

TRENDSPOT

EMERGING TECHNOLOGIES THAT CAN IMPACT THE FUTURE OF PHARMA MARKETING

THE MARKETING
INTELLIGENCE ENGINE

THE PROMISE OF NATIVE
ADVERTISING

THE RISE OF THE
SOCIAL ROBOT

AND MORE...



JUICE
PHARMA WORLDWIDE

WELCOME



Forrest King
JUICE Founding Partner
Chief Innovation Officer

Amazing. Inspiring. Mind-blowing. The list goes on. In this special issue of TRENDSPOT we capture the unique experience that is SXSW, identifying the emerging technologies that could impact the future in pharma. You will read about things like hyper targeting in the Machine Marketing Age, Artificial Intelligence in predictive modeling, Social Robots, Digital Physician Influencers, and how all of these innovations will weave together to improve the standards of healthcare globally.

We live in an age of miraculous change inconceivable to most of us only a few years ago—if not a few months. The scorching question is: How do you keep up? How do companies and leaders in healthcare evolve quickly enough to keep pace while entire healthcare markets are emerging in front of our eyes? In this issue of TRENDSPOT, we open the door on some of the innovations catalyzing widespread change.

The tech-healthcare race is on and the real winners are patients and consumers. We are fortunate to witness and be part of the creativity that will transform the health of our families, friends, and people everywhere. I hope our excitement is contagious and the content in this issue inspiring. For more innovation goodies, you can subscribe to our blog at juicepharma.com or our YouTube channel.

Enjoy,

A handwritten signature in black ink that reads "Forrest King".



WHAT'S NEW, WHAT'S HOT— WHAT HAS PRACTICAL APPLICATIONS IN PHARMA

Each year, JUICE sends a taskforce of digital strategists, writers, designers, and production professionals to Austin to attend the annual South by Southwest (SXSW) Interactive Conference—the premier showcase for emerging technologies that represent the future in pharma innovation. This report distills the key learnings for industry professionals to consider as they move forward with breakthrough integrated programs. **J**

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THE MARKETING INTELLIGENCE ENGINE

ADVANCING PHARMA MARKETING TECHNOLOGY



Technology can't replace humans, but it can make us dramatically better marketers

► **We have entered the Marketing Machine Age.** Marketing automation has already brought us sophisticated tools that target our customers and give us a window into what they want, where they are, and how to reach them. But the next frontier is the algorithm-based marketing intelligence engine, a potent mix of historical performance data, industry and company benchmarks, natural language processing, and real-time analytics. Using subjective human inputs that are layered against business and campaign goals, this technology can recommend strategies that have the greatest probability of success—and make them instantly actionable.

In a SXSW forum, Paul Roetzer, a marketing intelligence consultant, made a compelling case for all marketers to become knowledgeable about the coming marketing technology revolution. Pharmaceutical

products are natural beneficiaries of these advancements. More than in almost any other product category, pharma marketers need to efficiently hyper-target their messages to the right people at the right time.

Pharma marketers will soon have the ability to use the emerging marketing intelligence technologies that will enable them to do more with less as they run personalized campaigns of unprecedented complexity.

Financial services already use marketing intelligence technology with remarkable results – 60% of trades are made in milliseconds by machines with little or no human input

Why is marketing intelligence an irreversible trend? Because we create 2.5 quintillion bytes of data every day (one quintillion is followed by 18 zeros). And although today's

customer journey creates rich data at every stage, marketers use data in only 11% of their marketing decisions—and pharmaceutical marketers lag behind even more.

Technology can't replace humans, but it can make us dramatically better marketers

Marketing intelligence engines are the next step forward. Artificial intelligence (AI) may seem like science fiction, but it is already being used in some sophisticated applications. True, AI is still years away, but Facebook is using a form of AI in its “deep learning” technology that filters news feeds and recognizes facial expressions to read the user’s mood. Other technology in use can retrieve and analyze vast data sets, identifying insights through natural language and “cognitive intelligence” algorithms, then structuring a brand narrative to be distributed to the most appropriate social media or branded Web properties.

Pharma marketers will soon be hearing a lot about marketing intelligence engines as today’s marketing automation technologies take a back seat to these powerful new tools. **■**



IT ALL STARTS IN AUSTIN



LOCATION LOCATION LOCATION

It’s a city with no shortage of accolades—home to the Texas State Capitol, the Live Music Capital of the World, and, according to *Forbes Magazine*, the Fastest Growing City in America. But for the 134,000 people who flock here each year to experience the wonders of SXSW....

Austin is simply **Awesome**.



PERSONALIZATION FOR THE PEOPLE

HOW PHARMA CAN JOIN THE REVOLUTION



How can marketers effectively reach healthcare consumers without compromising trust?

► **While we often think of “awareness” in terms of a mass market, all that counts is awareness of your brand and its benefits to your market.**

So how can marketers effectively reach healthcare consumers without compromising trust?

At SXSW, a panel of experts discussed the use of marketing automation tools in a responsible and nonintrusive way, achieving great results in both sales and customer satisfaction. The panel included Sucharita Mulpuru, Vice President and Principal Analyst at Forrester Research, and Ari Levy, Senior Tech Reporter for CNBC. And while none of the panelists were pharma marketers, the information they provided is highly relevant to industry professionals.

Marketing automation has made targeting and re-targeting efficient and relatively inexpensive, but the best marketers have learned

to leverage other tools to create seamless interactions with their customers. Technology platforms such as Google and Facebook dominate the marketing automation arena, possessing huge data sets that locate prospective customers while determining their preferred channels and devices. Because they need to constantly acquire fresh data, these platforms have a vested interest in not being perceived as intrusive—their goal is to be perceived as helpful and customer-friendly.

Mobile technology has opened up a new wealth of data for major players such as Google, Facebook, Amazon, and others. Mobile apps ask customers to sign up through Facebook, for example, in order to import Facebook’s huge amount of data, creating a seamless integration of data that the user has already offered.

The trend of accessing and building upon data through multiple platforms continually builds the data that leads to predictive modeling—with all of the information supplied after the user agrees to a platform’s privacy rules and voluntarily opts in.

Although a customer’s health data can’t be acquired unless the user opts in and agrees to share his or her health data in a HIPAA-compliant environment, **pharma marketers can still join the marketing revolution, reaching customers through targeted demographic data, using the prospective customer’s previous online interactions to determine where and when to best interact.**

If these marketing innovations are used responsibly through seamless, nonintrusive marketing automation tools, everyone will benefit—the brand, the customer, the caregiver, and the healthcare professional. 📺



PRECLINICAL DETECTION OF NEUROLOGICAL DISEASE

UTILIZING SOFTWARE FOR EARLIER DIAGNOSIS

► **There's no shortage of apps and online software focused on tracking and managing a person's physical health.** However, the application of software to track and monitor cognitive health has been an elusive goal—until now.

As part of a SXSW program entitled *Hacking the Brain: What's Next for Neuro-Health*, Dr. Murali Doraiswamy, Professor of Psychiatry, Duke University, and a member of the Duke Institute for Brain Sciences, presented emerging capabilities for tracking and monitoring cognitive ability through online programs and wearable technology.

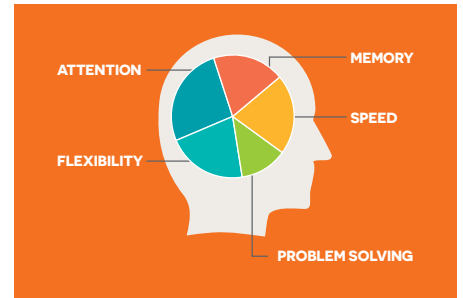
One of these programs is called The Human Cognition Project, from the researchers who developed the Lumosity brain training game. This research has already amassed a huge database of cognitive content based on the millions of people already using Lumosity, including how sleep, exercise, or alcohol can

affect cognitive abilities. They are now exploring how this technology can track and monitor patients who may be in the preclinical phase of Alzheimer's disease.



The application of software to track and monitor cognitive health has been an elusive goal—until now

The challenge of diagnosing and treating Alzheimer's and other neurological diseases is that patients primarily present in the clinical, symptomatic phase. For early detection or prediction in the preclinical phase, physicians only have access to expensive technology such as MRIs.



Utilizing the existing Lumosity brain training software may help physicians monitor patients' cognition, to detect when there are changes happening in the brain; ultimately leading to earlier interventions for neurological problems

Just imagine if we could use similar gaming software to detect rare diseases earlier in the diagnostic process. If researchers can characterize better early clinical markers, then programmers could potentially code the software to detect these characteristics. Patients may even be able to better self-identify as having symptoms that would motivate earlier interaction with healthcare professionals and treatments. 📌



BUILD IT AND THEY WILL COME

The Interactive portion of the Festival alone attracts an astonishing array of exhibitors and speakers—from promising start-ups to established industry giants flocking to SXSW to share their vision of what lies ahead.

In 2014:

32,798 participants **82** countries **1,100** conferences **2,377** speakers

THE PROMISE OF NATIVE ADVERTISING

AN OPPORTUNITY FOR
PHARMA MARKETERS

- ▶ A SXSW panel discussion entitled *The Future of Native Advertising* brought this newest form of integrated advertising into focus for marketers who are looking to build trusting relationships with their customers. The concept is relatively simple: Native advertising is a form of paid media where the ad experience replicates the natural form and tonality of the user experience in which it is placed.

Done well, the result is a seamless, non-intrusive yet involving part of your customers' overall digital experience. And while pharma still struggles with how to best utilize social media as a marketing tool, native advertising allows us to provide users with compelling content that draws them into the brand. There are no specific FDA guidelines for native advertising—the best course of action is to use existing brand promotional guidelines and make sure the content is clear and not misleading.

Native advertising can be an ideal way to form a bridge from unbranded to branded content—on the user's terms

This allows you to connect and engage with your customers in a



A seamless, non-intrusive part of your customers' overall digital experience

way never before possible. Native advertising is a one-to-one awareness vehicle where the user pulls the content, as opposed to mass-media awareness advertising that depends on “push” messaging. Today's consumers want to be in control of the brand experience, interacting where and when they are ready to receive information. Since much of today's social media is consumed on mobile devices, short-form content is always best.

Expand your thinking way beyond Facebook, matching the brand's value proposition to the most appropriate platform

You want to create content that is humorous or “light” for one platform, and serious and authoritative for another. And don't stress over production values, since they vary

widely from platform to platform. Remember, your brand is trying to fit in—not intrude.

Each instance of native advertising can have a short shelf life, lending it to experimentation and pilot testing. Native advertising is also a challenge to media buying agencies that have to think beyond Gross Rating Points and standard ROI models. The good news is that many social media platforms have developed sophisticated ways to track engagement and customer interactions, and effectiveness can be measured very quickly.

Finding the right platforms and creating the right native content is a challenge for creative agencies, but in today's shifting promotional environment, native advertising is well worth the effort. ▣

FIGHTING THE DATA DELUGE

HOW TO POWER CONTENT FOR BETTER ENGAGEMENT



Curating content is not just for the big boys...the tools that exist today are available to brands right now

- ▶ **How can content creators ensure that the content they create actually reaches their target audience?** The Internet contains nearly 5 billion pages, with more added every second of the day. While “Search” is indeed a fantastic way to navigate through the massive amounts of data we create and consume, is it the best way to find what you’re really looking for?

Now more than ever it is essential to embrace content curation to ensure that both creators and users will achieve their goals

Big-name media companies such as Netflix and Spotify use curation to recommend content – movies and music respectively – driving more than 70% of clicks to specific content on a site. More importantly, content is also being curated behind the scenes by organizations such as BuzzFeed, where so much of the shared content we see every day comes from, as well as Storyful, a company that utilizes a proprietary platform with journalists that discover, verify, tag and categorize, and acquire the rights to content created throughout the Internet. This is immediately searchable and scannable by their clients, providing them with an endless source of content. Many of the videos you see every day—such as the viral videos of cute cats that seem to crop up everywhere on Facebook and other social platforms—come through the Storyful system.



At SXSW, there were multiple presentations and seminars focused on the growing importance of content curation

But curating content is not just for the big boys...the tools that exist today are available to brands right now. Why would an individual brand want to curate content? Because it's still the best way to engage your audience in conversation and encourage engagement to a deeper degree—and that content does not have to be originally created. Like a masterful DJ spinning in a club, talented content curators can produce a continuous stream of content to capture the imagination of any audience they choose.

As healthcare marketers, we know that content from online scientific publications and medical journals is a wonderful way to disseminate the science, laying the track for brand-specific promotion. How can we take this to the next step? Establishing systems for curating content and offering it to our target markets on a regular basis, and employing technology like the Storyful platform to power our efforts, is not just a trend but a core part of the future in pharma communications. 📌



A MARRIAGE MADE IN MUSIC

Austin's reputation as a party town goes back to the 19th century, when nightspots along 6th Street were frequented by General Custer's troops after the Civil War.

Since then, the city has exploded with a higher concentration of original music clubs than anywhere else on the planet.

It was the music that inspired the first SXSW in 1987, inviting industry professionals to come see what was happening in Austin.

In 1994, SXSW added Film and Interactive to the mix, securing Austin's rightful place as THE destination for all things creative.

THE RISE OF THE SOCIAL ROBOT

IMPLICATIONS IN HEALTH AND WELLNESS MARKETING



► We already interact with programmed robots that exhibit some facets of artificial intelligence—the iPhone’s SIRI is a good example. SIRI “learns” through interactions with the user, adjusting to their individual needs and habits. The social robot combines a more sophisticated artificial intelligence with a physical manifestation, interpreting natural forms of communication like speech, eye contact, tone-of-voice, body language, and facial expressions.

Social robots can act as health and wellness coaches for those living with chronic conditions, as elder care companions, mental health therapeutic coaches, and more

During SXSW, a number of experts and developers discussed the possibilities for social robots and their applications in healthcare. Cynthia Breazeal, head of the personal robots group at the MIT Media Lab, gave a talk entitled *The Personal Side of*

Robots, discussing a new generation of robots capable of building emotional rapport through human-robot interfaces (HRI), providing a new level of sophistication in artificial intelligence.

Consider the obesity diabetes epidemic, then imagine a small robot called AUTOM that can sit on a tabletop and serve as a personal health coach and partner. A study of AUTOM demonstrated that consistent



Human-robot interfaces could provide additional support to help patients manage their disease

social interactions with a person suffering from a chronic condition provides a set of tools along with a profound emotional connection, a vital component for creating sustained behavioral change.

Implications in pharma

Over 60% of doctors are now working in large health systems that limit

prescribing authority and constrict the doctor's time with a patient. Human-robot interfaces could provide additional support through highly engaging and effective content platforms designed to help patients manage their disease.

The high level of engagement these social robots offer along with the high tech data capture and analysis their

interface provides can lead to higher levels of adherence and clinical improvements.

This could lead to a transformative partnership between human-robot interface developers and pharmaceutical marketers in the management of sustained behavior changes that have a lifelong impact on a chronic or rare disease. ■

SOCIAL ROBOTS

IMPACT ON DELIVERY OF CARE

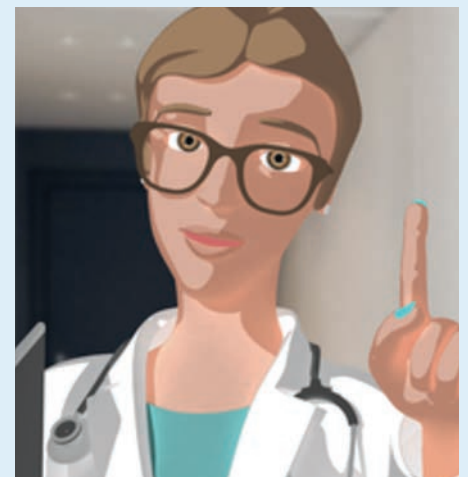
- ▶ What if time-constrained doctors could call upon a virtual health aid with all the training of a Physician's Assistant at any time, day or night?

Enter Sophie, a virtual health aid (VHA) avatar with some unique characteristics. Sophie is a "social avatar" who can serve as a complementary staff member to skilled medical practitioners. She combines 3-D animation with artificial intelligence that can understand natural language, body language, tone of voice, and mood. In other words, she can respond with *heart*. She can ask questions to collect information on what's

ailing the patient and take a patient's history. And through the interface, patients can even upload pictures of their condition.

Social robots and avatars represent a revolutionary new content platform

Besides assisting the HCP in the office, social avatars like Sophie can augment a constrained sales and marketing department within a pharmaceutical company. Imagine a "force" of social avatars deployed to call upon doctors between rep sales calls—an intriguing idea that could lead to increased access and interaction with customers. ■



MAPPING PERSONALITIES

DIGGING DEEPER INTO
PATIENT POPULATIONS

- ▶ **Wouldn't it be great to get right inside your customer's head to predict their every need?** While technology hasn't quite gotten us that far, "measuring" a patient's personality could be an important step in that direction.



At SXSW, a company called Traitify demonstrated an application that provides a fun interactive way to gain deeper insights into who your patients really are, both as individuals as well as a group. The premise is that if you know more about their personalities, you may know how to better serve their needs—whether it's knowing what kinds of tools they would respond to, or how inclined they are to change their behaviors.

Personality determines how we respond to the world around us. It comprises individual qualities or traits that can be categorized into distinct collections of traits or personality types

Traitify has created a standard set of visual cues that help determine the personality traits of users. Online



patients select "Me" or "Not Me" in response to a series of images. Based on their answers, they are provided a summary of the type of person they are. This may seem like free association, but the process is actually methodical and purposeful in its design and repetition. With each image, users are encouraged to move toward or away from concepts and images they do not identify with.



When a person finishes the assessment, Traitify reveals their personality type. The main result is a blend of the top two dominant personality traits in addition to the less dominant traits. After individual results are tallied, Traitify tallies the group results as well.

Customizable assessments

It's important to know who your patients are and what motivates them. Traitify can work with pharma marketers to customize the assessment, so the results are more relevant to the brand's needs. These insights can provide valuable knowledge to help shape desired behaviors, deliver more relevant tools, or simply deepen your knowledge of your patient population.

Getting personal with your patients

Gaining insight into how patients think and feel may give you the edge when it comes to knowing how to best service your customers, enabling you to deliver the most insightful and actionable communications. ▣



Shape desired behaviors, deliver more relevant tools, or simply deepen your knowledge of your patient population

REAL-TIME CONNECTING

THE DIGITAL PHYSICIAN INFLUENCER CHANNEL



The volume of physicians who seek online educational content and converse through social media channels has grown exponentially

- **Physician influencers (KOLs) are natural content creators and curators.** As a group, they have practiced the principles of content marketing long before the term found its way into industry jargon. Through publications in prestigious journals, institution affiliations, presentations at key conferences, and providing peer education, KOLs have always served as the singular gateway to establish credibility with physicians—until now.

Through the advent of social and digital platforms, a new type of influencer has emerged—the Digital Physician Influencer

Over the past decade, the volume of physicians who seek online educational content and converse through social media channels has grown exponentially. Physicians are creating and sharing content that aggregates to a “digital voice” resonating with the potential to directly influence healthcare decision-makers, and potentially impact brand choice. However, the inability to accurately access, analyze, and map this sphere of influence has made integration within the pharma marketing mix a significant challenge.

At SXSW, MDigital Health strategist Greg Matthews demonstrated a system that maps the digital footprint of over 475,000 US physicians, which links to their National Physician Registry Records. The MDigital Life database then provides a full suite of powerful analytics that allows pharma marketers to quickly assess the scope of physicians’ online content and unlock its full potential.

Evaluating the social-digital footprint of these influencers enables us to identify new insights, new ways to disseminate content, and new platforms to engage in information sharing and education

While KOLs will always remain the mainstay of influence in pharma, Digital Physician Influencers represent a potent engagement channel to disseminate content with the potential to influence peers, hospital systems, payers, and patients. 📌

“South by Southwest Interactive is one of the largest digital festivals in the world. Anyone who is in the advertising or digital industry should definitely have the event on their bucket list.”

Bizcommunity.com, March 2014



**SEE Y'ALL
NEXT YEAR!**

CREATIVITY YOU CAN LOVE ON



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