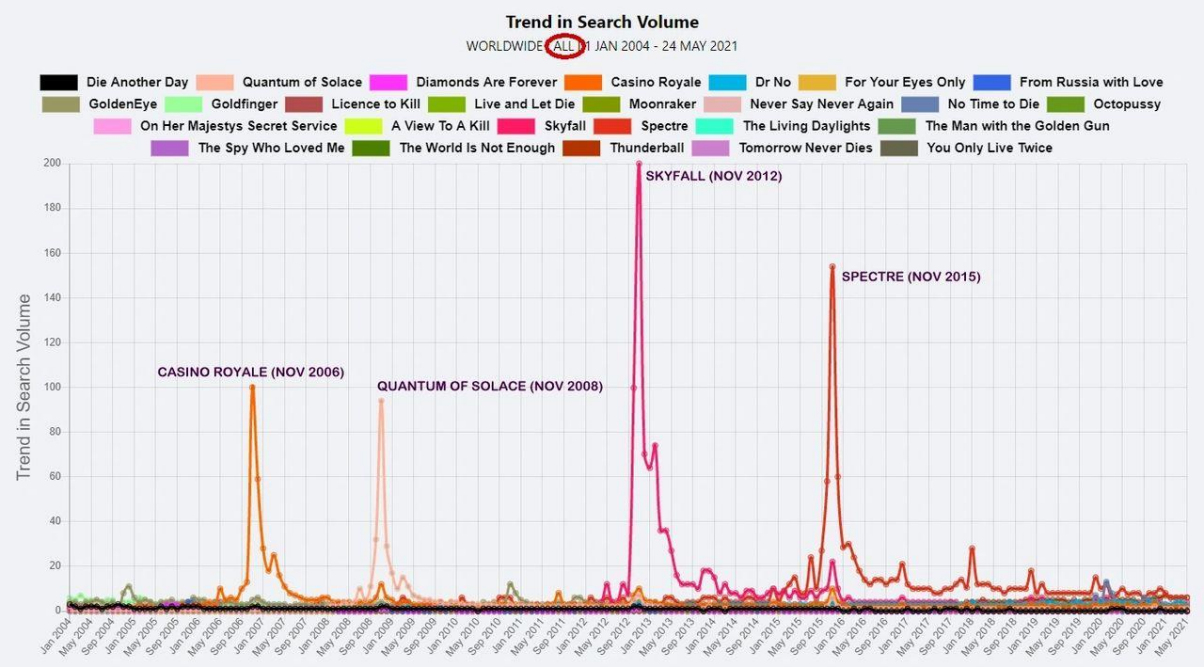


This chart (wrongly, it turns out) suggests a big decline in search for each new Bond movie released in the last sixteen years. However, that suggestion is wrong because (as I have discovered) the data does not reflect total searching for the Bond movies. It turns out that narrowing the data to the Movies category produces a reduced set of search data for the Bond movies that is misleading. Here's why…

Luckily Chris Arnold's **comment** to my post included a link to **this Forbes article** showing box office revenues for each of the Bond movies globally and in the USA. These revenue data show that, far from any decline, the revenues from the most recent Bond movies have been the highest, and dramatically increased for the most recent releases: Skyfall and Spectre. The Bond franchise is growing - Skyfall's revenue was almost double the revenue of Casino Royale. Common sense suggests that Google search data should reflect this, not indicate the opposite.

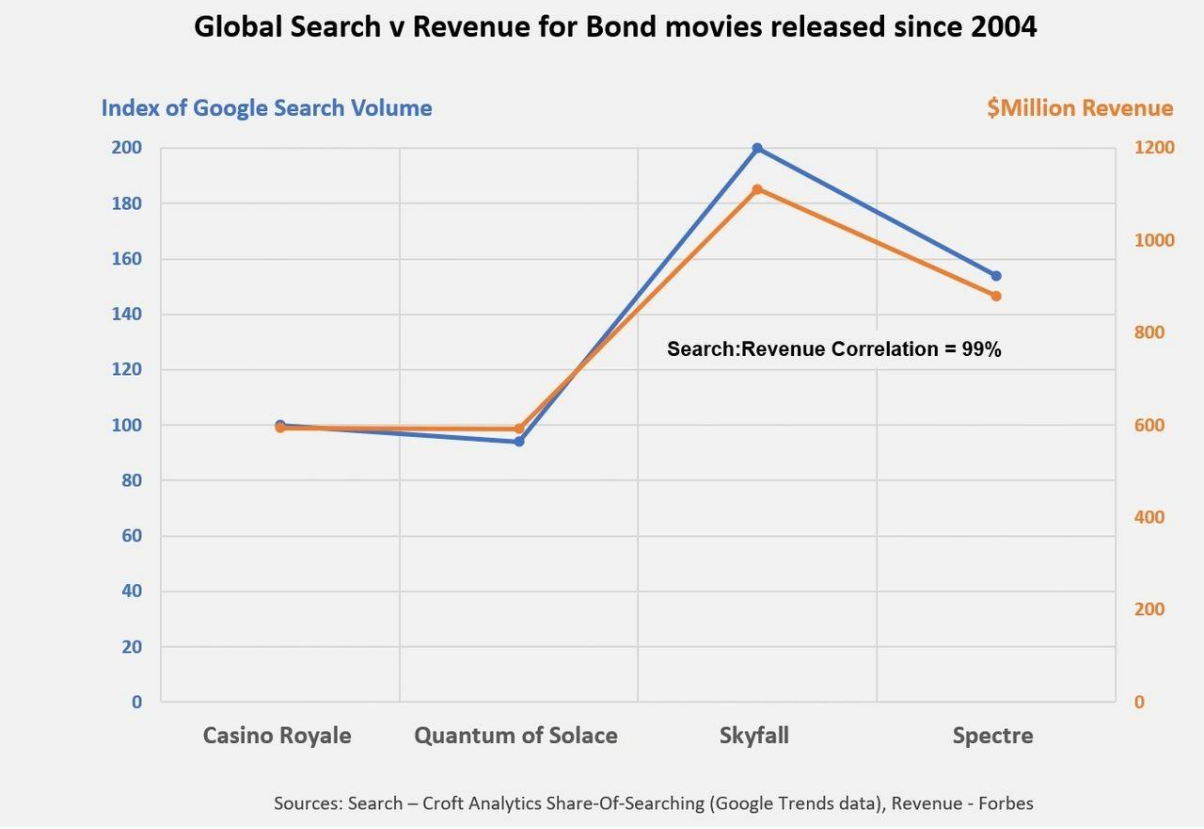
CORRECTING THE ERROR

So, I went back to the Share-Of-Searching app and ran the numbers again, this time widening the data to include All search (not filtered to Movies) across all categories. Here is the result:



These data make much more sense when compared to the revenues for each of the Bond movies.

In fact there is a 99% correlation between the global revenues and search data for the four most recent Bond as this chart shows:



So, a big thank you to Chris Arnold for helping me to reach this new conclusion: Google search trends (based on Global data across All Google categories) show that the Bond franchise continues to grow and grow. The search trend reflects revenue growth for the Bond franchise. As the Forbes article points out, the Bond series is the third-highest grossing franchise of all time (behind Marvel and Star Wars).

USING SEARCH DATA TO PREDICT MOVIE REVENUES

Finally, I have looked further to see whether search data before the release of a Bond movie can be used to predict its box office revenue, and the answer (at least for the recent releases) seems to be "yes".

Taking relative search volume totals for the six months prior to the month of release of each of the last four Bond movie releases and comparing these pre-release search data to the box office revenue of each movie results in a 93% correlation globally and 99% correlation in the US. Using the Casino Royale revenue as the base, it is possible to accurately predict (with above 90% accuracy) the revenue of the next three Bond movies using search volumes from the six months prior to the release of each movie.

This begs the question – can search data prior to release dates be used to predict box office revenue for any movie? You can use the **Share-Of-Searching app** for daily, weekly, and monthly relative search volumes and share of search from 2004 through to today. Revenue data for movies can be found **here**

ON SCIENCE AND CREATIVITY

28 May 2021|Advertising, Data Science, Emotion, Growing Brands, Insight, Scientific rules

Some people argue there is no science to creativity, that art is not science, that creative success depends on the eyes of beholders rather than science. Others argue there are scientific rules that dictate creative success. I think that artists/creatives (of any kind) can, and do, benefit from scientific insights and 'rules' – particularly data and trends that provide guidance on culture and human motivation.

Creative field is key - some creative endeavours lend themselves better to scientific input than others. Advertising is one of them.

Advertising creatives (at least the most successful ones) have always kept a keen eye on the science of human motivation and behaviour, knowing what motivates, what works best, what is likely to increase sales for a brand. That is, after all, what they are paid for. However, many of the scientific rules for creative success are tied up in the minds of great creatives, not shared and translated into scientific rules.

I recently read (and recommend) 'The Copy Book – how some of the best advertising writers in the world write their advertising', described as "a bible for creative directors" and featuring 53 essays from leading copywriters across the world. Every essay describes the author's personal rules for their success in copywriting, what they have learned works and what doesn't work. This book is full of science, of scientific method, of scientific rules for copywriting success. It is a scientific rule book for creatives.

The science of creativity is not new. Many articles and books have been written about the things that make some ads more successful than others, systemically, repeatedly, predictively – with empirical evidence in support. Much has been written about emotion, humour, distinctiveness, neuroscience, behavioural economics, and so on – all having scientific bearing on creative effectiveness in advertising.

Science and creativity are not at odds, they are symbiotic. Creativity need science, science needs creativity.

ON THE LINK BETWEEN SEARCH AND SALES IN THE MOBILE PHONE CATEGORY

4 June 2021|Brand Science, Correlation, Data, Data Science, Forecasts, Insight, Search, Share of Search

This is how I discovered (in three quick and easy steps) the 93% correlation between search and sales in the mobile phones category in just 10 minutes…

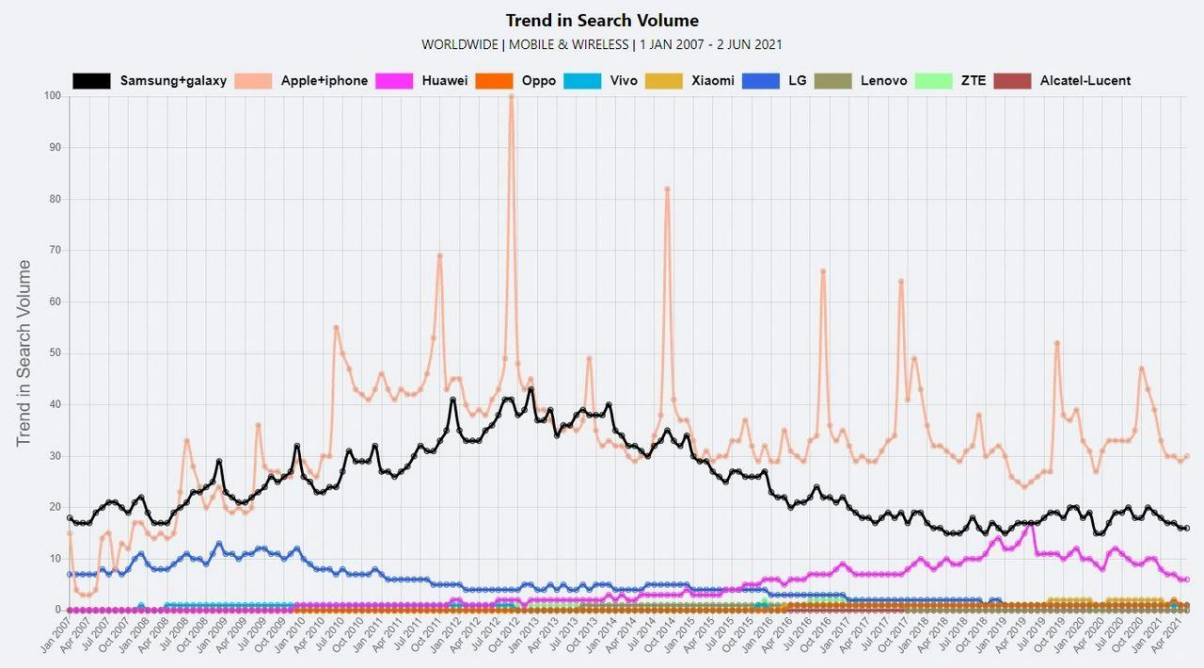
STEP 1: yesterday I chanced upon this table from Statista showing the 2019 global sales for each of the leading mobile phone brands.

Ranking of leading mobile phone brands worldwide in 2019, by shipments, sales, profit

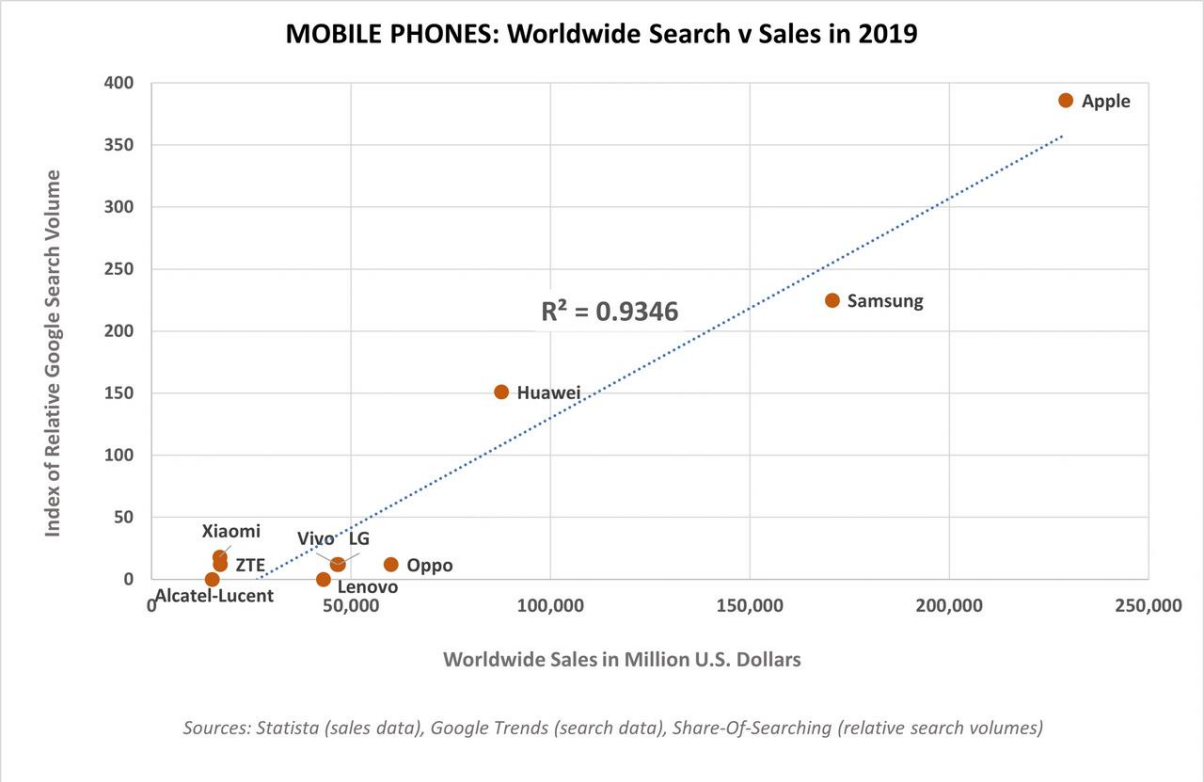
Characteristic	Units Shipped (in millions)	Profit (in million U.S. dollars)	Sales (in million U.S. dollars)
Samsung	315	18,947	170,625
Apple	215	48,351	229,234
Huawei	152	6,890	87,646
Oppo	111	1,400	60,000
Vivo	95	1,125	46,484
Xiaomi	95	1,000	17,000
LG	55	110	46,800
Lenovo	50	535	43,035
ZTE	45	719	17,123
Alcatel-Lucent	20	218	15,149

Source: Statista

STEP 2: I decided to look at the relative Google search volumes for these brands using the Share-Of-Searching app at https://www.shareofsearching.com – in three minutes I got this…



STEP3: I then exported the data from Share-Of-Searching to Excel and totalled the relative search volumes in 2019 for each of the brands, and then compared the 2019 search volumes to the value sales for each brand (this took five minutes), and got this…

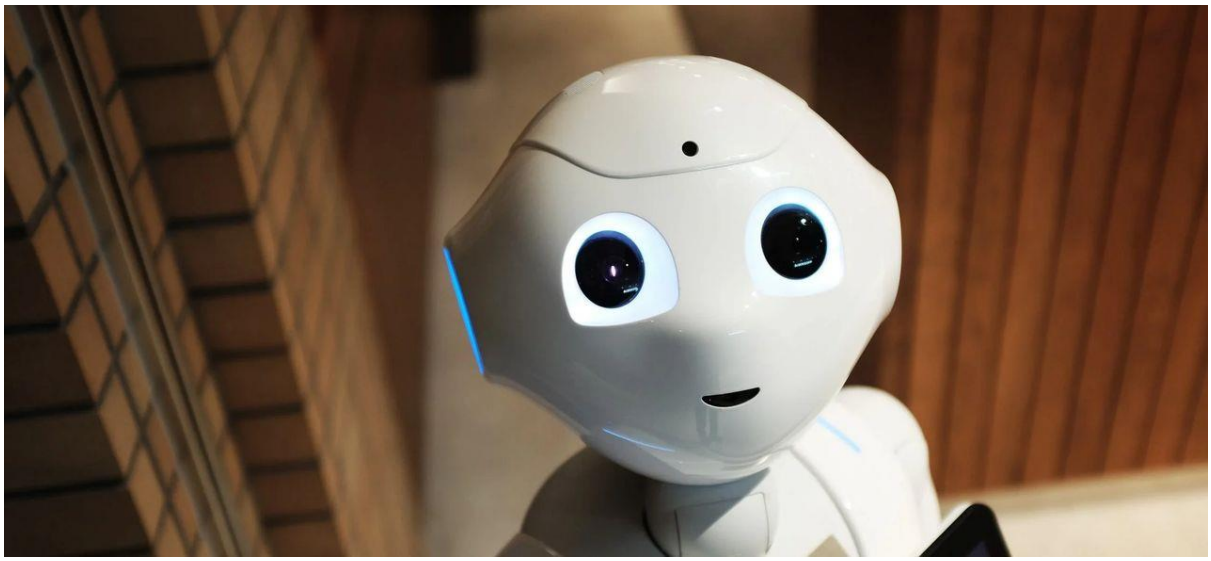


Hey presto! In ten minutes I had discovered that, in 2019, there was 93% correlation between Google search volumes and value of sales for mobile phone brands globally.

Next step: predict sales of mobile phone brands based on search data. As with movies and cars (see earlier blog posts) sales of mobile phones can be predicted from search data. Another reason to use the Share-Of-Searching app **here**

ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

11 June 2021|AI and Machine Learning, Data, Data Science, Modeling



AI and machine learning are the same thing (machine learning creates AI), but ‘artificial intelligence’ is a huge overstatement of what machines can achieve. There is nothing ‘intelligent’ about computers and the software that they use. Computers are quite literally dumb; they cannot think for themselves. They are not sentient beings. Nor is AI in any way artificial. It strictly follows rules provided to computers by humans.

Machine learning is also a misnomer. Machines do not ‘learn’ in the way that humans learn. Human brains are reduction engines, incredibly effective at using learning to filter useful signal from a large and wide cacophony of multi-sensory noise. Computers don't have the same capability. There are no computers that can (or are designed to) act and respond to the world in the way that humans do. Computers are intentionally far narrower, limited to, and focused on, *specific tasks* set by humans.

Machines apply algorithms - equations provided by humans - to data, and iteratively adapt the elements of the algorithms to become more effective at delivering specific measurable data goals set by humans. The ‘learning’ is at a basic level of “if this equation results in a data outcome closer to the goal, then choose it over one that is less effective”. The machine learning depends entirely on a human-dictated goal, it does not choose the goal for itself. In many applications ML is used to deliver algorithms that are eventually applied as "effective enough", with no further ‘learning’.

The internet provides the large volume and range of data that machines need to apply machine learning to specific tasks. There are a huge and growing number of specific AI/ML tasks: for example, voice recognition and automation, self-driving cars/trains/ships/planes, medical diagnostics and robotic aids, sentiment engines, facial recognition (image recognition of any kind), fraud prevention and cyber security, traffic systems, recruitment, robotic factories, playing games such as chess and Go etc. In all these tasks (and many more) the computer is not mimicking the human brain, it is applying algorithms to do a better and quicker job than humans *for the specific task*. However, AI/ML remains far from being able to learn from and respond to the world in the way that human brains do.

A big issue with AI/ML is the potential for bias, in the algorithms provided for ML and the data used by ML. Very few datasets are representative and unbiased. Depending on the data that ML is based on, there are many possible biases that can (unintentionally) emerge. For example, race, gender, religion, location, and age biases are often cited as existing in AI/ML tools used by police forces and the criminal justice system, in recruitment, and in healthcare.

The future for AI/ML is an every growing spectrum of uses, all tackling specific tasks that can be delivered by computers faster and more effectively than by humans. However, as the AI world grows so will the many issues of bias, prejudice, and discrimination. There will also be an increase in AI/ML going wrong in areas that may be disruptive for humans, potentially dangerous, possibly disastrous.

ON GOOGLE TRENDS AND SHARE-OF-SEARCHING

18 June 2021|Data, Data Science, Search, Search trends, Share of Search

Google Trends is a terrific tool (thank you Google!). You can enter up to five search terms at a time to see the trend in relative search volume for the terms all the way back to January 2004. You can filter the data by country and category. Google Trends is amazing. However, if you want to look at comparable search trends for more than five terms - for example, to compare search trends for all the brands in a category (most categories have more than five brands), you can't*.

So, an issue with Google Trends is that you are limited to a maximum of five search terms at a time, and the data is not comparable from one group of five terms to another group of different terms*. If you want to compare relative search levels for all car brands, or airlines, or any group of more than five search terms, you can't*.

The reason why the data in the Google Trends tool is not comparable from one group of five terms to the next* is because of the way the data is reported. The data for each group of search terms is shown as a relative search volume index (not actual volume) with the term that achieved the highest level of search volume at any point during the period is shown as 100 at that point, and all the other data points are indexed relative to the volume of the term with 100 at its highest point. If you then run the data for a different group of five terms, the term that achieved the highest volume of search at any point in the period will get a score of 100 – but that 100 is based on a different volume to the 100 from the highest volume term in the first group. This makes all the search indices in the second group non-comparable with the first group.

This is why Croft Analytics developed Share-Of-Searching, a tool that shows Google Trends data but allows up to 40 search terms to be entered at a time, with comparable search volume indices calculated and shown in trend charts for all the terms. The data is sourced directly from Google Trends. Users can filter the data by country, category, and date period,

using the same options as in Google Trends. Share-Of-Searching makes it quick and easy to compare relative search volumes and % share of search trends for all the brands in any category, or any group of up to 40 search terms at a time.

In summary, there are two key differences between Share-Of-Searching and Google Trends:

1. Share-Of-Searching shows trends in relative search volumes for up to 40 search terms at a time, while Google Trends limits users to a maximum of 5 search terms at a time.

2. Share-Of-Searching includes charts showing % share of search trends for each of up to 40 search terms at a time (showing trends in the percent of total search volume for each of the terms in the group. Share of search trends are not included in Google Trends (although they can be manually calculated for up to 5 search terms at a time). As mentioned in prior blog posts, in many categories share of search data can be used to predict market share. Share-Of-Searching provides quick and easy share of search data for up to forty brands in a category for any date period back to 2004.

Share-Of-Searching is free to use for seven days, and to use it for a whole year costs only £50 (equiv. to $69 or €58 per annum).

Take a look at https://www.shareofsearching.com

**At least comparison is difficult and manually laborious, because you are limited to five terms at a time in Google Trends.*

ON THE PUNCTURED EQUILIBRIUM

21 June 2021|COVID-19, Forecasts, Transformation

Amongst all species on the planet, Homo sapiens is one of the most vulnerable to extinction from a highly transmissible, rapidly mutating, deadly virus. This is because (being a relatively young species) we have much less genetic variation than most other living things. In fact, unlike most other species, humans are 99.9% genetically identical to each other. Lack of gene diversity makes it easier for viruses to propagate.

Luckily, we are clever and resourceful, giving us a stronger hand in the fight to survive. Despite this, COVID-19 has wreaked havoc for all humanity for eighteen months, with no end in sight. Many scientists talk about us having to learn to live with the virus (like influenza) long term. Without doubt, our lives have changed, permanently. There is nothing normal about it, no “new normal”, rather a prolonged period of change and uncertainty. We are in a new era, a punctured equilibrium.

The pandemic has accelerated many business changes that were already in motion. Most people are much more aware of the impact that humans have on the planet, and the need to tackle climate change. Sustainability has become big business, with companies accelerating CSR programmes and eco-friendly credentials. But the really big shift that has been speeded up by the pandemic is the digital transformation of governments, businesses, and society.

The pandemic has forced governments to build and deploy apps that track the spread of COVID-19 and the vaccine "passports" that are needed for travel, it has forced businesses to sell more products and services online, and forced everyone to spend more of their life online, whether for entertainment or work. Many talk about the speed of transformation,

concentrated change in one year that would have taken ten years. Internet businesses, most visibly Amazon, Google, Facebook, Microsoft, Netflix, and Apple, have been the inadvertent beneficiaries of the pandemic. But almost all businesses are now more digital because of the pandemic.

The pandemic has also decelerated many businesses, forcing large numbers to close, most notably the bricks and mortar retailers of the high street that were already trending down before lockdowns tipped them out of business. Places that used to throng with crowds of weekend shoppers have become wastelands of boarded up buildings. In 2020 more than 17,500 chain store outlets disappeared from high streets in the UK. 25% of retail products are now bought online in the UK.

There has also been a population migration out of cities and towns as the trend towards home working has been accelerated. The move to the country, to quieter closer-to-nature lifestyles, looks set to reverse the long-term urbanisation of the planet.

The COVID-19 pandemic has punctured the equilibrium, the relative peace and prosperity that the world had enjoyed for decades. Now it is much harder to predict the future, how we will live our lives, what our motivations and behaviours will be. There is no new normal.

About Croft Analytics (https://www.croftanalytics.com)

Croft Analytics helps marketers to grow their brands. Services include custom projects, brand growth webinars, presentations on scientific rules for brand growth, brand growth training, market and consumer research, reports on marketing and media topics, creation and deployment of unique global tools (such as shareofsearching.com), and a general marketing and media queries support service.

About Frank Harrison

My experience includes senior research roles at Publicis Groupe, latterly as the Global Research Lead at Publicis Media where I worked with agency teams and clients across many categories including automotive, CPG, financial services, and telecoms, delivering unique methods and data-driven tools that have contributed to brand growth worldwide. My expertise includes data science, consumer and media research, brand growth science, consumer journey measurement, brand strategy, knowledge management, and marketing ROI. Since 1996 I have been a Fellow of the UK's Institute of Practitioners in Advertising (IPA).

About the Croft Analytics Blog

I post thoughts on marketing, media, and data science to the Croft Blog on Friday each week. The blog can be viewed here.