

Effect of Ornamentation on the Emotional Response and Perception of Motion Graphics

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ABSTRACT

This study explores the effect of ornamentation on the emotional response and perception of motion graphics. A series of motion graphics were created, eye tracked, and tested for changes in emotional responses and perceptions based on the amount of ornamentation in the design. This study collected both quantitative and qualitative data to gain a better understanding of the viewer's overall emotional responses and perceptions of each video. Eye tracking data was studied to validate focal points and areas of interest. The quantitative data was analyzed by looking for correlations and trends. The qualitative data was analyzed for trends and reoccurring ideas.

This study found that the amount of ornamentation in logo animations has a direct effect on the viewer's emotional responses and perceptions. More ornamentation led to overall positive changes in the emotional responses and perceptions of the brand or message, however there can be a turning point where the ornamentation can cause a negative response from the viewer.

Effect of Ornamentation on the Emotional Response and Perception of Motion Graphics

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Overview

WHAT EFFECT DOES
ORNAMENTATION
HAVE ON THE
EMOTIONAL RESPONSE
& PERCEPTION
OF **MOTION GRAPHICS?**



Abstract

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Context

While watching one of my favorite shows on hulu.com, a "Ford Speed Dating" commercial kept playing over and over again. After seeing this commercial repeatedly, I became justifiably annoyed. Tired of looking at the same things, I began analyzing people and details in the background. It was then that I noticed something strange about the last clip of the commercial: the people in the background eating at the restaurant weren't moving. The last clip in the commercial wasn't a clip at all: it was a still photo. I began to ask myself why anyone would use a photo for that moment instead of video. My best guess was that if the people in the background were moving, the attention would be drawn away from the red car in the foreground or the overlaid text information.

It's very possible that all they had to work with or all the budget allowed for the commercial was a still photo and I was purely just overanalyzing things, but it was clear that video and visual communication have the power to create focal points and direct the viewers attention. As a motion graphic designer, I was curious how these focal points or areas of interest could be designed in motion graphics and how they could be validated.

Problem

The concept of focal points, or areas of interest in motion graphics, raised several questions: What do people look at in motion graphics? Do people notice any of the detail or ornamentation in the foreground and background? If anyone notices these details, does it distract from the intended focal point, or does it add to the overall emotional response and perception of the brand or message?

"Those who use cluttered and complicated graphics simply because they like cluttered and complicated graphics may commit an ethical breach... if their goal to satisfy themselves does not take into account the audience goal of complete understanding. Honest communication requires that decoratives, indicatives and informatives be controlled to promote comprehension, representing the information content and directing the audience toward that content rather than away from it." (Storkerson, 2010) "Modernism proves that we can be effective without decoration; but it also shows we can go too far—the often resulting minimalism is sometimes only appreciated by a few 'visually educated' people... Too much decoration may be aesthetic noise, but decoration can also be the 'redundancy' that visual communication needs." (Baldwin & Roberts, 2006) "How much more effective and persuasive would graphic designers be if they made a habit of testing and measuring to optimize their designs and back-up their claims?" (Storkerson, 2010)

Eye tracking technology provides an opportunity to validate focal points. Eye tracking data provides great quantitative

data for analysis, but does not provide any qualitative data to help understand the viewer's emotional response and perception of motion graphics. To truly assess the overall impact on the experiential response to interaction, qualitative measures must be incorporated into usability testing. (Abel, 2008) Coupling quantitative data with qualitative data provides a better perspective on the overall response to motion graphics.

Purpose

The purpose of this study is to gain a better understanding of the effects of ornamentation on focal points, emotional responses, and perceptions of motion graphics. Does the amount of ornamentation lead to a stronger overall reaction to the design or does it become visual noise and clutter leading to a negative response? "We respond to images that grab our attention and are quite adept at filtering out unwanted information that may be boring or unnecessary." (Gallagher & Paldy, 2007, p. 12) Therefore, is the extra detail in a motion graphic worth the time, money, or effort it takes to produce it? "The vast expenditure that production studios spend on advertising has resulted in elaborately produced commercials, many of which can be considered miniature movies." (Krasner, 2008, p. 66) This study will provide results to validate the inclusion of ornamentation, justifying the time, money, and effort spent on details, or validate saving time, money, and effort by omitting the use of ornamentation in designs.

Research Questions

This study will focus on two basic questions:

- 1) What are motion graphics?
 - a. What are the elements of motion graphics?
 - b. What are the principles of motion graphics?
 - c. What are the formats of motion graphics?
- 2) What is effect of ornamentation on the emotional response and perception of motion graphics?

Hypothesis

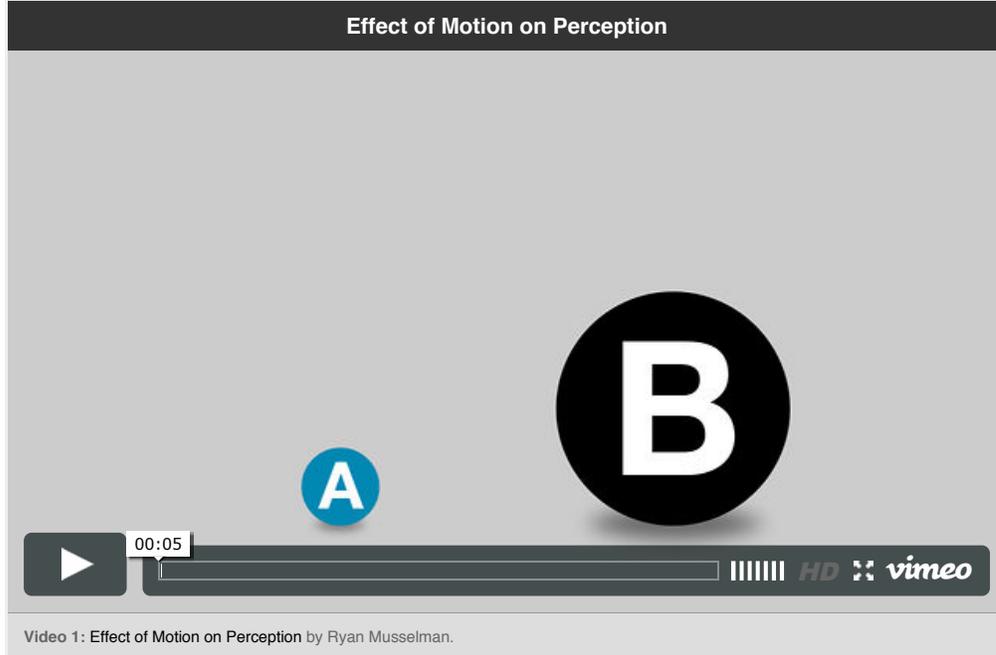
The anticipated findings of this study are that the level of ornamentation does have an effect on the emotional response and perception of motion graphics. As the level of ornamentation increases, the emotional response and perception to the video will have a positive result. However, I predict there is a threshold where the added ornamentation no longer receives a positive response from the viewer and instead leads to a feeling of agitation, confusion, or annoyance.

Literature Review

Motion

Motion is what sets motion graphics apart from other forms of design. Motion is what makes motion graphics, motion graphics. Any combination of the elements of motion graphics cannot be considered motion graphics without movement. Typography without motion cannot be considered motion graphics. "This is what sets motion graphic design apart from other forms of design. In its simplest form, it refers to the movement of objects within your design. The three main elements used to create motion are speed, direction, and the motion path that the object travels along." (Taylor, 2011)

The language of motion is universal and can have a greater impact than the actual content being animated. It is a powerful storytelling device that can be used to communicate knowledge, information, emotions, and beauty. (Krasner, 2008) "To catch the eye of a friend in a crowded airport one could wear a red hat, but it is more effective simply to wave a hand and trigger off his peripheral motion detectors. Motion not only gets attention but holds attention." (Anstis & Mackay, 1980) "Communicating via motion involves issues of both 'what' is moving across the screen—typographical, pictorial, or abstract elements—and 'how' that something is moving." (Kubasiewicz, 2005) How something moves across a screen can greatly alter the perception of the actual object itself (see Video 1 below).



Video 1: Effect of Motion on Perception by Ryan Musselman.

When static, the large circle on the right (B) might appear to be the heavier of the two objects, but once motion is added the smaller circle (A) now appears to be heavier. The movement or motion of the objects alters the viewer's perception of the objects shown. The video "Movement" created by student Elena Fergnani in the Basics of Motion Design class taught by Professor Henning Rogge at the University of the Arts in Bremen illustrates the same idea (see Video 2 below).



Video 2: Movement by Elena Ferhnani. Watch the entire project [The Basics of Motion Design](#).

Elements of Motion Graphics

Shape/Form, Typography, Image, & Live Action

The elements of motion graphics include shape/form, typography, image, and live-action. Motion graphics take many forms, but to be considered a motion graphic these elements must incorporate movement or be in motion. This list of elements was formed through the comparison of motion graphic elements, principles, or considerations described by Jon Krasner's book *Motion Graphics: Applied History and Aesthetics*, Angie Taylor's book *Design Essentials for the Motion Media Artist*, and Rebecca Gallagher's book, *Exploring Motion Graphics*. These elements can be applied to a variety of time-based media, but this study will use them specifically in reference to motion graphics.

"Motion graphic design is the most amazing art form because it gives you access to all of the others. You can combine imagery, animation, film, video, words (spoken, written, or sung), and music to communicate your story." (Taylor 295)

Shape / Form

"In addition to line, form is the most basic element of visual communication." (Krasner, 2008) "All objects can be broken down into basic geometric shapes or combinations of geometric shapes." (Taylor, 2011) The element of shape/form includes various primitive geometry, abstract shapes, logos, character animations, as well as other various 2D and 3D elements. "It goes without saying that there are the standard geometric shapes that we're all familiar with, such as circles, squares, rectangles, and triangles, as well as nonstandard, freeform shapes. The shapes of individual objects should obviously be considered when putting together your designs—not just the individual shape of a single object but also the shapes created by the groups of objects or even shapes that form parts of bigger objects." (Taylor, 2011) Animator and motion artist, Cento Lodigiani, uses the element of shape/form in this abstract motion piece (see Video 3 below).



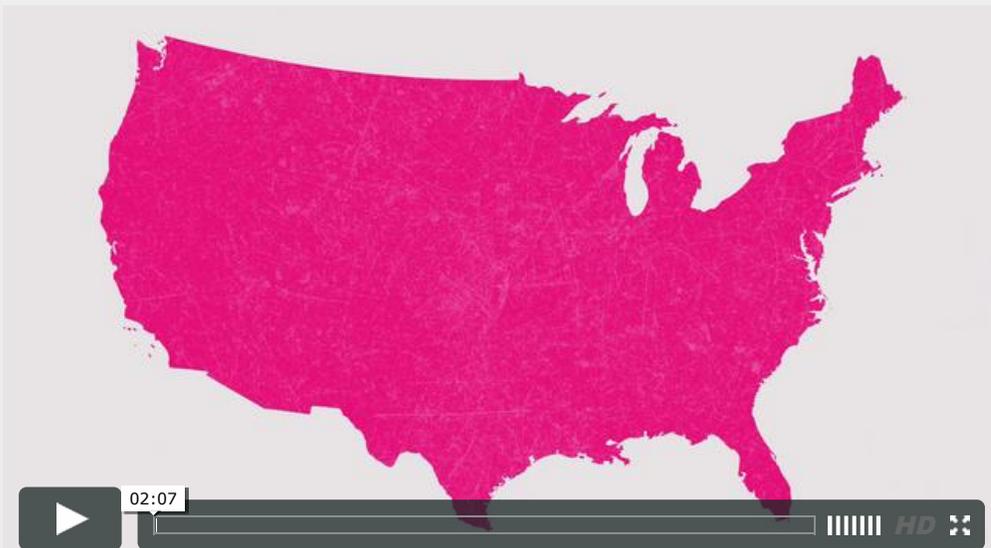
Video 3: A FEW MOMENTS OF MESS by Cento Lodigiani.

Shape can imply special depth, provide emphasis, symbolize or suggest ideas, and help organize information by establishing hierarchy and directing the viewer's eye throughout the frame. (Krasner, 2008) The video *CellOut*, created by freelance motion designer and animator Nico Belacha uses abstract shapes and forms to lead the eye throughout the composition and resolves on his logo for his portfolio site (see video 4).



Video 4: CellOut by Belacha.

“Culturally derived shapes such as the octagon which means “stop,” or a starburst which can identify something new or powerful, have been used to represent literal objects or ideas. Ubiquitous images, such as a vertical rectangle with a folded corner or a hollow circle with a diagonal line running through it, have become universally recognized.” (Krasner, 2008, p. 168) The motion information graphic by Buck created for the documentary, *Waiting for Superman* makes great use of the element of shape/form to effectively communicate their ideas. Many complex ideas and sentences are simplified into one symbolic image (see video 5).



Video 5: Participant Media – Pledge to See this Film by Buck.

Typography

“Type is one of the principle means of constructing messages in graphic design.” (Krasner, 2008) “Working with type is an essential part of being a motion graphic designer.” (Taylor, 2011) “Typography is a regularly used component in motion graphics.” (Gallagher & Paldy, 2007) However, typography alone, without the primary element of motion is not considered motion graphics. “Today, text is no longer limited to static, spatial forms of communication; it is also governed by time and motion. These added dimensions further enhance its communicative power.” (Krasner, 2008) “A

typographic vocabulary, through the use of time-based composition, sound and animation can broaden the emotional stimulus in users beyond static delivery systems.” (Stone, Alequer, & Borisch)

“Type in your designs should be considered as important as any other visual content and should compliment every other ingredient. The presentation of the type elements should be in keeping with the visual language you create and, in most cases, should work with the messages contained in the words and images.” (Taylor, 2011,) “Because typography is the main focus of the motion graphic that holds viewer’s attention, the details of each letter must be considered.” (Gallagher & Paldy, 2007) The expressive treatments of letterforms can enrich visual messages (Krasner, 2008) as shown in this example by Climent Canal and Sebastián Baptista (see video 6).



Video 6: MAKE IT BETTER by Climent Canal & Sebastián Baptista.

“The role of expressive kinetic typography is to represent a concept in a visual format. Rather than being literal, it can convey an intended emotion through its unique graphic impact and its movement in space. In many cases, it no longer reads as text but is perceived as physical shapes that create complex semiotic experiences through metaphor and motion.” (Krasner 187) Flickermood by Sebastian Lange is a great illustration of Krasner’s thoughts on how moving type can be perceived as shapes (see video 7).



Video 7: Flickermood by Sebastian Lange.

Typography is a very important and common element used in motion graphic design, but a designer has to spend time choosing the proper type treatment for each design situation. Choosing typefaces that appropriately express the message and match the style and tone of the other elements is important to communicate effectively and set the stage or emotional tone. (Krasner, 2008) "...kinetic typography, within an appropriate context, has the possibility to evoke emotion, while enhancing visual form, meaning and communication." (Stone, Alequer, & Borisch)

With the added element of motion in motion graphics, the information can and should be presented to the audience in a different way than it is presented in static design. "The movement of graphics can attract and direct the eye to read the information in the order that the message requires. By controlling how and when the words appear on the screen, the designer dictates the manner in which the message is read. When reading a static poster that has three lines of information, viewers can scan the poster in any order they choose. If the same three lines of information are presented in a motion graphic, and each line flows onto the screen in a specific order, the viewer will be forced to read the information in that order." (Gallagher & Paldy, 2007)

"Just as in static design, the text content needs to be legible, well laid out, and keeping with the content. But the job of the motion graphic designer must also include the added dimensions involved with motion." (Taylor, 2011) In motion graphics motion has to be taken into account when ensuring the type is readable. (Gallagher & Paldy, 2007) "If added motion is going to hinder the proper communication, you may need to leave the words on the screen for an extended period of time to compensate." (Gallagher & Paldy, 2007) In a motion graphics project I created, I chose not to use voice over to explain the message. Because there is nothing reinforcing the message, I needed to make sure the text stayed on the screen long enough for the viewer to read it (see video 8).



Image & Live Action

Live-action content has had a stronger presence in motion graphics due in part to the growing cinematic vocabulary of designers and to technical advancements in digital compositing. Regardless of the space live-action occupies in the frame, it must work aesthetically with other graphic elements and its qualities must contribute to the concept, message, or mood being communicated. Images can take on many visual characteristics ranging from graphic to textural, sketchy, whimsical, realistic, abstract, or layered. (Krasner, 2008) Images can be used in motion graphics as main content, background, or to add texture to other elements in the design. One example of how motion graphics can be integrated with live-action footage is through compositing. Many popular films like Marvel's Iron Man and Disney's Tron: Legacy use compositing to integrate motion graphic elements with live-action footage. A video by Michael Jones shows the integration of typography and shape/form with live-action footage. Jones does a great job of making some

of the elements appear as if they are actually a part of the footage. He includes various other 2D shapes overlaid on top of the video as well (see video 9).



Video 9: Gauntlet Bumper_Morning by Michael Jones.

“Factors that should be considered when working with live-action content include the form or context of the project, filmic properties, and cinematic properties such as tone, contrast, lighting, depth-of-field, focus, camera angle, shot size, and mobile framing.” (Krasner 177)

The illusion of live action footage can be created with the use of still images demonstrated in a video by Nick Campbell for a tutorial on his blog, Greyscalegorilla.com. His tutorial focuses on simulating live-action footage using still images of cars (see video 10).



Video 10: Car Race Animation by Nick Campbell.

I attempted creating the illusion of video in my own work through the spatial transformation of static images (see video 11).



Video 11: Munke Ice Cream by Ryan Musselman.

Although using still images to create an illusion of live-action footage is a great effect, using images in motion graphics with no intent of simulating video can result in a very interesting aesthetic style of its own (see video 12).



Video 12: Dirty Deeds - Stupid People by Flying V.

Principles of Motion Graphics

Principles of animation, principles of design and composition, color theory, communication theory, and sound.

Motion graphics borrows its principles from diverse forms of art and design. Each of these art forms has their own set of principles and guidelines for creating successful work. Since motion graphics are rooted in design color theory, communication theory, and principles of design and composition are essential to creating successful designs. Motion graphics design in four dimensions: X, Y, Z, and time. The dimension of time leads to the use of the principles of animation.

Principles of Animation

Below are the fundamental principles of traditional animation as described in *The Illusion of Life: Disney Animation* and John Lasseter's article, *Principles of Traditional Animation Applied to 3D Computer Animation*. The principles of animation are squash and stretch; timing; anticipation; staging; follow through and over lapping action; straight ahead action and pose-to-pose action; slow in and out; arcs; exaggeration; secondary action; and appeal.

Squash and stretch:

Defining the rigidity and mass of an object by distorting its shape during an action. (Thomas & Johnston, 1981; Lasseter, 1987)

"The most important rule to squash and stretch is that, no matter how squashed or stretched out a particular object gets, its volume remains constant." (Thomas & Johnston, 1981; Lasseter, 1987)

Timing:

Spacing actions to define the weight and size of objects and the personality of characters. (Thomas & Johnston, 1981; Lasseter, 1987)

"Timing, or the speed of an action is an important principle because it gives meaning to movement—the speed of an action defines how well the idea behind the action will read to an audience. It reflects the weight and size of an object, and can even carry emotional meaning." (Lasseter, 1987)

"Proper timing is critical to making ideas readable. It is important to spend enough time (but no more) preparing the audience for: the anticipation of an action; the action itself; and the reaction to the action. If too much time is spent on any of these, the audience's attention will wander. If too little time is spent, the movement may be finished before the audience notices it, thus wasting the idea." (Whitaker and Halas, 1981; Lasseter 1987)

Anticipation:

The preparation for an action. (Thomas & Johnston, 1981; Lasseter, 1987)

"An action occurs in three parts: the preparation for the action, the action proper, and the termination of the action." (Lasseter, 1987)

"Since muscles in the body function through contraction, each must first be extended before it can contract. A foot must be pulled back before it can be swung forward to kick a ball. Without anticipation many actions are abrupt, stiff and unnatural." (Lasseter, 1987)

"Anticipation is also a device to catch the audience's eye, to prepare them for the next movement and lead them to expect it before it actually occurs. Anticipation is often used to explain what the following action is going to be." (Lasseter, 1987)

Staging:

Presenting an idea so that it is unmistakably clear. (Thomas & Johnston, 1981; Lasseter, 1987)

"Staging is the presentation of an idea so it is completely and unmistakably clear; this principle translates directly from 2-D hand drawn animation. An action is staged so that it is understood; a personality is staged so that it is recognizable; an expression so that it can be seen; a mood so that it will affect the audience." (Lasseter, 1987)

"It is important, when staging an action, that only one idea be seen by the audience at a time. If a lot of action is happening at once, the eye does not know where to look and the main idea of the action will be "upstaged" and overlooked. The object of interest should contrast from the rest of the scene. In a still scene, the eye will be attracted to movement. In a very busy scene, the eye will be attracted to something that is still." (Thomas & Johnston, 1981; Lasseter, 1987)

Follow Through and Overlapping Action:

The termination of an action and establishing its relationship to the next action. (Thomas & Johnston, 1981; Lasseter, 1987)

“Just as the anticipation is the preparation of an action, follow through is the termination of an action. Actions very rarely come to a sudden and complete stop, but are generally carried past their termination point.” (Lasseter, 1987)

“Often, slight variations added to the timing and speed of the loose parts of objects. This overlapping action makes the object seem natural, the action more interesting.” (Lasseter, 1987)

Straight Ahead Action and Pose-To-Pose Action:

The two contrasting approaches to the creation of movement. (Thomas & Johnston, 1981; Lasseter, 1987)

“There are two main approaches to hand drawn animation. The first is known as straight ahead action because the animator literally works straight ahead from his first drawing in the scene. The second approach is called pose-to-pose. Here the animator plans his actions. Pose-to-pose is used for animation that requires good acting, where the poses and timing are all important.” (Lasseter, 1987)

Slow In and Out:

The spacing of the inbetween frames to achieve subtlety of timing and movement. (Thomas & Johnston, 1981; Lasseter, 1987)

“In early animation, the action was limited to mainly fast and slow moves, the spacing from one drawing to the next fairly even. But when the poses of pose-to-pose animation became more expressive, animators wanted the audience to see them. They found that grouping the inbetweens closer to each extreme, with only one fleeting drawing halfway inbetween, they could achieve a very spirited result, with the character zipping from one attitude to another. 'Slowing out' of one pose, then 'slowing in' to the next pose simply refers to the timing of the inbetweens.” (Lasseter, 1987)

Arcs:

The visual path of action for natural movement. (Thomas & Johnston, 1981; Lasseter, 1987)

“The visual path of action from one extreme to another is always described by an arc. Arcs in nature are the most economical routes by which a form can move from one position to another. In animation, such arcs are used extensively, for they make animation much smoother and less stiff than a straight line for the path of action. In certain cases, an arc may resolve itself into a straight path, as for a falling object, but usually, even in a straight line action, the objects rotate.” (Lasseter, 1987)

Exaggeration:

Accentuating the essence of an idea via the design and the action. (Thomas & Johnston, 1981; Lasseter, 1987)

“The meaning of exaggeration is, in general, obvious. However, the principle of exaggeration, in animation does not mean arbitrarily distorting shapes or objects or making an action more violent or unrealistic. The animator must go to the heart of anything or any idea and develop its essence, understanding the reason for it, so that the audience will also understand it. If a character is sad, make him sadder; if he is bright, make him shine; worried, make him fret; wild, make him frantic.” (Lasseter, 1987)

Secondary Action:

The action of an object resulting from another action. (Thomas & Johnston, 1981; Lasseter, 1987)

Appeal:

Creating a design or an action that the audience enjoys watching. (Thomas & Johnston, 1981; Lasseter, 1987)

“The word appeal is often misrepresented to suggest cuddly bunnies and soft kittens. It doesn't; it means anything that a person likes to see: a quality of charm, pleasing design, simplicity, communication, or magnetism. Your eye is drawn to the figure or object that has appeal, and, once there, it is held while you appreciate the object. A weak drawing or design lacks appeal. A design that is complicated or hard to read lacks appeal. Clumsy shapes and awkward moves

all have low appeal. Where the live action actor has charisma, the animated character has appeal.” (Thomas & Johnston, 1981; Lasseter, 1987)

Principles of Design & Composition

Balance, emphasis, movement, pattern, repetition, proportion, rhythm, variety, unity, harmony, figure & ground, direction, contrast, hierarchy, grids, economy, movement, and symmetry.

Motion graphics borrow principles of design and composition to create effective and successful designs. “In design, unity is an underlying principle that refers to the coherence of the whole—the sense that all of the parts are working together to achieve an overall harmony. It creates a cohesiveness within a composition and is one of the primary ways designers create stability.” (Krasner, 2008)

Motion graphics use the principles of design and composition over time. “In motion graphic design, you work within a frame, but the viewers’ comprehension of the space inside the frame can be altered over time. One minute they may feel that the space inside the frame is a small area, containing flat, graphic elements, and the next they can feel as though they’re in a spaceship hurtling through the stars.” (Taylor, 2011) “A story has a beginning, a middle, and an end. But in visual space all elements are often present at the same time, and the order of reading may or may not be defined by conventional linear arrangements of top to bottom or left to right. Variables other than position (typographic weight, color, size, complexity, and so on) may be necessary to create contrast or similarity among elements in order to signify the importance of certain information components over others.” (Davis, 2012)

These principles of design and composition need to be combined with principles of animation to effectively communicate the message in each frame and over time through movement.

Color Theory

“Colors used in any design need to support the emotional tone of the message. We recognize color before we read the text or see the images in a design.” (Gallagher, 2007) “Color is used in motion graphics to bring focus, group elements, emphasize information, and add visual interest. How color is implemented will also aid in developing a visual hierarchy, creating a map for how the viewer should read the design. Color used as emphasis shows what the most important element of the design is, thereby helping to communicate to the viewer what the most important part of the message is.” (Gallagher, 2007)

Below is a list of colors and their meanings as described by Angie Taylor in her book, *Design Essentials for the Motion Media Artist*.

Red

“Red is a stimulating color that can dominate a design if not used with caution, but because of this, it’s also great for attracting attention. Red can represent heat, fire, love, passion, blood, anger, and revolution.”

“Use red to highlight important elements in your designs and to draw the viewer’s eye.”

Pink

“Pink is the color we all associate with girls, toys, dolls, and makeup. It is essentially feminine and is often avoided like the plague by big rugged men.”

Orange

“Orange is often used to signify warmth, suggest the coziness of gathering around a roaring fire. It can also be seen as energetic, cheerful, and brash.”

“Orange is the best color to use if you want your designs to come to life and appear energetic and healthy.” (Taylor 232)

Yellow

“Yellow is highly visible and bright, particularly when set against black.”

“Yellow can represent sunshine, brightness, happiness, and optimism, but it can also represent cowardice, betrayal, or illness.”

“The good thing about yellow is that it tends to mix well with most other colors, so it can be introduced into a design to brighten up an otherwise dull image.”

Green

“Green represents nature, growth, renewal, or fertility, but it can also evoke feelings of nausea and envy, and it has been used to represent evil, witchcraft, and decay.”

“Green is another universally accepted color; most people are happy to look at greens for a long period of time...”

Blue

“Blue can signify cold, winter, clarity, liquid, or ice. It suggests cold temperatures and can also be used to demonstrate emotional coldness and detachment. It is usually considered a peaceful and calming color. It is also a metaphor for sadness, hence ‘singing the blues.’”

“Use blue in your designs when you want them to be fairly conventional and widely accepted. Blue is what I consider to be a safe color to use in many situations, but you may want to combine it with a warmer color to give the design some character.”

Purple

“Purple is a regal color, representing aristocracy, luxury, rank, bravery, wealth, and excess. It can also suggest pomposity and conceit. It’s considered to be quite campy and slightly eccentric.”

“Use purple when you want your designs to be a little daring and exciting; it works well combined with reds and blues because it is made up of a mixture of those two colors.”

White

“In the Western world, white represents purity, innocence, virtue, truth, empowerment, and sacredness.”

“[White] is the color of mourning in much of Asia.”

“As a background in design, it creates open space for other colors and designs to sit in. It also suggests simplicity and provides a great background when you want to suggest limitless space.”

Black

“Black is formal, powerful, elegant, mysterious, and sophisticated, but it also stands for darkness, space, night, emptiness, depression, death, and morning.”

“As a neutral, and as a background in design, blacks make other colors stand out and look brighter.”

Grey

“Grey can represent industry; it is neutral and modest but it can also be interpreted as boring. Gray can suggest old age and conservatism. But gray can be used in combination with color to create a very classy effect. It can be used to good effect to neutralize or give a solid base to brighter, more vibrant colors.”

Principles of Communication

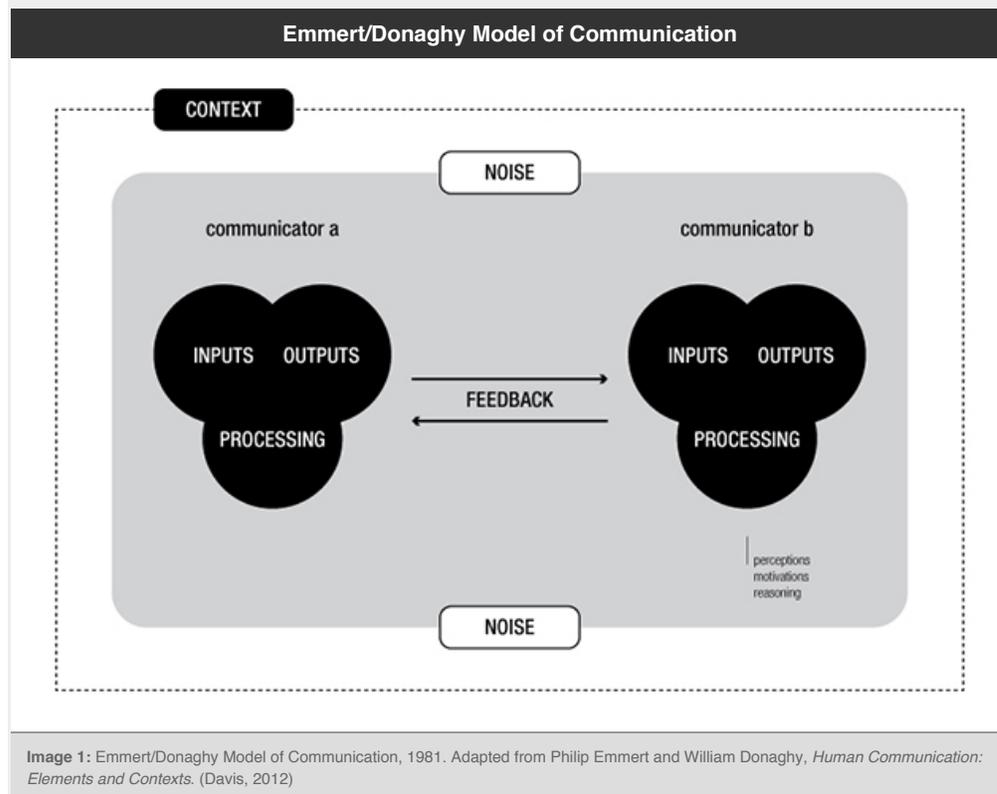
“Communication has two basic components: a sender and a receiver. The sender is the one with the initial message.

The intent of the sender is to get it to the receiver, who will hear or see the message and successfully interpret the content... This sender-to-receiver scenario is a basic communication model." "To be a successful motion graphics designer, you must study the communication model to anticipate potential problems with interference that could prevent the message from reaching the viewer." (Gallagher, 2007)

Noise is an important part of the communication model. "Too much decoration may be aesthetic noise, but decoration can also be the 'redundancy' that visual communication needs. This is arguably what the 'form follows function' maxim says—if the purpose is to communicate then the aesthetic language should support that, not detract from it." (Baldwin, 2006)

"If the designer chooses to ignore critical aspects of the communication context, the design may fail, even through its form may be responsive to other less important demands of the problem." (Davis, 2012)

Below is a visualization of the Emmert/Donaghy Model of Communication.



Sound

Sound is a very important tool in motion graphics. (Gallagher & Paldy, 2007) Sound is very important in motion graphics, but does not need to be present in order to be considered motion graphics. However, "In order to make your animations truly convincing, you'll need to add sound effects to them." (Taylor, 2011)

"We respond emotionally to what we hear and impart that emotion onto what we see. The sound a designer chooses to use in the motion graphic must support the emotion of the message." (Gallagher & Paldy, 2007) The mood and style of the sound added to motion graphics can greatly affect the overall mood and feel of the piece. For example, the sound and music in Carlo Vega's gives it a classic, elegant, and calming feel (see video 13). Although Steffen Knoesgaard uses similar visual language and shapes in his design, the sound coupled with it makes the video feel more frantic and lively (see video 14).



Video 15: RESONANCE by Resonance.

Motion Graphic Formats

Motion graphics can appear in a variety of formats and in a variety of digital media including film and video, television, web and interactive media, and environmental graphics. Below are a list of motion graphic formats as described by Jon Krasner in his Book, *Motion Graphics: Applied History and Aesthetics*.

Film & Video

Movie Trailers / Film Titles / Film End Credits / Film Integration

Television

Bumpers / Lower Thirds / Mortises / Lineups & Upfronts / Tags / Network Branding / Commercials & Advertising / Music Videos / Public Service Announcements / Promotional Campaigns / Station IDs / Show Openers / Show Packages / Interstitials

Web & Interactive Media

Banners / Advertisements / Informational Kiosks / Multimedia / DVD-Menus / Video Games / Video Over the Web / Animated GIF / Flash / dHTML / Java / Animated Transitions / Splash Page Animations

Environmental Graphics

Retail Environments / Animated Exteriors / Digital Signage / Performance / Altered Spaces / Immersive Environments / Interior Design / Exhibit Design / Art Installations / Educational Installations

Emotions

Parrott's Emotion Groups (see Table 1) and Plutchik's Wheel of Emotions (see Image 2) were used to develop the questionnaire for collecting emotional responses and perceptions of each motion graphic logo animation.

Parrott's Emotion Groups		
Primary Emotion	Secondary Emotion	Tertiary Emotion
	Affection	Adoration / Fondness / Liking / Attractiveness / Caring / Tenderness / Compassion / Sentimentality

Love	Lust / Sexual desire	Desire / Passion / Infatuation
	Longing	Longing
Joy	Cheerfulness	Amusement / Bliss / Gaiety / Jolliness / Joviality / Joy / Delight / Enjoyment / Gladness / Happiness / Jubilation / Elation / Satisfaction / Ecstasy / Euphoria
	Zest	Enthusiasm / Zeal / Excitement / Thrill / Exhilaration
	Contentment	Pleasure
	Pride	Triumph
	Optimism	Eagerness / Hope
	Enthrallment	Enthrallment / Rapture
	Relief	Relief
Surprise	Surprise	Amazement / Astonishment
Anger	Irritability	Aggravation / Agitation / Annoyance / Grouchy / Grumpy / Crosspatch
	Exasperation	Frustration
	Rage	Anger / Outrage / Fury / Wrath / Hostility / Ferocity / Bitter / Hatred / Scorn / Spite / Vengefulness / Dislike / Resentment
	Disgust	Revulsion / Contempt / Loathing
	Envy	Jealousy
	Torment	Torment
Sadness	Suffering	Agony / Anguish / Hurt
	Sadness	Depression / Despair / Gloom / Glumness / Unhappy / Grief / Sorrow / Woe / Misery / Melancholy
	Disappointment	Dismay / Displeasure
	Shame	Guilt / Regret / Remorse
	Neglect	Alienation / Defeatism / Dejection / Embarrassment / Homesickness / Humiliation / Insecurity / Insult / Isolation / Loneliness / Rejection
	Sympathy	Pity / Sympathy
Fear	Horror	Alarm / Shock / Fear / Fright / Horror / Terror / Panic / Hysteria / Mortification
	Nervousness	Anxiety / Suspense / Uneasiness / Apprehension (fear) / Worry / Distress / Dread

Table 1: Chart of Parrott's emotional groups. (Parrott, 2001)

Plutchik's Wheel of Emotions

To answer the question, "What effect does ornamentation have on the emotional response and perception of motion graphics?" three different logo animations were created, eye tracked, and tested. Each logo animation had three variations. Version A of each set was extremely simple, version B added ornamentation, and version C added even more ornamentation. (See videos 16, 17, & 18 below)

In this study, ornamentation was defined as any additional elements that were added to the design that were not essential to the brand or intended message.

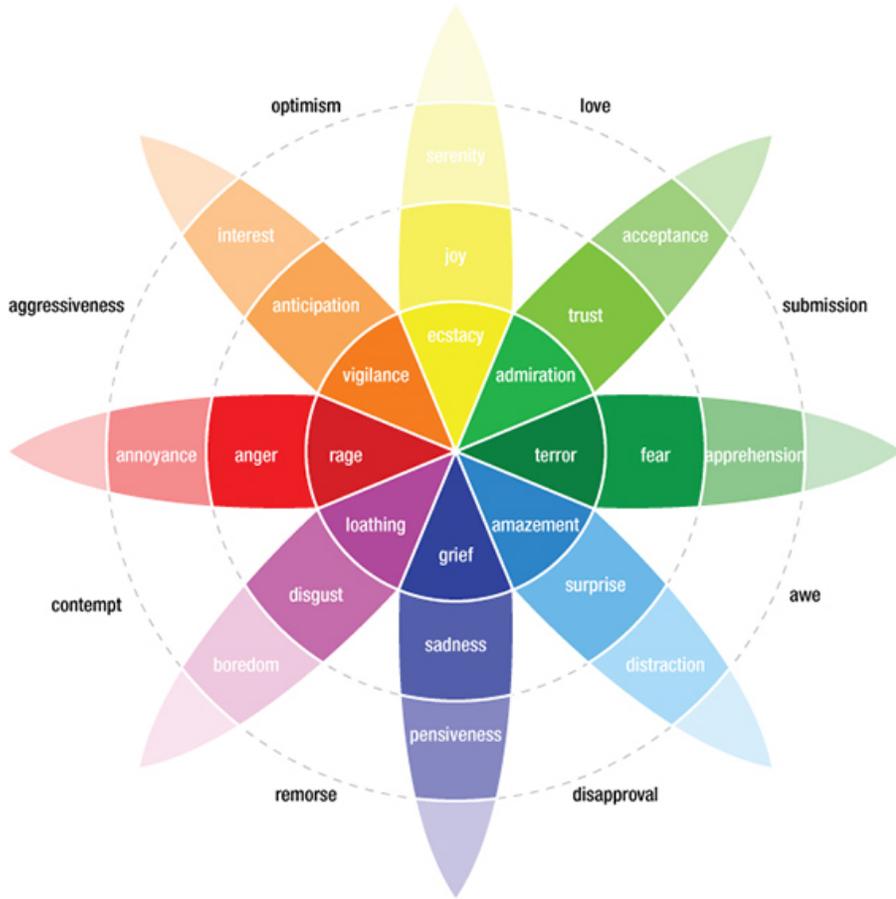


Image 2: Plutchik's wheel of emotions. (Plutchick, 1980)

Methodology

Motion Graphic Development

Creative Technologies Logo Animation ABC Comparison



Video 16: Comparison of versions A, B, & C of the Creative Technologies Logo Animation.

ETUT Logo Animation ABC Comparison



Video 17: Comparison of versions A, B, & C of the ETUT Logo Animation.



Video 18: Comparison of versions A, B, & C of the Voodoos Logo Animation.

Creative Technologies Logo Animation Development

Each version of the Creative Technologies logo animation had three components: white background spheres, colored focal points to create the symbol of the logo, and the Creative Technologies logo signature. Each version was the same length; had the same lighting, texturing, and camera move; and used very similar audio tracks. The animations were created mostly in Cinema 4D with minor edits or additions in Adobe After Effects.

Version A (see Video 19) of the Creative Technologies logo animation was designed to be the simplest motion graphic of the series. The colored sphere focal points were the same animation and the animations contained only two layers. The background spheres were not animated. The signature of the logo was animated on with a simple mask in Adobe After Effects.



Video 19: Version A of the Creative Technologies Logo Animation.

Version B (see Video 20) of the Creative Technologies logo animation added ornamentation in the form of 3D shape/form elements in the focal points and background. The colored sphere focal points were the same animation

that contained five layers. The background spheres were animated using the exact same animation as the focal points. The signature of the logo was animated on with a text preset in Adobe After Effects.



Video 20: Version B of the Creative Technologies Logo Animation..

Version C (see Video 21) of the Creative Technologies logo animation added even more ornamentation than version B in the form of 3D shape/form elements in the focal points and background. Version C was designed to be the most ornate and complex animation of the three Creative Technologies logo animations. Unique animations were created for both colored sphere focal points with 6+ layers each. Unique animations were also created for the white spheres in the background. The signature of the logo was animated in Cinema 4D and composited in Adobe After Effects.

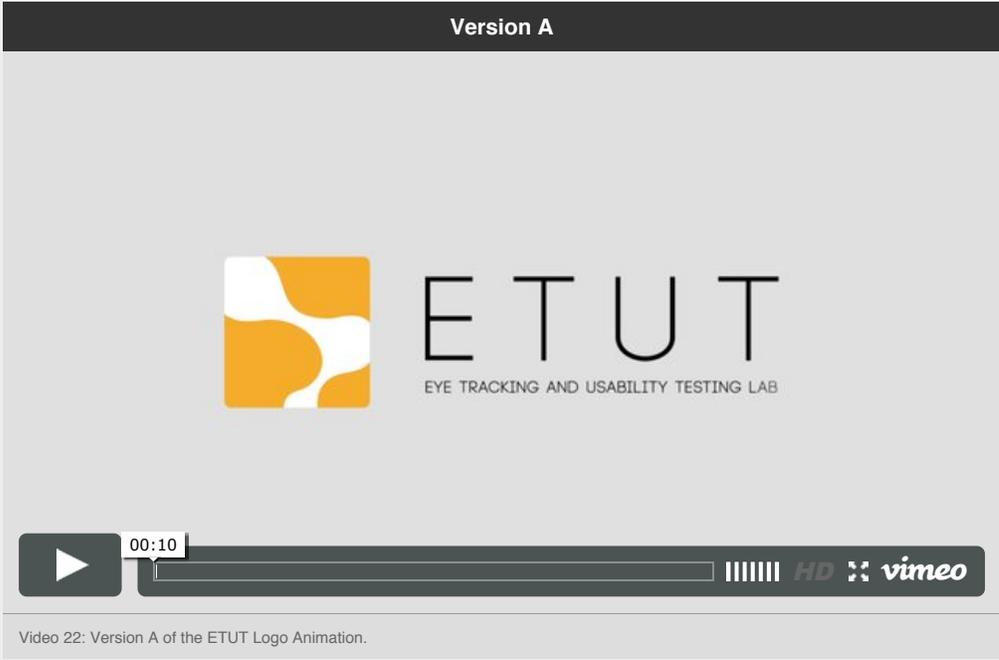


Video 21: Version B of the Creative Technologies Logo Animation.

ETUT Logo Animation Development

Each version of the ETUT logo animation had three components: the ETUT logo symbol, the ETUT logo signature, and the background or environment. Each version of the video was the same length; had the same timing and movement; and the same audio track. Ornamentation added to versions B and C was limited to the environment component of the animation. The entire animation was created in Adobe After Effects.

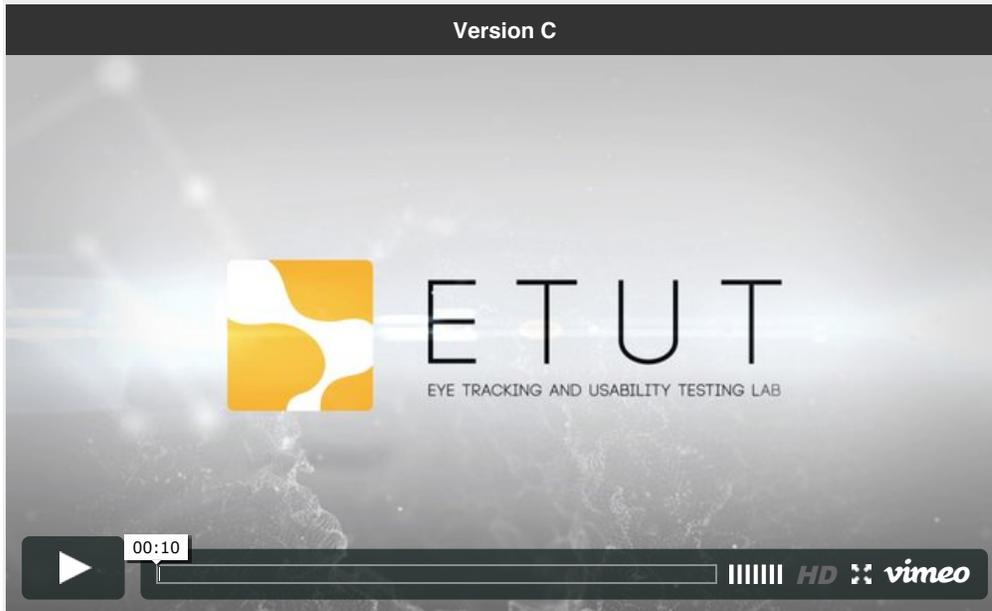
Version A (see Video 22) of the ETUT logo animation was designed to be the simplest motion graphic of the series. Elements in the animation were limited to the essentials: the symbol and signature of the logo. Version A also included a flat colored grey background.



Version B (see Video 23) of the ETUT logo animation added ornamentation. A gradient was added in the background, a lens flare was added to the foreground, and a vignette was overlaid on top of the video.



Version C (see Video 24) of the ETUT logo animation added even more ornamentation than version B. Added ornamentation in version C included two layers of atmospheric particle systems, a layer of spheres created in Cinema 4D, a layer of particles using Red Giant's plugin Trapcode Form, a lens flare to reveal the full signature, motion blur, and depth of field to blur foreground and background items.



Video 24: Version C of the ETUT Logo Animation.

Voodoo Logo Animation Development

Each version of the Voodoo logo animation had four components: the introduction text, the Voodoo logo and tagline, the background image, and the surrounding atmosphere or environment. Each version of the video was the same length; had the same timing and movement; and used the same audio track. Ornamentation added to versions B and C was limited to the environment component of the animation. The entire animation was created in Adobe After Effects.

Version A (see Video 25) of the Voodoo logo animation was designed to be the simplest motion graphic of the series. Elements in the animation included the introduction text; the voodoo logo and signature; a drop shadow on the logo; a background image; and a skull image that flashes between the intro text and the logo.

Version A



Video 25: Version A of the Voodoo Logo Animation.

Version B (see Video 26) of the Voodoo logo animation added ornamentation. A vignette was overlaid on top of the video. Live-action footage of dust particles was added to the beginning of the animation around the intro text and logo. Paint splatters were overlaid on top of the background image. Finally, a light was added to cast shadows and darken the edges of the frame.



Video 26: Version B of the Voodoo Logo Animation.

Version C (see Video 27) of the Voodoo logo animation added even more ornamentation than version B and was designed to be the most ornate and complicated motion graphic of the Voodoo logo animation series. Added ornamentation in version C included a layer of live-action footage smoke effects during the intro text animation, two layers of live-action smoke effects over the Voodoo logo, more particles throughout the video, and a flickering animation added to the intro text and light.





Video 27: Version C of the Voodoo Logo Animation.

Questionnaire Development

The questionnaire was designed to collect quantitative and qualitative data (Abel, 2008) about their emotional responses and perceptions. Emotion categories in the questionnaire were based on the Plutchik's wheel of emotions (see Image 2)(Plutchik, 1980) and Parrott's emotion groups (See Table 1)(Parrott, 2001).

The emotional response and perception questionnaire included the following questions:

On a scale of 0-10, how did the video you just watched make you feel? Please circle any emotions in each category that applies as well as a single number in each category. Circle zero (0) if you did not feel any of the emotions in a specific category.

Caring / Compassion / Fondness / Liking / Adoration / Sentimentality / Longing / Love	0	1	2	3	4	5	6	7	8	9	10
Pleasure / Amusement / Delight / Enjoyment / Happiness / Satisfaction / Contentment / Hope / Pride / Thrill / Joy	0	1	2	3	4	5	6	7	8	9	10
Amazement / Astonishment / Surprise	0	1	2	3	4	5	6	7	8	9	10
Agitation / Irritability / Annoyance / Frustration / Bitter / Dislike / Resentment / Disgust / Anger	0	1	2	3	4	5	6	7	8	9	10
Displeasure / Melancholy / Disappointment / Insecurity / Isolation / Sadness / Unhappy	0	1	2	3	4	5	6	7	8	9	10
Anxiety / Uneasiness / Shock / Panic / Suspense / Nervousness / Apprehension / Worry / Fear	0	1	2	3	4	5	6	7	8	9	10

What adjectives would you use to describe the video you just watched?

On a scale of 0-10, was the video you just watched

0 1 2 3 4 5 6 7 8 9 10

engaging?

On a scale of 0-10, was the video you just watched **visually appealing**? 0 1 2 3 4 5 6 7 8 9 10

On a scale of 0-10, did the video you just watched make you **interested in the brand or message**? 0 1 2 3 4 5 6 7 8 9 10

What did you like about this video? / What did you dislike about this video?

Eye Tracking Methodology

There were 20 participants in this study. Each participant was first asked to review and sign an informed consent document. The test participants then filled out a demographic survey asking information including gender, age, educational background, time spent watching television, etc.

The participants then watched each motion graphic video and filled out an emotional response and perception questionnaire after viewing each video. Eye tracking data, audio recordings, and visual recordings were collected while participants watched each video.

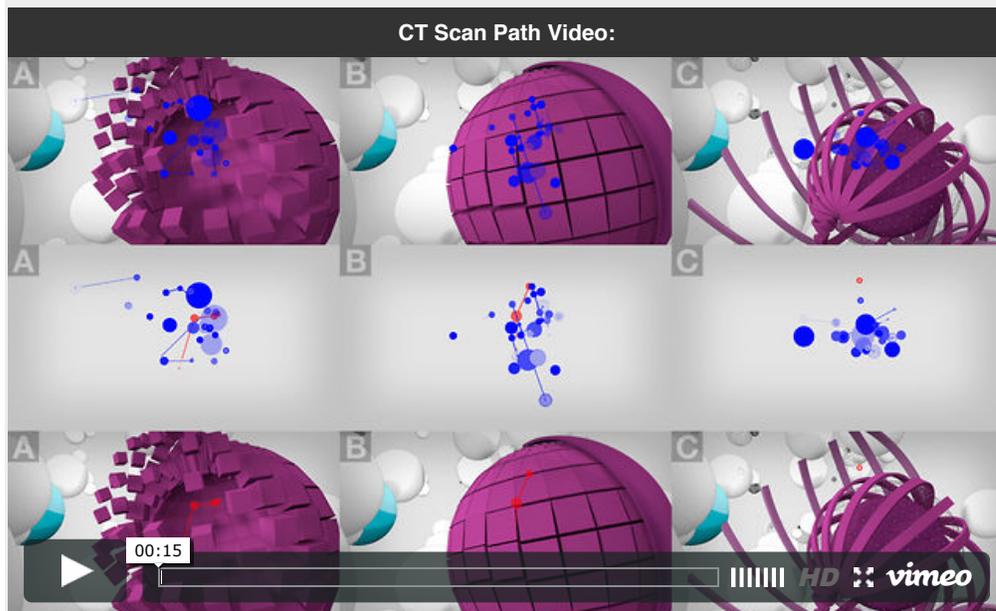
The order was randomized (ABC, ACB, BAC, etc) within each video set, but the video sets were always shown in the same order. The Creative Technologies logo animations were shown first in random order, then the ETUT logo animations were shown in random order, and finally the Voodoo logo animations were shown in random order.

Data Analysis

Eye Tracking Data

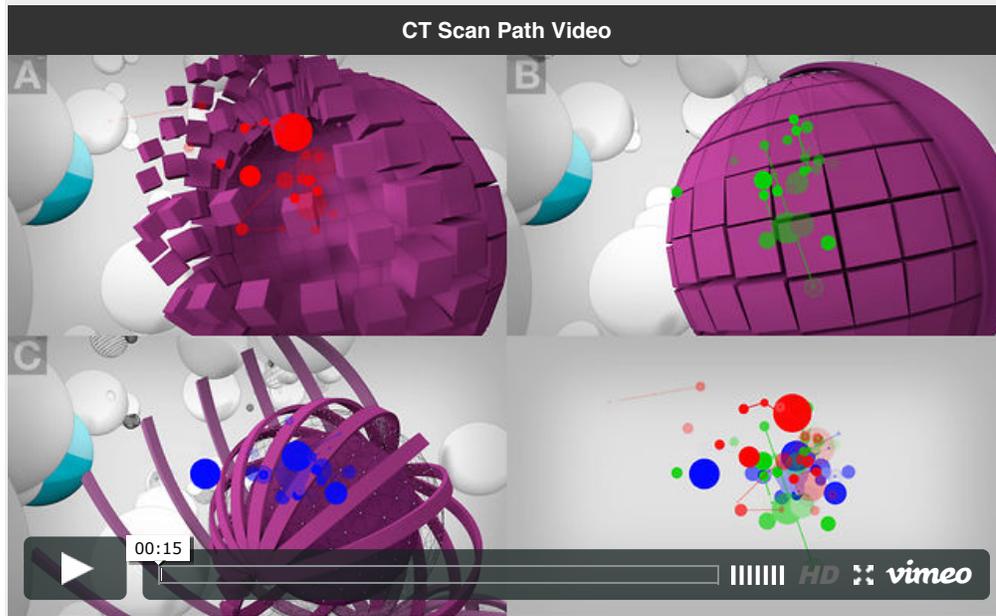
Eye tracking data was collected from 20 participants. The eye tracking data validates focal points and illustrates possible unintended focal points or areas of interest. The video below (Video 27) shows the eye data from the 20 participants and the eye tracking data from me watching the videos.

Click on the tabs to the left to view eye tracking data for each set of logo animations.



Video 27: Eye tracking scan path data of the Creative Technologies Logo Animation versions A, B, & C comparing eye tracking data of me watching the videos (red) versus the eye tracking data of the 20 participants in the study (blue).

Eye Tracking Data: CT Logo Animation



Video 28: Comparison of eye tracking scan path data of the Creative Technologies Logo Animation versions A, B, & C.

Scan path eye tracking data of the Creative Technologies logo animation shows that the viewer's attention is drawn to the large animated elements on the left side (see Image 3), but when more ornamentation is added in the background the viewer's attention can be diverted away from the intended focal point (see Image 4).

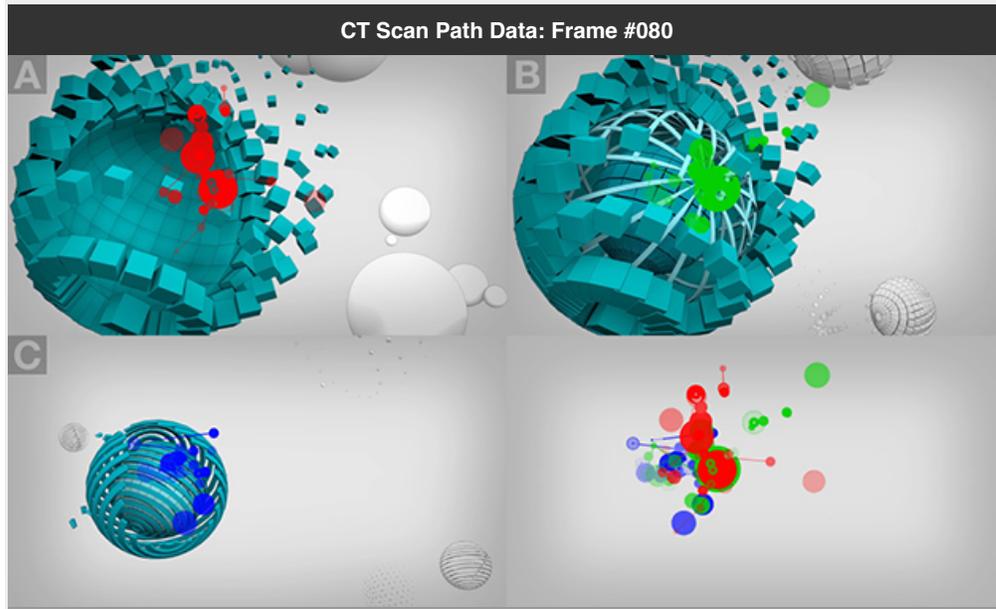
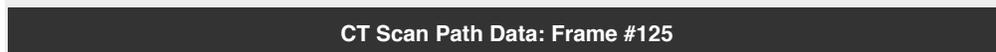


Image 3: Frame #080 comparing eye tracking scan path data of the Creative Technologies logo animation.



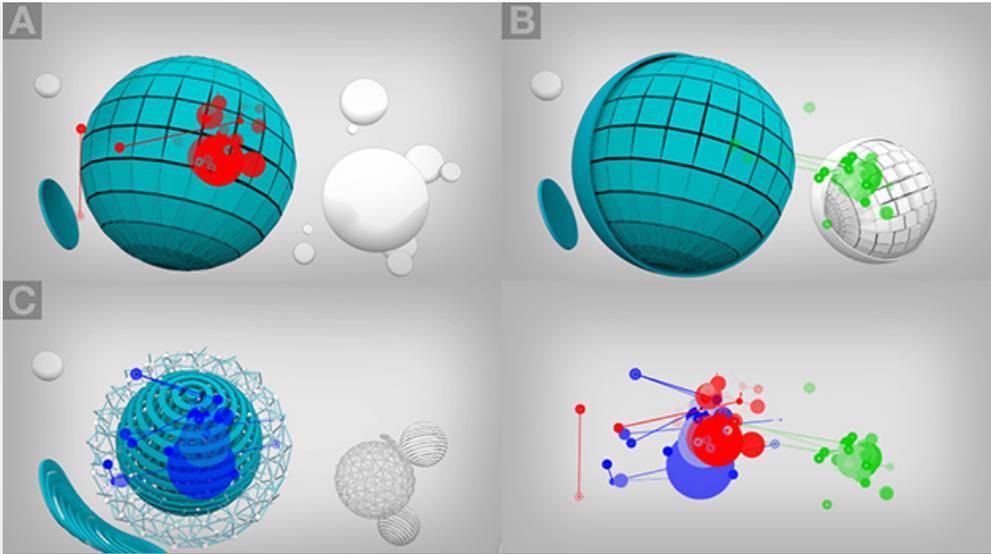
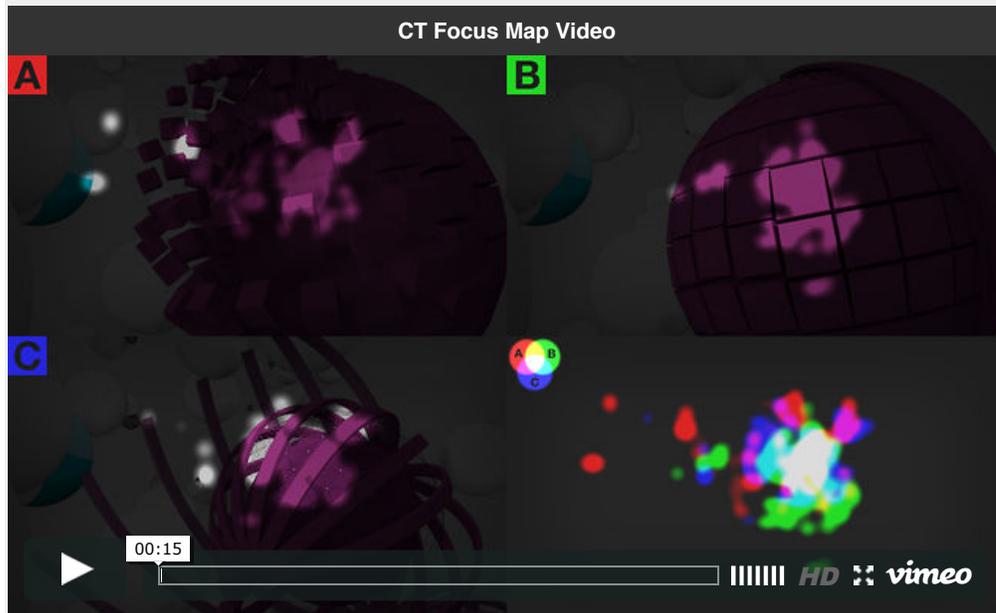
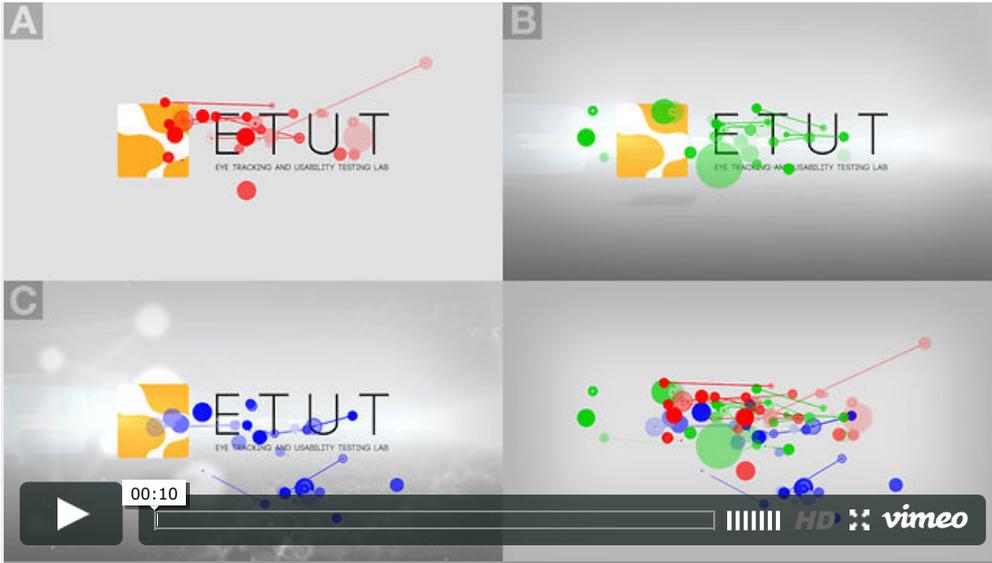


Image 4: Frame #125 comparing eye tracking scan path data of the Creative Technologies logo animation.

Diversion of attention can happen when the elements in the background are more visually appealing or interesting than the intended focal point. In versions A, the intended focal point is more interesting than the background details. In versions B and C, there are moments where the background detail is more visually interesting than the intended focal point causing the viewer's eye to stray from the focal point.





Video 30: Comparison of eye tracking scan path data of the ETUT Logo Animation versions A, B, & C.

Scan path eye tracking data of the ETUT logo animation shows that the viewer's attention is drawn to the animated symbol of the ETUT logo. When ornamentation is added, the viewer's attention can be diverted from the symbol and the viewer's eyes explore more of the screen (see Images 5 and 6).

ETUT Scan Path Data: Frame #100

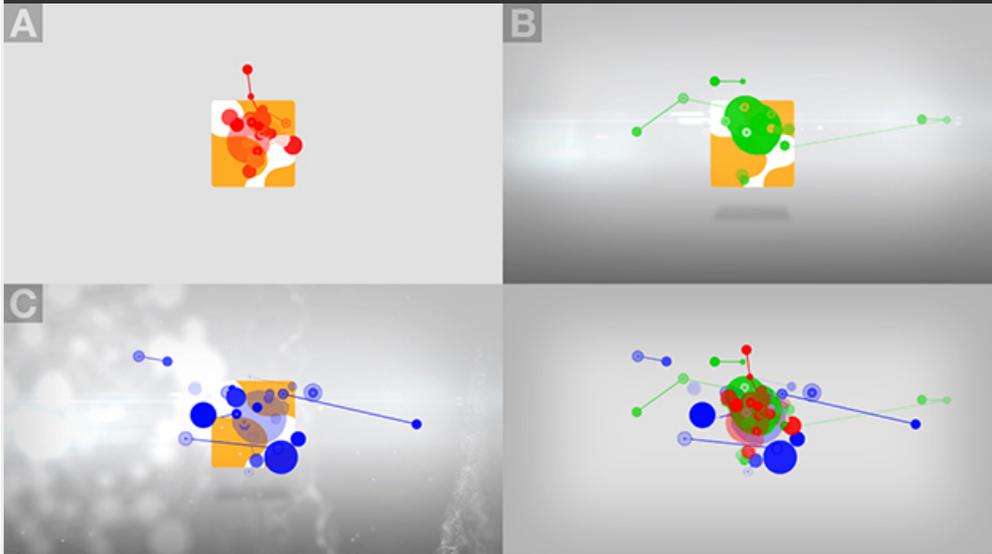
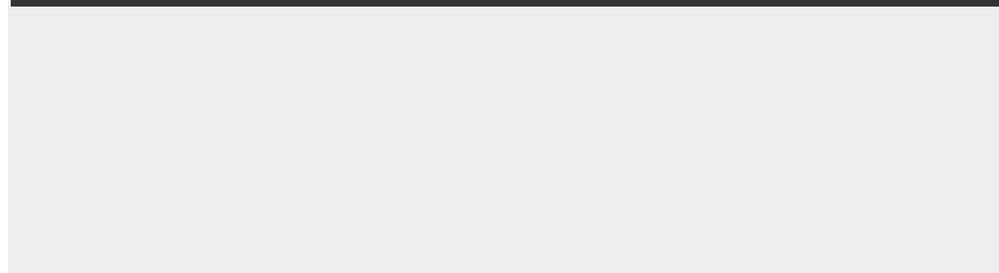


Image 5: Frame #100 comparing eye tracking scan path data of the ETUT logo animation.

ETUT Scan Path Data: Frame #200



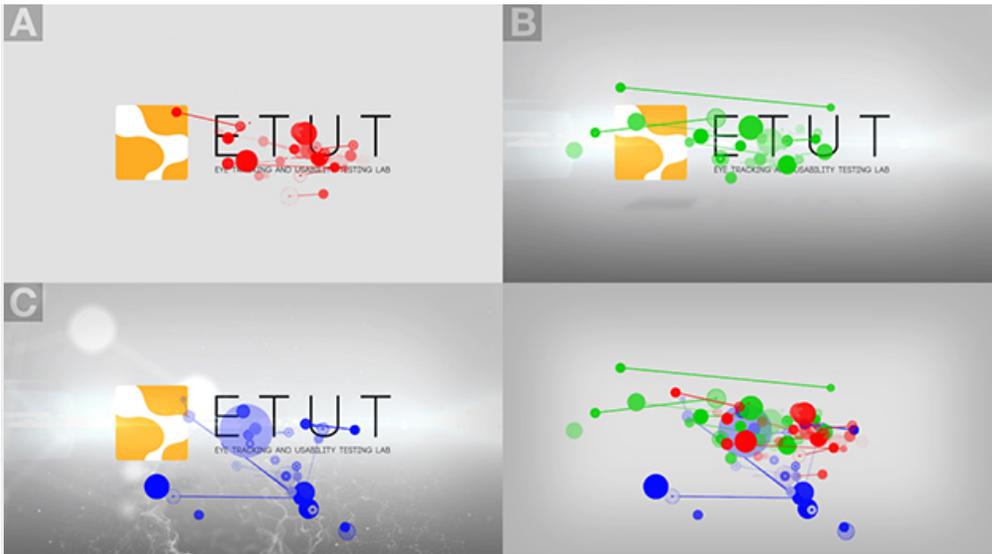
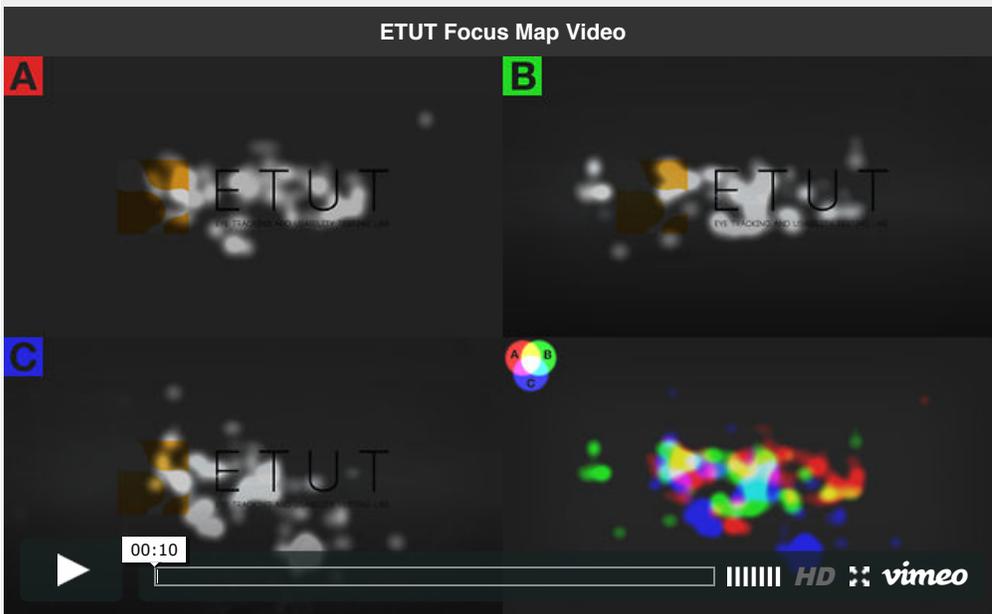


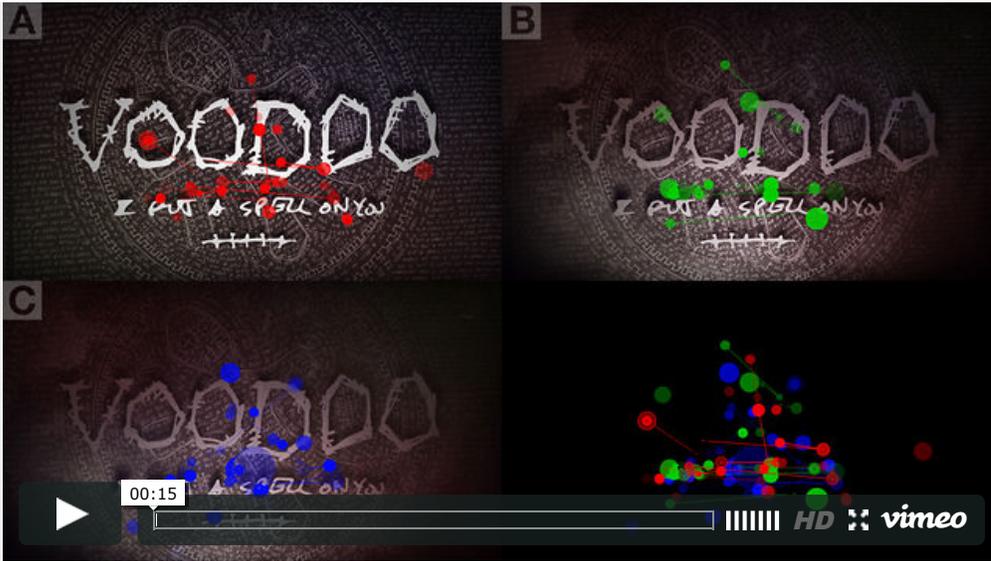
Image 6: Frame #200 comparing eye tracking scan path data of the ETUT logo animation.



Video 31: Comparison of eye tracking focus map data of the ETUT Logo Animation versions A, B, & C.

Eye Tracking Data: Voodoo Logo Animation

Voodoo Scan Path Video



Video 32: Comparison of eye tracking scan path data of the Voodoo Logo Animation versions A, B, & C.

Scan path eye tracking data of the Voodoo logo animation shows that the viewer's attention is drawn to the intro text and the Voodoo logo. Added ornamentation tends to cause the viewer's attention to be diverted from the intended focal point for short periods of time. In versions B and C, the particles and smoke below the text attracts the viewer's attention (see Image 7).

Voodoo Scan Path Data: Frame #080

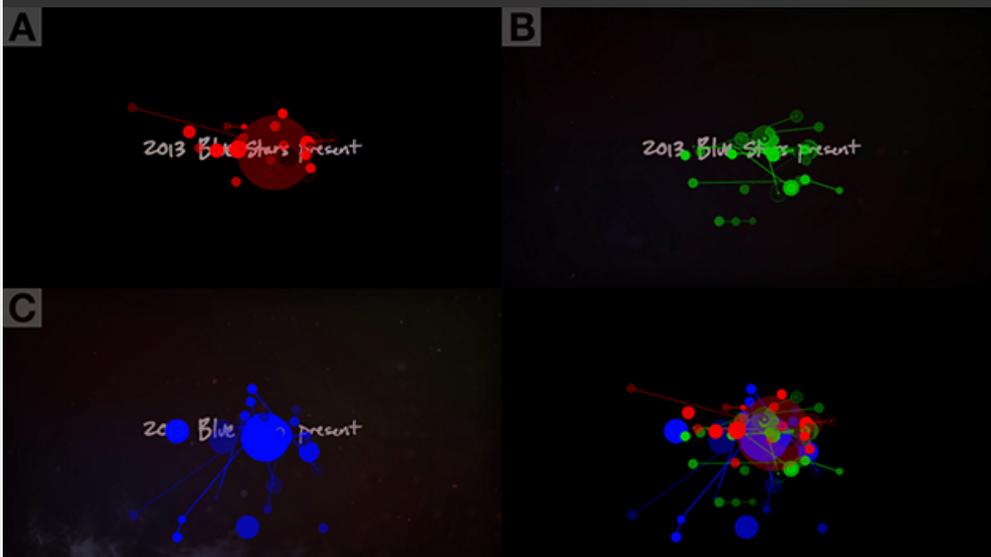


Image 7: Frame #080 comparing eye tracking scan path data of the Voodoo logo animation.

When the Voodoo logo is revealed, the added particles and smoke effects in versions B and C attract the viewer's attention, but also reduces the contrast in the background image causing the viewer to focus more on the Voodoo logo (see Image 8).

Voodoo Scan Path Data: Frame #325

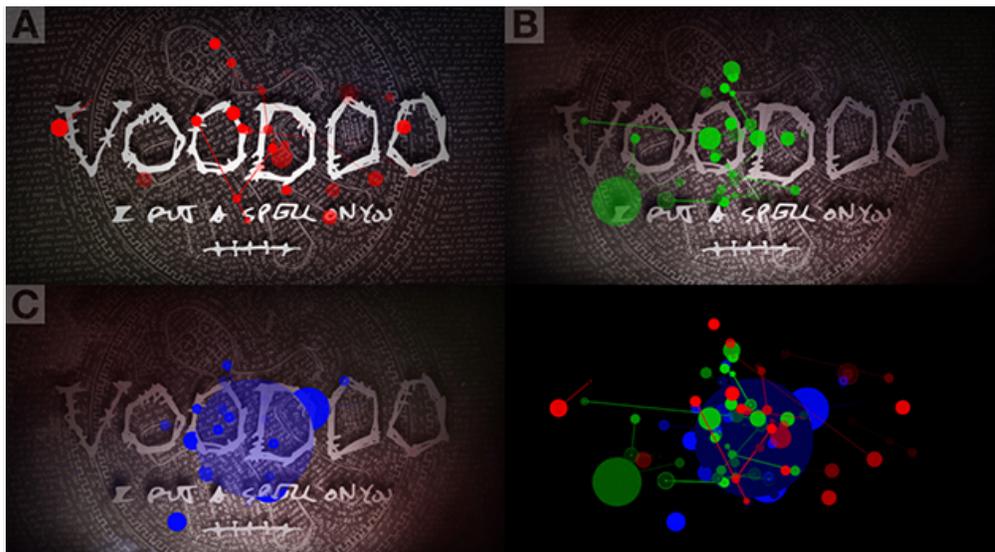


Image 8: Frame #325 comparing eye tracking scan path data of the Voodoo logo animation.



Video 33: Comparison of eye tracking scan path data of the Voodoo Logo Animation versions A, B, & C.

Correlations

Correlations are a method of data analysis that shows that relationship between two sets of data. The equation returns a number between negative one and positive one. A value close to positive one means two data sets have a strong positive correlation: if a number in one data set increases, it is likely that the number will increase in the other data set as well. A value close to negative one means the two sets of data have a strong negative correlation: as one number increases, the number in the other data set is likely to decrease. Numbers close to zero suggest two data sets have little to no correlation.

The data visualizations below (see Images 9, 10, 11, and 12) shows the correlations between emotional responses, perceptions, and eye tracking data. Black lines are positive correlations and red lines are negative: the thicker the line, the stronger the correlation.

The correlations between the level of ornamentation (ABC) and the emotional responses or perceptions are not strong,

but there are strong correlations between emotions and perceptions. For example, amazement has a strong positive correlation with caring, pleasure, interest in brand, visual appeal, and how engaged the viewer felt.

The first visualization (see Image 9) combines the data sets for all three logo animations. The rest of the visualizations (see Images 10, 11, and 12) show correlations for individual logo animations.

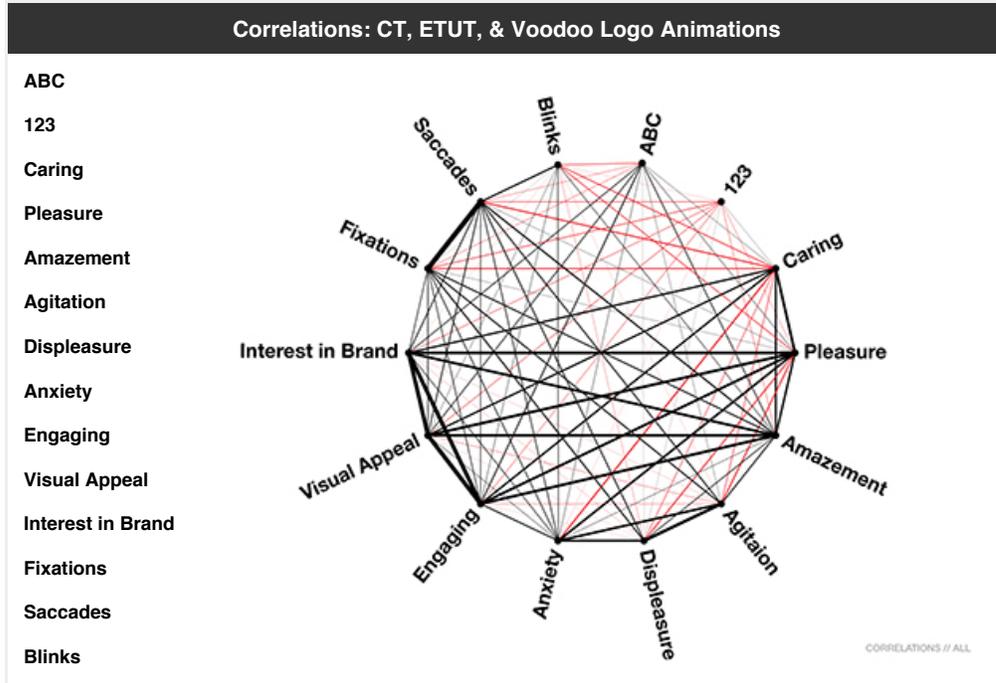


Image 9: Visualization of correlations between emotional responses, perceptions, and eye tracking data for all logo animations. Hover over the list of emotions, perceptions, and eye tracking data to see individual sets of correlations.

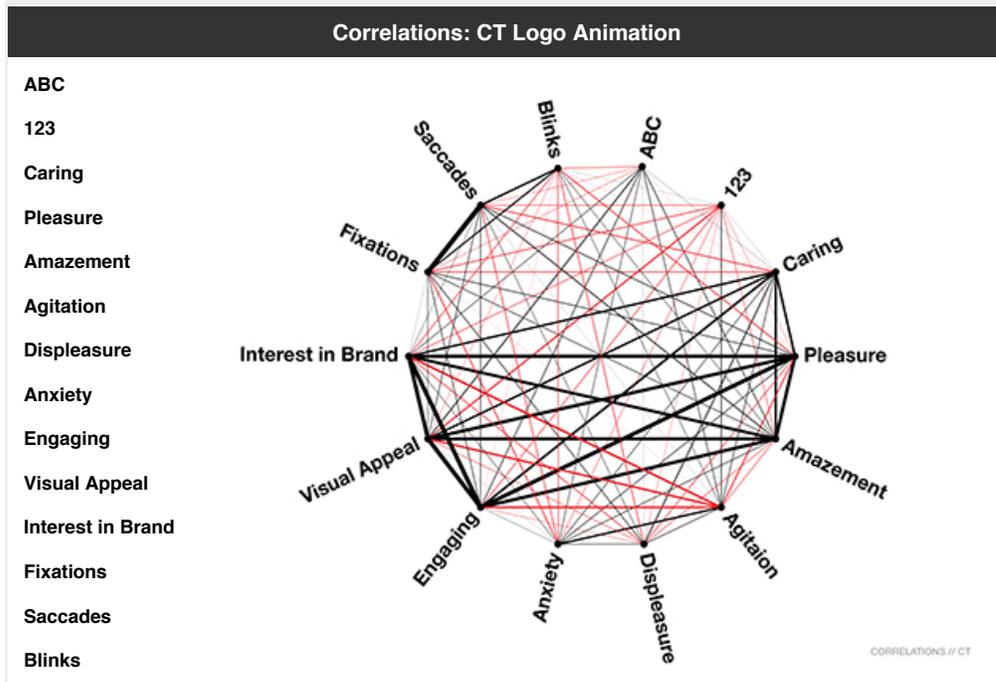


Image 10: Visualization of correlations between emotional responses and perceptions for the Creative Technologies logo animation. Hover over the list of emotions, perceptions, and eye tracking data to see individual sets of correlations.

Correlations: ETUT Logo Animation

- ABC
- 123
- Caring
- Pleasure
- Amazement
- Agitation
- Displeasure
- Anxiety
- Engaging
- Visual Appeal
- Interest in Brand
- Fixations
- Saccades
- Blinks

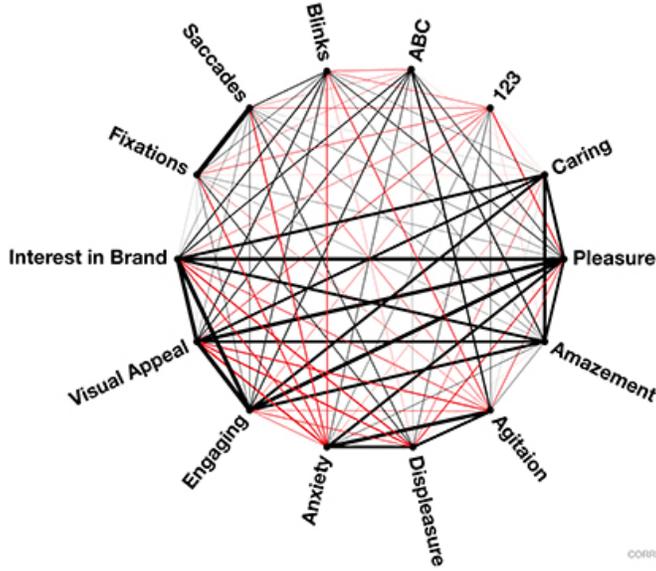


Image 11: Visualization of correlations between emotional responses and perceptions for the ETUT logo animation. Hover over the list of emotions, perceptions, and eye tracking data to see individual sets of correlations.

Correlations: Voodoo Logo Animation

- ABC
- 123
- Caring
- Pleasure
- Amazement
- Agitation
- Displeasure
- Anxiety
- Engaging
- Visual Appeal
- Interest in Brand
- Fixations
- Saccades
- Blinks

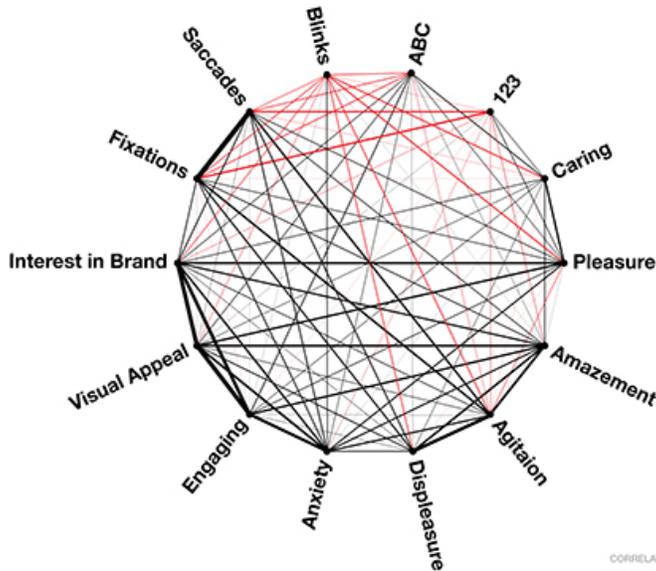


Image 12: Visualization of correlations between emotional responses and perceptions for the Voodoo logo animation. Hover over the list of emotions, perceptions, and eye tracking data to see individual sets of correlations.

Trends in Emotional Responses & Perceptions

Positive and negative changes in emotional responses and perception of the motion graphics were charted and analyzed for trends (see Image 13 and 14 below). The data was analyzed for trends in changes from version A to B, B to C, and A to C. The resulting numbers were organized in various ways to search for any possible trends.

One noticeable trend in emotional responses and perceptions of the Creative Technologies logo animation was

Trend Analysis of Emotions & Perceptions

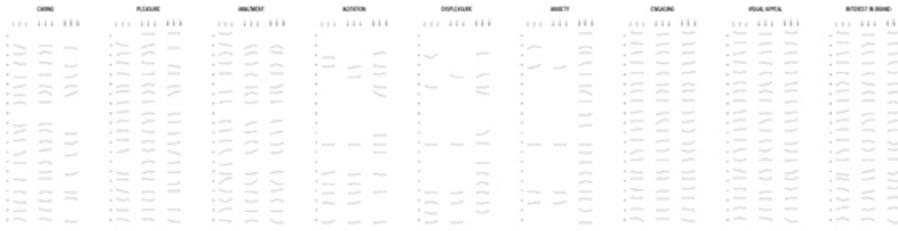
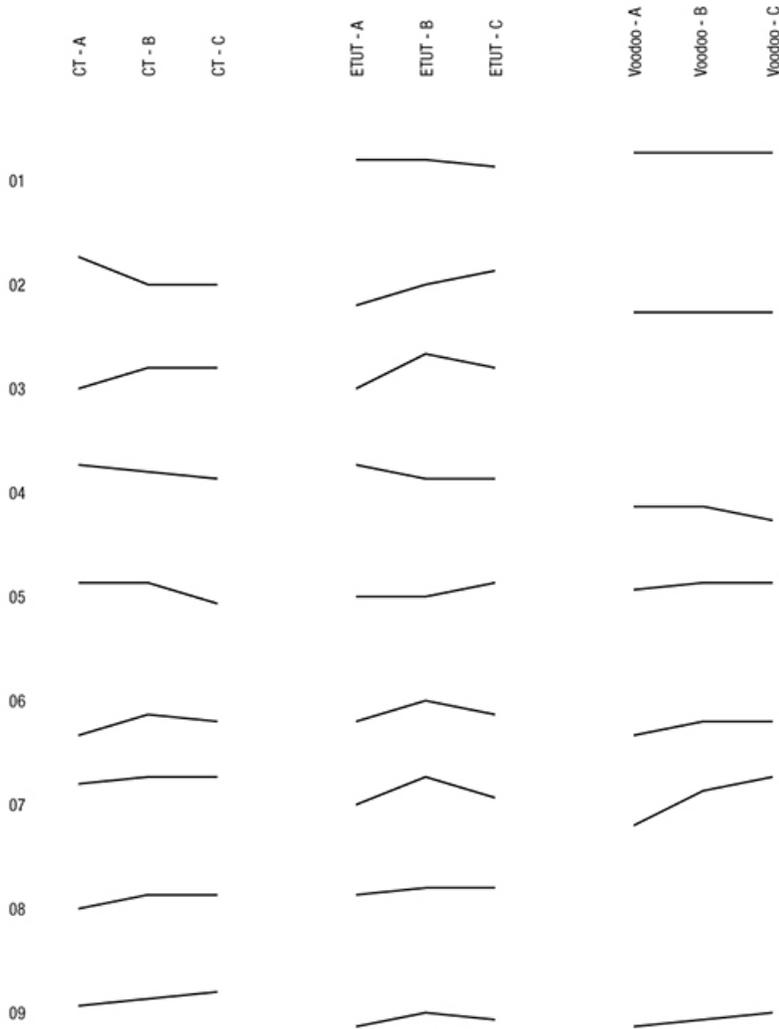


Image 13: Visualization of the positive and negative changes in emotional responses and perceptions. Hover over the image to show colors.

Trend Analysis of Ratings in Pleasure

PLEASURE



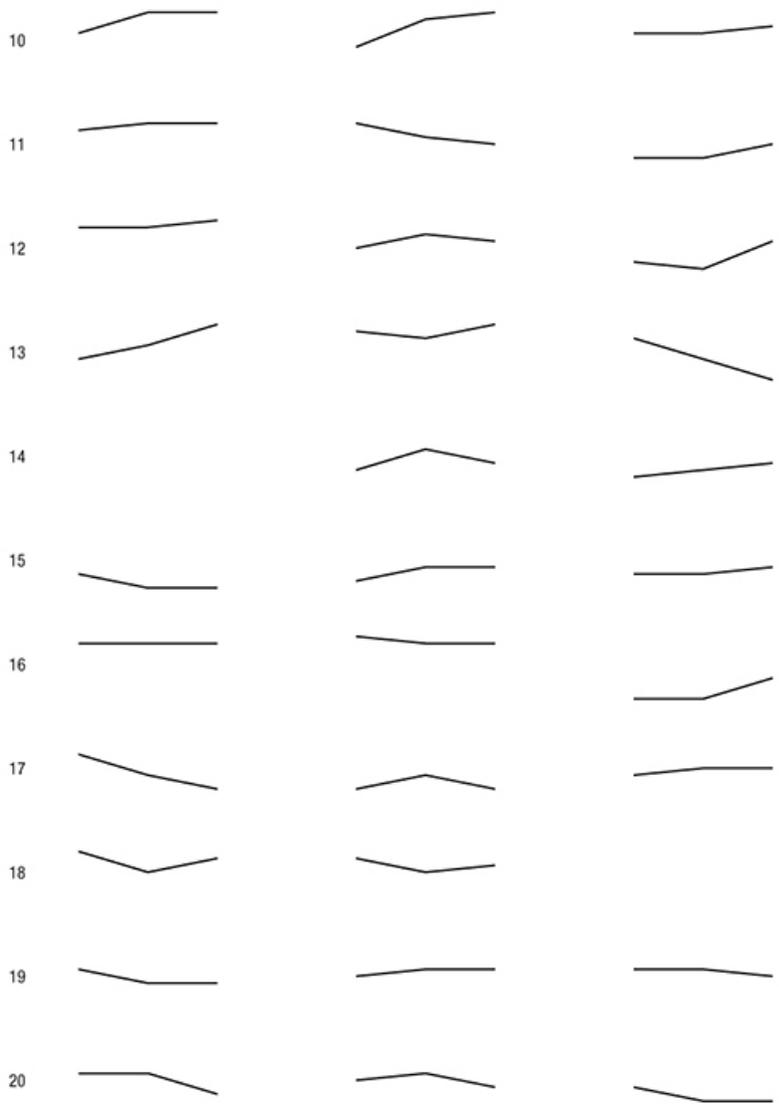


Image 14: Visualization of the positive and negative changes in pleasure felt by the viewer after watching each motion graphic. Hover over the image to show colors.

CT Logo Animation Emotion & Perception Trends

positive changes between versions A and B as well as positive changes between versions A and C (see Image 15).

CT // Arranged by Video Comparison

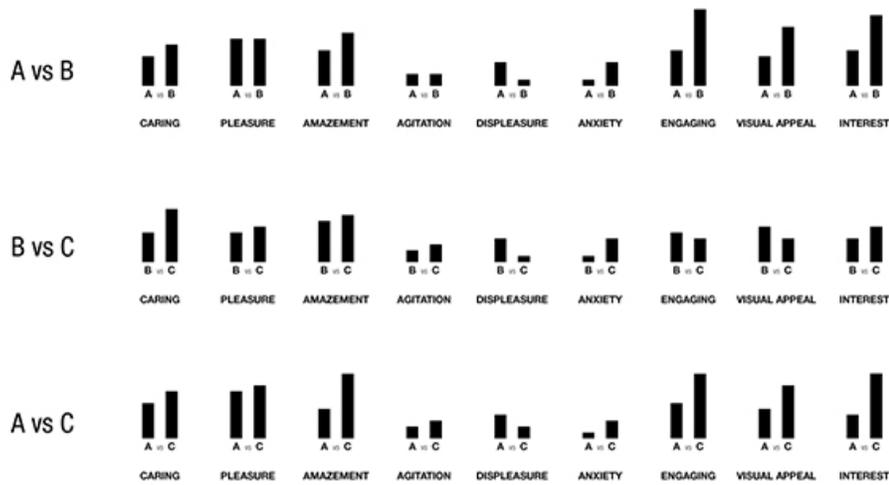


Image 15: Visualization of the changes in emotional responses and perceptions of the Creative Technologies logo animation arranged by video comparison. Hover over the image to show colors.

Another noticeable trend in the viewer’s emotional responses and perceptions of the Creative Technologies was increase in caring, pleasure, amazement, anxiety, and interest in brand as well as a decrease in displeasure (see Image 16).

CT // Arranged by Emotions and Perceptions

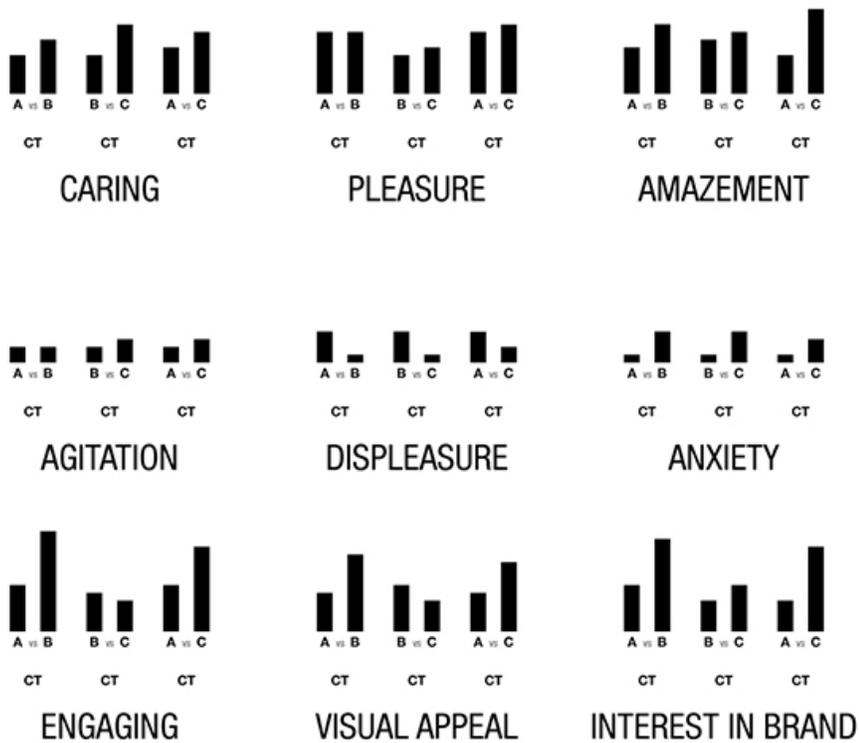


Image 16: Visualization of the changes in emotional responses and perceptions of the Creative Technologies logo animation arranged by emotions and perceptions. Hover over the image to show colors.

ETUT Logo Animation Emotion & Perception Trends

One noticeable trend in emotional responses and perceptions of the ETUT logo animation was positive changes from version A to B and versions A to C. However, there was a decrease in caring, pleasure, and interest from versions B to C (see Image 17).

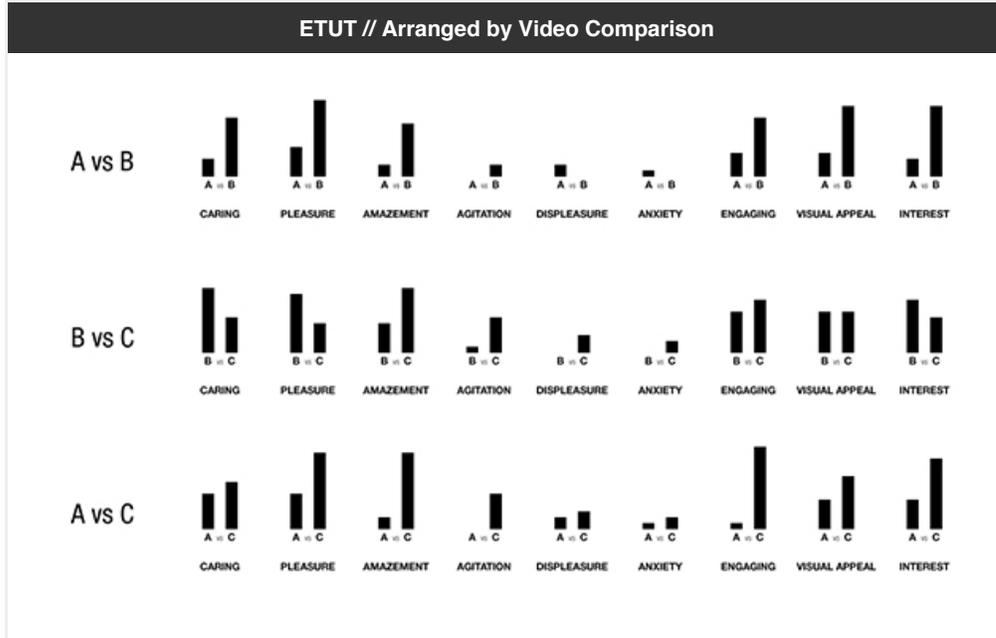
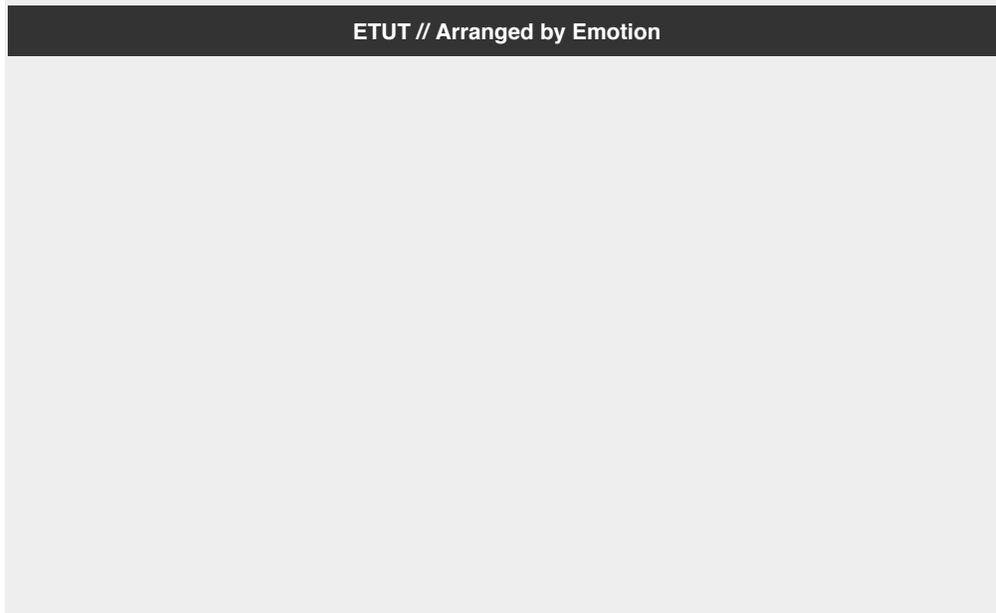


Image 17: Visualization of the changes in emotional responses and perceptions of the ETUT Logo Animation arranged by video comparison. Hover over the image to show colors.

Another noticeable trend in the viewer’s emotional responses and perceptions of the ETUT logo animation was more ornamentation caused an increase in amazement, agitation, and how engaged the viewer felt (see Image 18).



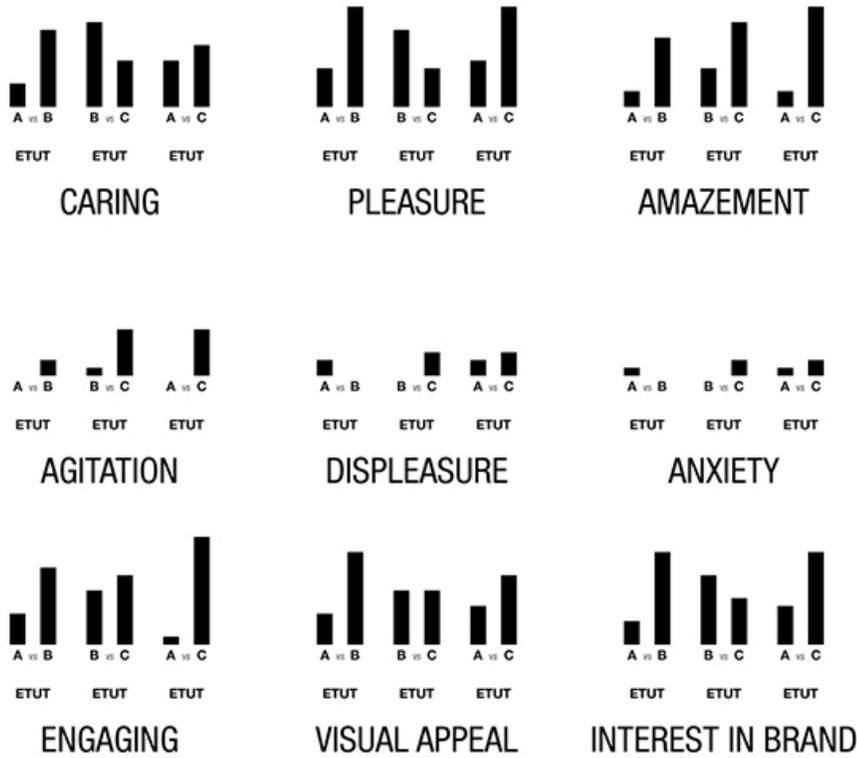


Image 18: Visualization of the changes in emotional responses and perceptions of the ETUT Logo Animation arranged by emotions and perceptions. Hover over the image to show colors.

Voodoo Logo Animation Emotion & Perception Trends

One noticeable trend in the emotional responses and perceptions of the Voodoo logo animation was overall positive changes from version B to C, and A to C (see Image 19).

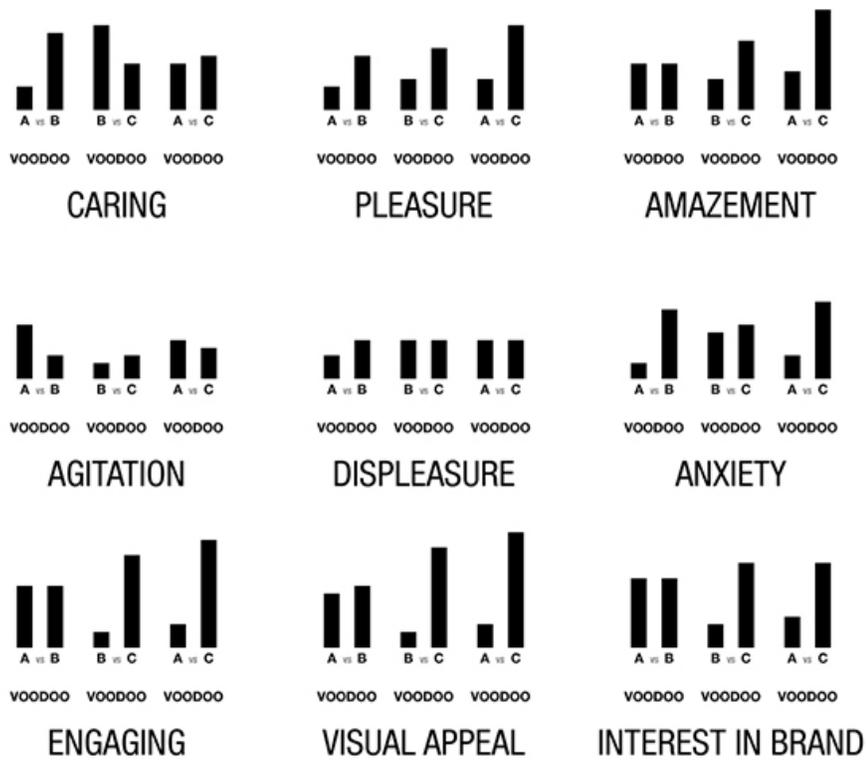
Voodoo // Arranged by Video Comparison



Image 19: Visualization of the changes in emotional responses and perceptions of the Voodoo Logo Animation arranged by video comparison. Hover over the image to show colors.

Another noticeable trend in the viewer’s emotional responses and perceptions of the Voodoo logo animation was increased pleasure, anxiety, and visual appeal (see Image 20).

Voodoo // Arranged by Emotion



When comparing the ratings of video A and video C, a trend showed increased ratings in emotional responses and

Image 20: Visualization of the changes in emotional responses and perceptions of the Voodoo Logo Animation arranged by emotions and perceptions. Hover over the image to show colors.

A vs B / B vs C / & A vs C Trends

perceptions or the brand or message (see Image 21).

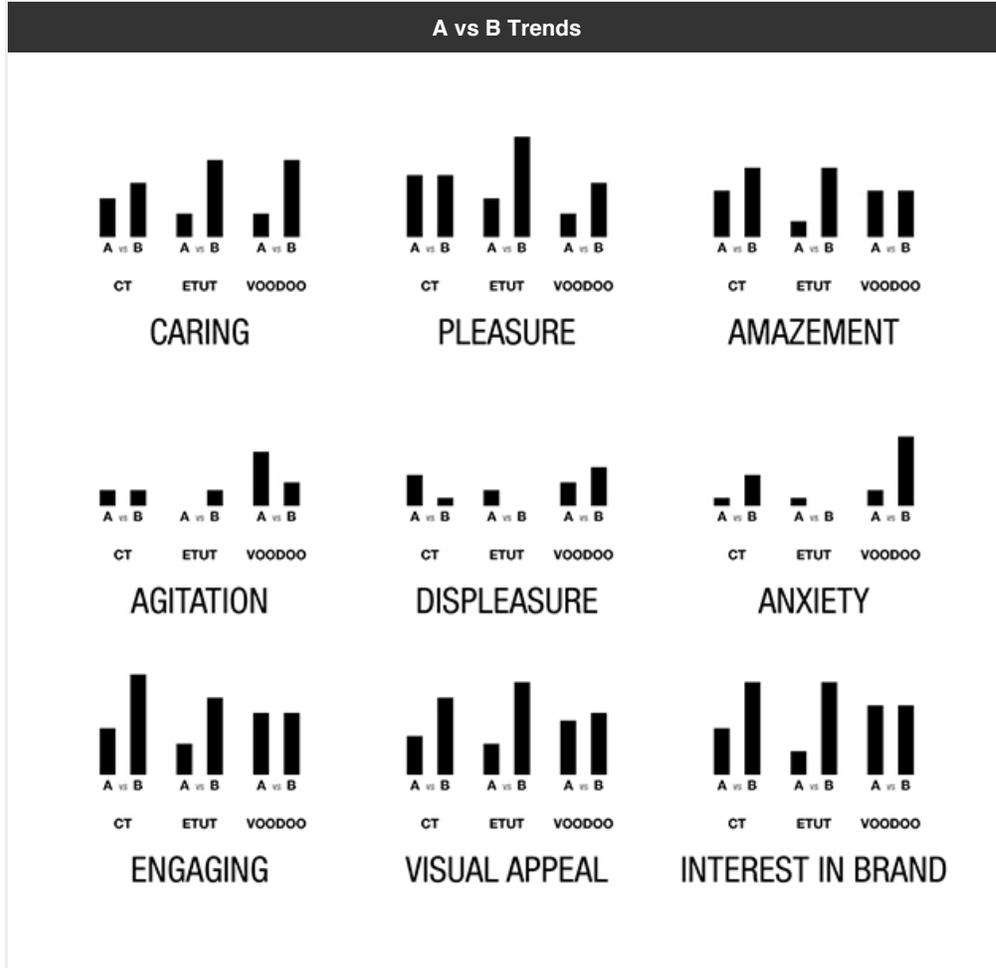


Image 21: Visualization of the changes in emotional responses and perceptions between Versions A and B of the ETUT, Creative Technologies, and Voodoo logo animations. Hover over the image to show colors.

When comparing the ratings of video B and video C (see Image 22), there are more frequent decreases in emotional responses and perceptions compared to the number of decreased ratings when comparing A with B, and A with C. This trend shows that there can be a turning point where the amount of ornamentation added in a video can start to detract from the emotional responses and perceptions of the motion graphic.

B vs C Trends

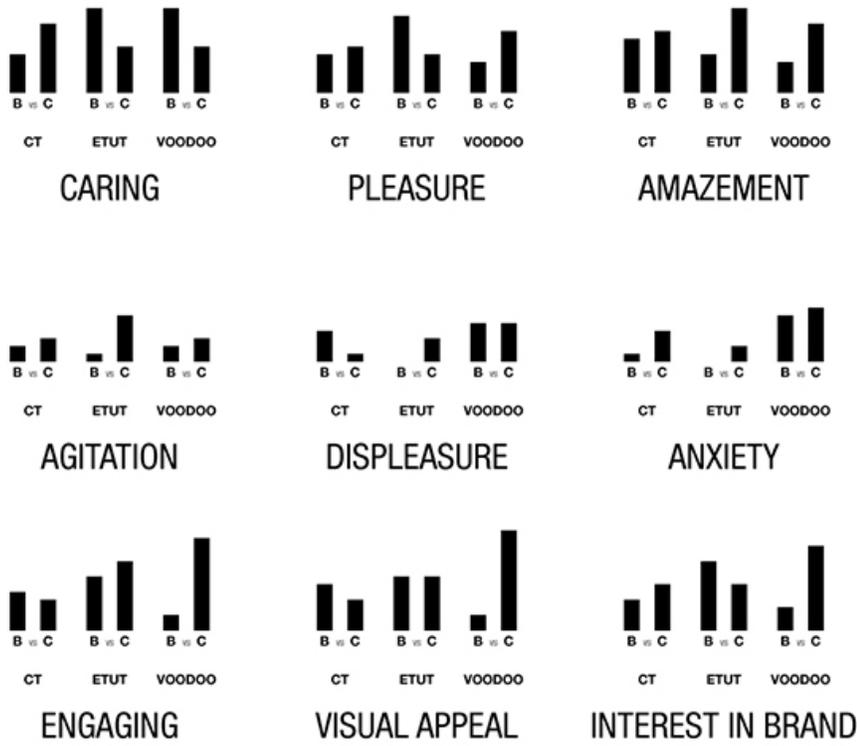


Image 22: Visualization of the changes in emotional responses and perceptions between Versions B and C of the ETUT, Creative Technologies, and Voodoo logo animations. Hover over the image to show colors.

When comparing the ratings of video A and video C, a clear trend showed an increased emotional response and increased positive perceptions of the brand or message (see Image 23).

A vs C Trends

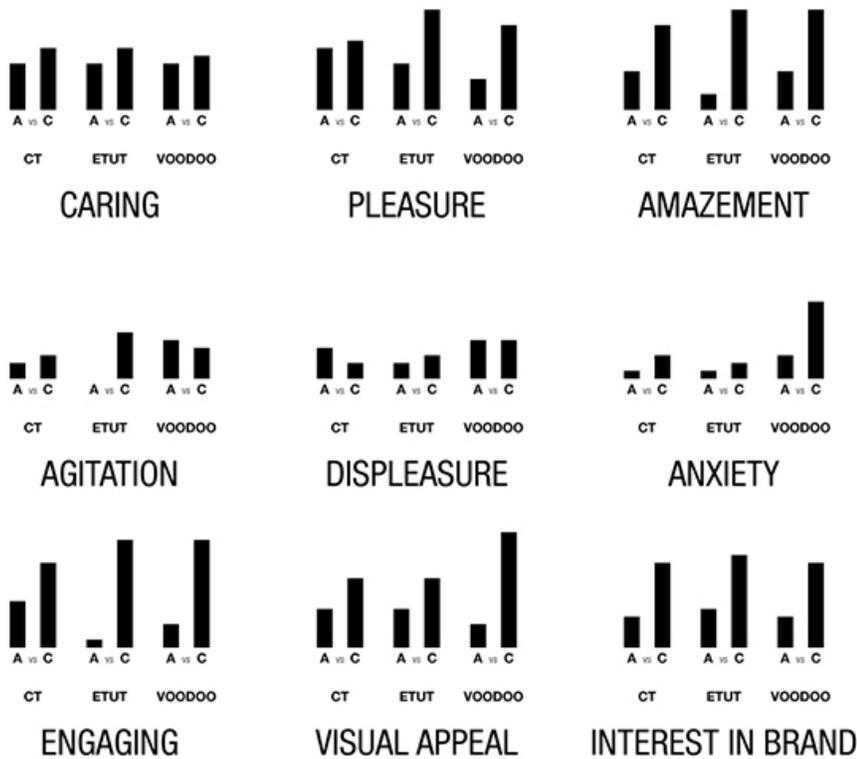


Image 23: Visualization of the changes in emotional responses and perceptions between Versions A and C of the ETUT, Creative Technologies, and Voodoo logo animations. Hover over the image to show colors.

Qualitative Data Trends

Qualitative data was collected from the research participants by asking two open-ended questions in the emotional response and perception questionnaire. These questions were:

What adjectives would you use to describe the video you just watched?

What did you like about this video? / What did you dislike about this video?

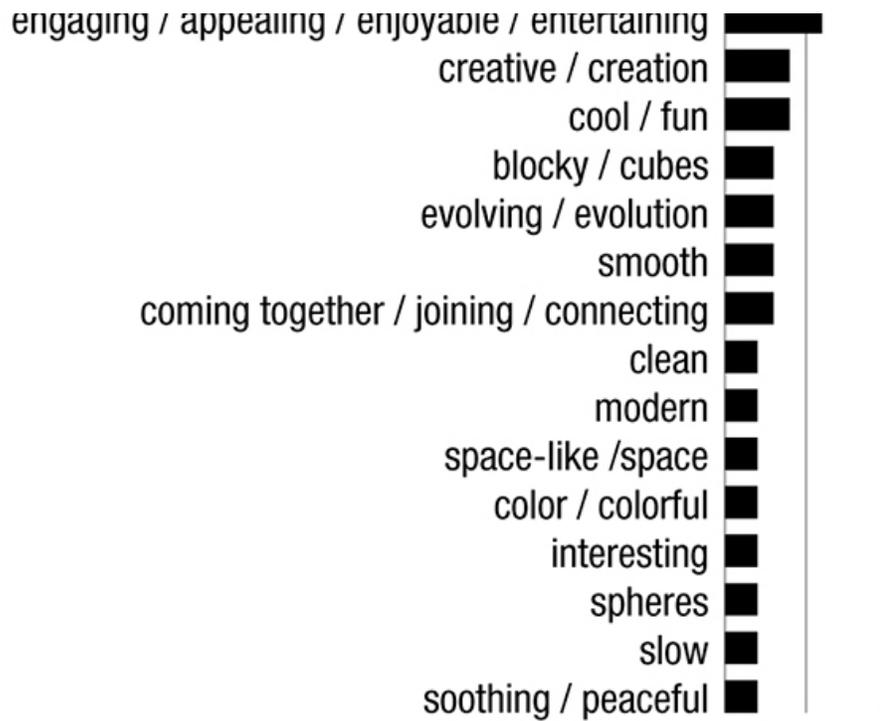
By organizing qualitative data by grouping similar ideas, also known as the KJ method, trends can be seen in what words were most common in describing each logo animation. (Kawakita, 1982)

CT Logo Animation Qualitative Data Trends

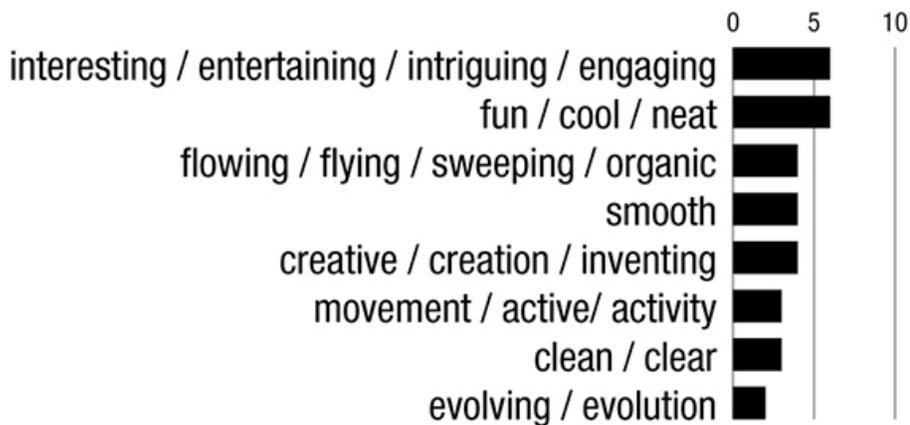
CT Descriptive Word Trends

CT - A

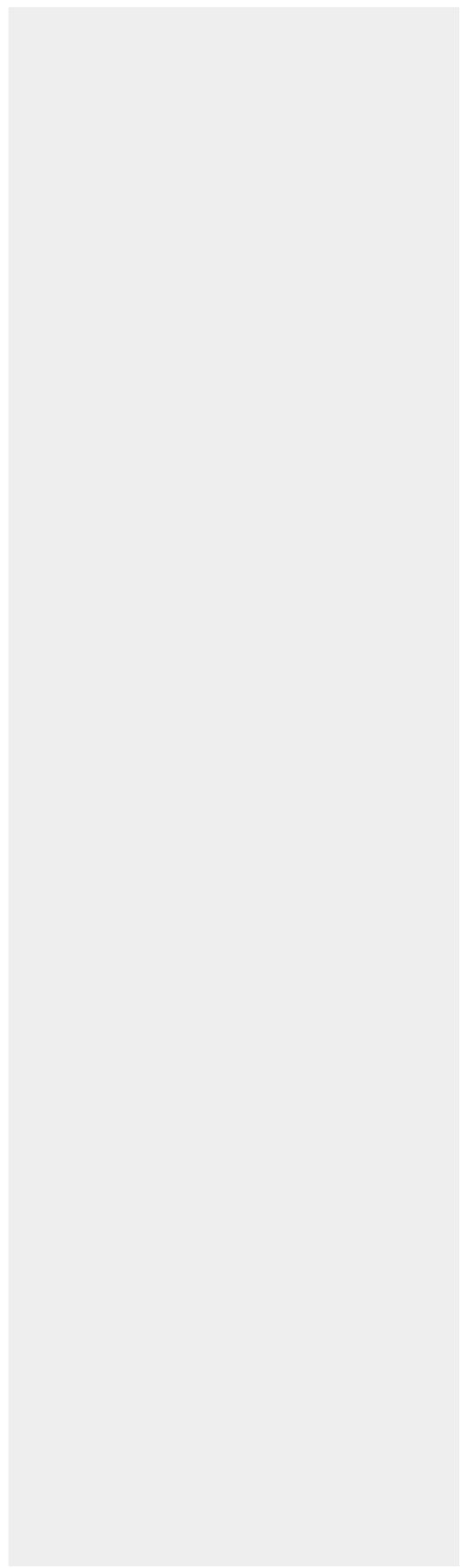
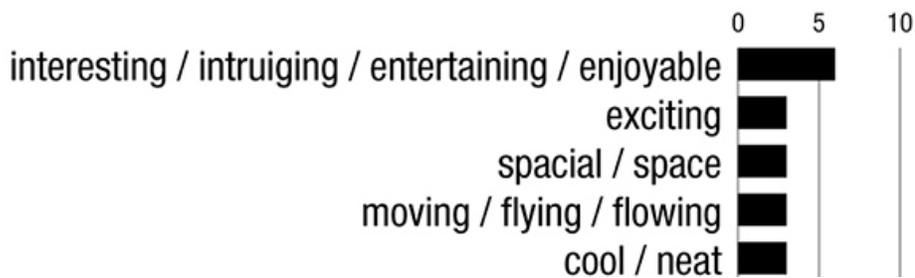
0 5 10



CT - B



CT - C



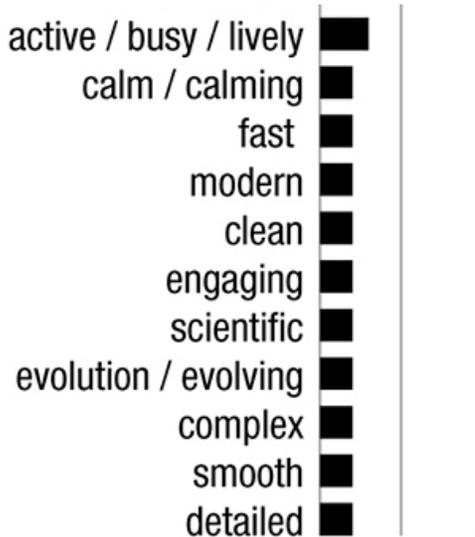
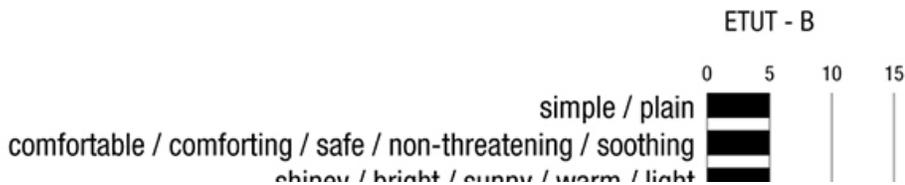
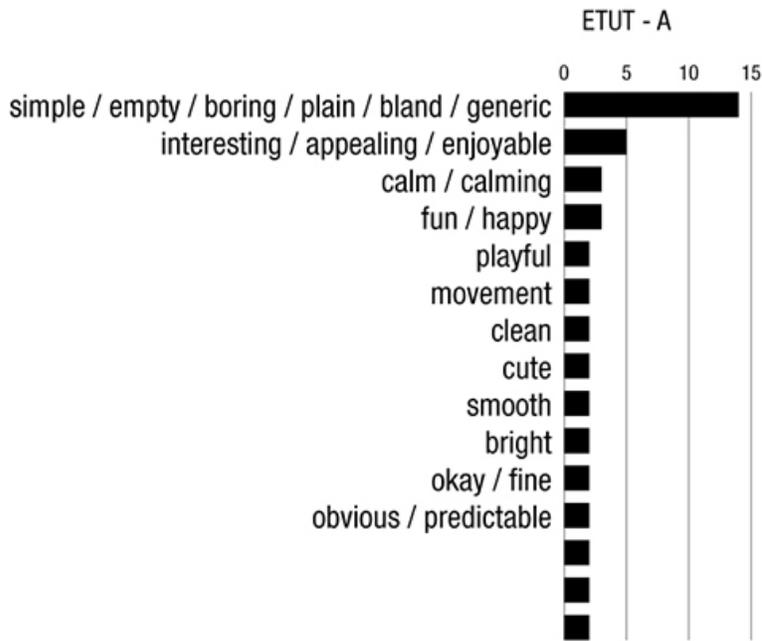


Image 24: Visualization of trends and repeated words participants used to describe versions A, B, and C of the Creative Technologies logo animation.

ETUT Logo Animation Qualitative Data Trends

ETUT Descriptive Word Trends



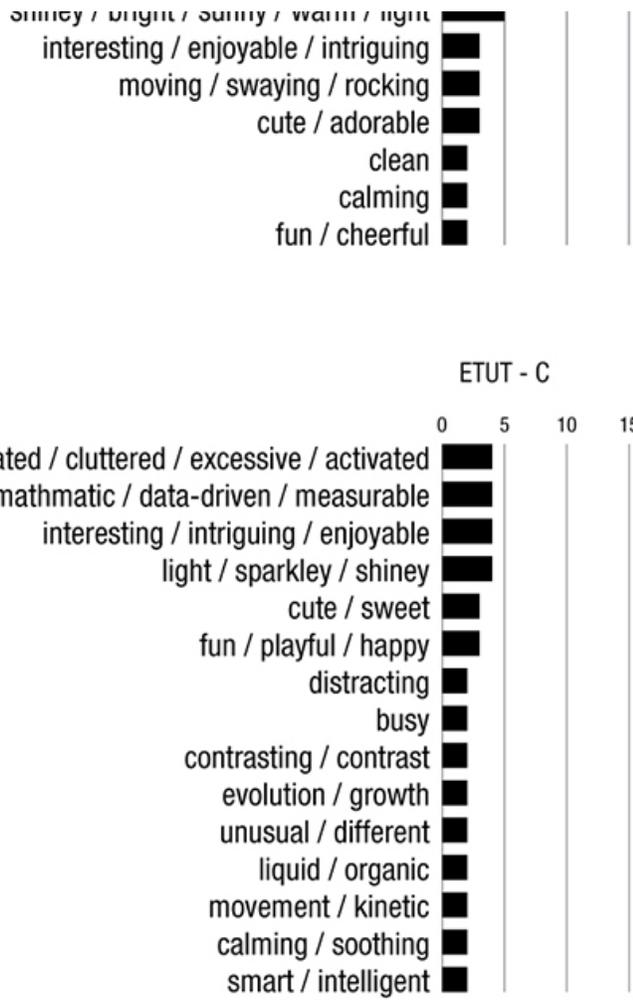


Image 25: Visualization of trends and repeated words participants used to describe versions A, B, and C of the ETUT logo animation.

Voodoo Logo Animation Qualitative Data Trends

Voodoo Descriptive Word Trends

There was a total of 20 participants in the study. The participants in this study were primarily college students ages 18-25 who frequently watch television online (see Image 27).

Less ornamentation tends to cause the viewer to focus more attention on the logo or intended focal point. However, the viewer might perceive the brand or message as cute, simple, basic, or boring.

More ornamentation tends to cause the viewer's eye to explore more of the screen and increase the emotional response and perceptions of the brand or message in a positive way. However, there can be a turning point where the ornamentation can distract the viewer from the logo or intended focal point.

There are several shortcomings in this study that must be acknowledged:

This study only explores the effect of ornamentation on the emotional response and perception of a single format of motion graphics: logo animations. The results of this study do not reflect the effects of ornamentation on the emotional response and perception of all formats of motion graphics.

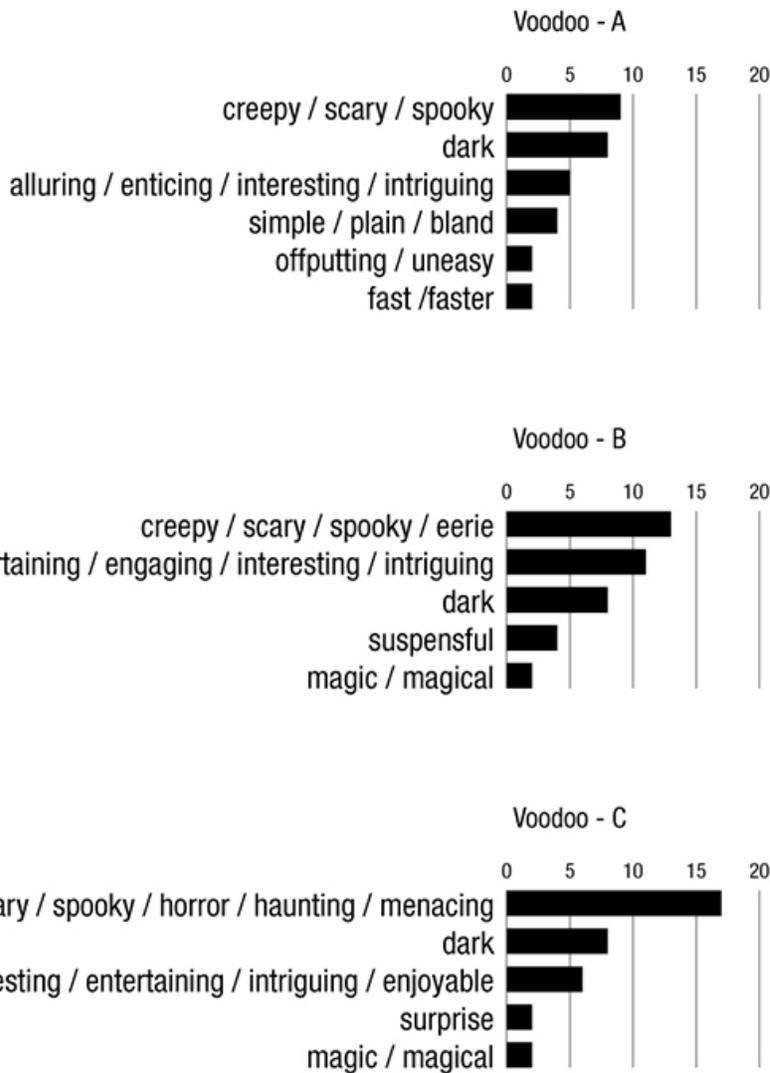


Image 26: Visualization of trends and repeated words participants used to describe versions A, B, and C of the Voodoo logo animation.

Demographics

Research Participants Demographic Information



Second, only three different logo animations were created for testing with only three variations of each. The motion

Image 27: Visualization of the demographic information of the 20 participants in this study.

Conclusions

Conclusions

Shortcomings

graphics created for testing may not be indicative of actual motion graphics regularly seen on television or in commercials.

Third, only 20 people were tested in this study and the demographics of those participants were primarily college students, ages 18-25.

Future Research

This study created only 3 variations of each video. The level of ornamentation in version C of each set was not pushed past my (the designer's) comfort level. Testing to see if a design that was too ornate for the designer's comfort would provide valuable feedback and validation of a designer's intuition.

Another area for further study would be exploring the relationship between sound and visuals and what effect audio has on the emotional response and perception of motion graphics.

A third idea for recommended future research would be exploring the relation between the number of times a video has been seen and the viewer's emotional response or perceptions of the video.

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IRB Approval Letter

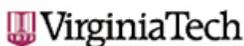
images

Image 28: Virginia Tech IRB Approval Letter Page 1.

Image 29: Virginia Tech IRB Approval Letter Page 2.

About the Author

Ryan Musselman is a graphic designer and motion designer. He received a BFA in Graphic Design from Iowa State University and received his MFA in Creative Technologies from Virginia Tech. [Click here to view his portfolio.](#)



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MEMORANDUM

DATE: March 5, 2013
TO: Ryan William Musselman, Troy D Abel
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires May 31, 2014)
PROTOCOL TITLE: Eye Tracking Motion Graphics
IRB NUMBER: 13-126

Effective March 4, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

<http://www.irb.vt.edu/pages/responsibilities.htm>

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: **Expedited, under 45 CFR 46.110 category(ies) 6,7**
 Protocol Approval Date: **March 4, 2013**
 Protocol Expiration Date: **March 3, 2014**
 Continuing Review Due Date*: **February 17, 2014**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.