

NEUROLOGICAL ASSESSMENT OF CROSS SCREEN ADVERTISING

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council for research excellence

OUR AGENDA TODAY



- Introduction to Consumer
 Neuroscience
- Findings and recommendations around cross screen advertising
- Potential topics of future research

INTRODUCTION TO NEUROSCIENCE

Neuroscience Technology Applied to Marketing



Neuroanatomy Controlled and Automatic Processing



Measuring brain activity EEG measures micro volts at the scalp





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The Cognitive Timeline Milliseconds Matter





 The time lag between 500 milliseconds and 5+ seconds is of epic proportions

• And this requires a different type of measurement tool

METHODOLOGY

Neurological Effectiveness



ATTENTION

DEGREE OF COGNITIVE INTEREST A measure of how well the stimulus grabs the consumers' focus



EMOTIONAL ENGAGEMENT

AFFECTIVE RESPONSE A measure of how well the content emotionally engages the consumer



MEMORY ACTIVATION

DEGREE OF MEMORY SYSTEM ACTIVATION A measure of the extent of encoding new information as well as retrieving past associations



NEUROLOGICAL EFFECTIVENESS

ATTENTION



Attention is critical for ad and messaging awareness

- Degree of cognitive interest
- A measure of how well the stimulus grabs one's focus

EMOTIONAL ENGAGEMENT



AFFECTIVE RESPONSE A measure of how well the content emotionally engages the customer

So it can communicate, persuade and result in enduring changes in attitudes or behavior

EMOTIONAL ENGAGEMENT DRIVEN BY THE LIMBIC SYSTEM



APPROACH/AVOIDANCE MOTIVATIONAL SYSTEM Facilitates behaviors to approach appetitive stimulation or avoid aversive ones.

MEMORY ACTIVATION



DEGREE OF MEMORY SYSTEM ACTIVATION A measure of the extent of encoding new information as well as retrieving past associations

MEMORY ACTIVATION SYSTEMS FOR LONG TERM MEMORY

Information Processing Model



Different Neural Systems Mediate Long term Memory for Facts and Autobiographical Memories versus Skills and Habits



Scale/Interpretation: Key Metrics

KEY METRICS SCALE	0-2	2-5	5-8	8-10
INTERPRETATION	Reconsider or jettison altogether	Requires major modifications in messaging, execution or both.	Selective elements in messaging, execution or both should be considered.	Use stimuli with no modification

NeuroFocus Key Metrics are reported on 10-point scales – each individually normalized to provide clients with an easy-to-interpret frame of reference for study results.

Individual Key Metrics (as estimates of the population) are +/- 0.2 at a 95% confidence level. To conclude statistical significance between two metrics, a difference of 0.4 is required.





We tested two ads within the same category, with different brands and distinct execution approaches. The results provided within this study are applicable to this scenario.

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KEY FINDINGS

KEY FINDING #1: FOR THE "SIMPLE" MINUTE MAID AD, THE TYPE OF PLATFORM HAD LITTLE TO NO IMPACT ON THE OVERALL EFFECTIVENESS

MINUTE MAID- LAPTOP VS TV SCREEN

	MINUTE MAID - LAPTOP	MINUTE MAID –TV SCREEN
EFFECTIVENESS	6.7	6.5
ATTENTION	6.2	5.8
EMOTIONAL ENGAGEMENT	6.8	6.7
MEMORY ACTIVATION	7.0	6.2
ACTION INTENT	7.0	6.6
NOVELTY	6.9	6.5
COMPREHENSION	6.5	6.4

C I STATISTICALLY SIGNIFICANT



MINUTE MAID – WEAR IN/WEAR OUT

Similar overall scores across screen type



TAKEAWAY: The Minute Maid ad had few significant differences across core metrics at a second-by-second level and performed similarly across platforms on emotional engagement and overall effectiveness.

BUSINESS IMPLICATION: Simple ads may reach across more platforms with less risk of losing effectiveness.

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KEY FINDING #2: FOR THE "STORYLINE" TROP 50 AD, THE TYPE OF PLATFORM DID HAVE AN IMPACT ON THE OVERALL EFFECTIVENESS OF THE AD

TROP 50- LAPTOP VS. TV SCREEN

	TROP50 - LAPTOP	TROP50 - TV SCREEN
EFFECTIVENESS	6.1	6.9
ATTENTION	6.1	5.8
EMOTIONAL ENGAGEMENT	6.5	7.2
MEMORY ACTIVATION	5.8	6.8
ACTION INTENT	6.2	7.0
NOVELTY	6.4	6.6
COMPREHENSION	6.3	6.5

C I STATISTICALLY SIGNIFICANT



TROP50 – WEAR IN/WEAR OUT

Lower scores consistent when comparing laptop to TV Screen



TAKEAWAY: At the second-by-second level, the Trop 50 ad has much more significant variance in core metrics across platforms. Overall, it performs significantly better on a TV screen.

BUSINESS IMPLICATION: More complex ads may not perform as well across smaller screens.

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KEY FINDING #3: FOR TROP 50, EMOTIONAL ENGAGEMENT IS STRONGER AND MORE CONSTANT ON THE TV SCREEN THAN THE LAPTOP

TROP50 – EMOTIONAL ENGAGEMENT



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TAKEAWAY: On the laptop, emotional engagement starts low and increases over time while on the TV screen it stays relatively elevated throughout. Elements with that typically cause low neurological effectiveness (quick scene changes, losing facial contact with character) appear to be magnified on smaller screen.

BUSINESS IMPLICATION: Ads that rely on emotional engagement and investment in the storyline are better suited for larger screens.



MINUTE MAID TV SCREEN DETAILED RESULTS



MINUTE MAID – TV SCREEN

Components -



All scores are on a 10 point scale, with +/- 0.2 being significant, thus an absolute difference of 0.4 between two metrics

MINUTE MAID – TV SCREEN



HEATMAP

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MINUTE MAID – TV SCREEN Neurological Compression



Minute Maid –TV Screen ~ 30 sec



Compressed Minute Maid–TV Screen ~ 12 sec

Our algorithms automatically extracted compressed versions of the ad based on neurological optimality.

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TROP 50 TV SCREEN VS LAPTOP DETAILED RESULTS



TROP50 – TV SCREEN

Components -



TROP50 – TV SCREEN VS LAPTOP



TROP50 – TV SCREEN

Neurological Compression







Compressed Trop50 TV Screen ~ 13 sec

Our algorithms automatically extracted compressed versions of the ad based on neurological optimality.

SUMMARY OF OBSERVATIONS & RECOMMENDATIONS

Observation	Recommendation
The type of platform may impact the effectiveness of "complex" ads (with smaller platforms being less effective)	Caution when ads with more complexity across smaller screens. Avoid assuming a good TV spot will translate into a good digital spot.
The type of platform may not have much impact on the effectiveness of "simpler" ads.	Suggests less risk in loss of overall effectiveness when using less complex spots on smaller screens.
Smaller screens may have more difficulty establishing or maintaining emotional engagement. Trop 50 ad struggled on smaller screen in establishing emotional engagement compared to TV Screen . Common elements of commercials that tend to score lower on any screen appear to be magnified on smaller screens.	Consider objective selection of advertising when running on smaller screens. Ad compression and/or more robust ad testing recommended

POTENTIAL TOPICS OF FURTHER RESEARCH

How can neurological assessments help us understand...

- 1. Additional test cases for ad type and complexity among screens to strengthen learnings and benchmarking. Changing variables such as ad type and type of screen.
- 2. Application of neurocompression techniques to optimize ads both by length and type of screen.
- 3. Deeper dive into neurological best practices in general and specific to smaller screen translation.