

# Chapter 10

## The Neuroscience of Social Television

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### ABSTRACT

*In a short few years, social media has become the dominant way in which we communicate with the outside world. It has become prevalent in almost every aspect of our daily lives, but one of the most significant changes social media has had, has been on the way we watch television. This phenomenon, known as dual screening, has caused some concern amongst marketers and advertisers, who believed that this behaviour was having an overall negative impact on consumer engagement with television. This chapter attempts to address some of these concerns by providing evidence obtained from the neurosciences and from a case study. The evidence we present in this chapter demonstrates the opposite effect, whereby social media can actually be used to enhance viewer engagement.*

### INTRODUCTION

The availability and widespread use of Internet connected devices has seen a fundamental shift in the way we consume media today. In particular, many of our interactions on the web are now driven around social media, which itself has become a revolution in the way we create and share content. As a result of both of these changes, there has also been a shift in way media is consumed as traditional media streams have fragmented. For marketers and advertisers this has not only meant

an increase in the overall number of available consumer touch points but importantly a new avenue for direct interaction with the consumer.

One of the most interesting phenomena arising from the social media revolution is dual-screening, where television viewing which was traditionally a sole viewing experience, is now shared with a second Internet-enabled screen. This observation has been backed by a number of quantitative investigations that report widespread dual screening in the household (Deloitte, 2012; Google, 2012; Thinkbox, 2012). Of particular interest is live

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tweeting behaviour, which not only provides a means for the viewer to express their thoughts and emotions in real-time, but also allows marketers and advertisers access to a new source of consumer driven insight. Twitter now provides a list of best practices so TV show producers know how best to interact and ‘engage’ viewers and even more recently has joined Nielsen in providing a new TV ratings metric (Nielsen, 2013a; Twitter, 2014).

When you consider that the vast majority of televised content is now shared with a second screen, it can be somewhat difficult to determine what impact if any, dual screening has on the audience engagement. In particular, if we consider that ‘engagement’ is a finite resource then it is logical to conceive that dividing this resource amongst two different activities may ultimately result in a reduction in the amount of engagement that is directed to TV viewing. While this may be true simplistically, current research from the neurosciences alludes to a more complicated relationship.

## **A BRIEF INTRODUCTION TO THE HUMAN BRAIN**

The human brain is a vastly complicated organ that serves many functions that range from the automatic control of our hearts, to the voluntary control of our feet as we walk. The brain itself is divided into two halves, called hemispheres, which are connected by a thick bundle of nerves fibres known as the corpus callosum. Each hemisphere is divided into separate anatomical and functions regions known as the lobes. The most common of these are the frontal, temporal, parietal and occipital lobes (see Figure 1).

The frontal lobe is the largest of all the lobes and is located at the front of each hemisphere. The frontal lobes subserves many functions ranging from memory encoding (Brewer, Zhao, Desmond, Glover, & Gabrieli, 1998; Buckner, Kelley, & Petersen, 1999), voluntary motor control (Penfield & Boldrey, 1937; Penfield & Rasmussen, 1950),

working memory (Miller & Cohen, 2001) and anticipation (Rolls, 2000). Traditionally seen as a classical sensory association area, the parietal lobe is also implicated in spatial ability, motor planning and attention processes (Bisley & Goldberg, 2010; Snyder, Batista, & Andersen, 2000). A prominent example of this occurs in visual sciences where the parietal lobe is referred to as the dorsal stream or “where” and “how” pathways (Goodale & Milner, 1992; Ungerleider & Mishkin, 1982). The parietal lobe is located adjacent to the frontal, temporal and occipital lobes. The temporal lobe is located towards the lateral side of the head, just beneath the parietal lobe. The lobe is involved in object recognition (Goodale & Milner, 1992; Ungerleider & Mishkin, 1982), facial processing (Sergent, Ohta, & MacDonald, 1992), memory (Maguire, Frith, Burgess, Donnett, & O’Keefe, 1998; Wood, Dudchenko, Robitsek, & Eichenbaum, 2000) and the understanding of language (Wernicke, 1970). Lastly, the occipital lobe is located at the very posterior of the head with its functioning primarily involved in vision.

## **ENGAGEMENT IS RELATED TO PERSONAL RELEVANCE**

Engagement is a term that is widely and frequently used in media, most notably in the area of advertising research. The peak research body for advertising research, the Advertising Research Foundation (ARF) defines engagement as “turning on a prospect to a brand idea enhanced by the surrounding context”. Using the findings obtained from the field of neuroscience, we suggest a much simpler definition. Specifically, we suggest that engagement occurs when a situation elicits a ‘sense of personal relevance’ and we will use this definition throughout the remainder of this chapter. This notion of personal relevance is backed by a number of observations of functional brain activity that have isolated an area within prefrontal region of the brain near the forehead known as Brodmann

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