TABLETS ON THE BRAIN: USING NEUROSCIENCE TO UNDERSTAND HOW PEOPLE CONSUME NEWSPAPERS IN PRINT VERSUS DIGITALLY

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A: INTRODUCTION

As readers increasingly access newspaper content across diverse platforms, publishers face a challenge addressing perceptions that people consume newspaper content very differently in print, compared to digitally.

That their reading behaviour is different…that they feel differently about the content …that the content produces different responses and that ads work differently in print compared to digital.

These beliefs have a major impact on our business commercially, resulting in advertisers regarding our digital readers as being a less engaged and therefore lower value audience.

We have an alternative viewpoint. We believe audience behaviour is driven more by the content and the way it is presented, rather than any assumed characteristics of the platform.

And where we present similar, edition-led content (which is the case for The Times across print and tablet), this will deliver similar levels of engagement and response, and advertisers should therefore value both audiences similarly.

This challenges accepted industry wisdom and needs robust evidence to support such a contrary position. It was this hypothesis that we set out to prove via this research study.

B: BACKGROUND

The origins of the research study stem from another piece of work carried out previously for News UK by US data analytics company, Palantir.

They conducted a study for us, looking at the consumption patterns of Times readers across our three main digital platforms, Tablet, Smartphone and Web.

The results of this work (Figure 1) revealed three very different patterns of consumption:

- **Tablets** – readers exhibit "chain" like behavior, navigating through articles within a section before switching to a new section.

- **Smartphone** – readers tend to jump between articles, often navigating to the homepage in between.

- **Web** - readers typically jump between homepage and articles with no intra-article transitions.
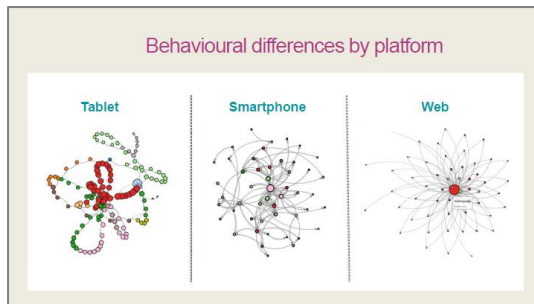
Figure1

Of these three platforms, we believe that the 'linear' consumption pattern exhibited by tablet readers was most like that of print readers.

We do have some data to support this view.

- For instance, we know people consume The Times' content for around **40 minutes per day** across both print <u>and</u> tablet.
- We also know that readers also tend to read the content **early in the day** – 40% of consumption on both platforms happens before 10am

But we don't know so much about <u>how</u> they read The Times across these platforms and also the different <u>outcomes</u> each platform delivers.

C: RESEARCH CHALLENGE

We set out to answer those questions via research.

In particular, we wanted to challenge the assumption that people's behaviour on a particular platform is determined by the platform itself.

We felt that if the stimulus (i.e. content) is similar, then it can drive similar behaviour across different platforms.

Our aim was to deliver a robust, thought-provoking piece of research to challenge existing perceptions as well as helping position newspapers in general and News UK in particular at the forefront of industry thought leadership.

D: RESEARCH APPROACH

We felt that we needed to move beyond usage data and claimed behaviour to gain a deeper understanding of the similarities and differences between print and tablet readership.

We felt because much human behaviour is driven by emotional (right brain) thinking, yet the rational left brain dominates language capability, that readers may be unable to articulate what they really think.

And we know from numerous studies that the most effective advertising engages both sides of the brain.

Our challenge was how to measure this.

We decided on a neuroscience-based approach to find out what was really going on inside people's heads whilst reading The Times and engaged specialist neuroscience research company Neuro-Insight to help tackle this challenge.

Our brief was to provide robust evidence to show how people read The Times in print and on tablet – the similarities and the differences.

E: RESEARCH METHODOLOGY

To address this objective, we adopted a multi-stage methodology:

1. Neuroscience research

At the heart of the project was a major neuroscience study, exploring readers' sub-conscious responses to The Times.

We took a sample of n=150 regular Times readers, (75 x print readers; 75 x tablet readers) and invited them in groups of 8 to a venue where they were fitted with brain monitoring headwear.

They were then given a comfortable environment to read that day's issue of The Times on their preferred platform.

They had 30-40 minutes to read The Times as they would normally. Over that time, 20 different sensors monitored second-by-second electrical activity in different areas of the brain, correlating with different brain responses in an exercise that generated 1.7 billion datapoints for analysis.

Participants were also filmed so we could link precisely what they were reading with what brain activity was going on at that time.

2. Qualitative research

This stage was used to explore conscious attitudes and behaviour, using the neuroscience results from stage one as a prompt to inform questioning.

It total we held 6 x 8 people focus groups, recruited from participants in the earlier neuroscience research stage and split equally between print and tablet readers.

3. Quantitative research

We also conducted an exit survey amongst all the neuroscience participants (n=150), collecting demographic information and asking other recall questions to be correlated with the neuroscience findings.

4. Visual impact study

We also conducted a 'visual impact study', using a predictive computer-based software tool, based on decades of research into the human visual system, to assess the visual 'stopping power' of 40 different pages/layouts

The tool uses a very similar process to how the brain allocates attention and can predict the first one to three seconds of 'bottom up' consumer attention, which drives consumers' first looks and, hence, the stopping power of different visual elements.

F: RESEARCH MEASUREMENT

In our analysis of the neuroscience work, we focused on several key measures:

Our most important measure was Long Term Memory Encoding (LTME). This refers to everything stored in our long term memories to be retrieved at a later date.

Numerous studies have proven a direct correlation between LTME and future actions, both in terms of general behaviour and more specific purchasing behaviour.

LTME is primarily driven by three factors:

- **Engagement** (defined as 'personal relevance') - When something is personally relevant we are more likely to store it in our long term memory. For instance, if we are shown a picture of a member of our family, we are more likely to remember it because it is personally relevant.

- **Emotional intensity** - Evolutionary and linked to survival - we tell our brains to remember anything we consider important. For instance, most of us will be able to remember where we were when we first heard about 9/11 because our brain would consider it an important event.

- **Narrative** - We look for connections to make sense of the world. A 'story' is always more memorable. This is at the heart of what newspapers are good at.

In this research, we concentrated on measures of LTME, Engagement and Emotional Intensity to test our hypothesis (Note: Narrative is more dictated by context and cannot be measured in this process).

G: RESEARCH FINDINGS

The research itself revealed various insights supporting our original hypothesis:

1. Reading behaviour

Firstly, we did find initial differences between print and tablet in terms of how readers access content.

Tablet reading is an immediate, visually-stimulating experience, associated with greater 'flicking' behaviour, whereas print is a more relaxed, 'slow burn' experience (Figure 2).
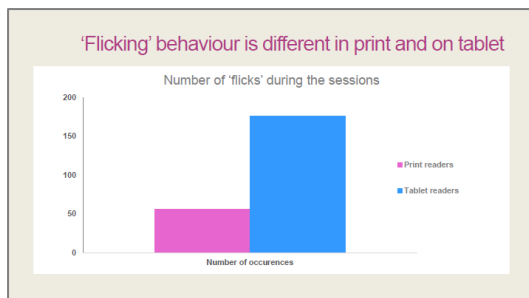

Figure 2

Interestingly though, readers are more acutely conscious of the physical differences in how they access content across the platforms and can magnify these differences to make them seem greater than they actually are. Print readers do still 'flick', but with their eyes rather than their fingers and so they don't generally consider it to be the same.

However, there were also many similarities in people's reading experience, regardless of platform.

- They used the same 5 rules for prioritising content and navigating through the edition (logical linear order; start from the back; personal interest; sense of social duty; novelty).
- They recalled exactly the same number of articles and most of those were exactly the same stories.
- They used almost identical words to describe the brand content (e.g. intelligent; educational; comprehensive; insightful).

2. Relationship with platform

In terms of their relationship with the platform, despite the dynamic and personal nature of tablets, the bond between readers and print remains strong.

Whereas tablets scored higher for visual attention (+25% versus print), print drove higher engagement (+7% versus tablet), and emotional intensity (+29% versus tablet). See Figure 3.
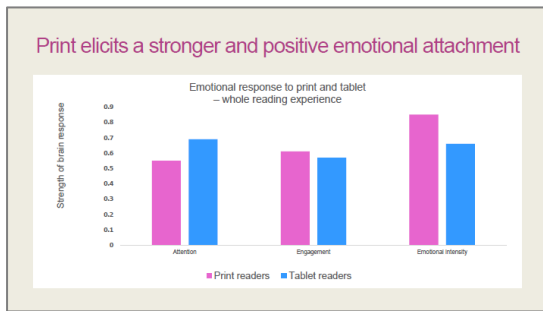

Figure 3

But interestingly, when asked about their 'favourite' platform, 44% of tablet readers chose print (Figure 4), suggesting readers often select platforms to access content due to circumstance rather than natural platform preference.
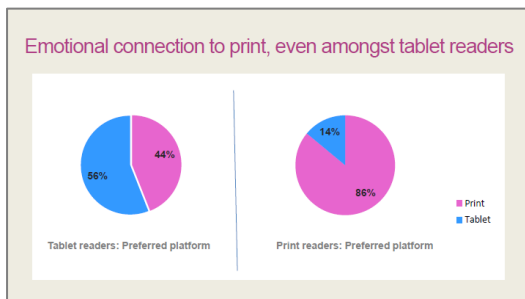

Figure 4

3. Content take-out

But when it comes to the all-important area of memory encoding, similarities start to emerge.

Initially, LTME across all content was stronger amongst tablet readers (Figure 5), generating a more immediate experience, but over the duration of the reading session, the 'slow burn' effect of print caught up, ensuring overall levels of LTME were the same (Figure 6).
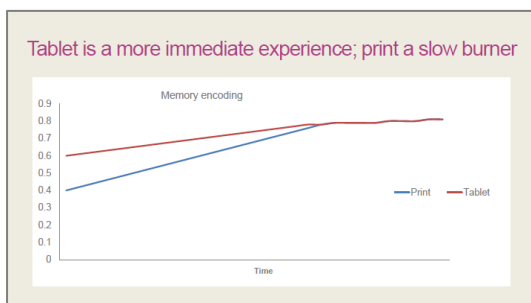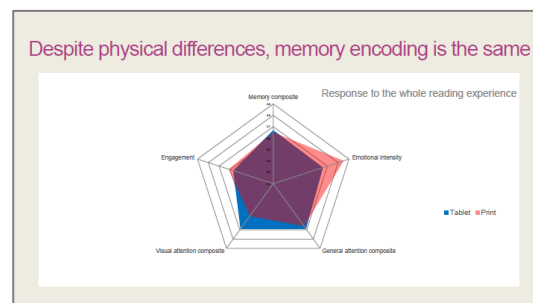

Figure 5

Figure 6

This pattern was true for both left brain (detail) and right brain (global) memory (Figure 7).
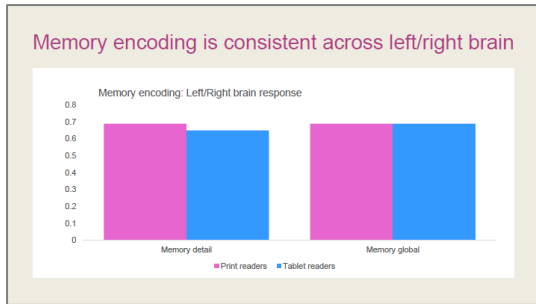
Figure 7

4. Advertising take-out

In terms of specific advertising LTME, there was a consistent story.

Whilst tablet ads score more highly for attention and print ads a little higher for emotional intensity, importantly, advertising take-out, as indicated by the strength of long-term memory encoding, is similar across both platforms (Figure 8)
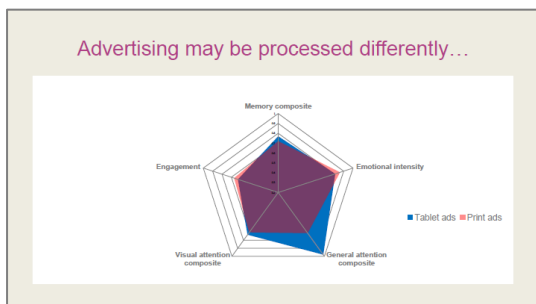

Figure 8

But whilst readers spent much longer exposed to print advertising on page (surrounded by content), compared to tablet advertising, levels of memory encoding were actually higher for static tablet ads (Figure 9).

Figure 9

This surprising result challenges the view that 'time spent' is directly responsible for engagement and memory encoding.

The 'visual impact' research provided us with additional understanding about what attracts initial attention. This is important, since without initial attention, there is no opportunity for subsequent memory encoding.

In analysing 40 different layouts, we uncovered several key learnings:

- Human faces are seen as most rewarding and will generally attract initial attention (Figure 10)
- The eye is drawn to areas of greatest visual contrast (Figure 11)
- The eye can be directed in a particular direction via 'gaze cuing' (Figure 12)
- There is no difference in attention between left hand and right hand side (Figure 13)

Figure 10

Figure 11

Figure 12

Figure 13

In summary, the research provided conclusive proof that whilst there are some differences in how people access content across print and tablet, there are significant similarities in terms of how they process content and what they take-out also.

These findings, built on understanding how our brain really works, help challenge existing thinking and demonstrate how similar newspaper content, delivered on different platforms, can drive similar behaviour.

H: RESEARCH APPLICATION

The research has already had a significant impact on our business.

It has radically changed how we sell our medium, being the catalyst for 'Access One' a whole new way of trading print and tablet that officially launched on March 2nd 2015.

Access One sells a total Times audience across print and tablet, valuing advertising equally regardless of platform (based on the understanding that the advertising works similarly). Access One is budgeted to generate a significant revenue uplift of £1.5 million in its first year, but wouldn't have been possible without the evidence from this ground-breaking research.

The research was also the catalyst for a major editorial investment in developing an edition-led product for web and smartphone. This initiative is based on the insight that it is content that drives behaviour, ergo, an edition-led product for web and smartphone can deliver a reading experience more like print and tablet. This has the potential to revolutionise our editorial product and is again a direct result of the research.

I: CONCLUSION

This is the story of how News UK applied an innovative neuroscience-based research approach to help challenge existing media industry beliefs around how different platforms work and from this foundation, to help support the launch of a new game-changing advertising strategy for The Times in a highly competitive commercial marketplace.

The research has also helped to generate significant attention and interest, along the way, both internally and externally, helping to strengthen News UK's growing reputation for providing innovative and thought provoking commercial research and insight initiatives.

But we'll leave the last word to the editor of industry leading 'Mediatel Newsline' (UK) who wrote about the research:

"Using some clearly sophisticated neuroscience techniques, News UK Commercial produced an impressive piece of research to effectively demonstrate that the tablet edition of The Times newspaper is delivering the same levels of engagement and memorability as in print.

At a time of huge transition and digital experimentation for publishers, it's good to see a project that is able to tell us something new, challenging and meaningful about our relationship with media."