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ABOUT THE COVER

QR codes have become ubiquitous as the number of people owning smartphones has increased over the past few years. According to a Pew survey in September 2012, 45 percent of U.S. adults own a smartphone—66 percent for the 18–29 age group.

ABOUT THIS ISSUE

From the printing press to the camera, advances in technology have always influenced the arts. Today, the rapid expansion of digital technology is changing the art world in entirely new ways. Books are read on Kindles or iPads, drastically altering the brick-and-mortar landscape of bookstores and libraries. Filmmaking has moved into computer-generated imagery (CGI), a technology that has helped elevate video games into an art form. Some museums are experimenting with crowdsourcing as curatorial strategies, and many more have turned to QR codes, apps, and other online tools as ways to disseminate exhibit information. And, of course, the advent of Twitter, Facebook, and blogs has permanently changed the way stories are told.

So how are arts organizations viewing this change? In a survey of NEA grantees conducted by the Pew Research Center, 81 percent of the respondents stated that the Internet and digital technologies were very important for promoting the arts, 78 percent said these technologies were very important for increasing audience engagement, and 92 percent agreed that technology and social media have made art a more participatory experience. Of the 1,244 arts organizations surveyed, a whopping 99 percent have their own website and 97 percent have a social media presence. And they are using social media to interact with their audiences, either by sharing content, conducting their own online surveys and polls, or hosting discussions. (You can read the entire report at **www.pewinternet.org/Reports/2013/Arts-and-technology.aspx.**)

It's no surprise that arts organizations are making use of the new technologies to further their missions, and in this issue we look at some of the more interesting ways in which technology is being used in the arts: from the Smithsonian's mobile strategy to the use of video games for learning to creating a transmedia platform for theater, from the effect of e-books on literature and the publishing industry to the creation of "location-aware" music that changes as you change locations.

These innovative uses of technology to reach new audiences and create new art are just the tip of the digital iceberg, and as we move into the second decade of the 21st century and technology continues to evolve, the uses will just get that much more interesting.

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STORIES

Beyond Museum Walls

The Smithsonian Institution's Mobile Strategy

BY REBECCA GROSS

Nancy Proctor, Smithsonian Institution's head of mobile strategy and initiatives.

PHOTO COURTESY OF NANCY PROCTOR

In the past few years, museums and other arts institutions have been able to extend their reach far beyond their brick-and-mortar walls by utilizing new technologies and trading in their "temple on the hill" reputations for interactive, user-friendly identities. Few institutions have handled these changes as adeptly as the Smithsonian Institution. With 19 museums in Washington, DC, and New York, the Smithsonian has amplified its campuses with dozens of apps, blogs, mobile sites, Twitter feeds, Pinterest boards, and Facebook pages. Overseeing much of it is Nancy Proctor, Smithsonian's head of mobile strategy and initiatives. In addition to her current work at the Smithsonian, she is co-chair of the Museums and the Web annual conference, and manages **MuseumMobile.Info,** a site designed to facilitate and inform conversation about museums and technology.

Recently, we spoke with Proctor about her work at the Smithsonian, and the effects and future of museums in the digital age.
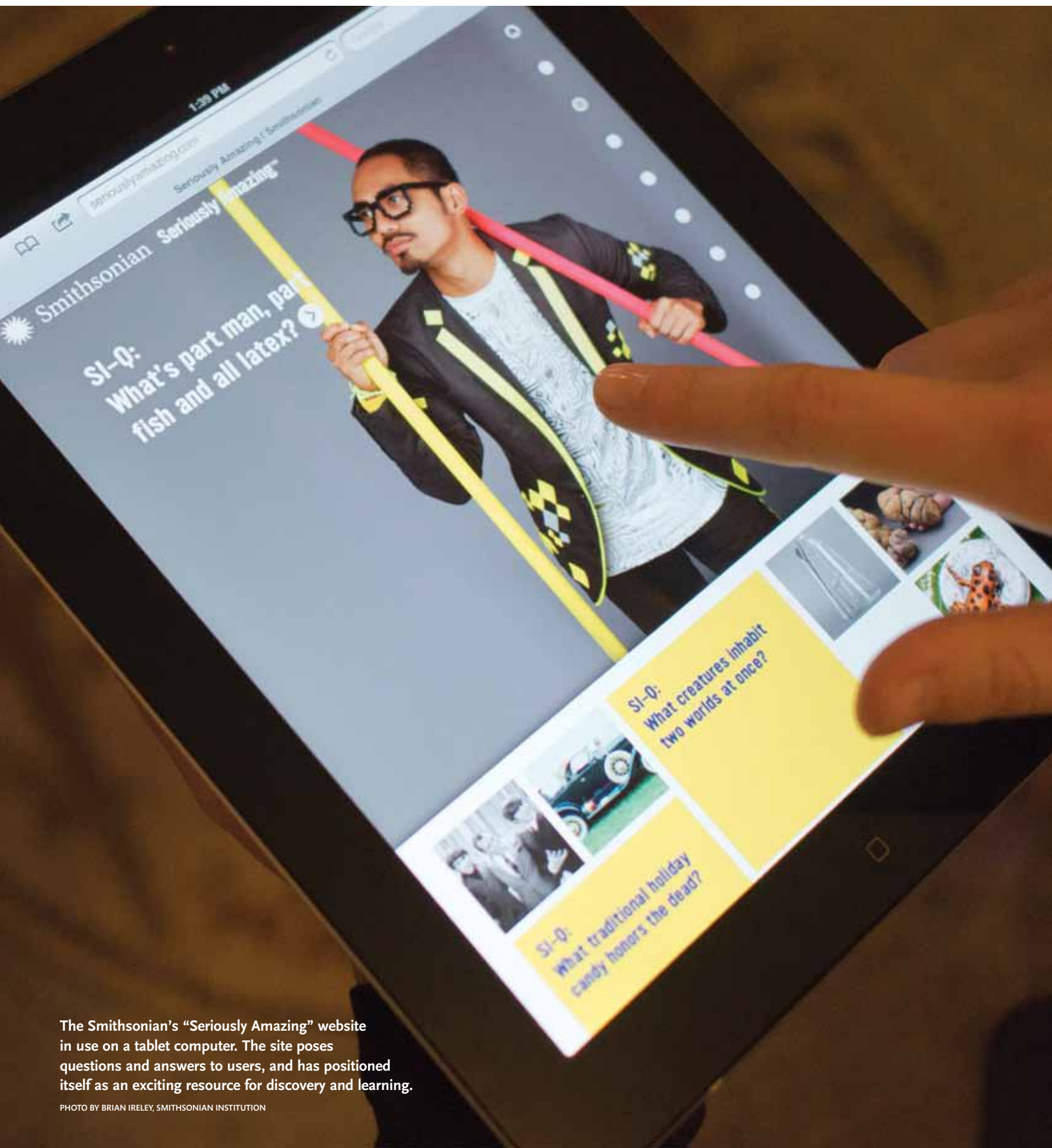
The Smithsonian's "Seriously Amazing" website in use on a tablet computer. The site poses questions and answers to users, and has positioned itself as an exciting resource for discovery and learning.

PHOTO BY BRIAN IRELEY, SMITHSONIAN INSTITUTION

NEA: The Smithsonian is obviously unique in that there are 19 museums. How has mobile strategy been used to solidify the museum's collective identity?

NANCY PROCTOR: I don't know that it has. But it certainly is very sympathetic with the new brand strategy that the Smithsonian has adopted. The new brand strategy really espouses some fundamental social media principles about it being as important to listen as to speak. [It's] trying not to occupy the position of "the sage on the stage," as they call it, but to be more in conversation with our audiences and responsive to them and focuses on engagement in new ways.

NEA: In terms of reversing "the sage on the stage" mentality, do you think crowdsourced curation poses any risk in removing a layer of expertise that the Smithsonian is known for?

PROCTOR: In short, no. This is the same conversation that's going on all around the world. Putting an expert's knowledge in conversation with a larger audience is frankly how experts have always [enhanced] their knowledge: through networks and conversations with a wide range of people of varying expertise. Nobody should feel threatened by that. If anything, with the increase of information on the Internet and in the network world in general, I think the value of experts in helping us navigate through the noise is increasing the more that they are participating in that wider conversation. Beyond that, experts make mistakes all the time and the "lay" audience or non-experts (i.e., people who don't work for the Smithsonian) have a hell of a lot of expertise that we would like to tap into.

NEA: Apps like LeafSnap [see sidebar on page 6 for description] go beyond what's on exhibit while still promoting Smithsonian's main mission. In this regard, how is technology changing the traditional museum experience?

PROCTOR: Museums have to think far beyond their physical buildings and the people who come to them now. Obviously, an increasing majority of our audiences are carrying around some sort of a mobile device. Those devices are network-connected, which means that they enable us to engage people not just in

The Smithsonian's National Postal Museum offers *Owney: Tales from the Rails,* a new free e-Book narrated and performed by country singer Trace Adkins, in two ways—online and as an Apple iPad app. IMAGE COURTESY OF SMITHSONIAN INSTITUTION

dialogues, but to connect them to larger, multimodal conversations. So certainly for the Smithsonian, with its mission of increasing and diffusing knowledge for all, it would be very shortsighted not to avail ourselves of this platform, which is nearly ubiquitous now and so very powerful in creating the kinds of connections and conversations that would really help us further our mission.

NEA: In your opinion, what are the benefits of making museums increasingly social experiences?

PROCTOR: For the Smithsonian, that's a no-brainer. We're the people's museums, so if we want people to want to come here, or want to use our collections online, or simply be part of conversations that the Smithsonian has started or is part of, we have to make those experiences engaging. And for a lot of people, the social nature is what makes something engaging. Now that's not true of everyone. Some people certainly seek out museum experiences precisely because they want to get away from everyone and be contemplative, and that's fine, too. We need to support that as well. But I think, typically, museums have done a much better job of supporting scholars and subject specialists than they have more general audiences who might be interested in a more social experience. When you think about working to find ways that an interaction with the

Some Arty Apps from the Smithsonian

Leafsnap: Using visual recognition software, this app allows users to identify tree species simply by taking a picture of its leaves.

Access American Stories: This app accesses audio descriptions of museum objects as recorded by museum visitors. The recordings allow those with visual impairments to "see" an object with their ears.

goSmithsonian Trek: Instead of a traditional museum tour, go on a scavenger hunt—complete with clues and challenges—through the most popular exhibits at nine Smithsonian museums.

Stories from Main Street: This app collects users' stories of small town and rural life. Record your own, or listen to those left by others.

Romare Bearden Black Odyssey Remixes: This app allows users to create their own digital collages using personal photos, words, and cut-outs, as well as snippets from Bearden's works.

museum—as a physical visitor or through some sort of online participation—can transcend generations, that [interaction] can involve families or classrooms. That's very powerful indeed in terms of building an audience and a brand loyalty that will be sustainable for the long-term.

NEA: Speaking of sustainability, technology is obviously changing at an incredibly rapid rate. What does the Smithsonian do to try and ensure that the technologies it is developing are sustainable?

PROCTOR: We need to do a much better job of thinking about how to work with content and content providers who are already out there, be they Wikipedia or crowdsourced content like what you might find on Flickr or YouTube—making sure that we're not re-inventing the wheel.

But one thing that is starting to happen more and more is that when museums invest in creating content, they're starting to think a little bit more about how we can use it in multiple places. That's really a function of the huge cost of content generation. It should be the most expensive thing that we do, and therefore we should be thinking about how do we use it in as many different ways as possible and ensure that we can continue using it over time. In the past, a shortsighted approach has put investment in the technology over investment in the content, and the technology, as you say, is so rapidly obsolete.

NEA: What kind of experience do you think the Smithsonian is offering people who for either geographic or economic reasons aren't able to visit Washington?

PROCTOR: The thing about the Smithsonian is it's so big and there is so much going on, that I guarantee you I only know about a small fraction of it. Every day I come across some amazing thing that we're doing that I didn't know about. So there are pockets of real excellence in terms of using technology for outreach. I do think that that's a critically important tool. That's why I'm working with mobile: not just because I want to reach the people who come to our physical buildings, but because I want to reach everyone everywhere, whenever they might want to connect with us.

The director of the [Smithsonian] Freer Sackler has expressed this very well, I think. Julian Raby said that the first generation of museums on the web was about putting information out there, putting collections online, telling people what we've got. That was important because we have a lot of stuff that's simply not visible in the buildings, and making that content and data accessible online is a really important mission. But now that a lot of that stuff is out there—we know how to do that now. We need to start thinking about how do we use those network platforms, those digital platforms, to *create* experiences, not replicate the experience of a physical museum visit. I think you're fighting a losing battle if you're trying to make

up for geographic distance and physical separation. But [you can] provide complementary and alternative experiences so that even people who cannot afford a hotel room to come to Washington, DC, or to New York, can still have a profound and moving and transformative experience of the Smithsonian. That's our challenge now, to think about how to use technology to enable people to engage not just on an intellectual, informational level, but to engage emotionally as well.

We also need to be thinking beyond even web and mobile to how technology in physical installations can allow access to content that wasn't previously available. Again, Freer Sackler recently hosted the installation called *Pure Land* by the ALiVE Lab out of City University of Hong Kong. That's a work created by the artist Jeffrey Shaw with Dr. Sarah Kenderdine and their team. They scanned in extremely high-resolution images of one of the caves in Dunhuang, China, which are almost impossible for anybody to visit. A small number of the caves are open for short periods of time, but you're in darkness to preserve the paint of the caves. You can explore with a flashlight. But with these high-resolution scans installed in a virtual reality cave, you can virtually visit those caves and zoom in and see details that, frankly, would be impossible or practically impossible to see in person. We had a similar experience when we joined the Google Art Project and they did Google pixel scans of selected artworks. The way that you can zoom in and see the brush strokes and the cracks in the paint—again, that's a level of access that's hard even for the curators and conservators in charge of the objects to get. Those are obviously really important uses of technology, but, again, they're just tools. They're just supports for getting closer to the content. They're not the end in and of themselves.

NEA: What do you see as the long-term effects of technology on the museum world?

PROCTOR: I think it's easy to get distracted by the gadget side of technology and think that, "Oh, if we have an app then the museum's totally different." For better or for worse, quite often new technologies come into old institutions and, frankly, not much changes. The museum is still structured in the same way. There might be different people in power, but the structure of power remains the same in terms of who calls the shots and what a museum is and what it does and how

The Smithsonian's National Museum of African Art has launched the Smithsonian: Artists in Dialogue 2 app for iPhone and iPod Touch. PHOTO COURTESY OF TRISTAN INTERACTIVES, INC./ SMITHSONIAN INSTITUTION

it communicates with the public. So what I would hope is that we're inspired by technology to interrogate the way that we've always done things. Sometimes we will find that new platforms and new ways of working with technology will give us ideas about how to fundamentally restructure our institutions and change the way we work. Other times it might point out that actually certain practices have been around for a long time. The Smithsonian has been crowdsourcing since the mid-19th century when it opened its doors. It wasn't using apps; it was using the telegraph machine. But it was the same fundamental concept of we're the people's museum and we're built in partnership with the people. The technology gives us more powerful tools for achieving that mission…. It's so easy to fall into these knee-jerk polarizations of "I'm pro-technology," "I'm anti-technology." The really useful questions lie much deeper than that, I think: What do we want to change and how do we want to change it? ▲

Level Up!

Learning to Learn through Video Games

BY PAULETTE BEETE

Video games have come a long way since 1958 when William Higinbotham created *Tennis for Two,* nearly two decades before Atari was even a start-up. In summer 2012, the Smithsonian American Art Museum hosted the groundbreaking exhibit *The Art of Video Games,* and New York's Museum of Modern Art closed out 2012 by accessioning several games into its permanent collection, including *Pacman, Tetris,* and *Myst*. Still, the NEA raised some eyebrows in 2012 when it encouraged potential grantees to consider projects involving video games. The problem? Not everyone seems to agree that video games are part of the arts.

But let's face it, without a visual artist, a musician, or a dancer on the team, there'd be no *Angry Birds* or *Dance Dance Revolution.* The agency's grants to support video games indicate the crucial role artists play alongside technologists in creating games, while reflecting the agency's support of innovative projects that fall outside the traditional boundaries of fine arts. Tracy Fullerton of the University of Southern California and Jan Norman of Young Audiences, Inc. (YA), both recent NEA grantees, know first-hand that arts are equally as important as technology whether you're a game designer or a gamer. A classic work of art—Henry David Thoreau's *Walden*—is the subject of Fullerton's game in progress, while Young Audiences has adopted video game design as a strategy for rekindling a love of learning in young people while also engaging them in the fine arts. In both cases, the arts are front and center as game-changers.

Amanda Taylor, a student at Heights High School in Wichita, Kansas, learns to design a video game as part of Young Audiences' program. PHOTO BY KATIE LYNN

DESIGNING A LOVE OF LEARNING

Norman, Young Audiences' director of education, research, and professional development, described the mission of the 60-year-old organization as "[thinking] about what it is that we learn from the art-making and the art-thinking process that can help inform us, and make us better able to learn in other subjects." Last year, YA piloted a two-part immersive game design curriculum intended to cultivate skills such as critical thinking and collaboration in young learners by asking them to

Students at Cleveland School of the Arts in Ohio working on designing video games. PHOTO BY JOE IONNA

create video games, and to equip educators with the necessary skills to facilitate student projects.

The program is rooted in the belief that "game-making is a composite of all the arts," said Norman. "You can't create a game without…looking at and using the visual arts to create the background, to create all of the things that make it exciting. You would likewise need to complement it with music and you also need to have good writing skills."

Norman believes the curriculum not only develops specific fine arts skills, but also teaches "design thinking," a critical skill in the 21st century. As Norman explained, design thinking is an iterative process that includes "identifying the intention, defining what resources you have, gathering information,…[and exploring] different possibilities through this reflective process and authentic assessment…. It's essentially the exact same process that every designer goes through and that every artist goes through and that applies to any kind of learning in life."

To borrow a phrase from the gaming world, YA's project is "multi-player;" YA designed the program in tandem with Laguna College of Arts and Design (LCAD), working closely with Jack Lew, the college's then-dean of visual communication, a former colleague of Norman's, and a pioneering game designer at Electronic Arts. LCAD already boasted a summer game design program for local high schoolers, so the partners were able to build on that curriculum, incorporating the professional development aspect for

teaching artists and classroom teachers. Both cohorts work in teams to learn all of the aspects of game design, from creating the look and sound of the game to writing the player "script" to programming.

Mentorship is a critical element of the project: the classroom-level teachers are mentored by professional game designers, the students are then mentored by the newly trained educators, and finally, as students acquire advanced skills, they, in turn, mentor each other and new students.

Another important element, according to Lew, is that the educators develop games around their particular school subject, which for one Kansas teacher was language arts. As Lew described, "The teacher was working with the students on developing a game or games related to what they were reading, which [was] *Tom Sawyer.* So the player actually had to gather information at different sites related to locations, like Hannibal, Missouri, within the story…. Even in that particular language-arts class, there would be certain graphics and visuals that the students had to create. They had to work with art and sound and programming and design thinking."

The immersive game design project debuted at three YA affiliate sites—YA of Northeast Ohio, Arts Partners Wichita, and YA of Indiana—through a combination of summer, in-school, and after-school class time. By spring 2013, Norman expects the video game program will involve about 1,200 students. In fact, the Ohio program hopes to springboard into a

game design-focused high school come fall.

In addition to growing enrollment, YA is looking at various ways to measure the success of the project. "We want to see students not only learn to solve certain problems but to be aware of their learning. In other words, learning to learn with an ability to be articulate and explain what that learning is," said Norman.

Lew added, "I want [students] to know that learning can be fun. I want them to know that engagement with subject matter that's challenging can lead to some exciting results, and that good things don't come easily."

TAKING ON THE PERSONA OF THOREAU

If Lew is correct that a measure of success is engaging with challenging subject matter in pursuit of exciting results, then Tracy Fullerton's *Walden* project is already a hit. What could be more challenging than making an interactive 21st-century video game out of a nearly 300-page, 19th-century text comprising equal parts philosophical treatise, nature guide, and outdoor-living manual?

According to Fullerton, the idea for the game sparked while she was simultaneously visiting Walden Pond and reading Thoreau's tome. "I started thinking about how his experiment was…a way of trying to understand the world and his place in it, and the changes that were going on around him." Fullerton—an experimental game designer—was struck by the author's articulation of what he considered the essentials in terms of his relationship with nature and with society. "The more I thought about that…the more it seemed like a really interesting and playable system, which I could express in a game and which a player could take on for themselves."

Fullerton and her team, however, are not striving for a slavish recreation of the text. Rather they are working toward what Fullerton calls a "translation" of *Walden* into a different aesthetic form. "You do begin in July, which is when he first went down to live at the pond, and the first thing you do is you build your cabin. So it does begin at the outset with the same sort of start of the adventure. But then we let you explore and play out the experiment on your own." As the game progresses, the player—taking on the persona of Thoreau—has to satisfy basic tasks, such as chopping wood and picking berries, after which he or she can decide to make money, become an expert in the

Henry David Thoreau, author of *Walden*. PHOTO BY GEO. F. PARLOW, COURTESY OF LIBARARY OF CONGRESS PRINTS AND PHOTOGRAPHS DIVISION

The site of Thoreau's hut at Walden in Concord, Massachusetts, circa 1908. PHOTO PART OF THE DETROIT PUBLISHING COMPANY PHOTOGRAPH COLLECTION, LIBRARY OF CONGRESS PRINTS AND PHOTOGRAPHS DIVISION

A screen shot of the *Walden* video game showing the shore of Walden Pond. IMAGE COURTESY OF TRACY FULLERTON

flora and fauna populating the landscape, or spend more time with the text excerpts embedded throughout the game. "Depending on how you decide to play the game, your relationship to the woods grows more lush and vivid and more inspired, if you will, or it can diminish and become quite banal if you, say, spend all your time working and not thinking about the larger picture."

Given the level of detail achieved in the original text, building the game takes a wide range of skill sets. In addition to Fullerton, the creative director and designer, the team includes a programmer, a level designer, an environmental artist, animators, a sound designer, and even someone who was responsible for animating Thoreau's hands—to enhance the first-person player experience—among others.

Like Fullerton, each member of the team—none of whom work on the project full-time—is fiercely committed to getting it right. She described part of their process: "We're now building a procedural sound environment so that as you walk around the world, not only do the birds and sound of the world change, but they change according to the season, they change according to the time of day. They actually even change according to what kind of trees you're standing around so that the right kind of bird calls are happening in the right kind of trees. Our sound designer, Michael

Sweet, who's amazing, lives onsite in Concord so he's recording all of these during the course of the year."

While the prospective audience for *Walden* the game is demographically broader than the target group of Young Audience's project, both endeavors reflect a preoccupation with contextualizing learning in a way that makes it exciting for young people. "One of my original inspirations was younger people who may not have the patience to get through Thoreau without some incentive or some inspiration," said Fullerton. "And if I can contextualize it, make them feel how exciting the kind of adventure is of going out and discovering these sorts of things that he was trying to understand about life and our relationship to nature and to basic systems, if I can make them feel it by playing a game, then they may be inspired to go and read the book and to think about these things in relation to their own life."

Both projects also reflect the importance of arts thinking in strategizing a way to fruitfully engage with the world. "I could say that making games is my way of understanding the answers to questions that I have about the world," mused Fullerton. "And that is one of the primary impulses of an artist, to use a medium to explore the central questions that intrigue them, that plague them, and that they think are of interest to themselves and others." ▲

A screen shot of the meetverastark.com website, which celebrates the great (fictional) actress.

Theater Goes Transmedia

> TAKING PLAYS FAR BEYOND THE THEATER WALLS

BY MICHAEL GALLANT

Center (ETC), a small but enthusiastic movement toward transmedia theatrical experimentation has begun to grow—and according to those involved, this is just the beginning.

GOING TRANSMEDIA

Founded and run in the Washington, DC, metropolitan area, the Black Women Playwright's Group has spent more than two decades advocating for playwrights of color, first locally and then, with the advent of the Internet, on a national level. For playwright Karen Evans, the group's founder and president, inspiration to explore transmedia storytelling came as a result of a national meeting held by the organization in 2008. "We gathered 100 playwrights and scholars in Chicago, people at all stages of their careers," said Evans. "One of the points of the conference was to ask our members, How can we help? What can we do to make your professional and creative lives better?"

A key theme that emerged from the resulting discussions was equal parts technology and opportunity. "The playwrights wanted to know more about the intersection of digital media and theater," Evans recalled. "The rate of productions at regional and community theaters is less than two percent for women of color. Information is power, and we predicted that learning more about digital media could help us get more productions and reach more people with our work."

One of Evans' board members introduced her to the Entertainment Technology Center at Carnegie Mellon University (CMU), a unique program that offers a two-year professional master's degree, from which graduates regularly go on to work for DreamWorks, Pixar, Disney, and other companies. Conversations and meetings followed, culminating in a visit by Evans to Pittsburgh—and a gutsy pitch made to the center's then-director, Don Marinelli, who co-founded the program at CMU.

Visit the website meetverastark.com and you'll learn about one of America's greatest actresses, a woman referred to as a teacher, singer, lover, civil rights activist, and femme fatale. You can read excerpts from her autobiography, *It Rained on My Parade,* and see a photo from her final performance at the Folies Bergère in Las Vegas. There's even a documentary video that outlines her breakout film role as "Tilly the maid" in *The Belle of New Orleans.*

The only catch? Vera Stark isn't real.

The iconic diva of screen and stage is in fact a figment of Lynn Nottage's imagination, first brought to life in a production at Second Stage Theatre in New York City. The Pulitzer Prize-winning playwright not only wrote the play, *By The Way, Meet Vera Stark* to be performed by Second Stage, but also created the additional written content that would become **meetverastark.com.**

Nottage's journey into transmedia storytelling didn't blossom in a vacuum, nor is it alone in its approach to breaking boundaries within the world of theater. Thanks to a collaboration between the Black Women Playwrights' Group (BWPG) and Carnegie Mellon University's Entertainment Technology

The online game *Powerbomb*, created for Kristoffer Diaz's play *The Elaborate Entrance of Chad Deity*, carried forth the themes of the play and offered discounted tickets to the play for those that score enough points.

"I told him that I wanted to put together playwrights, theaters, and universities that focus on computer technology," she said. "Ideally, we could create a model and a template that makes online content accessible and workable for playwrights as an extension of their work in the theater. Don said, 'Okay, we're game.' So we started working together."

Evans gathered a small group of willing independent theaters into the fold, including Steppenwolf Theatre Company in Chicago and Penumbra Theatre in Saint Paul, Minnesota. "I told my colleagues at each company that, for this project, I wanted them each to find a playwright to partner with. Then that playwright would write additional online content and the students at Carnegie Mellon would bring it to life."

Chris Klug, a video game designer, playwright, and former Broadway lighting designer who serves on the faculty at ETC, worked on the project from the beginning. "We were thrilled to be part of this collaboration, and the basic premise attracted our students," he said.

As part of their education, ETC students participate in rigorous independent projects. "They spend 60 hours per week working with outside parties and organizations," Klug said. "It's 90 percent of their course load for a semester, so as an organization we very carefully pre-vet projects before we decide to staff them with people from our program."

Klug described the students who volunteered for the transmedia collaboration as both highly enthusiastic and diverse in background. "One was a playwright, another was a former ad exec for Google who was interested in writing, two more were video game programmers, and two more were artists and animators," he said. "Students don't come to this center specifically to work on interactive theater, and we don't have any agenda to formally promote it—but the idea excited them. They were thrilled to be involved and I was very happy with how they performed."

MAKING ART ON STAGE AND ONLINE

The Black Women Playwrights' Group and CMU's first two collaborative productions launched in 2012. Nottage's previously described work on *By The Way, Meet Vera Stark* received special funding from the Mellon Foundation via a commission. "For a work of theater, that was a big deal," commented Evans. "We're still working on the website for her next production. There are already four productions, and we are continuing to add another interactive level to the show."

The second playwright to participate was Kristoffer Diaz, a Brooklyn resident who was honored with the *New York Times'* 2011 Outstanding Playwright Award. His creation, *The Elaborate Entrance of Chad Deity,* received productions at the Woolly Mammoth Theatre in Washington, DC, and the Dallas Theater Center—as well as a custom video game programmed and posted as part of the BWPG and CMU collaboration. "We created a very simple game that carries forward the theme of the play," said Evans. "The poor hero gets beaten up all the time, so you actually get points if you lose," she continued with a wry laugh.

"It went off very well," added Evans. "The game launched on the web in time for each production and thousands of people played it."

Evans was quite aware that, though Diaz is a playwright, he was not a black woman—and she celebrated

the diversity that her program has helped foster. "We told our participant theaters to choose *whoever they wanted,* regardless of gender or ethnicity," she said. "Each theater needed to believe in the playwright and play and we all knew that this project could not take any of those theaters outside of their missions. So the playwright partner had to be a natural selection, a like-minded soul who had the chops to write something great and was adventurous enough to try something very new.

"When we were first creating all of this, nobody knew where it was going, so everyone had to be game," she added.

EXPANDING TRANSMEDIA STORYTELLING

Evans sees great potential in BWPG's future transmedia endeavors. These include Harrison Rivers' *Look Upon Our Lowliness,* a show that will be produced by the Movement Theatre Company in New York. Discussions are also underway with the Massachusetts

Institute of Technology's Media Lab and George Mason University, as well as an expanding roster of independent theaters, to foster future collaborations.

"The thesis that was presented to me the first time I met Karen continues to be something I'm astoundingly interested in, and something that's important for the entire theater community," said Klug. "It's incumbent on theater communities to reach out, since audiences in their 20s who consume stories via games, TV, and film often don't even know that live theater *exists.* All of us who are involved in this field need a way to get them to be aware of it." Klug is convinced that, as evidenced in no small part by his own students' enthusiasm, such people "will love theater for the unique nature of its physical, actual performance." ▲

—Michael Gallant is a composer, musician, and writer living in New York City. He is the founder and CEO of Gallant Music **(gallantmusic.com).**

Shawn T. Andrew and Jose Joaquin Perez in a production of Kristoffer Diaz's *The Elaborate Entrance of Chad Deity* **by Woolly Mammoth Theatre Company in Washington, DC.** PHOTO BY STAN BAROUH

EMBRACING DIGITAL
Publishing in the 21st Century

BY REBECCA GROSS

As printed pages are increasingly traded in for digitized screens, the very basics of publishing are being turned on their heads. Jacket copy is now replaced by metadata, downloads are quickly taking the place of print runs, and a book that once took a year-and-a-half to publish can now be released within six months.

"What protected the book business was the expertise needed to make books and distribute them," said Mike Shatzkin, a longtime consultant for the publishing industry. "If the book is not critical and the distribution is not critical, then what value does the book publisher bring to the party?"

It's a question that many publishers are grappling with as they struggle to find their role in the digital age. With the development of new technologies, both print and electronic publishers have been experimenting with strategies for how to best make their presence known in a changed marketplace. While this has proven tumultuous for many publishing houses large and small alike, it has also created a rash of new possibilities—not just for publishers, but for authors and readers as well.

The relative speed of publishing an e-book has allowed for an explosion of new material for readers to consume—and an explosion of new opportunities for both emerging and established authors to quickly get their work into readers' hands. Social media has narrowed the distance between authors and their reading public, and has created new ways for publishers to engage with prospective customers.

One publisher that has moved to embrace the possibilities of digital is Dzanc Books, an NEA grantee based in Michigan. When Dan Wickett and Steven Gillis launched the not-for-profit print publishing

Above: A selection of Dzanc Books printed copies, which are also available as e-books. PHOTO COURTESY OF DZANC BOOKS

Open Road's Pinterest page interacts with readers on literary topics and the e-books they publish. PHOTO COURTESY OF OPEN ROAD

house in 2006, neither even owned an e-reader. But the pair realized relatively quickly that publishing e-editions concurrently with their print counterparts would soon become a necessity. It was a prescient realization: the Association of American Publishers reported that in 2011, e-books became the single most popular format for reading adult fiction, Dzanc's primary genre.

"It's another avenue for us to find readers for our authors, which is what we're trying to do," said Wickett. Several years later, Dzanc created yet another way for readers to access its titles with the Dzanc Books eBook Club, which sends subscribers a new e-book from the Dzanc catalogue on the first of every month.

Other publishers are toying with ways to bypass print altogether. HarperCollins recently launched a short-form young adult digital imprint called HarperTeen Impulse, and in November, Random House announced the creation of three new digital imprints: Flirt, Hydra, and Alibi, which will publish young adult, science-fiction, and mystery titles respectively.

The decision by Random House to start the new imprints was "really an issue of consumer demand," said Allison Dodson, director of Flirt, Hydra, and Alibi. Readers of mystery, sci-fi, and YA often tear through books, which are usually quickly paced and often serialized. "[The new imprints] are a great opportunity

> "I can actually read an 1,100-page book at the same time as 200 other people and have everyone bounce their ideas off each other as opposed to reading out there almost in the wilderness alone." — *Dan Wickett*

for readers, because this content is very accessible, in terms of just being able to purchase it," she said.

E-publishing has also opened new doors for older titles, and have turned them into a business all their own. One such success story can be found in Open Road Integrated Media. Founded in 2009 by publishing executive Jane Friedman and filmmaker Jeffrey Sharp, the e-publisher specializes in digitizing and marketing authors' backlists, which are books that have been in print for a year or longer. While some backlisted books do perennially good business—say *Catcher in the Rye* or *To Kill A Mockingbird*—lesser-known books often get bumped from a bookstore's shelves in favor of the "frontlist," new books that tend
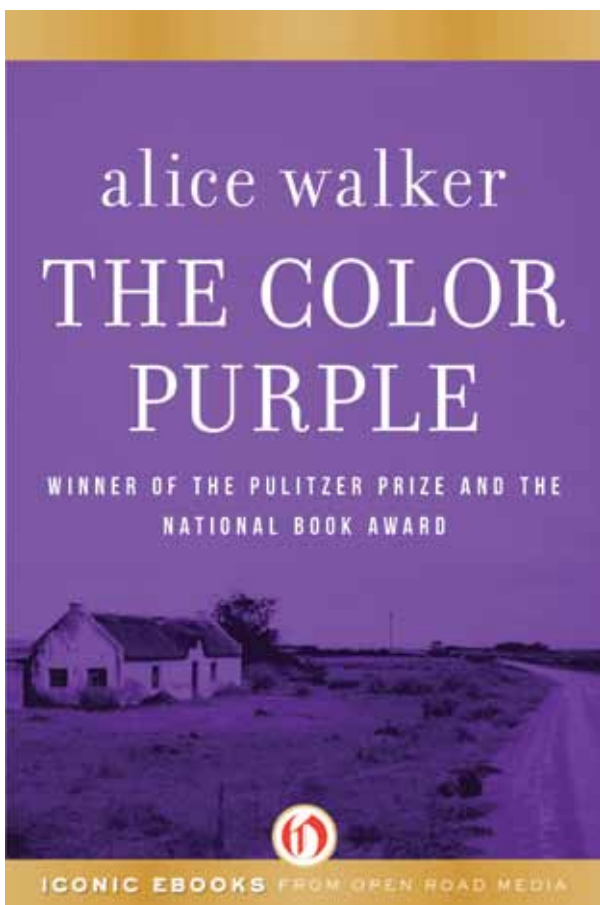
Alice Walker's *The Color Purple*, James Jones' *The Thin Red Line*, and Michael Chabon's *The Wonder Boys* are some of the titles that Open Road Integrated Media has digitized for a new audience. IMAGES COURTESY OF OPEN ROAD
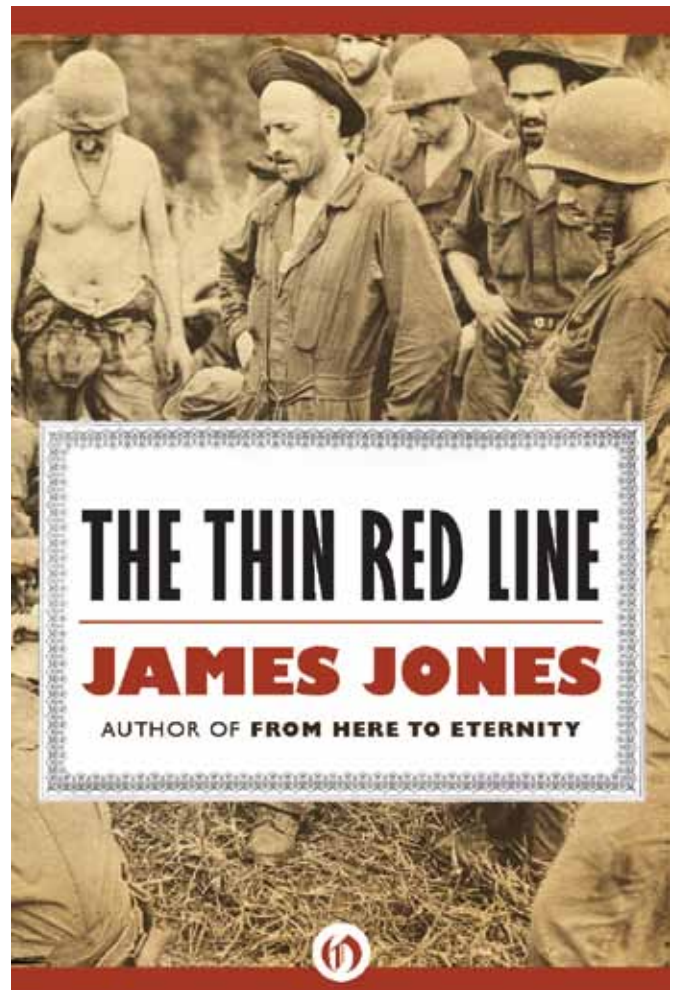
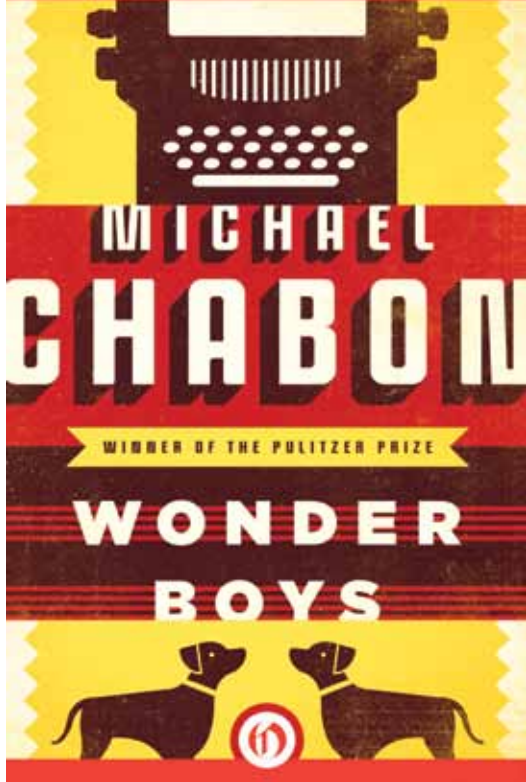to dominate reviewers' and readers' attention, as well as publishers' advertising dollars.

But free from concerns of shelf space, e-tailers are able to stock as many digital titles as are available, no matter when the book was first published or how well it is expected to sell. Friedman said that many of the books she works with have "lost their way," even though they're not actually out of print. "[A book] doesn't have to disappear physically, but it disappears in the mindset when everybody is busy focusing on the frontlist," she said.

The company has published close to 3,000 titles, producing roughly 200 books a month, and their stable of authors ranges from well-known names such as Alice Walker, Michael Chabon, and Pat Conroy, to popular mystery, sci-fi, and how-to writers. It has even secured the holy grail of publishing: a bestseller. Last April, to coincide with the 100th anniversary of the sinking of the *Titanic,* Open Road released the e-edition

of *A Night to Remember,* the classic story that commemorated the ship's sinking. Although it first appeared in print in 1955, the book managed to reach the #1 spot on the *New York Times* nonfiction e-book list.

At Dzanc Books, the r*E*print series has also given new life to books that are either out of print or out of mind. One of the not-for-profit's forthcoming titles is *Women and Men* by Joseph McElroy, first published in 1993. On Amazon and **BarnesandNoble.com,** the 1,100-page novel starts at $175. Wickett said that their digital edition will be available for somewhere in the $10 range.

News of this drastically reduced price was recently shared on **GoodReads.com,** the world's largest social media site for book lovers, where a group devoted to *Women and Men* already exists. Both Wickett and Gillis have been interacting with group members, notifying them of their current and upcoming digital McElroy titles, and even gauging the interest in a limited print run of *Women and Men.* It's a brilliant example of how

time as 200 other people and have everyone bounce their ideas off each other as opposed to reading out there almost in the wilderness alone."

Open Road also relies heavily on social media to spread the word about its books, and has staked a presence on Facebook, Twitter, Pinterest, Tumblr, and YouTube. While these are clearly 21st-century tools for allowing readers to interact with the publisher, authors, and each other, Friedman pointed out that in some ways, the publishing industry has always relied on similar methods.

"Social media is in so many ways word of mouth, which is the way we always sold books," she said. "It was much better than review coverage, much better than media coverage. If a friend recommended a book to you, you bought it. That's what social media has now done, just using technology. It is actually just a reformatting of what a suggestion by a friend has been."

The final story on e-publishing is not yet out, of course, and as publishers keep experimenting, opportunities for readers and writers will likely continue to evolve. After all, it is still just the beginning of the Digital Age.

"On one hand I feel like we've been doing this for 100 years," said Friedman of her e-publishing work. "We're moving at triple speed, but we are still a new business. One has to get one's head around it." ▲

technology has not only enabled publishers to better understand their audience, but has allowed readers to build a community of their own.

"There might not be a ton of fans of post-modern writers living in Westland, [Michigan,] near me that I can find to hang out with and talk about McElroy," Wickett said. "But online I can find those communities. I can actually read an 1,100-page book at the same

GoodReads.com **has become the largest social media site for readers, boasting more than 14 million members.**
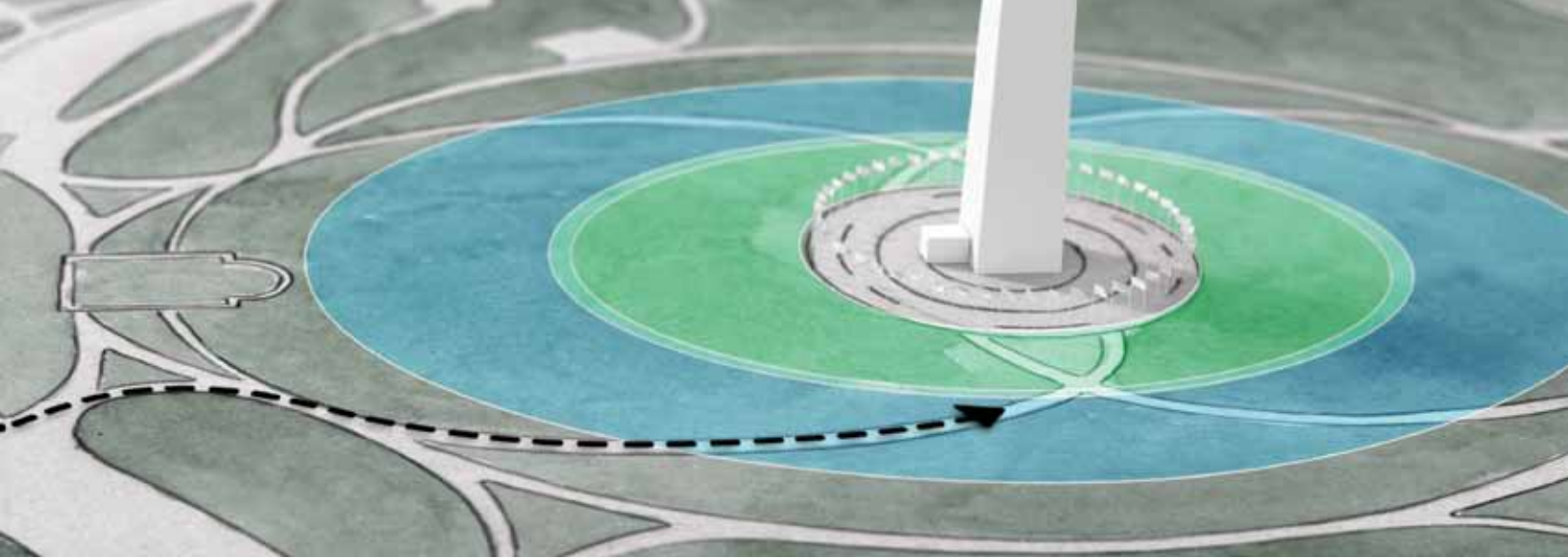IMAGE COURTESY OF **GOODREADS.COM**

That Space

Between

Sounding Off with

Ryan Holladay

BY PAULETTE BEETE

Artistic rendition by Gabe Askew of how *The National Mall* album works, showing the sound rings around the Washington Monument. PHOTO BY GABE ASKEW

Washington, DC-based Ryan Holladay lives a double life. He's not only one-half of the music duo Bluebrain, which he founded with his brother Hays, but he's also the curator of new media at Artisphere, a contemporary arts space in northern Virginia. A newly minted TED fellow, Holladay's arts practice revolves around place, both as a setting for and also as a character in the musical compositions he creates. Here is an excerpt from our interview with Holladay, which took place as we walked through several of Artisphere's galleries. We finally seated ourselves on an array of lightboxes while taking in a changing panoply of tweets projected as part of the interactive installation W3FI. *Visit* **arts.gov** *to read a longer version of the interview.*

NEA: How did your arts practice evolve from the kind of electronic music that Bluebrain originally produced to site-specific work like *The National Mall* app?

RYAN HOLLADAY: I think Hays and I had always talked about these kinds of concepts and ideas for installations. But it felt like, for whatever reason, we needed to make our way as musicians first. At one point, I think it sort of hit us that there was no reason to wait to experiment, and the idea of music and sound interacting and responding to physical space was always fascinating. One experience that sticks out was visiting Central Park and seeing Christo and Jeanne-Claude's *The Gates,* a massive installation of hundreds of brightly colored metal beams draped with fabric—I had never seen anything like that before. I was in college at the time, and it was just a real eye-opener for me in terms of how art can transform how we think about a physical terrain and speak to the landscape. It really planted a seed that would later manifest itself in the form of the location-aware albums we've created. They are obviously a completely different kind of project, and I certainly don't put what we're doing on that level at all. But I think the idea of location-based music stems from that experience in a lot of ways, of how

an artist can use a landscape as canvas. In the case of Christo and Jeanne-Claude, it's a very physical manifestation. In our case, it's a virtual layer that's placed atop a physical place using a smartphone's built-in GPS functionality. But both are responding to space, and that's been central to much of the work we're doing.

NEA: When I was going through your website I was very struck actually by the fact that you use the phrase 'location-aware' as opposed to 'site-specific.' Can you talk about that language?

HOLLADAY: It's kind of a clumsy name, and we were never sure what the best phrasing was for it, but 'location-aware' became the buzz phrase for apps that use any sort of augmented reality. 'Site-specific' doesn't fully convey what we're doing. *The Gates* is site-specific in that it was created for a specific place, but the work isn't continuously recalibrating based on your placement within the park. In our case, the app figures out where you are and then changes the music based on your actual location. So that was the distinction we were making—that the app is responding to your movement and following you around.

The start screen for Bluebrain's *The National Mall* album app, which provides music that responds to your movements around Washington, DC's National Mall. PHOTO BY BRANDON BLOCH

NEA: So what was that leap where you went from making records and performing live to "Hey, let's go make something that responds to a space"?

HOLLADAY: A lot of the works we had done up until that point had been music linked to a physical space but using much less sophisticated tools. One of the first projects we did in this area was creating a music accompaniment for the Ocean Hall in the Smithsonian Museum of Natural History. But the only way we knew how to accomplish this was to create a score based on the length of time it takes for the average visitor to make their way through the exhibition. It was a static linear piece intended to be used in a specific place along a designated path, not unlike the work of Janet Cardiff. It was not "smart" in the sense that it responded to movement or allowed any sort of autonomy on the part of the listener. But with the introduction of apps came the ability to integrate user feedback just by their movement from one place on a map to another. The prospect of creating an album as an app opened up the possibilities.

Meanwhile, we were seeing this explosion in innovation happening with mobile technology, but it seemed artists—and certainly musicians—were really not scratching the surface with it. Some were using apps to make games related to music or even tools to make music with, but it didn't seem like anybody was using these new parameters to compose music in a completely different way. That's where we became excited, [at] the idea of using these new things to create music in a totally new way, and also as a listener to experience it in a very new way as well.

A map rendering of the musical landscape for *The National Mall* album app. COURTESY OF RYAN HOLLADAY

NEA: I am curious about your National Mall project—how do you enter into that project in terms of inspiration or figuring out how to move through the space?

HOLLADAY: The National Mall was the perfect first site to experiment with this concept because of the physical arrangement of the park itself. While there are unique landscape ideas in various sections throughout the park, the overall framework of the Mall is symmetry. That lent itself to coming up with a methodology to musically approach a physical terrain for the first time. It felt a bit like we were playing with bumper lanes. There are parts where you can wander off, which we enjoyed playing with, but there is really only one way to walk from the Capitol to the Lincoln Memorial.

One space we used was the Washington Monument. We clearly saw that square, the grounds leading up to it, as one piece, as one motif. So as you cross the street going into that square, you hear, I think it's piano and a single cello, and as you climb the hill, more and more elements come in. As you reach the giant obelisk, you hear more strings and then a choir, and then when you are finally touching the monument, when you are up against it, you're hearing out of control heavy metal blast-speed drums. But then if you go the other way, it all happens in reverse. The idea is that it's complementary to what you are actually experiencing physically as you are getting closer to this thing that is so massive. So that really worked well because it gave the whole thing an anchor.

NEA: Hearing you talk about it, you almost seem to be suggesting a musical narrative for how you are moving in space.

HOLLADAY: It's interesting, because we decided early on we weren't going to have any words throughout the whole thing because we didn't want to color someone's experience to that extent…. From the beginning, we thought the best way to describe this is like a choose-your-own-adventure composition. Do you remember those books where you could go to any part and there were multiple ways the stories could unfold but all of them worked? That's kind of how we saw this. That was one of the jumping off points for us—if you could make a musical composition with multiple scenarios or outcomes where all of them worked. So the interesting part was that we were writing music like you would

any normal album, but then trying to figure out how to technologically and organizationally make this work was a whole different challenge. So there's no narrative per se, but certainly the idea of choose your own adventure was a jumping off point for us.

NEA: Can you talk a little bit about the technology and data part of the project?

HOLLADAY: We are not really developers ourselves, and, while we definitely gained a bunch of skills throughout this process, we've worked with a lot of other people who collaborated with us on the tech side. The way it works in a very basic sense is very similar to the engine behind a video game. If you think about how a video game works, there's sound and music associated with different areas or objects within this virtual terrain that your avatar is moving through. So as you approach a waterfall in a video game, it's increasing in volume based on your character's proximity to that waterfall. And the idea there is to give the illusion that you are in a physical space by mimicking how sound functions in the real world. What we've done is take this idea of syncing the coordinates of that virtual space and translated it to the coordinates of a physical space.

NEA: Do you consider yourself a musician or are you a sound-artist?

HOLLADAY: That is a good question. I think my background is certainly in music, and I think I moved laterally into the art world and probably don't have the credentials to consider myself a professional in either field. But I think maybe what I'm bringing to the table is the sort of intersection of these different areas—music and technology, both in my work as a curator at Artisphere and my role in creating with my brother. That nexus where art and technology come together and create something that doesn't fall into either category or falls into both is at the heart of what Hays and I do together and is central to many of the projects that I've brought to exhibit at Artisphere. I think those labels are becoming less and less relevant with the kind of work that crosses these sorts of platforms now, these different genre-bending things. That's the kind of stuff I'm interested in. ▲

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Scan the QR code to your right to access our online material. Or you can visit **arts.gov** where we look at the production of the Oscar-winning animated short *The Fantastic Flying Books of Mr. Morris Lessmore* from book idea to film to app and finally to printed book; we look at Kickstarter and see how the website has changed the way the arts are funded; we look at Sonic Trace, a storytelling project in Los Angeles involving Mexican and Central American immigrants that blends traditional broadcast tools with new digital media; and more.

Sonic Trace launched a competition to design a portable recording hub in which Mexican and Central American immigrants could tell their stories, which resulted in *La Burbuja,* or The Bubble, a silvery globe with a hot pink *rosa Mexicano* interior designed by Hugo Martinez and Christin To that has been the site of more than 200 interviews to date. PHOTO BY ERIC PEARSE CHÁVEZ