

The Most Powerful Name in Corporate News

Emotional Analytics Technology Innovation



Bill Thompson - CEO

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About BehaviorMatrix, LLC

As the leading technology innovator in emotional analytics, our mission is to bring clarity to data and scientific measurement to emotion. We simplify the complex process of understanding emotions from vast amounts of digital content. We provide customers with unparalleled real-time intelligence and empower them to change perceptions that drive behaviors.

Using our SMARTview Platform supported by our EmPrint Technology, we mine unfiltered and unstructured digital content in news, forums, blogs and social conversations. We extract the emotional context from the data and convert this qualitative information into actionable insights for our customers.

Our products include strategic insights and research, dynamic dashboards and SMARTview platform APIs.

Interview conducted by: Lynn Fosse, Senior Editor, CEOCFO Magazine

CEOCFO: Mr. Thompson, what is the concept at BehaviorMatrix?

Mr. Thompson: We have developed a cognitive systems infrastructure which uses both emotional and behavioral analytics. We process unstructured data and provide insights into how people are feeling, how they're behaving and what these feelings and behaviors mean for our clients.

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CEOCFO: *Would you give us an example of a fairly common engagement and something a little bit more complicated or complex?*

Mr. Thompson: A good example is how we help pharmaceutical companies that have new drugs coming to market. We study their target markets and we track and analyze the emotions around our customers' drugs. Using our infrastructure, we garner all the information from big data around the associated disease state and any competitive drugs. We collect digital content from social platforms such as Twitter, Facebook and blogs, and we also collect news and broadcast content from video, TV and radio. We take in all the data, and we process it through our proprietary system. We then identify, track and monitor emotional trends and develop a full view of the market landscape—the competitors and their market share, how they're positioned and moving within the market. We can see what's causing patients' responses and to what doctors are responding. We provide our clients detailed, scientific-based results and strategic insights that help them determine how to effectively launch their new drug into that marketplace.

CEOCFO: *Is the assumption today that we do not need to go beyond social media and that everyone is participating?*

Mr. Thompson: No, and this gets to the immense value of taking a cognitive approach. We know that social media can be a leader, but it can also be a reaction or even lag in the process. If we look at the example of a cognitive system, it is all about the stimuli that are applied. If you have a TV news event and all of a sudden you have a rush of social media activity around it, the stimulus was the news event. The social media reaction is the response. You cannot just go into social media and say that it is driving everything. Something has stimulated that social conversation, and to really understand the emotion within that conversation, you have to understand the entire process of the stimuli that were applied to the crowd. It could be a news event, something that happened, like a riot, or an outbreak of Ebola in the US. The event occurrence is the stimulus as well as the catalyst.

The emotional reaction can take place across broadcast and social media, so you must be able to sequence and timeline events to accurately understand the cause of the reactions in order to be able to predict the likely outcomes. For example, depending on the stimuli, the emotions that determine the outcome may be a combination of mistrust and panic leading people to purchase one drug more often than another, or, leading voters to elect one candidate over another. If you apply more, or different stimuli into that crowd, you can actually influence and change the outcome. The important thing is the types of stimuli you apply. If you do not understand the emotional state of the crowd, then you have no way to understand how to move them in order to change the behaviors that you want to change.

CEOCFO: *What might be one thing that you look at and add to the mix when you are doing your assessment that perhaps others do not recognize as meaningful?*

Mr. Thompson: We hold the foundational patent in the digital measurement of emotion. We understand that stimulus is the first step in the brain's cognitive loop. People react subconsciously to stimuli, which creates emotion. Emotions are generally created from stimulation of the five senses. This creates an emotional response, and that emotional response, depending on what types of emotions are at play, will cause a

behavior. That behavior results in an outcome. What we do better than anyone else is understand that entire process and detect and analyze emotions, behaviors and outcomes across all digital media.

CEOCFO: *Where does the technology meet the human factor?*

Mr. Thompson: Our technology platform is completely automated, so it is a large infrastructure that takes in massive amounts of data simultaneously and processes it to extract a wide array of answers. The human element comes in with strategic interpretation. If we are delivering a dashboard to a client, then that client is interpreting the dashboard trend and measurements. If we are delivering insights and research, then our insights team interprets the data and makes recommendations based on the objectives and priorities of our client. For example, if our client is bringing a new product to market, then we recommend the best way for our customer to launch that product.

Using our APIs, we may feed our emotional scores into another system, and customers can then interpret all the data we provide them using their own methods to reach their desired outcome. We work flexibly with customers depending on their needs and can provide our team's expertise as desired.

CEOCFO: *Tell us a little bit about the different services and products you are offering.*

Mr. Thompson: We have a powerful infrastructure that ingests unstructured and structured data from any data source. We have the ability to take that data, emotionally score it in real time, understand all of the emotions around it and all the topics within those conversations. We can semantically tag and geographically locate everything so we can also identify people, places and things.

We understand the timeline and sequence of events, and we identify who is influencing the crowd. We can identify and track these influencers and determine how their influence is moving through the crowd and what type of crowd is following a particular topic. We establish if a crowd is highly structured in its emotions and behaviors or if it moves like a "School of Fish" that is generally unstructured and just reacts to stimuli. For instance, a product like Diet Coke has an audience that's largely a trapped "School of Fish". They exhibit high loyalty to the brand, yet for a variety of reasons, they're an unstructured group. Because of this, Coke's most effective strategy is to simply blast this crowd with messaging. Consider the last Presidential election. President Obama's followers were a crowd type that we refer to as a "Democracy", which is a hierarchal structure with some "School of Fish" characteristics. This type of crowd reacts strongly to a grassroots movement.

CEOCFO: *How important is a person's mood when they are posting and tweeting on social media and commenting in online forums?*

Mr. Thompson: Think about how we communicate on a daily basis. For example, when I write an email to a person, I may write a message that is very short and sweet just because I don't want to put a lot of language into it. The person on the other side interprets the email a certain way. Maybe this person had a problem that morning and something upsetting happened at home. So, when they read my email, they're reading my message based on their emotional state. Are they reading it objectively? Probably not. The words and emotions eliciting the mood state of the person have a direct effect on what is going to happen next. The ability

to anticipate, understand and interpret the emotional cause and behavioral effect is very important.

CEOCFO: *How important are words, and what about the tone of the words?*

Mr. Thompson: When writing, we typically understand that the tone of our words and the language we use will elicit certain emotions from our target audience. Just one word can change the emotional content of an email or an advertisement, or of any type of message you communicate to another person or to a crowd. For one of our clients, we processed and analyzed the content of their advertising campaigns using our system prior to their launch. We showed them that if they ran the campaign as planned, the emotions evoked would not fit their objectives. Using our technology, we were able to tell them that if they changed just three words in their ad copy, they'd achieve the desired result. Words and their tone are crucial for achieving higher engagement levels within every target audience.

CEOCFO: *Are there some emotions you can point a company to that they do not normally consider?*

Mr. Thompson: Because we provide customers with a full picture of what's said and felt by people who are communicating online, our work can uncover surprising details about target audiences. We're taught from an early age that emotions are either positive or negative. This simply isn't true. Emotions can occur in many different intensities and gradations. The average person isn't trained to truly understand all the possible nuances. With our technology, we can identify and track up to 48 emotions and consider combinations of emotions that create these complex nuances. We base our science on the pioneering work of Dr. Robert Plutchick's Wheel of Emotions. Plutchick was a psychoevolutionary psychologist. His work was largely qualitative and we validated and operationalized it. Last year, the Advertising Research Foundation based some of its work around Plutchick's theory and identified the emotions that have to be present to drive consumer purchasing. This is consistent with our own findings.

CEOCFO: *Where else are you finding that understanding emotion is important?*

Mr. Thompson: A great example of the importance of understanding emotion is in politics, and in particular, understanding the role played by fear. For years, we have seen politicians effectively use fear to drive voters to vote one way or another. This is why negative advertising works so well. Fear is a strong driver of attention and engagement.

Emotions have significant value when they are used strategically to move the crowd to do certain things. Joy, anticipation, interest, and all similar types of emotion, drive purchasing decisions every day. Consider Apple as one of the best companies using emotion this way. Since its rebirth under Steve Jobs, their messages have all been designed to evoke emotion. Emotion features prominently in everything they talk about; they use words like beautiful, simple, and gorgeous. They use a lot of emotional tonality in everything they do because they understand that when they connect emotionally with consumers, they'll drive the purchasing decision and cult-like loyalty.

CEOCFO: *Who uses your services?*

Mr. Thompson: We have three primary areas of focus. These are the federal government and intelligence community, large businesses—

many of which are pharmaceutical companies—we also work with political campaigns. We are starting to move into other markets including consumer brands and products.

CEOCFO: *When you are speaking with prospective clients, is there an aha moment when they understand the depth of what you offer?*

Mr. Thompson: One way we create an aha moment is through our Emotional Quadrants. These visualizations summarize and simplify real-time emotional data. As a result, our customers realize they don't have to wait for analyst or market research reports in order to see how they, their products or competitors are performing. Customers can see where they're sitting in any of these key quadrants. This tells them if a brand or a product is likely to succeed, or is already winning, in the marketplace. With our products and services, our customers can access this information on a daily basis and watch changes in trends as they track the effectiveness of new campaigns. Our information empowers customers with the knowledge as to whether their campaigns are working, and if they're not, our customers have all the intelligence they need to be able to fix them quickly and cost effectively.

CEOCFO: *Can you describe an example of a customer campaign that changed because of the information you provided?*

Mr. Thompson: We worked with a customer on a re-branding project that involved a character they were using in their commercials. We showed that it was actually detracting from their new brand. Our findings were surprising to them because they thought the character was great focal point for their campaign. However, this character was actually eliciting strong negative emotions from the audience. We showed the customer the difference in their brand's emotional positioning before and after they began using the character. The way the character was portrayed was negatively moving the emotions of the target audience, and our early diagnosis potentially saved the customer months of research and millions of dollars.

CEOCFO: *It seems your customers can save time and a lot of money on their advertising.*

Mr. Thompson: Yes. For advertisers, it is very important to be able to meaningfully harness the power of data in real time and fully understand the impact campaigns have on a brand's position in the market. Our customers can watch the emotions of their target audience in real time. They understand that not every message or campaign is going to work the way they might expect, and we provide science-based intelligence that allows them to change a campaign as it's running. The insights we provide help advertisers fine tune their messages before they spend large sums of money, and we can help them evaluate the success of a campaign. But this goes well beyond just advertising. We provide a tangible and quantifiable way for marketer's to build emotional brand equity.

CEOCFO: *That seems hard to resist!*

Mr. Thompson: I think it is. This is an industry that is evolving, and the technology is still in the early adoption stage. But I think that through 2015 and 2016 the demand will take off. Forward thinking companies will use emotional and behavioral analytics as a key tool for decision making. This is a required step in order for the industry to increase marketing ROI. If you want to improve the numbers, you have to really understand

the crowd that follows your brand and how to connect with them to motivate them to take action.

CEOCFO: *Final thoughts? What should people take away when they read about BehaviorMatrix?*

Mr. Thompson: We believe emotion moves the world. We are a company with products that are based on advanced science and technology. We have spent a lot of time understanding how people feel, react and behave, and we are the best at doing this. If organization leaders and marketers truly understand their audiences and connect with them at an emotional level, they'll win in their markets. They should talk to us about their business and audiences because we understand how emotion can move their world.

BIO: Mr. Thompson is the Chairman and CEO of BehaviorMatrix. He's a serial entrepreneur who started his first company in 1983, took it public in 1994 and then sold it in 1998. He is the former Co-founder, Chairman and CEO of Innovative Tech Systems, a publicly traded company that developed infrastructure management software used by Fortune 500 companies. During his tenure, Mr. Thompson was the Chief Technologist and Architect of all software products developed by the Company, which serviced clients such as the NSA, Department of Defense, Johns Hopkins Hospital & University and Rohm and Haas (DuPont). Mr. Thompson was the recipient of the Ernst and Young Entrepreneur of the Year award in 1998 in the category of fastest growing software company for the Mid-Atlantic Region.

