

# Understanding the impact of consumer emotions in advertising development

#### **Client:**

Fabler Studio

#### Agency:

Various

#### Location:

New York, USA

#### Website:

fablerstudio.com

For decades advertising agencies and brands have fought over testing and creative development of advertising campaigns where two issues often remain at the center of contention - the use of animatics for pre-testing and the 'touch' of the client in revisions of the creative. Now, by using the cutting-edge 3D Facial Imaging technology to measure consumers' emotional reactions, we can shed light on these debates. In fact, looking at these preliminary findings we would say there are several substantial insights that illuminate the topic for both issues

Since pre-testing began, there has been the ongoing debate as to whether you can realistically evaluate an advertising idea by showing potential consumers

an animatic rather than a final production version of the commercial. Conventional wisdom says that if the idea is good it will come through regardless of an execution. To go further, it has been posited that if an idea needs the execution, especially in terms of high, expensive production values, to communicate, then it's not much of an

idea in the first place. However, in reality, when tested in malls or focus groups the argument goes something like this - if the animatic tests well, it's a great idea, if the animatic tests poorly it's due to the execution.

In a similar vein, the advertising fraternity generally doesn't appreciate when 'part-timers' dabble with their work. It has been expressed by creative directors the world over that when you let the client dip into and 'finesse' the content, flow, and thus overall execution of the ad, it generally leads to a less impactful, probably safer, yet bland commercial.

## **Fabler Studio** applies **nViso**'s powerful 3D Facial Imaging technology to improve creative development

#### **Solution:**

nViso 3D Facial Imaging for Consumer Insight Analytics.

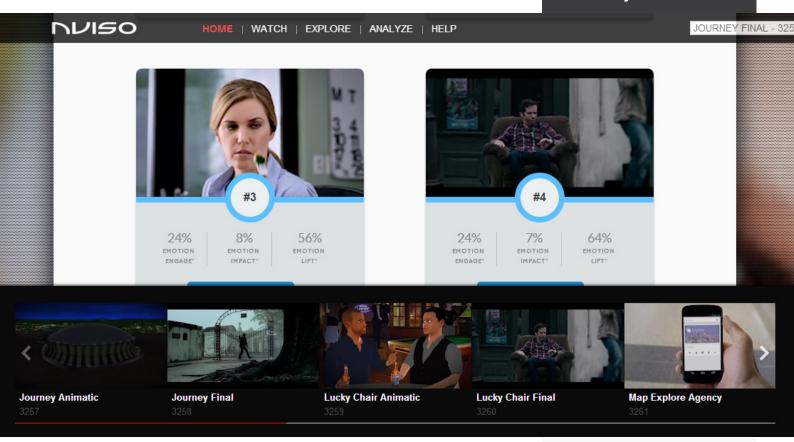
More information on the solution available at http://www.nviso.ch



Recent research, using nViso's 3D Facial imaging technology has show that the same idea tested in animatic and final production generated similar profiles of emotional response. The final production shared the same peaks and valleys of the animatic but had higher emotional levels with helped sustain interest through to the conclusion.



Click to access the interactive dashboard of the study results.



nViso 3D Facial Imaging Interactive Dashboard tracks emotions to any advertising stimulus, enabling you to find out how your target group really feels about messages and communications.

So, there's evidence to suggest that the idea and the overall build of an ad can be communicated using animatics at the first stage - at least when there's an easy to communicate storyline. The same research also indicates when clients are 'let loose' and are allowed to tamper with their agency's work there is indeed a dampening of emotional impact irrespective of the final production quality.

The results of this study can be viewed online in the nViso Interactive Dashboard (Username: anim2014 and Password: welcome) that includes advanced reporting options including tools to help diagnose the emotional reaction of viewers. Client demand for greater ROI from their communications spend means "accountability" and "effectiveness" are key demands in many client-agency negotiations. nViso provides believable measures of effectiveness based on the direct feedback from the hearts of consumers. We talk "emotions", not jargon, but do it with a degree of realism and accuracy that planners and creatives alike appreciate. nViso 3D Facial Imaging puts emotion back at the centre of your discourse with clients, supporting a more creative response to client demands and helping understand what kinds of concepts, messages, and imagery will create the most effective communications for their business.

#### Rank

and compare each stimulus by emotion engage, impact, and lift scores

#### Watch

unfiltered second-by-second emotional responses as they occur perfectly in-sync

#### **Explore**

how target segments react and discover what drives their reaction

#### **Analyse**

different ad executions, cuts, edits, and ad strategies

#### **COMPARISON 1: ANIMATIC VS FINAL PRODUCTION**

For decades agencies have debated the usefulness of evaluating an advertising idea using common pre-testing methods. The reasons cited for lack of faith in this approach are many. Key arguments against, revolve around the belief that it is impossible to replicate the real world in a laboratory environment, that animatics can't project the effects of a finished film, and how articulated answers of questionnaires do not accurately capture the richness of human emotional response focusing analysis on the rational message content of an ad - which may only be a small portion of what makes the ad effective.

nViso 3D Facial Imaging for Consumer Insights is a solution for creative advertising development that is designed to be creative friendly. It specifically addresses the fundamental grievances from the creative community by putting emotion at the heart of evaluation diagnostics and captures accurately emotional response to animatics, something out of reach for traditional systems.

Two sets of animatic vs final production ads where compared in this study. An initial review of the findings would indicate that the animatics can reflect the emotional response profile to the overall idea and 'story sequence' but the finished quality and, in this case probably the talent involved, boost the overall emotional levels and help sustain the growth in involvement. In a nutshell, the animatic version generates response profile not dissimilar from the final production version but the limited executional style gives an overall lower scoring.

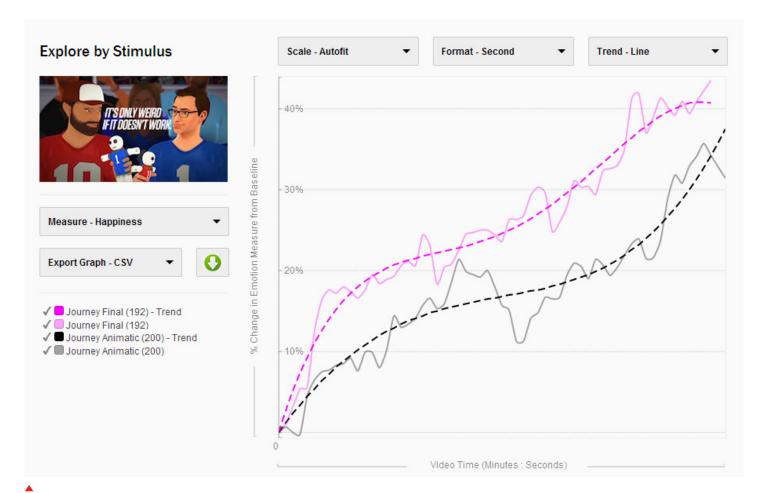
#### **INSIGHTS**

#### Animatic and Final Production Versions Correlate Positively

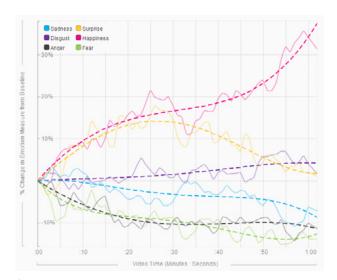
Both animatic and final production versions of emotion profiles are strongly positively correlated with 95% and 97% correlation between trend lines of both versions tested

### **Quality of Execution Drive Emotions Higher**

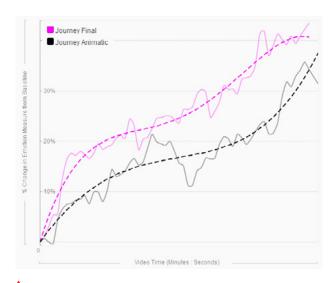
The higher production quality of the finished ad boost the overall emotional levels and help sustain the growth in involvement. The finished ads finished 25% and 12% higher in positive emotion than their animatic counterparts.



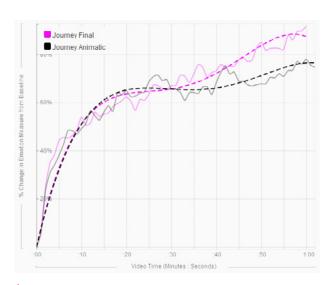
nViso 3D Facial Imaging Interactive Dashboard tracks emotions to any advertising stimulus, enabling you to find out how your target group really feels about messages and communications. (Click to explore the study results)



## Bud Light 'Journey' (Animatic) Emotional Profile (Click chart to explore)



Bud Light 'Journey' (Final vs Animatic)
Happiness (Click chart to explore)



Bud Light 'Journey' (Final vs Animatic)
Emotional Lift (Click chart to explore)

#### **Bud Light 'Journey' Commercial**

The animatic (click to watch) to this Super Bowl 2013 commercial starts off with a Ravens fan clinking a bottle of Bud Light before running off "to do that thing". He sneaks into the stadium, walks past a security guard and into the locker room where finds hair in a brush and a sock from a laundry cart. On the way out, he grabs some grass. The man then walks down New Orleans back streets and into a dive bar. He buys two bottles of Bud Light, giving one to the bar tender. They toast and our man asks "Is he here?" The bartender points him to the back through a hallway to a back room where a voodoo priest takes the items and creates a voodoo doll.

Later, on Super Bowl Sunday, the man pulls out a voodoo doll he made of a San Francisco 49 player. Unfortunately, the man next to him takes out his own doll of a Baltimore Ravens player. If they are both cursing each other, who will win? Stevie Wonder's "Superstition" track comes up for product shot and logo around 5 seconds from the end.

The final production version (click to watch) follows the animatic except it does away with the opening bar scene. Also the hero passes by a party taking place a cemetery, on his way to the dice bar. The Voodoo priest is played by Stevie Wonder, and "Superstition" cuts in at around 35 secs, much earlier than the animatic.

The animatic's initial emotional drivers are both Happiness and Surprise, especially as the hair, sock, and grass are being collected. After this segment, at around 25 seconds in, the Surprise wains and the Happiness alone drives overall emotional lift. The final production version shows a steady build in the Happiness level as the ad progresses. Happiness climbs rapidly once Stevie Wonder is recognized and is sustained to be further increased when the two guys discover they've got the same dolls.

When we compare the two versions, the Happiness levels both increase throughout the ad although the animatics's level drops during the exchange between the bartender and the customer. The climb is re-initiated and the revelation of the dolls generates a sharp lift, as it does for final but from a higher level. It can be argued that the boost generated by Stevie Wonder and the earlier introduction of the music was a vital part in maintaining the momentum in the final production ad, a feature from which the animatic did not benefit.

We can see from the emotion lift chart that although both started in a similar vein, the final production commercial did not wain around mid-ad as did the animatic and the emotional lift for the final production ad was sustained until the end. How much of this was down to the introduction of a music legend, compared to an animatic voodoo priest, compounded by the earlier introduction of a well-known piece of music is open to discussion.

#### **Bud Light 'Lucky Chair' Commercial**

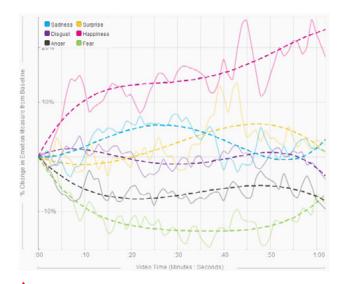
A second pairing of an animatic and final production ad tested was the Bud Light 'Lucky Chair' idea. Again the storylines are similar. The animatic (click to watch) for the second spot in the Super Bowl 2013 'Superstitious' campaign starts off with our two heroes toasting friends in a bar and a receiving an invitation to 'watch their team lose' at a house party. They accept, take a drink and explain they have "a thing to do". We cut to a dimly lit house exterior where our hero's are moving a chair out through the window. They roll the chair through the street, picking up a six-pack of Bud Light along the way and end up at the gates of a mansion. A guard accepts the beer and lets them bring the chair into the house. Inside, they meet a Voodoo priest and ask him "Do you do lucky chairs?", he replies "it's my specialty."

We cut back to the house, where a party is in full swing. The host boastfully asks his guests to "back up" and states "that's my lucky chair". The two toast as cheers around the room indicate their team performed well, presumably because of the hoaxed chair.

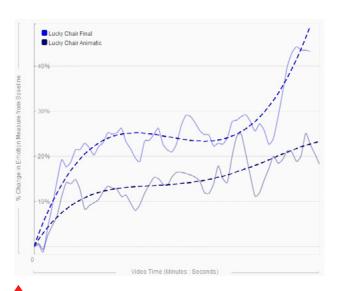
The final production version (click to watch) skips the bar scene, instead opening with the duo stealing the chair, so gets to the intrigue straightway. Otherwise the broadcast spot tracks similar to the animatic, with the exception of the Voodoo priest, Stevie Wonder, claiming not to be an expert with hoaxing Lucky Chairs. He clicks his fingers and Zoe Saldana (Avatar, Star Trek) appears and hoaxes the chair instead.

The animatic in this case does not get off the ground so well, the initial scene of the invitation in the bar does not seem to engage or propel the storyline as well as the opening elements of the Journey animatic discussed previously. In contrast, the final production ad gets underway with the lucky chair being stolen immediately and we suggest this accelerates interest, hence the more rapid ascent of the happiness scores. The "not today it isn't" punch line helps drive happiness rapidly in the last few crucial seconds as well.

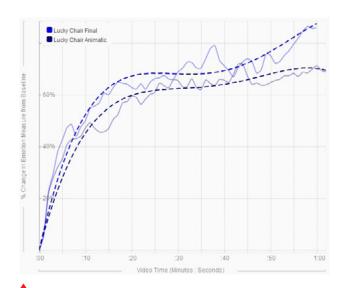
When we compare the two versions directly, despite the weaker beginning, the animatic's build in happiness, still follows a similar pattern of ascent as the final production ad implying that the storyline constituents hang together in the same fashion regardless of the execution in this case.



Bud Light 'Lucky Chair' (Animatic)
Emotion Profile (Click chart to explore)



Bud Light 'Lucky Chair' (Final vs Animatic) Happiness (Click chart to explore)



Bud Light 'Lucky Chair' (Final vs Animatic)
Emotional Lift (Click chart to explore)

#### **COMPARISON 2: AGENCY VS CLIENT**

Pre-testing can be valuable as a diagnostic tool - helping to understand what elements of an ad or campaign might be working or which aren't,. However agencies many have been vocal in denouncing 'conventional' ad research methods, claiming that they cannot record emotional response well, or even actively discriminate against more emotional advertising. Underlying both criticisms is the perceived inability to measure and interpret emotional response.

In this comparison we'll look at how well the effects of client directed revisions can be observed on the emotional response of target audiences. We'll look at two commercials, the first a 60 second ad for Google Maps, then a 30 second ad for Lean Cuisine. After the agencies presented their versions, the clients made revisions to the brand exposure and storyline.

In both cases, the overall emotional responses and lifts are lower in the Client ads, indicating a 'dilution' of impact when the clients' directions are implemented. Clearly, this is not definitive in terms of determining whether those changes would have impacted the effectiveness relative to objectives. Nevertheless, if it is felt that an important component of effectiveness is how well emotion drives engagement, then any weakening of emotional impact is an issue of concern.

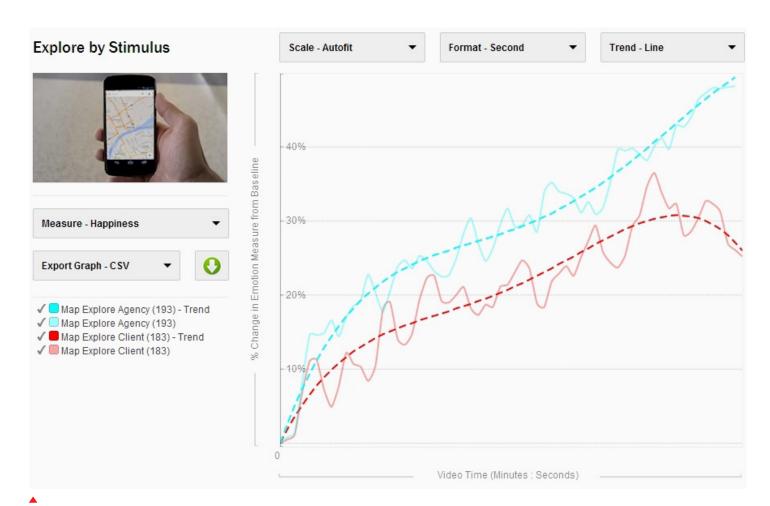
#### **INSIGHT**

#### Agency Cuts Outperform Emotionally

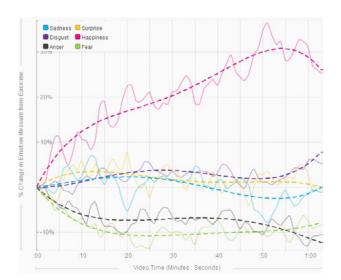
Agencies cuts outperformed Client directed cuts by up to 20% in emotion levels at the end of the commercials. Overall build and engagement where higher throughout the Agency commercials.

#### Heavy Client Focus on Product Lowers Emotion Levels

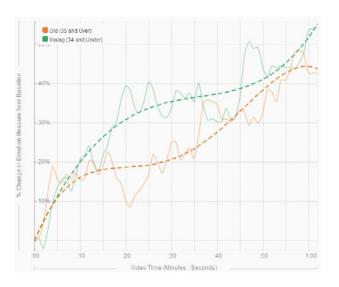
When Client directed cuts focused heavily on the product and removed key emotional building storylines, overall emotions dropped significantly with similar display of visuals.



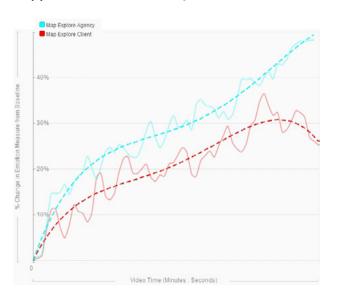
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## Google Maps 'Map Explore' (Client) Emotional Profile (Click chart to explore)



Google Maps 'Map Explore' (Agency Young vs Old)
Happiness (Click chart to explore)



Google Maps 'Map Explore' (Agency vs Client) Happiness (Click chart to explore)

#### **Google Maps 'Map Explore' Commercial**

The agency ad (click to watch) is shot first-person style and starts with a visitor arriving at the Detroit Metro Airport, explaining to his wife he's stuck for the night. As he plots the course of his unexpected layover using the new Google Maps App, Kiss's 'Detroit Rock City' kicks the spot into a fast-paced montage.

The character zips around the city, watches a baseball game, eats a taco dinner, and winds up at the famous dive bar LJs Lounge. He befriends a biker who takes him to buy a leather jacket and watch a rock concert. Before collapsing from exhaustion into his comfy bed, he hits up the Lafayette Coney for one of their famous hot dogs. The spot ends with our character telling his wife that everything is in Detroit.

The open and close of the client version (click to watch) does not feature the character but focuses more heavily on the product. Also, the client version does not have the Taco eating scene.

It is important to recall that the agency version starts with the scene of the man phoning his partner to say he's stuck in Detroit and doesn't know what to do there, then finishes, after a series of events, by speaking again and saying there's 'everything' to do in Detroit, an emotionally building storyline.

We see the Happiness level continues to grow at a good pace throughout the length of the agency version implying interest is maintained. The problem was posed, Google maps introduced and then a series of contrasting and interesting activities to pursue displayed, hence the problem was solved. In particular this level of Happiness was higher and accelerated more rapidly in the 34 and under group.

When the client took over direction, the opening and closing scenes from the agency were removed to feature the product more prominently instead. In addition several scenes of relatively ordinary urban life were inserted - e.g. people get off trains, etc.

This being the case, the Happiness line still grows albeit at a lower pace, and the story does not sustain but slopes off towards the end of the commercial. This drop is almost entirely driven by the younger age group, who seem to tire of the client's version of the story towards the important concluding stages.

When we compare the two, the difference in engagement is clear. Not only does the agency version engage higher levels of Happiness, it propels this emotion at a faster pace and sustains engagement to the conclusion. The client version does not engage so well from the start, does not get the acceleration, and then fails to sustain with a substantially weaker ending. Product focused clients changes comes at a heavy expense to the emotional impact of the commercial.

#### **Lean Cuisine 'Take Out' Commercial**

In the agency version (i.e. Director's Cut) (click to watch), an over-enthusiastic work colleague explains her Lean Cuisine stir-fry lunch doesn't have preservatives. The Lean Cuisine fan goes to pronounced lengths promoting the new 'no-preservatives' recipe, claiming "only dummy dum dums eat preservatives" to her recoiling colleague.

The on-air client version (click to watch) pulls the Lean Cuisine fan's antics back considerably (notably removing "..only dummy dumb dumbs..."), portraying her as a more sympathetic and safer character and puts in more product shots.

The Director's Cut grows for the first two thirds of the ad before plateauing but finishes on a relative high.

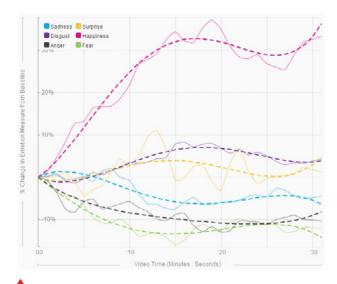
We can see the impact of the co-worker's somewhat 'zealous' promotion of the preservative free nature of Lean Cuisine, with the spike on Surprise at around 13-14 seconds. This happens across both genders but resonates more strongly with men. (A potential concern with both versions is that the response by women although similar in profile, is noticeably less positive than with men.) But there are no major negatives around the co-worker's preservative-free advocacy antics.

When we look at the client version, as with the Google Maps exercise, the emotional response is less pronounced. At the point where the agency ad 'took off', the client version remains flat.

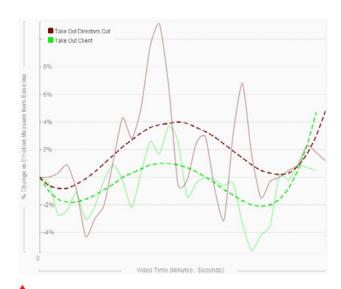
This latter point is emphasized in the comparison of Surprise in both versions. The Director's Cut captures higher levels of initial surprise from a more daring character where its timing within the overall storyline is clearly pronounced.

This demonstrates that even the most well intentioned rational change can hurt the ability of a commercial to engage emotionally customers.

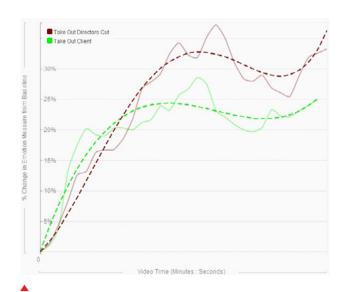
In each of these cases, the client has increased the proportion of direct branding in the video. The results from these comparisons imply that an increased number of client revisions have negatively impacted emotional engagement with the ads. If nViso early stage testing would've have been used it could've highlighted the impact of such changes - warning the client of the potential negative impacts. Combining such early stage testing with traditional testing might be beneficial to evaluate branded recall, overall disposition to trial and propensity for repeat purchase in finding the right trade-off between improved brand perceptions and emotional engagement of the ad.



Lean Cuisine 'Take Out' (Agency)
Emotion Profile (Click chart to explore)



Lean Cuisine 'Take Out' (Agency vs Client) Surprise (Click chart to explore)



Lean Cuisine 'Take Out' (Agency vs Client)
Happiness (Click chart to explore)

#### **COMPARISON 3: CUT1 VS CUT2**

Although there are various methods for measuring ad-effectiveness, most traditional methods are subjective in nature and simply categorize ads as effective or non-effective. The criteria for evaluation are often based on measures that focus on a person's ability to recall or be consciously aware of an underlying sub-conscious processes. In reality, most subtle changes to the style, music, images, and cuts of a commercial work at levels beyond rational articulation.

From an emotional perspective, traditional methods have difficulty to suggest what modifications should be made with certainty because they are unable to accurately capture the effects at sub-conscious processes on a moment by moment basis. Traditional diagnostic recommendations are limited to how consumers playback and recall the rational message content of an ad on a whole – and can not advise on emotional driven changes.

In this comparison two very similar edits are compared of a promo for a TV series by MTV - Jershey Shore Culture. The cuts are very similar although at certain points very subtle changes to music and images occur that are barely recognized after watching the commercials. However the deviations in emotional response are very clear and actionable recommendations can be made on what elements should be keep and are driving emotional response.

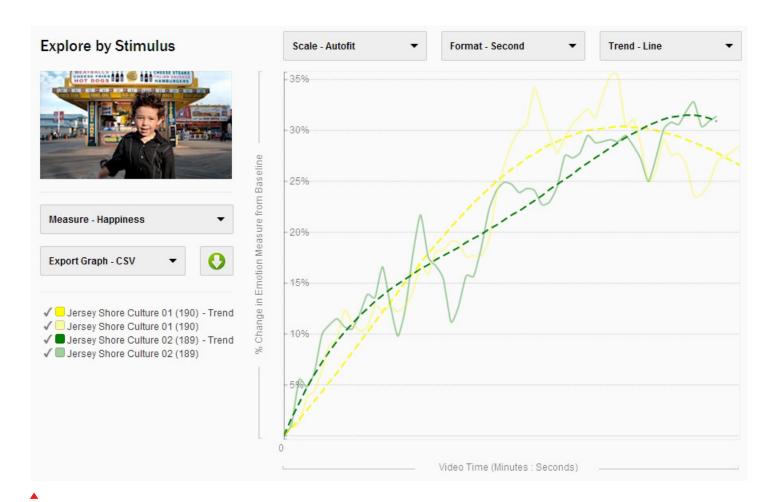
#### **INSIGHT**

#### Pace of Engaging Scene Cuts Drives Emotions Higher

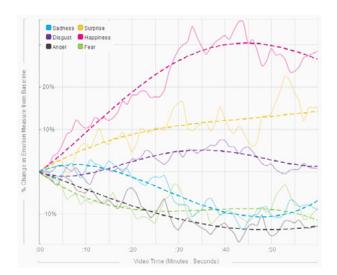
In order keep building engagement, it's important to keep feeding the audience with new scenes, particularly those that are surprising and joyful.

#### Text and Music Choices Drive Emotional Response

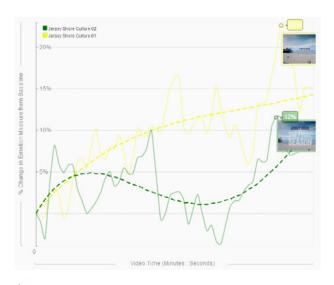
The right selection of subtle changes to music and endtag text statements can drive emotion responses to higher levels.



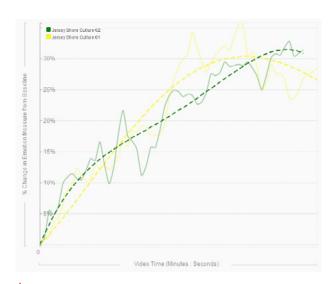
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## MTV 'Jershey Shore Culture' (Cut1) Emotional Profile (Click chart to explore)



MTV 'Jershey Shore Culture' (Cut1 vs Cut2) Surprise (Click chart to explore)



MTV 'Jershey Shore Culture' (Cut1 vs Cut2) Happiness (Click chart to explore)

#### **MTV 'Jershey Shore Culture' Commercial**

In this original promo (Cut1) (click to watch), Jersey Shore natives deliver deadpan catch phrases from the show. The calm demeanor and cinematic style is deliberately the antitheses of the show's reality aesthetic.

The video starts with early morning scenes of the Jersey Shore boardwalk. Viewers respond well with happiness indicators rising quickly in the first 8 seconds. As our characters are revealed, reciting show catchphrases in a deadpan tone, the rate of the happiness rise slows slightly. This is interesting because the happiness indicators usually increase faster when we reveal people.

There's a renewed acceleration in happiness when we see a slow motion roller-coaster. We assume that respondents have a positive emotion associated with it.

As the lift from the roller-coaster begins to wane, an image of a young boy picks up the rate of happiness. This is consistent with previous results demonstrating that children increase emotional lift.

New characters and catchphrases are introduced, however they fail to push positive emotional indicators up. A decline of surprise and a fall in positive indicators suggests that viewers are losing interest. When a young woman announces "I tan because I can", viewers obviously don't care and our indicators fall sharply.

As we reach the end tag, high levels of Surprise are evoked followed by happiness indicators tapering off and we end the spot with emotional indicators flat. The high levels of Surprise around the end tag with flat or declining follow-on positive emotions question the effectiveness of the end tag.

The released version (Cut2) (click to watch) did not include children as it was deemed too controversial, given the mature rating of the show. Also the music, although similar in tone, is different than the directors cut. Although both rational choices, the impact on emotional response is measurable.

Finally a change in the end tag from "It may be ending" to "The final season" in bolder and larger text shows a lower relative change in surprise versus the trend (6% versus 10%) within a follow-on increase in happiness emotion, suggesting the reworked end tag is performing better.

Overall, the released version tracked similarly as the original promo cut but without the positive lifts gained from the children (the peak emotion ended up 6 points lower in Happiness) and with a better end tag proposition creating a more positive reaction at the end of commercial.

#### **Survey Methodology**

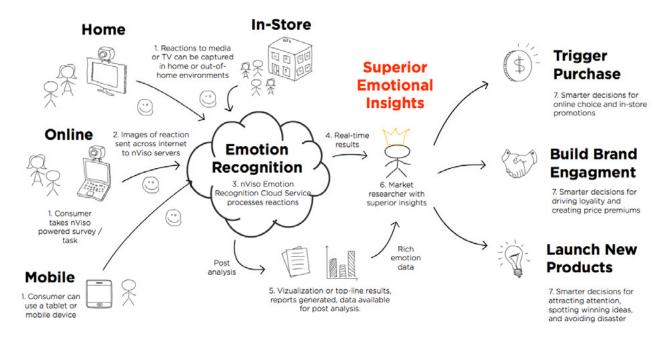
#### **Design Details**

Around 200 respondents aged between 18 and 65 were interviewed in the U.S., based on, a nationally representative sample using an online administered questionnaire. No special equipment (besides an ordinary webcam) was required. Respondents answered a short screening questionnaire to establish eligibility and to check basic demographics. Eligible respondents had their webcam checked via a Flash based software application which also verified that a person was sitting correctly in-front of the camera. Respondents were given some basic instructions (no talking, eating, smoking etc) and they did not have to download any application or 'calibrate' the software in any way. Videos were then downloaded to the respondent PC in a controlled environment (not streamed), then played back in randomized order for a total of 10 minutes viewing. The entire survey took no longer than 15 minutes to complete and online interview costs were minimal.

#### **Exposure to Multiple Videos**

Many conventional ad pre-testing systems test advertisements monadically, with each ad exposed to separate samples. This approach is largely dictated by issues to do with post-exposure recall and confusion when respondents have to try and assess ads after viewing them. Since nViso's 3D Facial Imaging utilises passive recording of response as it happens, these issues can be avoided. Exposing respondents to multiple ads (with random viewing order) has the following benefits:

- Statistically it provides more accurate comparisons between alternatives, since you are comparing results for each individual, rather than between different samples.
- It provides a direct and natural baseline to compare ads (e.g. our ad versus our closest rival) in terms of build in engagement, pattern of response. With this method nViso's Interactive Dashboard of the results will let you instantly compare each of the six ads on a second-by-second basis, broken down by emotion and key demographics.
- Conclusions are easier to draw on main themes across the category how certain types of imagery or messages are working. This takes the study from being merely a test of "which ad is more effective", and allows a client to draw more strategic conclusions for creating better communications in the future.
- It is more natural viewers typically see ads in batches. Ad tests on single ads can exaggerate their impact and effectiveness.
- It is more cost-effective, allowing more information with smaller sample sizes.
- It is more scalable, video many be tested and compared across many channels.



#### **Explanation of Key Metrics**

#### **Pure and Direct Emotion Measurement**

Emotion analysis is provided in terms of key measures. The purpose is to provide a comparable assessment across diverse stimuli that directly captures emotional response. It also provides an initial baseline evaluation of whether the test stimulus is having any problems evoking emotion at all, the level of positive engagement it is triggering and if the story is having its intended impact. This is done before delving into diagnosis of response on specific emotions and measures.

For each respondent, the data collected is an emotional profile described by 7 emotions on a second-by-second basis. These include Happiness, Surprise, Sadness, Fear, Anger, Disgust, and Neutral as defined by Dr Paul Ekman in the Facial Action Coding System (FACS) (http://en.wikipedia.org/wiki/Facial\_Action\_Coding\_System).

FACS was originally developed by Paul Ekman, Wallace V. Friesen, and Richard J Davidson in 1978. It is an anatomically based system, and thus describes facial codings through specific muscle movement. The ability of FACS to taxonomize human facial expressions enables the user to either detect or create facial expressions associated with emotions. Since its original conception, it has gone through many revisions and been extended to include practically the whole head and all facial actions associated with it. Given the universality and long academic validation history of the approach, it is the most commonly used system to detect emotions that is robust across cultures.

Inspired by the FACs system, nViso has translated facial muscle movements into a machine-learning environment and in the process addressed several known limitations of automated and manual FACS based coding techniques. The system developed is designed for real-time human-computer systems to capture, mimic, and reproduce human perceptions of facial expressions. It allows a rich set of emotion metrics to be computed for each time interval (e.g. second, half-second, or frame by frame) for each respondent based on facial muscles movement calculations.

#### **Emotion Profile**

The Emotion Profile provides a precise and granular emotional response measure in both intensity and direction to the stimulus. Consisting of the primary emotions (Happiness, Surprise, Sadness, Disgust, Fear, and Anger), and Neutral they are is provided in two different measures called M01 and M02.

The Emotion Profile is calculated as a percentage change from a baseline. The baseline is the prior emotional state immediately before watching the stimulus or in some cases, a 2-second blue screen prior to the stimulus. Hence the output will be zero for second 0 and consist of both positive and negative values. A negative value indicates that the emotion intensity has decreased relative to the baseline or prior state. The typical range of values lies between -50% and 150%. This measure is used to filter out any differences in the initial state of each respondent and is more robust in aggregate analysis.

For each emotion, an emotional build profile is typically plotted for the duration of the stimulus. This build shows an increase or decrease relative to the baseline useful in diagnostic analysis. From this base data, there are a number of summary metrics that measure the overall emotional impact and the balance of positive & negative.

#### **Emotion Lift™**

Emotion Lift is a measure of overall emotional response to the stimulus, intended to provide a summary measure of the degree to which the stimulus evokes emotion of any type. The core purpose of the measure is to provide a comparable measure across diverse stimuli. It also provides an initial baseline assessment of whether the stimulus is having any problems evoking emotion at all, before delving into diagnosis of response on specific emotions.

It is called "lift" because it measures increase (or decrease, although this is unusual), in emotional response for each respondent compared to their level of emotional response prior to viewing the stimulus. The score is calculated by calculating levels of change in emotional response for each second of the stimulus and using this as the basis for a total score.

Emotion Lift is usually presented as an aggregate score calculated as a score across the total stimulus and based on the sample or sub-sample being analysed.

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#### **Managed Services**

Software

#### **Beacon Award**

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#### **ABOUT NVISO**

nViso is a leading provider of emotion recognition software and analytics that interprets human facial micro-expressions and eye movements captured through video compatible with ordinary webcams. We uncover the why and how of customer behaviour in real-time, letting brands make smarter business decisions.

The company uniquely combines the latest advancements in computer science, engineering and behavioural sciences to make automatic emotion recognition a viable reality using any image based device. Its proprietary analytical techniques are based on theoretical work by Dr. Paul Ekman, which demonstrates that emotions can be precisely recognized by minor changes in micro-expressions in the face. nViso is based at the Swiss Federal Institute of Technology in Lausanne, Switzerland (EPFL).

#### **RELATED INFORMATION**

- ► Frost and Sullivan Time to Build 3D Facial Imaging into you Core Brand Marketing Strategy. (Click to download)
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