Using Faces
*Measuring Emotional Engagement for Early Stage Creative*

by Orlando Wood

This paper outlines what led to the construction of our emotional measurement technique, and the psychological theory underpinning it. It describes some important new findings for the measurement of emotion in advertising:

i. Emotions drive everything we do, so absence of emotion results in inaction
ii. The right emotion will produce the desired action – happiness for commercial ends; fear, anger, disgust for social ends
iii. Advert understanding and the propensity for attitude change is determined by the emotional trigger (reflective or autonomic) and cognitive post-processing of the emotion
Introduction

Purchase intention, relevance, understanding, brand recall; there will be few researchers who are unfamiliar with these measures and constructs – questions that have been used over the years to help marketers to understand whether their stimulus has had the desired effect on its audience. These are the questions we ask to establish how the consumer has responded to the information seen, and to gauge whether it will influence their behaviour. They help us to predict brand awareness, penetration and repeat purchasing, and are designed to plug straight into the sales and marketing mechanisms of the companies and organisations who commission research. But do they really tell us what is going through consumers’ minds when they see a new product idea or a new advertisement? Do they even attempt to mirror the appraisal mechanisms in the human brain?

Leading psychologists agree, emotions are at the heart of everything we do. Our emotions guide our everyday choices and determine our biggest decisions. Our lives are often arranged to maximise the number of pleasurable emotions and to minimise those feelings that are less enjoyable. Emotions can last for just the briefest of moments, but can be all-consuming. They can both save our lives and put them at risk, and there are times when they can even overcome our most basic instincts for survival. They stir and prepare the conscious mind for important events, and influence and pre-empt our judgements, yet where do our emotions fit into the familiar measures so widely used by researchers?

Emotions feel as though they are happening to us, as though we have little control over them or the impulses that trigger them. And we like to think that, when making hard-headed decisions in the commercial world, it is reason and thought – over which we exercise greater control – that should be measured. In organisations an emphasis is placed on reason and logic, and the role of emotions in consumer choice can often be sidelined. After all, if we are really at the mercy of our emotions, does this not suggest that we might easily be influenced by things we see as being outside our control? None of us would like to believe this – and especially so in the commercial world. This is short-sighted, because comprehensive studies have demonstrated beyond reasonable doubt that emotion contributes to brand interest and purchasing attitudes far more than cognition. Emotions should be understood by market research practitioners because it is our emotional response to stimulus that results in action, attitudinal or behavioural change.

It was this thought that set us on a course to understand human emotions, to arrive at a framework that would help us to measure them, and to understand what triggers them and how they are triggered.

In this paper I outline what led to the construction of our proprietary emotional measurement technique, FaceTrace™, and the psychological theory that underpins it. With reference to several examples, I will set out some important new findings for the measurement of emotion in advertising:

i. Emotions drive everything we do, so an absence of emotion results in inaction
ii. That evoking the right emotion for the purpose will produce the desired action; generally happiness or surprise for commercial ends, and fear, disgust and anger for social action (sadness needs to be used carefully).
iii. Advert understanding and the propensity for attitude change is determined by the emotional trigger and cognitive post-processing of the emotion. Adverts that evoke emotion through reflective appraisal are more likely to succeed than those that rely on autonomic, hard-wired emotional responses.
How have emotions been measured in the past?

Much work has been conducted in recent decades by psychologists and research practitioners on the measurement of emotion. There are essentially two report processes – *self-report*, where subjects indicate what they are feeling, and *psycho-physiological measurement*, where the manifestations or by-products of emotion are measured through heart rate, skin conductance, facial expressions and, more recently, brain activity.

1. Psycho-physiological Measurement

While experiments have shown that psycho-physiological measurement can be helpful in detecting emotional response, this is not an approach that lends itself to large scale consumer research. The apparatus required dictates measurement in laboratory conditions, where the subject is very conscious of being under examination. It is also less good at measuring emotions that are felt at low intensity, and is currently a measure of ‘outputs’, which does not for the moment offer the understanding of the processes within us that lead to emotional response.

2. Self-Report

Self-report, by contrast, is a more practical approach to emotional measurement on a commercial quantitative basis. It is also more user-friendly and quicker to administer. The chief criticism of self-report techniques, however, is that respondents may not be fully aware of the information they process automatically – that is to say, self-report may not be able to capture emotions that are suppressed or unrecognised by the cognitive mind. This is an important criticism and one that we would have to take into account in devising any measure of our own.

There are broadly two approaches that have been employed in the measurement of emotion in psychological research – dimensional and differential (the basic emotion approach).

1. Dimensional

Mehrabian and Russell (1974) asserted that humans are in a constant state of emotion that can be expressed as a combination of three dimensions – pleasure, arousal and dominance. They believed that every emotion we feel can be described by combinations of these three independently measured, bi-polar dimensions. This framework was used by Lang (1980) in the development of a Self Assessment Manikin (SAM), and very helpfully in advertising research by Morris et al (2002). One criticism of this technique, however, is that, as a self-report technique, it relies on a set of verbal instructions and a level of cognitive processing that may bias response. In other words, it may only measure the perception of an emotion and may not measure emotions that we feel but which we do not acknowledge to ourselves. Moreover, because it measures generalised emotional states and not specific emotions, it can lead to ambiguous results (pleasantness and arousal might signify both fascination and pride), and therefore the technique’s use to the marketer is limited.

2. Differential (basic emotion approach)

The alternative approach for measurement – the differential or basic emotion approach – points to a reduced set of basic emotions that are considered to be universal and distinctive values. While there is some consensus on what constitutes this reduced set of basic emotions (sadness, fear, surprise, disgust are typically described), there is not one definitive set of emotions that is universally used by practitioners. The basic emotion approach has largely been used in conjunction with verbal self-report by practitioners, although recently cartoon animations have been used for the express purpose of measuring low intensity emotions evoked by product design. Central to the basic emotions approach, however, is the definitive understanding of which emotions we should be measuring.

A review of methods used to measure emotion led us to the conclusion that we needed to develop a self-report technique (it needed to be easy to administer and user-friendly) that
overcame some of the criticisms of self-report, namely that identified the emotion felt without the need for a great deal of cognitive processing on the part of the respondent. We turned to the work of Paul Ekman (2003), a respected psychologist, who puts a case for a set of seven basic emotions: happiness, surprise, sadness, fear, anger, contempt and disgust, all of which are universally conveyed by and recognisable in the face⁷. Ekman’s research on reading emotion in people’s faces has two important implications:

1. it gives us a framework for understanding which emotions we should be looking to capture.
2. it provides a means of accessing what respondents feel, with minimal cognitive processing on their part.

I would like to outline Ekman’s research findings, because they serve as our theoretical framework for measuring emotional response.

**The emotions we should we be looking for**

Ekman arrived at his conclusions as a result of a number of experiments. He wanted to determine whether emotions were universally recognisable and whether they could be said to be universally present, regardless of race or cultural background. To do this he needed to conduct his research not only in developed countries, where Western facial expressions might have been learned from films or television, but also in parts of the world where there was little contact with Western civilisation.

Ekman set off for Papua New Guinea and took numerous pictures with him of Westerners contorting facial expressions. He presented the photos to the indigenous population and asked them to tell a story in which the face might appear. Most of the stories told correctly incorporated the emotions depicted by the faces shown. He then looked back at the stories told and used these as a basis for his own stories. His stories were crafted to ensure there was no ambiguity in the type of emotion that might be triggered. He told these stories back to new research subjects and asked them to point to the photo which represented the emotion that would be felt by the protagonist in that story. This work, conducted among 300 people in Papua New Guinea, and replicated by his colleague Karl Heider among the population of West Irian in Indonesia, and across more than twenty other Western and Eastern cultures, always returned the same result, that the emotions Happiness, Sadness, Anger, Disgust, Surprise, Fear and Contempt are all culturally present, consistent and expressed and recognised through identical facial expressions across the globe.

Of course, in certain cultures there may be attempts to hide some of these emotions, as they are deemed socially unacceptable, but they are nevertheless understood and recognised when seen, and although they can be suppressed or masked when in company, when in isolation, all people exhibit the same signs on their faces when feeling these emotions. This was demonstrated in an experiment Ekman conducted among American and Japanese people. Both American and Japanese participants exhibited the same expressions in isolation, when viewing a film designed to evoke emotion, but when the scientists were also present, the Japanese were more likely to mask their feelings. This leads Ekman to assert that there are certain display rules, as he calls them, that are particular to each culture, but this should not detract from the finding that certain emotions are universally understood and conveyed by the face.

The very fact that these seven emotions are universally recognisable leads Ekman to conclude that these are the core emotions for human development and existence, and it is
precisely because of this that all humans can recognise them, wherever they are from, whatever their culture or race. These emotions are imprinted on all of us, and enable us to understand each other. They are not individual or learned, or none of us could begin to understand each other's feelings or motivations. If we did not all have the same basic emotional hard-wiring, Ekman asks how could it be that congenitally blind children, unable to learn expressions from others, could have the same facial expressions as those who are not? These expressions and emotions are not learned, but somehow in-built and indelible.

There are clearly different types of emotion within these seven broad categories, and Ekman outlines these in great detail, but these are not all discernible or universally discernible, at least, by looking at the face. It's important to understand how Ekman sees these emotions, as they will help us to decode the responses we record later in our research. Let's start with happiness, because, as we will see later, this is a key emotion in measuring advertising effectiveness.

Ekman believes that happiness is a vague term that we use to describe a number of enjoyable emotions, some of which do not even have their own word in English. It is evident that enjoyable emotions drive us forward, and that we organise our lives to maximise the frequency and intensity of them.

There are at least twelve different enjoyable emotions, according to Ekman. I list these emotions below. I have divided them into two groups, because I believe that five of them are particularly pertinent to advertising pre-testing and new product development research (Group 1). These five are more likely to be triggered by what I will outline later in the paper as reflective appraisal, through humour, challenge, novelty and imagination, all triggers that have real relevance to advertising and, indeed, new product development.

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amusement</td>
<td>Humour</td>
</tr>
<tr>
<td>Excitement</td>
<td>Anticipation, novelty or challenge</td>
</tr>
<tr>
<td>Pride in others' achievement</td>
<td>Acknowledging to self others' accomplishments</td>
</tr>
<tr>
<td>Pride in own accomplishment</td>
<td>Overcoming challenge</td>
</tr>
<tr>
<td>Wonderment</td>
<td>Overwhelming incomprehension at unlikelihood, novelty or rarity</td>
</tr>
<tr>
<td>Contentment</td>
<td>Relaxation</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>Meditation, nature, joy from sex</td>
</tr>
<tr>
<td>Elevation</td>
<td>Experiencing goodness in others</td>
</tr>
<tr>
<td>Gratitude</td>
<td>Appreciation of gift providing benefit</td>
</tr>
<tr>
<td>Relief</td>
<td>Dissipation of another emotion</td>
</tr>
<tr>
<td>Schadenfreude</td>
<td>Delight in others' suffering or downfall</td>
</tr>
<tr>
<td>Sensory Pleasures</td>
<td>Sight/Sound/Smell/Taste/Touch</td>
</tr>
</tbody>
</table>

Fig. 1 Enjoyable Emotions and their Triggers
You may wonder where love features, but this is a term that can have many meanings and is not considered so much by Ekman as an emotion as an enduring attachment, within which a number of emotions can all exist at any given time.

It is the smile that is the universally understood facial feature for happiness, but it is not possible to detect the type of happiness that has been triggered from the smile alone. We cannot, for instance, readily distinguish between Schadenfreude on the one hand and a moment of self-congratulatory pride on the other. Ekman points to the strong role of the voice in conveying enjoyable emotions as perhaps the reason why we cannot identify exactly the type of enjoyable emotion felt, purely from the face. It is possible to determine whether the enjoyment is genuine or not in a smile, however, from the orbicularis oculi muscle, that is to say, it’s all in or around the eyes.

It is worth briefly outlining Ekman’s theories on the other universal emotions, as this will be helpful in decoding our new emotional scale.

**Sadness** is generally triggered by the universal theme of *loss* – of a person, of self-esteem, health, a bodily function, a treasured object. Sadness involves resignation, whereas agony, a stronger version of sadness, which conveys a sense of protest, signals agitation. Sadness may have evolved to bring needed help from others.

**Anger** is generally triggered by the universal theme of *interference with intent or physical restraint* – and can be measured on a scale ranging from annoyance through to rage. There are different types of anger – indignation, exasperation, sulking. Resentment and hatred, however, Ekman believes are emotional attachments rather than emotions, just as love is. There is often a slight physical urge to move towards the object that is causing us anger. Anger may have developed in us to signal to others to get out of the way.

**Fear** is generally triggered by the universal theme of something *approaching us through space quickly*, the *sudden loss of support* and *threat of pain*. Impending (but not immediate) threat leads to increased vigilance and muscular tension. We tend to freeze in fear and, as the threat becomes more immediate, to flee. If there is nothing we can do to eliminate the threat, we tend to feel no panic or fear of any kind, as there is little we can do to change the situation. Fear is likely to have developed as an emotion to help us to protect ourselves.

**Surprise** is a very brief emotion and alerts us to things that are out of the ordinary. It is likely to give way to other emotions once we have had chance to assess the situation fully. It is usually triggered by seeing something unusual or out of context. It is different from merely being startled and results in a different facial expression.

**Disgust**, as an emotion, is fascinating, as it is not evident in us until mid-way through childhood, when the cognitive brain has developed to the point of being able to recognise the items that trigger it. Ekman references the work of Paul Rozin, who believes there are two types of disgust. The universal triggers for *core disgust* include bodily products – faeces, vomit, urine, mucus and blood, but only when they have left the body. Disgust may well have developed in us to prevent us from consuming potentially harmful items. *Interpersonal disgust* on the other hand, it is believed, is triggered by four learned triggers: the strange, the diseased, the misfortunate and the morally tainted. Disgust may have evolved to make us think carefully about participating in activities that may be harmful to us, but objects that trigger disgust, also fascinate in equal measure.

**Contempt** is experienced in relation to *people and their actions*, rather than objects, which trigger disgust. It is usually bound together with a feeling of superiority over others, and may be accompanied by anger. It is my belief that contempt has evolved as a mild warning signal, perhaps a pre-cursor to anger.
It is tempting to classify these seven universally recognised emotions as ‘positive’ or ‘negative’, but Ekman guards against this. We can, for example, enjoy a good cry, be amused at cruelty or enjoy an angry argument. When kept in check, all these universally recognised emotions are constructive, in the sense that they help us to lead our lives, deal with situations, live with and understand others.

There are other emotions, certainly, that exist but which are not universally recognisable; shame, guilt, embarrassment, for instance, which may not have developed in humans until later, as social hierarchies, communities and rules developed, as the triggers for these emotions seem to differ from one culture to another. Some commentators refer to these emotions as ‘higher order emotions’. It seems to me that the seven core emotions are like primary colours, and that these ‘higher order emotions’ are akin to secondary colours, which are mixed using a palette of the basic emotions – and which are usually determined by a response to others or our place in society. For instance, jealousy has many components – fear of loss and humiliation, anger at and contempt of the protagonists involved, sadness at the loss of a loved-one and disgust at the notion of the act of infidelity. Guilt and shame are fear of exposure and fear of loss of others’ respect. Envy is sadness at the absence of an item that could cause happiness and anger that someone else has something that you do not have.

The development of our Emotional scale (FaceTrace™)

For this reason, we felt that the seven core emotions – the emotions that have been so helpful in the development of our species – were those we should be measuring. We were also acutely aware of the effect that faces have on us. Just by pulling these faces, we can instigate the associated emotions in ourselves. Try it and you will see that, by pulling a sad face for long enough, you will start to feel down, and that by pulling a happy face, you will lift your mood. It’s a two way process – the face reflects our emotion, but by contorting our face muscles we can also influence the way we feel. There is clearly a deep rooted neural and psycho-physiological connection between our face muscles and the way we feel. We felt that the visual representation of faces was therefore important and could overcome the criticism of self-report measures, because faces are a direct route to our emotions. Using faces we felt we could access the actual emotion felt at a subconscious, pre-processed level, and reach deeper than the rational neural processes that are usually engaged by semantic measures. These faces, we believed, may also help to avoid the confusion and ambiguity that can be introduced by words.

We therefore determined to create a measure that would incorporate pictures of the face itself to identify the emotional response and intensity of response to stimulus – primarily advertising, because this seemed to us to be the areas which would benefit most from this tool. We were later to realise that it had many other applications too, however.

Our first challenge was to create a set of faces that could be used in our research to represent each of the emotions (plus ‘neutral’) at different levels of intensity. We started by creating cartoons and caricatures in the hope that this exaggerated style would lend itself to an emotional schema. As you can see from Fig 2a, the cartoons did a reasonable job of portraying the emotions, but they couldn’t really convey the complexity of the face sufficiently, and did not seem to connect with us emotionally.
Our next approach was to create detailed line drawings in an attempt to add the detail and subtlety missing from the cartoons. As you can see from Fig. 2b, this was a step in the right direction, but still did not feel quite right.

What finally dawned on us was that the only way to represent the emotions that Ekman proved we can all recognise in people’s faces was to use an actual face. Obvious in hindsight, but then isn’t innovation always like that once you’ve got it right!

So we set about taking photographs of a real model. With apologies to our wonderful model, we deliberately chose a rather androgynous look as we felt that this would be more universal. Her hair was pinned back to reveal her forehead, which also served to minimise her femininity in case this distracted or alienated respondents – male or female!

It took many attempts and over 6,000 photos to achieve realistic representations of each emotion. We started off giving verbal instructions as to how the face should look for each emotion, of the ‘narrow eyes, furrowed brow’ type, but the images we received back did not work. The photographer gave the model a mirror to help her in her facial contortions, but this did not work either, essentially because she was just trying to pull a face. So we thought back to Ekman, and his instruction that you need to ‘feel the emotion’ for it to appear naturally across the face, and we asked our model to feel sadness, anger, contempt, disgust – which took very little persuasion by this stage!
This worked, and we eventually had a set of 22 photos that we were happy to proceed with:

Neutral – one image
Happiness – 3 levels of intensity
Surprise – 3 levels of intensity
Sadness – 3 levels of intensity
Fear – 3 levels of intensity
Contempt – 3 levels of intensity
Disgust – 3 levels of intensity
Anger – 3 levels of intensity

Our intention was to incorporate the faces in a multi-layered question that would identify the net emotional footprint left by a piece of stimulus, and also the depth of that impression. We also wanted to understand what triggered that emotion and the way in which it was triggered, as this might be central to pinpointing parts of the advert that most affected the viewer.

The question we developed works as follows. A respondent is shown the advert. As soon as possible thereafter, they are shown a set of eight faces, representing the seven basic emotions plus neutral, and are asked to:

**STEP 1:** Select the one face that best expresses the emotions felt (one of the seven or neutral). We include neutral, because it is quite possible that the respondent feels none of the core emotions in response to the stimulus. The most intense photo of the seven emotions is shown for each emotion in this first stage, as Ekman believes that ‘no-one needs much help in how to interpret a facial expression when an emotion is at its peak’ *(Emotions Revealed, p77)*. In this first stage, we include labels because two of the universal emotions are sometimes difficult to tell apart – those of fear and surprise.

*Which of these faces best expresses how you feel about this advert?*

Fig. 3 FaceTrace™ First Level Question Screen

**STEP 2:** They are then asked to choose one of the three faces (low, medium, high intensity) that matches the intensity of the emotion that they believe they felt. If they chose neutral in Step 1, they do not answer this part of the question.
Now, to what degree did this advert make you feel [selected emotion, e.g. disgust]?

Fig. 4 FaceTrace™ Second Level Question Screen

STEP 3: An overall emotional intensity score is determined by measuring the degree of emotion felt, regardless of the nature of the emotion. All emotional reactions are incorporated in the Emotional Intensity score, including the proportion who felt nothing (gave ‘neutral’ as a response). Fig. 5 illustrates an example of 3 commercial and 3 social ads tested, each with their corresponding Emotional Intensity Score and the nature of the emotions that make up the score (% of respondents feeling each emotion at all).

Fig. 5 Illustration of Emotions Felt and Emotional Intensity for 6 Ads Tested

STEP 3: They are then asked why they felt that way – what triggered that emotion – using BrainJuicer’s open-ended MindReader survey tool.
How can FaceTrace™ help us in ad pre-testing and early stage creative?

In early 2007 we tested a number of adverts that had won awards from the Institute of Practitioners in Advertising, and had therefore been shown to be deliver against their business objectives. Alongside these, we tested a set of adverts from each of the same categories, with what might commonly be termed as having the same kind of advertising objective (i.e. direct message, relaunch, brand building). The experiment was conducted on-line, and each advert was tested monadically and isolation of others (no clutter reel was used) among approximately 150 respondents. Each pair of ads was matched at analysis on % seeing the advertisement before, to ensure that any familiarity effect was equalised. I show below the FaceTrace™ results together with a detailed table of how the adverts performed on traditional 7-point scale advertising measures (1= minimum and 7 = maximum) and on our emotional measure (award-winners are marked #):
### IPA Award-Winning Adverts vs. Others

**Integrity Score**
measured on a scale from 1 to 3

<table>
<thead>
<tr>
<th>Intensity Score</th>
<th>Surprise</th>
<th>Happy</th>
<th>Neutral</th>
<th>Sadness</th>
<th>Fear</th>
<th>Anger</th>
<th>Disgust</th>
<th>Contempt</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Neutral</td>
<td>52</td>
<td>59</td>
<td>72</td>
<td>60</td>
<td>61</td>
<td>34</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>% Happy</td>
<td>30</td>
<td>24</td>
<td>72</td>
<td>60</td>
<td>61</td>
<td>34</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>% Surprise</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>% Contempt</td>
<td>8</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>% Disgust</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% Sadness</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>% Anger</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>% Fear</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Emotional Intensity (from 0 to 3)</td>
<td>1.02</td>
<td>0.94</td>
<td>1.79</td>
<td>1.51</td>
<td>1.86</td>
<td>0.99</td>
<td>1.69</td>
<td>1.73</td>
</tr>
</tbody>
</table>

**How different it was**
5.12 5.05 5.26 4.69 5.85 4.72 5.11 5.52 -0.65 0.37 0.62

**How entertaining you found the advert**
4.83 4.26 5.66 5.34 5.89 4.87 5.74 5.65 -0.96 0.93 0.96

**How memorable you found it**
4.85 4.22 5.75 5.03 5.82 4.72 5.60 5.59 -0.95 0.90 0.95

**How impactful you found it**
4.58 3.81 5.34 4.61 5.39 4.35 5.23 5.24 -0.93 0.88 0.93

**How easy it is to understand**
4.40 3.00 6.00 5.43 5.44 5.33 6.30 5.93 -0.77 0.86 0.77

**How persuasive you found it**
3.93 3.01 5.00 4.29 4.23 3.93 5.18 5.08 -0.79 0.87 0.80

**How relevant it is to you**
3.79 3.10 5.08 4.67 4.33 3.98 5.75 5.43 -0.77 0.88 0.80

**How much it told you about the brand**
4.09 2.89 5.13 4.28 4.11 4.47 5.54 5.28 -0.63 0.75 0.65

**How much it made you want to buy the product**
3.64 2.69 5.17 4.44 4.22 3.75 5.28 5.01 -0.82 0.92 0.84

**% Spontaneous Brand Recall**
93 83 92 66 71 84 95 86 0.17 -0.07 -0.13

---

**Fig. 7a & b Comparison of Award-Winning and Non-award-winning Ads on FaceTrace™ and Key Advertising Metrics**
I should first perhaps say that just because the non-award winners have not won awards, does not mean to say that they are not effective pieces of communication. There may be many successful adverts that are not entered for the awards. That said, there does seem to be clear water between the award-winners and the non-award winners in most cases, with the exception of the cat food adverts, this last pair being much closer on most measures (it was the demonstration of a successful long-running campaign for Felix that won the IPA award).

The emotional scale we had developed was able to tell us how many viewers felt each emotion, having viewed the adverts, and also the intensity with which they felt any emotion.

The first important finding is that adverts which had won the IPA awards were less likely on the whole to evoke no emotional at all (neutrality) than their non-award-winning counterparts. If we look at the correlation between neutrality and standard ad pre-testing measures, we see that neutrality is negatively correlated with all of them, and in particular the important metrics of memorability, persuasion and desire to buy.

The second important finding is that of the seven basic emotions, it was principally happiness that was felt, and that happiness is positively and strongly correlated with memorability, persuasion and desire to buy. The same is true of emotional intensity – the more intensely emotions were felt, on the whole, the more likely respondents were to want to buy the product advertised, the more memorable the ad was deemed to be. These measures are also strongly and positively correlated with understanding, and many other key measures, including relevance and how much it told you about the brand.

It is evident that our emotional response measure can bypass traditional measures when assessing advertisements where sales are the ultimate objective. I would now like to demonstrate how useful the measure can be for adverts for a different type altogether: social advertising – that is to say non-commercial adverts for charities or public service information. The table below compares the results of adverts for three UK charities.

<table>
<thead>
<tr>
<th>Charity Ad 1 (30 secs)</th>
<th>Charity Ad 2 (30 secs)</th>
<th>Charity Ad 3 (60 secs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base:</td>
<td>150</td>
<td>147</td>
</tr>
<tr>
<td>% Neutral</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>% Happy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>% Surprise</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% Contempt</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>% Disgust</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>% Sadness</td>
<td>59</td>
<td>48</td>
</tr>
<tr>
<td>% Anger</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>% Fear</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Overall emotional intensity</td>
<td><strong>1.18</strong></td>
<td><strong>1.31</strong></td>
</tr>
<tr>
<td>How different it was</td>
<td>4.57</td>
<td>5.71</td>
</tr>
<tr>
<td>How memorable you found it</td>
<td>4.9</td>
<td>5.26</td>
</tr>
<tr>
<td>How impactful you found it</td>
<td>5.21</td>
<td>5.77</td>
</tr>
<tr>
<td>How easy it is to understand</td>
<td>5.73</td>
<td>5.46</td>
</tr>
<tr>
<td>How persuasive you found it</td>
<td>4.71</td>
<td>5.05</td>
</tr>
<tr>
<td>How much it told you about the charity</td>
<td>4.79</td>
<td>4.98</td>
</tr>
</tbody>
</table>

Fig. 8 Comparison of Charity Ads on Key Advertising Metrics

The first important finding is that the advert that performs the most strongly on traditional measures (Charity Ad 2), including how much it told you about the charity and how persuasive you found it, is the advert that achieves the lowest neutrality score. Second, our charity adverts are no longer evoking happiness as the principal emotion, it is primarily
sadness, but also anger, disgust and contempt that are felt. Third, that emotional intensity for Charity Ad 2 is in line with that of Charity Ad 3, even though it was only half the length.

So why has Charity Ad 2 performed so well on the traditional measures? Well, it could well be that it has triggered the assertive emotions that lead to behaviour or prevention of behaviour, involvement and fascination (anger, disgust and fear), and less sadness than the other two adverts, which is an emotion borne of resignation:

<table>
<thead>
<tr>
<th>% Joy</th>
<th>Charity Ad 1</th>
<th>Charity Ad 2</th>
<th>Charity Ad 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base:</td>
<td>150</td>
<td>147</td>
<td>147</td>
</tr>
<tr>
<td>% Contempt</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>% Disgust/Anger/Fear</td>
<td>10</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>% Sadness</td>
<td>59</td>
<td>48</td>
<td>59</td>
</tr>
</tbody>
</table>

Fig. 9 Summary of Charity Ad Scores on Key Emotions

If we look at the reasons given in the table below for feeling sadness (the most commonly felt emotion for all adverts), it is quite clear that there is a sense of resignation in the responses (‘we can’t stop it’, ‘[something] that I can’t change’). If we look at what triggers anger there is a much greater sense of purpose – that the situations shown could have been prevented. The reason for this could be that in anger, we seek to remove the object that is thwarting us, that we are motivated to move towards the object making us angry. In the UK in the 1980s, it was not enough for people to see suffering in Africa on their television screens or to feel sadness for action to ensue, it was Bob Geldof’s anger and the conversion of passive sadness to active anger that mobilised the masses to action in Live Aid. Disgust here also appears to be an assertive emotion and to be of the interpersonal disgust type outlined by Rozin, and specifically the rejection of behaviour that is morally tainted. Contempt, which Ekman believes is always felt towards people, rather than objects, is apparent for Charity Ad 3. But contempt is not felt towards those people depicted in the advert, rather towards those who are responsible for making and airing the advert. This is precisely the emotional reaction that we do not want to see, and suggests that the advert might even be counter-productive.
Earlier we hypothesised that sadness had developed in us as a signal for help to others. By that logic, it may well be more beneficial for advertising to highlight sadness in others on screen, as this will lead to intervention on the part of the viewer, rather than set out to evoke sadness in the viewer him-/herself.

David Bonney, in his excellent paper ‘Sad-vertising’ (2006), underlines the effectiveness of sadness when it is resolved by more pleasurable emotions such as happiness, and that ‘sadvertising probably works best when the brand offers a positive, cathartic finale after a glut of sadder emotions’. This may well be the appropriate role for sadness in advertising and is reinforced by Petty and Cacioppo (1981) “The promise of relief from a negative event may also provide an incentive to accept an advocacy” (p. 72).

So what has our emotional scale led us to conclude and what are the implications of these findings? I summarise below:

- Neutral response to advertising is likely to result in inaction
- Happiness is key when the ultimate objective of the advert is to generate sales, because it correlates strongly with advert memorability and the desire to buy the product.
- Assertive emotions – disgust, anger, and possibly fear – are likely to result in action in non-commercial public service or charity adverts, because they are emotions that lead to behaviour or prevention of behaviour.
- Sadness is an emotion that is borne of resignation and may not be an effective emotion to evoke in the viewer, unless it is resolved by another (more pleasurable/purposeful) emotion.

---

**Fig. 10 Comparison of Emotional Triggers for Charity Ads**

<table>
<thead>
<tr>
<th>Charity Ad 1</th>
<th>Charity Ad 2</th>
<th>Charity Ad 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top Reasons for Emotion</strong></td>
<td><strong>Top Reasons for Emotion</strong></td>
<td><strong>Top Reasons for Emotion</strong></td>
</tr>
<tr>
<td>Sadness – 59%</td>
<td>Sadness – 48%</td>
<td>Sadness – 59%</td>
</tr>
<tr>
<td>because it is not right children have to live like this</td>
<td>the thought that in this day and age children are still being treated so badly</td>
<td>that people still suffer in a modern age today</td>
</tr>
<tr>
<td>children are suffering and although we can help, we can’t stop it altogether</td>
<td>sadness that child abuse goes on and that ads like this are needed.</td>
<td>It is always very sad to see children suffering - more needs to be done to help</td>
</tr>
<tr>
<td>there are children out there suffering and it’s not fair</td>
<td>Sad that child abuse is still as much a problem as it has always been</td>
<td>What it is showing is true but not pleasant, we take too much for granted</td>
</tr>
<tr>
<td>there are children out there suffering and governments are not doing enough</td>
<td>Sad because there was no way forward. Happened 20yrs ago, still happening</td>
<td>Because it’s sad when some people have so much and poverty can’t be eradicated</td>
</tr>
<tr>
<td></td>
<td>Because I feel so much suffering goes on, that I can’t change</td>
<td></td>
</tr>
<tr>
<td><strong>Anger – 7%</strong></td>
<td><strong>Anger – 14%</strong></td>
<td><strong>Anger – 6%</strong></td>
</tr>
<tr>
<td>Because the world and me could have prevented this</td>
<td>I love children and cannot bear to see or hear of child abuse</td>
<td>Because these things shouldn’t be happening</td>
</tr>
<tr>
<td><strong>Disgust – 3%</strong></td>
<td><strong>Disgust – 9%</strong></td>
<td><strong>Contempt – 8%</strong></td>
</tr>
<tr>
<td>Because in this day and age children shouldn’t have to deal with this</td>
<td>Disgust that an adult could be so angry that they cannot see what they are doing</td>
<td>I am sick of this type of advert // I shouldn’t have to watch it and have people make me feel guilty for being able to</td>
</tr>
</tbody>
</table>

---
The ability to measure contempt is important, because contempt signals that the ad may be counter-productive – contempt being an emotion that is directed towards people (and the brand personalities they create).

Emotional intensity is a useful summary measure for overall effectiveness, correlating strongly with ad memorability, relevance and desire to buy.

**Emotional triggers and their importance for understanding and memory**

I would like to touch upon the processes that trigger our emotions, because understanding these processes is central to explaining the effect of our emotions on understanding and memory. Psychologists generally believe that emotions precede conscious thought, and I believe this to be true most of the time, though this is not always the case, as I shall explain.

Ekman believes that we have automatic mechanisms for emotional appraisal (he calls them auto-appraisers), that are always switched on to alert us to fear, surprise and so on. These automatic mechanisms are responsible for much of the emotion we feel, but our emotions can also be brought about through reflection.

Ekman's research leads him to conclude that there are certain themes that, over the years, through our species’ history, are bound to trigger emotion in us automatically and instantaneously, and that we are hard-wired to respond to these basic themes for the purposes of self-preservation or the protection of others’ welfare. These universal themes trigger emotions in all of us autonomously, Ekman asserts. I believe the general themes that may automatically trigger emotions in us include light, dark, movement, speed, height, size, proximity, sound and rhythm, and it is our five senses that provide the necessary input to our auto-appraisers. A good example of one of these universal themes in action might be a fast moving train passing through a station while you are standing on the platform. You do not have to think or even see the train coming to sense fear, it is enough to be close by to be afraid as it moves through the station at speed.

Automatic appraisal happens in a fraction of a second, before the conscious part of the mind catches up; we do not have chance to think about it, to consider what is happening. In fact, when we try to recall moments where our emotions have caused us to react quickly, we can find it difficult to remember what happened exactly. It is as if reaction to these general themes momentarily blocks out thought and conscious memory. If we are driving our car and need to break or swerve to avoid another vehicle, this is likely to be thanks to one of our core emotions – fear – triggered autonomously by our auto-appraisers in response to a universal theme (approaching movement). We don’t have to think about it and as a result, we may find it difficult afterwards to remember what happened precisely or to know what was going through our mind at the moment we reacted; our cognitive mind has not been engaged. It is not uncommon for crash victims to find it difficult to recall what happened in the moments leading up to the collision.

Reflective appraisal takes a few seconds longer than automatic appraisal. It manually kick-starts the automatic mechanisms, which are only triggered by and attuned to general themes. Reflective appraisal takes place when subtleties of circumstance are not detected by our automatic appraisal system, and when either words or the situation need to be interpreted before we fully understand their implications. Ekman distinguishes these triggers from themes, and calls them variations. A good example of this might by your boss’ insinuation that your job is on the line, which it may take several minutes for you to understand, and for fear to be evoked. The underlying theme here is loss of support, but when expressed in words and ideas it is too distant from the universal theme for fear to be triggered autonomously, and reflective appraisal is therefore required. Reflective appraisal is a more subtle detection mechanism, during which the mind refers back to other memories and experiences for points of reference, and it checks against universal themes to tell us how we should be feeling and behaving. Ekman suggests that each new reflective appraisal will be stored against a database of other similar situations in our memory, to help us interpret future situations.

Once an emotion occurs in us, regardless of the trigger mechanism, we can find ourselves in what Ekman calls a refractory state, a period of perhaps just a few seconds during which ‘our
thinking cannot incorporate information that does not fit, maintain or justify the emotion we are feeling’ (*Emotions Revealed*, p.40). The purpose of this refractory state, Ekman claims, is to ‘[focus] our attention on the problem at hand, using the most relevant knowledge that can guide our initial reactions, as well as preparations for further actions’. Our emotional response therefore *shapes* our cognitive response. Music is interesting because it can tap into our emotions very directly, and influence our feelings and mood autonomously, without the need for reflection, but it can also lead to a refractory state, if it triggers memories and associations in us.

So, in summary, it seems that we are hard-wired to react emotionally to broad and general themes, thanks to the evolutionary process, but that reflective appraisal, with the help of a certain amount of learning and experience, alerts us and determines our emotional response to situations that fall outside the bounds of these general themes. A refractory state follows, during which the conscious mind retrieves relevant information to re-enforce the emotion we are feeling.

I believe it is important to make the distinction between the general *themes* that automatically trigger emotion – which can impede understanding and memory and work in isolation of the conscious mind – and, as Ekman calls them, the *variations* on general themes that first trigger reflective appraisal, and only then our emotions, because this might help us to explain why in certain circumstances emotions can help understanding and memory, and in others they may impede it. It is my assertion that reflective triggers are likely to lead to greater understanding than autonomic triggers, by virtue of the fact that our response begins in the conscious mind. The fact that reflective appraisal is a means of searching for new variations on the core universal themes, I believe, is also more likely to result in us storing the situation in our memory for future reference. When, in market research, we detect that an emotion has been triggered in response to new advertising or a new product, it is therefore *evidence of reflective appraisal* that I hypothesise we need to look for, as emotions borne of reflective appraisal are likely to be the most conducive to memory and understanding. Evidence of the *(refractory state)*, during which our cognitive mind seeks to justify and consolidate the emotion we are feeling, will also be an important factor in determining the level of cognitive processing and understanding that has occurred.

Ekman points to seven different triggers for emotion that I believe could all be classified under the term *reflective appraisal*, as they all nearly always require the participation of the conscious mind at the outset. They are:

- Remembering a past emotional scene
- Relaying past emotional experiences
- Imagining a scene – ‘rehearsal’ of emotional scenes
- Empathising – trying to imagine how others are feeling
- Being told by others what to feel emotional about
- Exposure to the violation of social norms
- Pulling the facial expressions associated with each emotion – tricking your mind into feeling the emotion

When you cast your eye over these triggers, you can see immediately how many of them are and can be used in advertising communication. These, I believe are likely to be the most successful emotional triggers in TV advertising to ensure understanding, while devices that tap into broader universal themes may simply serve to distract us from the message that needs to be conveyed.

If we return to the two car adverts we looked at earlier, we will see how important the emotional trigger is for comprehension, and that evidence of either reflective appraisal or the refractory period is likely to be a good indication of understanding. Both adverts were relaunch adverts. Below I outline the reasons given for happiness, which as shown above, seems to be the emotion correlated most strongly with advert memorability, impact and desire to buy. I have also looked at the main message that was received by respondents, and included some verbatim comments that demonstrate that the message is conveyed more
successfully by the Golf advert – the award-winning advert with the stronger emotional intensity score and the advert with the higher happiness rating:

<table>
<thead>
<tr>
<th>Top Reasons for Happiness</th>
<th>Main message</th>
<th>Top Reasons for Happiness</th>
<th>Main message</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘It was a brilliantly done ad, great idea and superbly executed’</td>
<td>‘The Golf is a new version of an old classic’ - 72%</td>
<td>‘It was quite amusing’</td>
<td>‘You would be surprised at how stylish the new [Brand &amp; Model] is’ - 43%</td>
</tr>
<tr>
<td>‘A well made and fun advert’</td>
<td>Key Associations</td>
<td>‘It got the point across’</td>
<td>Key Associations</td>
</tr>
<tr>
<td>‘Funny, clever, classic but with a modern twist’</td>
<td>‘Singing in the rain’; Gene Kelly dancing in the rain a classic; it represents a technical and classic product with a touch of class ‘classic car with an updated look’</td>
<td>‘Humour’; ‘main character in the wrong car’ ‘his fear he would be seen in the wrong car; ‘tongue in cheek, sends itself up’</td>
<td>‘Bland’; ‘nothing to get excited about; ‘Very much the same as every other car advert’</td>
</tr>
<tr>
<td>A very clever advert</td>
<td>‘Gene Kelly dancing’ ‘updated dance moves’</td>
<td>Reminded me of singing in the rain</td>
<td>‘[Brand]’; ‘popular cars, middle of the road, not very exciting’</td>
</tr>
<tr>
<td>‘Fun, a new twist on an old thing’ ‘takes something classic and adds a modern spin’</td>
<td>‘Inventive film, cgi’ ‘no-one else has done anything quite like it in this field’ ‘It’s completely different to anything ever done before’</td>
<td>‘Car’; [Brand &amp; Model], ‘One of the [Brand] range of modern cars’</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 11 Comparison of Emotional Triggers in Car Adverts

The trigger for happiness in both appears to be reflective appraisal. For viewers of the Golf ad, happiness was triggered by the understanding that the advert itself was a metaphor for the car – ‘a classic updated’, and this translates into high levels of understanding – the main message being taken out by 72% of respondents. The cognitive mind has triggered the emotion (‘clever’) or at least been engaged during the refractory period (‘kept me interested’, ‘reminded me’). For those viewers of the non-award-winning car ad for whom happiness was evoked, happiness was triggered by the same process of reflective appraisal (‘it got the point across’), demonstrating again the link between the type of emotional trigger – reflective appraisal – and understanding.

When we compare how well the message was conveyed by the two adverts, we can see that for the Golf advert, where there is greater evidence of reflective appraisal and a refractory state, the message is clear: ‘takes something classic and adds a modern spin’. For the other car advert, however, where there is only limited evidence of reflective appraisal, it is less evident that the message has been well received (only 43% are able to tell us the main message of the advert). Importantly, when we look at the associations for the non-award-winning advert advert, the only slight evidence to suggest that the message has been received is when the primary association is ‘humour’ (‘his fear he would be seen in the wrong car’), pointing again to the fact that emotions help to carry a message when the emotional trigger is reflective appraisal.

A similar result is seen in our charity adverts. The message of the strongly-performing Charity Ad 2 has been conveyed via reflective appraisal and the use of metaphor ‘the [charity brand]
stands in between children and abusers’. There is little evidence of reflective appraisal in the other two adverts, which use extensive imagery of children, poverty and suffering, and the emotional triggers are therefore more likely to be universal themes. As a result, the message seems to be played back less fully, respondents simply describing what they see rather than processing and reacting to the message.

<table>
<thead>
<tr>
<th>Charity Ad 1</th>
<th>Charity Ad 2</th>
<th>Charity Ad 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main message</strong></td>
<td><strong>Main message</strong></td>
<td><strong>Main message</strong></td>
</tr>
<tr>
<td>children need our help // please donate to help children in poverty and danger // Give donations to [charity brand] to help poor children</td>
<td>that the [charity brand] is committed to ending child abuse // [charity brand] need support // the [charity brand] stands in between children and abusers</td>
<td>give money // sponsor a child // help</td>
</tr>
<tr>
<td><strong>Key Associations</strong></td>
<td><strong>Key Associations</strong></td>
<td><strong>Key Associations</strong></td>
</tr>
<tr>
<td>Children living in poverty</td>
<td>Child abuse can occur in any home</td>
<td>Poverty</td>
</tr>
<tr>
<td>children suffering</td>
<td>[charity brand] offers advice and help to both children and parents</td>
<td>Third World</td>
</tr>
<tr>
<td>poverty</td>
<td>[charity brand] protects children</td>
<td>Sadness</td>
</tr>
</tbody>
</table>

*Fig. 12 Comparison of Charity Ads on Message Received*

Evidence that the *refractory period* is important is seen in the Tropicana advert. Here it was primarily the music (Breakfast in New York) that triggered an emotional response and connection. The only voice-over used in the advert was:


Music is mentioned as the main emotional emotional trigger by those feeling happiness (68% of those feeling happy). Music triggers association, imagination and memory, resulting in a long refractory period that will help to convey the message and improve understanding. In the Tropicana advert, it is use of music and visual imagery to trigger emotion that helps to convey a complex and multi-dimensional set of messages via a refractory period:

- Tropicana Orange juice important part of breakfast
- Tropicana is a global brand
- If you can’t have what you want [for breakfast] have orange juice
- Good for you
- No additives
- Better than other juices

This complex set of messages has been ‘filled in’ by the brain during the refractory period, while referencing back to associations, memories and even the imagination to support the emotion felt.

An experiment we conducted on a financial services ad for a UK bank, where emotional intensity was low, shows how autonomic triggers can impede understanding. The advert was designed to encourage switching to the bank from other banks, and this was conveyed by metaphor – rabbits hopping over stepping stones from one bank of a river to another. The depiction of animals triggered happiness (‘I like rabbits, it was cute and I wanted to see what would happen next’, ‘the rabbit was able to get across to the other rabbits, and it was cute’), but the rabbits detracted from viewer understanding. The main emotional trigger – rabbits – a trigger that required little cognitive processing and that connected to universal themes around the urge to care and protect – meant that the main association with the advert was ‘rabbits’ (50%) – with the main message somewhat confused ‘rabbits like green fields and are clever at crossing rivers’.
We have seen how reflective triggers help understanding and that adverts with high emotional intensity are considered highly memorable, and how autonomic triggers can impede understanding. We have also seen the benefits of a refractory period. Our analysis of the effect that the emotions have on memory would not be complete if we did not consider factual and brand recall, however.

Turning back to our experiment on award-winning adverts, what strikes us is that the ability to recall the brand spontaneously and immediately was not strongly correlated with any of the key emotional measures – neutrality, happiness or emotional intensity. If anything, it was negatively correlated with emotional intensity, and it seems that higher emotional intensity results in slightly lower immediate brand recall.

<table>
<thead>
<tr>
<th>Adverts Tested</th>
<th>O2# Telecoms Ad 2</th>
<th>Tropicana# Fruit Juice Ad 2</th>
<th>VW Golf# Car Ad 2</th>
<th>Felix# Cat Food Ad 2</th>
<th>Neutrality</th>
<th>Happiness</th>
<th>Emotional Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base:</td>
<td>147</td>
<td>153</td>
<td>150</td>
<td>147</td>
<td>143</td>
<td>148</td>
<td>146</td>
</tr>
<tr>
<td>% Neutral</td>
<td>52</td>
<td>59</td>
<td>27</td>
<td>35</td>
<td>21</td>
<td>55</td>
<td>31</td>
</tr>
<tr>
<td>% Happy</td>
<td>30</td>
<td>24</td>
<td>72</td>
<td>60</td>
<td>61</td>
<td>34</td>
<td>67</td>
</tr>
<tr>
<td>Emotional Intensity (from 0 to 3)</td>
<td>1.02</td>
<td>0.94</td>
<td>1.79</td>
<td>1.51</td>
<td>1.86</td>
<td>0.99</td>
<td>1.69</td>
</tr>
<tr>
<td>% Spontaneous Brand Recall</td>
<td>93</td>
<td>83</td>
<td>92</td>
<td>86</td>
<td>71</td>
<td>84</td>
<td>95</td>
</tr>
</tbody>
</table>

Looking at our charity adverts, again the same pattern emerges, but more strongly. Emotional intensity seems to be negatively correlated with brand recall, suggesting that intense emotion may well impede factual recall. Perhaps this is even more strongly seen when the primary emotions felt are those other than happiness.

Fig. 13 Correlation of Immediate Spontaneous Brand Recall with Emotional Measures

<table>
<thead>
<tr>
<th>Adverts Tested</th>
<th>Charity Ad 1 (30 secs)</th>
<th>Charity Ad 2 (30 secs)</th>
<th>Charity Ad 3 (60 secs)</th>
<th>Correlation with Emotional Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base:</td>
<td>150</td>
<td>147</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Overall emotional intensity</td>
<td>1.18</td>
<td>1.31</td>
<td>1.37</td>
<td>-0.99</td>
</tr>
<tr>
<td>Spontaneous Brand Recall</td>
<td>88%</td>
<td>78%</td>
<td>71%</td>
<td>-0.99</td>
</tr>
</tbody>
</table>

Fig. 14 Comparison of Charity Ads on Emotional Intensity and Brand Recall

Our finding that there is a weak and possibly negative relationship between brand recall and emotional intensity is consistent with the research outlined by Robert Heath and Paul Feldwick (2007) in their recent paper, ‘Research has shown that advertising with high levels of emotion is discriminated against by recall metrics’.

To summarise, the findings point to the fact that:

1. Emotional intensity can help understanding, with the appropriate (reflective) trigger. Evidence of reflective appraisal as the initial emotional trigger is likely to go hand in hand with viewer understanding of the message.
2. Evidence of the refractory state, where cognitive processing seeks to re-enforce the emotion felt, is also key for understanding (music is one mechanism that can lead to a refractory state), but the emotion evoked should be appropriate.
3. Emotional Intensity will help memorability of the advert, but may impact on immediate factual or brand recall – regardless of the emotional trigger. If brand recall is considered important (and some commentators suggest that it is not central to an advert’s success), it is important to check that it has not been adversely affected by the emotion evoked.
The IPA award-winning adverts performed well for their brands in the marketplace: the Tropicana advert was held to have reversed share decline by triggering a new set of positive emotions and associations around the brand, the O2 advert was held to have stemmed a rising trend in disconnections and to have attracted new customers, and the Golf advert was one of a long series of adverts that helped to make the model the third biggest selling car in UK history. These adverts all display signs of triggering reflective appraisal. That reflective appraisal and the refractory state may also lead to lasting attitudinal change is consistent with cognitive response theory. As Petty & Cacioppo (1981) explain,

“If the new attitude results from issue-relevant cognitive activity, the new attitude is likely to be relatively enduring. But if the attitude results from various persuasion cues in the situation, the attitude change is likely to exist only so long as the cues remain salient. Recent reviews of attitude change studies measuring persistence have supported the view that active cognitive involvement of the person in the persuasion situation is crucial for the production of enduring attitude changes” (p. 263).

And:

“If a message initially elicits many favourable thoughts, and if the message recipient rehearses these favourable thoughts so that they are transferred from short-term to long-term memory, persistence of persuasion is likely” (p. 248)

In psychological research a link has therefore been shown to exist between the mental rehearsal of arguments and lasting attitude change. Reflective appraisal as an emotional trigger mechanism, and the refractory state that follows an emotional episode, are both evidence of cognitive processing, and therefore point to lasting attitude change.

Evidence to support the cross-cultural validity of FaceTrace™

In an experiment designed to test the hypothesis that simplicity is actually closely aligned to an emotion – and specifically that of happiness – we tested 23 concept ideas in both the UK and China for their simplicity (measured using a semantic agreement scale) and happiness (measured using our FaceTrace™ technique). Simplicity was highly correlated with happiness in both countries (0.90 in the UK and 0.88 in China) and our hypothesis was validated. Perhaps more importantly, however, the response obtained to the concepts was as at least as consistent between the two countries when measured with FaceTrace™ as when measured with semantic scales – even though it is a Caucasian face that is used in the question.

If we look at the correlation between the results of the two countries for several key measures across concepts on a semantic agreement scale, we see the following:

- Would be easy to use: 0.63
- True example of Simplicity: 0.56
- Relevant and meaningful benefits: 0.54
- Based on real understanding: 0.51

The correlation between countries across concepts on happiness and surprise is 0.63 and 0.69 respectively. We might well have expected to see differences between countries in the way that they responded to the concepts and, indeed, it would have been surprising if response to the ideas on test had been identical in both countries, and this explains why correlations are not higher on any individual measure. By comparing the country correlations on the semantic agreement scales with those on happiness and surprise, however, we can conclude that the FaceTrace™ measure is at least as universally employable as semantic measures across different cultures, and that the result is a validation of the technique’s applicability across the world. This should not be a surprise to us, as recognition of the core emotions and happiness on our faces is universal, but it is a very welcome validation of the Ekman theory.
Fig. 15 Comparison of % for whom Happiness is Triggered for Concept Testing in UK and China
Conclusions

In this paper I have outlined with reference to psychological theory how we might measure emotional response on a quantitative and commercial basis. I have outlined the emotions we believe it is important to measure, how we might measure them and the intensity with which they are felt; I have also shown what triggers them and how they are triggered. I have also shown that our measure is valid in different cultures across the world, because the theory it rests on is universal.

The application of our technique has led to some important conclusions advertising pre-testing, that:

- Emotions drive everything we do, so an absence of emotion results in inaction
- Happiness is key when the ultimate objective of the advert is to generate sales, because it correlates strongly with advert memorability and the desire to buy the product.
- ‘Assertive’ emotions – disgust, anger, and possibly fear – are likely to result in action in non-commercial public service or charity adverts, because they are emotions that lead to behaviour or prevention of behaviour.
- Sadness is an emotion that is borne of resignation and may not be an effective emotion to evoke in the viewer, unless it is resolved by another (more pleasurable/purposeful) emotion.
- The ability to measure contempt is important, because contempt signals that the ad may be counter-productive – contempt being an emotion that is directed towards people (and the brands they create)
- Emotional intensity is a useful summary measure for overall effectiveness, correlating strongly with ad memorability, relevance and desire to buy

Our experimental evidence points to the conclusion that the way emotions are triggered matters. Emotions triggered by reflective appraisal are likely to result in better understanding of the message. Autonomic triggers, on the other hand, are likely to impede cognitive processing and therefore understanding. Evidence of the refractory state, where cognitive processing seeks to re-enforce the emotion felt, is also likely to point to greater understanding, but the emotion felt needs to be appropriate.

Emotions will help the memorability of an advert, but may impede factual and brand recall, regardless of the emotional trigger. Much ad pre-testing theory is founded on brand and factual message recall, and if emotional intensity impedes recall, this is an important finding. One hypothesis we hope to explore with further work is that emotional engagement at the precise moment the brand is introduced is key for high brand recall.

Our findings on how emotions work in advertising are illustrated below.
Our findings have important implications for advertising. First, they suggest that all adverts should generate emotion. Second, they suggest that a different kind of approach to generating emotion may be required for different advertising objectives:

1. Adverts where the ultimate objective is to drive sales should generate happiness and emotional intensity

2. Adverts where the ultimate objective is a call to action should evoke emotions that commonly lead to action or the prevention of action, that is to say anger, disgust and possibly fear, and not sadness, which is an emotion borne of resignation

3. The appropriate emotional trigger is reflective rather than autonomic, unless we can discern evidence of a refractory state, where the emotion is underpinned by further cognitive processing. Devices designed to trigger our emotions autonomously, as an easy short-cut to the emotions, will prove less effective.

**Implications for Ad Pre-Testing**

We believe that the distinction that marketers and practitioners make between rational and emotional response is artificial. At some level, our response to stimulus is always emotional, and this response commonly takes place before the cerebral post-rationalisation of an emotional response or the verbal articulation of it. We therefore believe that for nearly all product categories, emotional response to stimulus is the most important indicator of future behaviour. The enduring distinction between rational and emotional response, we feel, is unhelpful and misleading, and it is time to challenge the received wisdom that rational response is somehow more important than emotional response.

There are only really ever two goals to advertising – to drive sales or to change behaviour. If adverts do not perform well on certain traditional measures, apologies have perhaps been made in the past for their ineffectiveness on the basis that they were simply intended to convey a new message, that they were only ever meant to drive awareness or that the advert was operating in a low involvement category. As a result, ad pre-testing has become
increasingly complex to accommodate different ‘types’ of advertising, with different models, norms and weights for different categories.

We assert that high or low involvement categories do not exist – only high and low involvement brands and adverts. What is typically referred to as a low involvement category is in fact a collection of low involvement brands or adverts, the net effect of which is a low involvement category. One of the best known, loved and longest-running adverts in the UK is for what should be a very low involvement category – the toilet tissue brand, Andrex. We believe that an opportunity exists for brands and adverts that compete in such categories to break away from other low involvement brands and adverts, and that the vehicle for this is emotionally engaging advertising. This applies as much to financial services and insurance as to telecoms and utilities, as long as the appropriate emotional trigger is used.

The research tool we should be looking to use is, therefore, a measure of emotional response; a simple question that can determine whether there is latent potential for action by measuring the emotions evoked. Measuring emotional engagement jumps straight to the heart of the matter, without the need for a multitude of complex measures that are mere proxies for what we should be measuring but could not measure hitherto. If no emotion is evoked by an advert, it merits no further discussion and it should not be aired. If the emotions it evokes are inappropriate, we need to understand what is driving them. If the emotions are triggered incorrectly, we need to know how to correct that. We need to know all this at an early stage in the development process, to help clients to avoid unnecessary expense.

Alexander Biel (1995) is right when he stresses that:

‘marketers would be far better off increasing the number of prototype rough commercials tested; going back to an earlier state of finish would increase their chances of finding marketplace winners’.

A measure of emotion, based on an understanding of how the mind works, is what is required, so that we can predict success early on in the development process. The kernel of an idea, perhaps in need of polish, but in essence present and potent, is likely to have the capacity to evoke emotions if the idea is of value. Emotions can be evoked even if the execution is not fully finished. Measuring emotions will result in significant cost savings for clients, more creative products and better adverts. Ultimately, it is emotions that we should be measuring, because it is our emotions that are the best and most immediate judge of advertising and early stage creative.
References


The Author

Orlando Wood is a Client Director at BrainJuicer Group plc, and sits on the BrainJuicer Labs development committee.

Images

Please note that all images except advert stills are copyright of either BrainJuicer or Paul Ekman.
Notes

1 See Paul Ekman’s *Emotions Revealed* (2003).


7 See Paul Ekman’s *Emotions Revealed* (2003).


9 Stills from the award-winning adverts are shown at the end of this document.


11 Morris et al demonstrate that emotional attitudes have a stronger influence on behaviour than cognitive attitudes in 12 out of 13 product categories. The exception was computers, where cognitive attitude was more predictive of conative attitude. “The Power of Affect: Predicting Intention”, *Journal of Advertising Research*, 42 (2002): 7-17.