Technology in Europe: Cultural Reboot

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Abstract: The integration of technology in culture and art in Europe is transformational. Technology is changing the social fabric of cities in Central Europe, like the existential movements of the past have done. Cities like Vienna, Prague, Linz, and Berlin, are experiencing a socio-cultural renaissance, because of technology. In Prague, the philosophy of Franz Kafka is having significant impact on society in the digital age. Kafka's existentialism is as relevant today as it was 100 years ago. Kafka said, "The decisive moment in human evolution is perpetual."[1] Kafka's existentialism is relevant, from the perspective of social anthropology, to understanding digital media's transformative effect on the culture of Prague today. In Vienna, the Viennese aim to create things that are different, weird, and strange, and they are doing it with digital media in the 21st century. Vienna is currently a hotbed of innovative applications of digital media in art. In Vienna there is a new kind of modernism, a digital modernism. In Berlin, though the scars from cold war division remain today, there is remarkable resiliency in the city and a plan to make it a leader in digital media in Europe, and perhaps around the world. Digital media is many things in Berlin. It is technology, art, commerce, education, and lifestyle. Digital media is bringing together high society and bohemianism, in an effort to create a new economy. German existentialist Friedrich Nietzche advocated for cultural rebirth in Europe. Europe is experiencing such a rebirth with digital media: creating artistic and social cultures that are wildly interesting and progressive and have technology integrated in them.

Keywords: Digital Culture, New Media Innovation, Tech Economy, Digital Modernism, Cultural Transformation, Interactive Art, Social Anthropology, Human Computer Interaction

Introduction

Certain European cultures have had significant impact on the world. The Greeks contributed to democracy, philosophy, science, and literature. The Romans spread their signature architectural style and influenced how many civilizations designed and built cities. The Austro-Hungarians gave us Mozart. And the Spanish spread Christianity. Today, Europe is hub for digital media. Moving forward, it is likely that the continent will influence the trends of the global tech movement in ways that few tech professionals have predicted.

I spent an entire summer conducting research for this paper. I wanted to experience firsthand what was happening in the world of digital media on the European continent, specifically in central Europe. I did not want to read blog posts, online articles, or startup web sites from afar that describe the scene, because they would likely be full of hype, spin, and marketing pitches. Typically the objective of these kinds of resources is to lure new media neophytes and wannabe tech entrepreneurs to visit there and invest time, energy, and capital creating new ventures. I wanted to learn why Europe was not considered by many executives in Silicon Valley and its counterparts in China and India to be a major player in the international tech scene. I learned the opposite.

In terms of ideation, Europe *is* a player. During my travels, I interviewed tech innovators from around the continent and found that there is a lot of *new* there. Fresh ideas are everywhere. The main challenge Europe faces, and perhaps the reason why the continent has yet to produce a tech product or company lauded by the global tech community as significant and game-changing (like Google, Facebook, Instagram, or Amazon), is financial. Silicon Valley is slow to invest in European tech ventures. And European investment, though available from various multi-national sources, is not as abundant as it needs to be to kick-start a major social network, search engine, or e-commerce business. I discuss investment in the technology sector in Europe from a cultural perspective later in this paper.

[1] Franz Kafka, *The Blue Octavo Notebooks*, edited by Max Brod, translated by Eithne Wilkins (Exact Change Press, Boston, 2012), p 16.

All that said, the direction new media is taking in Europe is profound, even inspired. The continent that brought the world Roman arches, Aristotelian logic, and *Eine Kleine Nachtmusik* is bringing us exciting new media concepts that may have as much cultural impact as previous contributions. If you thought Cupertino, Mountain View, New York City, Bangalore, and Shenzhen were in the vanguard of tech innovation, wait until you hear about Prague, Vienna, Linz, and Berlin.

Prague: Kafka's Birthplace Reborn

When visiting Prague, the present-day capital of the Czech Republic, you experience three cities. The first is a Cold War remnant, a city still grappling with its Soviet legacy and how to reinvent an economy that was propped up for so long by central government subsidies. The crumbling buildings away from the Old Town, where most tourists go, show signs of decades of neglect. The grand residences, civic institutions, and places for art are in disrepair and a blatant reminder of how moving on from its socialist past is not easy for Prague. The second is a destination for tourists, replete with wonderfully restored buildings, bridges, and monuments, and protected by UNESCO as a World Heritage Site. The third, and this is where digital media is extreme, is a city of impressive thinkers, who envision a new society for themselves in which technology is integral to daily life.

When walking around Prague's Old Town, you are transported back in time. The Medieval spires and turrets, which rise above meandering, narrow alleys and spacious squares, are reminiscent of a storybook kingdom, the kind that seemed to inspire Disney's artists. The Old Town is incredibly authentic in its physicality, and the traditions of this centuries old city, with cultural roots as far back as the Holy Roman Empire, are lasting. However, the conversations that people are having are current and progressive. One recurring topic is the role of technology in the lives of everyday people and its impact on society.

The people of the city of Prague are deep thinkers. Prague is, after all, the birthplace of Franz Kafka, arguably one of the greatest thinkers of his generation. Discussions around a dinner table are anything but casual, especially when the topic is technology. To the Czech people, technology is more than a set of digital tools, a collection of servers that make up a computer network, or a line of handheld devices that make communication mobile. Technology is the foundation of their lives socially, professionally, and academically. They don't talk about digital media devices in terms of brand popularity or profit. They talk about how technology makes life better or worse.

For example, at a restaurant, while dining on local sausage and pasty dumplings, I participated in a conversation about search engine algorithms and how a sophisticated algorithm can increase quality of life, because when you find what you are searching for quickly, you have more time to ponder what you searched for. This was Kafkaesque: exploring the philosophic implications of technology. More interesting than that, Czechs talk about how digital media is necessary to keeping their centuries old customs and traditions alive, with the digitization of ancient texts, websites that accurately document the history of their city, etc..

Humanization of Technology

Their conversations about technology can be metaphysical. The Czechs that I met were less interested in how the iPhone's user experience might be superior to that of other smart phones, or how the code behind Google's search engine might be more intricate than Bing's, than how digital media can provide society with a foundation on which new life constructs are created and morals followed. For example, they encourage users of social networks to communicate more about important social, political, educational, and artistic matters that affect large portions of society and less to post photographs of eating hamburgers in the local greasy spoon.

Technology is worthy of discussion, and there is a sense that the proper and meaningful use of technology should be part of a bigger belief system. They talk about the human benefits of technology, what might be described as the *humanization of technology*. They talk about the effects of digital media on the lives of all people, whether working-class or upper-class, average or accomplished.

The Czechs express faith that mankind will do the right thing with technology. This faith may have evolved from Kafka's belief that mankind's spirituality should be a trusted guide in life. Kafka said, "Test yourself on mankind. It is something that makes the doubter doubt, the believer believe."[2] The Czech people believe in lofty concepts, and they live by them, as credo.

They engage and test themselves with provocative discourse on technology topics, which most of us leave to the tech gurus. For example, they discuss hacking, not as a way to take down governments, spy on adversaries, damage the reputation of celebrities, or mitigate profits of corporations, but as an art form or an intellectual sport. Hacking is a way to challenge sharp minds that find pastimes like playing chess and solving calculus programs passé. "Hackers have gotten the status of heroes, who are admired mainly because of the practical value of their skills."[3]

The Czechs believe that digital media will have a consequential evolution, as long as mankind thinks about technology critically, evaluates its purpose, and determines its usefulness – always. Kafka said, "The decisive moment in human evolution is perpetual."[4] I believe if Kafka were alive today, he would encourage us to think about new technologies every moment, in the moment, and continually assess the impact they have in our lives professionally, academically, artistically, and spiritually. In Prague they are doing that now.

Vienna: Digital Modernism

Vienna is both a city with amazing history and a place of contemporary creativity. Currently, it is the capital of the country of Austria. Previously, it had been a capital of the Austro-Hungarian Empire and the German-Austria Republic. As the borders of Austria have changed over time, its cultural identity has changed. The influences from the various groups who have inhabited it – including the Celts, Romans, Ottomans and the Germans – have stayed with Vienna. And the city has become a rich mosaic of culture, reflected in its architecture, visual art, urban landscape, music, and, presently, digital media.

The Viennese think outside of the box in a way that other Europeans do not. They have done so for centuries. In particular, during the period of 1890 and 1918 Vienna Modernism was influential in how cultural society developed. Vienna Modernism was a progressive movement in art and literature that produced prominent avant-garde artists and thinkers, who had impact on the direction of art, science, and literature globally – including the philosophy of Ludwig Wittgenstein, the constructivism of scientist Wiener Kreis, the architecture of Adolf Loos, and the expressionistic writings of Hermann Bahr. "Modernists in Vienna focused inward and tried to understand the irrationality of human nature."[5] Viennese Modernism created a foundation for future thinking that would be new and unusual and, for the people of Vienna, culturally necessary.

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[2] Franz Kafka, *A Hunger Artist and Other Stories*, translated by Joyce Crick (Oxford University Press, Oxford, New York, 2012), 195.

[3] Anna Lubecka, "Economic, Sociocultural, and Technological Contexts in the New Europe," in *Culture and Technology in the New Europe: Civic Discourse in Transformation in Post-Communist Nations*, edited by Laura Lengel (Ablex Publishing, Stamford, CT, 2000), 41.

[4] Franz Kafka, *The Blue Octavo Notebooks*, edited by Max Brod, translated by Eithne Wilkins (Exact Change Press, Boston, 2012), 16.

[5] Eric R. Handel, *The Age of Insight: The Quest to Understand the Unconscious in Art, Mind, and Brain*, *From Vienna 1900 to Present (*Random House, New York, 2012), 14.

The Viennese aim to create things that are different, weird, and strange, and they integrate them into the lives of the people and the culture of the city. They did this when Baroque was *different* in the 18th century, when Beaux Arts was *weird* in the 19th century, and when Modernism was *strange* in the 20th century. And they are doing it with digital media in the 21st century. Vienna is currently a hotbed of innovative applications of digital media in art.

Experiential Tech-Art

In art it does not get more interesting than exhibiting new works made of and with technology. And Vienna is doing this. The city's museums, along with industry partners, produce exhibitions of media art that are scintillating *and* accessible. It is art for all persons to see and experience at an affordable price. To the Viennese, avant-garde vision is something that should inspire everyone – the grocery clerk as well as the arts aficionado.

So, on a Sunday afternoon visit to Mumok, the contemporary art museum in the Museums Quartier Wien (Museum Quarter Vienna), which is one of the largest and most influential art and cultural complexes in the world, I walked around galleries with a wonderfully diverse group people that included a teenager from South Africa, a young family from the Austrian countryside, and a professor from London. And I experienced firsthand how digital media can be inspirational and transformative in art.

Mumok appears as a gray blob of a building in the middle of a courtyard covered in pavement stones, where once the royal horses of Emperor Charles VI pranced in and out of imperial stables. The building's unusual forms and stone façade visually communicate that something out of the ordinary is housed there. In size it is not large, like the Museum of Modern Art in New York City or the Centre Pompidou in Paris. However, in stature it is important. "The exceptional collection and the pioneering exhibitions and events have given the museum an excellent international reputation so that compared to larger institutions it is a jewel."[6] These exhibitions and events include first-rate digital media art.

As you walk around the museum, you discover that art is integrated into human experience. Because of the museum's moderate size, you can see all of the exhibitions in a single visit, without worrying about missing anything – which is often the feeling when visiting larger museums. At Mumok, museumgoers have the opportunity to view the art, ponder its meaning, and discuss it with friends, all within a few hours. The art is not on display behind glass cases or velvet ropes, so it accessible, which is important for interactive works. The art is within reach for everyone, even the art that requires high-end technology. Museumgoers enjoy the art at first glance. But as time passes the emotional experience turns to assessment, as you will want to determine why the digital artwork is impactful.

The impact comes from the technology being a vessel for a human experience: emotional connection to creative output. Author Marcia Ann Dobres describes technology as a "decidedly cultural and human phenomenon that encompasses far more than the physical transformation of the physical world from one state to another."[7] And she defines technology as a "verb of meaningful social interaction and sensuous material engagement."[8] The tech-art on display at Mumok can be described as such. The art is evocative in its interactivity and sensuality, providing the museumgoer with an experience of emotional depth.

When I was there, I walked around large screens suspended from the ceiling, on which were projected evocative images that had been photographed at bizarre angles. I put on headphones

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[6] "Museum of Desires," September 9, 2011, accessed August 8, 2015, http://www.artuniqa.at/home/event.php?comp=MuseumderWuensche_EN.php&langcode=EN.

[7] Marcia Ann Dobres, "Meaning in the Making: Agency and the Social Embodiment of Technology and Art," in *Anthropological Perspectives on Technology*, edited by Michael Brian Schiffer (University of New Mexico Press, Albuquerque, 2001), 48.

[8] Dobres, "Meaning in the Making," 48.

and listened to soundscapes that accompanied frenetically edited video footage displayed on television monitors. The audio and video components were intentionally incongruous: synthesized, atonal sound along with close-ups of people lounging on the beach. And I looked at the screens of computer monitors displaying oversized human eyes. This avant-garde tech art and the closeness to it made for an engaging and self-conscious visitor experience.

The art prompted self-reflection. I thought about what was on display in terms of my own life experiences. And at moments I may have thought my memory was fooling me. I have lounged on beaches before and thought what I heard was the sound of ocean waves. When in actuality what I heard was the cacophony of the people all around me – couples fighting, children wining, and teenagers shouting. I have looked in the mirror and thought I saw my entire face, but what I was really focused on were my eyes and how brown they were. The experience at Mumok made me rethink my memories – moments and even days after seeing the art. Self-consciousness was at the core of Modernism in Vienna at the turn of the twentieth century, and it is part of the digital art experience at Mumok in Vienna today.

In Vienna there is a new kind of modernism, a *digital modernism*. The city's past informs this new modernism, giving it historical depth. Digital modernism is not a trend in Vienna. It is a way to inspire people, who by their nature seek what is new. Mozart, Freud, and Klimt created *new* in Vienna. And Poet Ezra Pound, a Modernist, encouraged creators of art and literature to *make it new*. Pound put forth that we need "a greater levity, a more befitting levity, in our study of the arts."[9] On display in Vienna today is artwork that is refreshing, exciting, and *new*. But more importantly, it has taken on greater levity because it is digital.

Linz: Flowing with Ingenuity

Linz, Austria is situated on Danube River, like Vienna. It takes just over an hour to travel from Vienna to Linz via train, so Austria's first and third largest cities, respectively, are relatively close geographically. But the two cities have vastly different histories, in terms of the cultural and economic factors that shaped them. Vienna has always enjoyed the reputation as an imperial capital and the cultural center of the country. Linz, historically, has been a city of industry, notably steel manufacturing. And when Linz's industry fell on hard times in the 1980's, leaving scores of workers unemployed and decimating the city's economy, Linz's leaders scrambled with ways to reinvent its economy. They did it with digital media.

In 2009 Linz was voted the Europe Union's Capital of Culture. Coinciding with this was the opening of Ars Electronica Center, a "place of inquiry and discovery, experimentation and exploration, a place that has taken the world of tomorrow as its stage, and that assembles and presents influences from many different ways of thinking and of seeing things."[10] Ars Electronica Center is part museum, part educational institution, part media arts center, part arts/industry incubator, part research hub, and part shrine to digital media.

Ars Electronica Center is a fascinating establishment, unlike few in the world. And as its name implies, the common denominator to all the creative, academic, and scientific work created there is that it is electronic. The work is digital or has something to do with technology. The array of work on display and the research produced there is vast in scope, theme, and context. There are projects that focus on interaction design, 3-D immersion, architecture, social media, natural sciences, medicine, and combinations thereof. There are labs where media artists, programmers, academics, architects, and scientists come together to solve problems with digital technologies, to invent technologies that will help us avoid future problems, and to create media art that prompts us to ponder our problems philosophically.

All of this happens on a small site on the Danube River, anchored by a main building, shaped like an oversized barge and made of glass that in daylight has the greenish gray color of

[9] Michael Dirda, introduction to *ABC of Reading*, by Ezra Pound (New Directions Publications, New York, 2010), 2.
[10] "Ars Electronic Center: About," accessed August 15, 2015, http://www.aec.at/center/en/.

the river next to it. At night a brilliant light show, controlled by a mobile application, colors the building with saturated hues.

Technology Across Disciplines

There are few boundaries conceptually when producing work for Ars Electronica Center, which is evident at the Center's international festival called Prix Ars. Prix Ars' competition categories include computer animation and visual effects, digital music and sound art, hybrid art, and pioneering media art. Submissions for prize consideration come from thousands of people around the world. In 2015 winners were from Japan, Mexico, Indonesia, Belgium and Australia, to name just some of the countries.

Because digital media technologies are complex, collaboration among artists and scientists is necessary to produce *new*. The most meaningful digital work comes from integrating expertise from different disciplines. "Studies on interdisciplinary collaborations in ... research-and-development teams have revealed that three processes—communication, coordination and knowledge-sharing—significantly influence their efficiency and effectiveness."[11] Ars Electronica Center is a model for collaboration with digital media across disciplines and national borders.

During my visit to Ars Electronica Center to conduct research for this paper, I interviewed a top-level administrator, who acknowledged that the interdisciplinary and international reach of the Center is expansive and expensive. Collaborative projects that bring together experts of the highest caliber cost a lot of money. Renowned artists, accomplished academics, and celebrated scientists make up Ars Electronica's research and artistic teams. FutureLab, which produces some of the most interesting, often experimental, work at Ars Electronica Center, is especially appealing to these experts. It provides them with an environment where failure is a necessary part of the process of creating great technology and evocative art. In order to fund these collaborations, Ars Electronica Center engages private enterprise. Partnerships with big companies help provide the Center with capital to support new work.

But more interesting than the private dollars that fund project development at Ars Electronica Center is the financial support that comes from the city of Linz. The local government contributes significantly to the operating budgeting of the Center. An interesting tidbit about the history of Linz is that Adolph Hitler, whose birth country was Austria, wanted to make Linz a cultural capital of Europe, part of his megalomaniac plan which never materialized. "According to Hitler's grand scheme Linz was to be one of the Reich's crowing glories, a showpiece of Nazism … with a monumental museum made of a series of colossal buildings housing the most important works from prehistoric times to the present day."[12]

Well, the people of the Linz have created a monumental museum for themselves. Their past is behind them. And there seems to be a productive future ahead for them. One important reason is that they are proactive in keeping their economy afloat with digital media. Linz, a river city, is flowing with tech ingenuity.

Berlin: Capital of Digital Fusion

Berlin, Germany is a city that has been undergoing a cultural, economic, and political renaissance since the Berlin Wall fell in 1985, and its east and west sectors were unified into a single metropolis. I visited Berlin in the early 2000's, and I felt then that it was a city that would be a global leader, once it figured out what kind of city it wanted to be. On my recent visit for this

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[11] Brigitte Steineider and George Legrady, *Interdisciplinary Collaboration in Digital Media Arts: A Psychological Perspective on the Production Process* (MIT Press, August 2004, vol. 37 no. 4), 315.

[12] James A. R. Nafziger, Robert Kirkwood Paterson, Alison Dundes Renteln, *Cultural Law: International, Comparative, and Indigenous* (Cambridge University Press, New York, 2010), 699.

research, I felt the same. It is still a city in search of its future. Berlin is a wonderfully patchy place, where new meets old, new struggles with old, and new is trying hard to redefine old.

The city no doubt has a tumultuous past. It has been the capital of the Holy Roman principality of Margraviate of Brandenburg, the Kingdom of Prussia, the German Empire, the Weimar Republic, and the Third Reich. In the 1920's, as the third largest municipality in the world, Berlin was a center of cultural fusion: high society integrated with decadent bohemianism. It was celebrated as a leader in music (Brecht and Weill), film (Lang), philosophy/psychology (Jung), and architecture (Bauhaus). Empires and leaders have come and gone, and all seem to have left some mark on the city.

After World War II, the city was divided into East Berlin and West Berlin –communism in the east and democracy in the west. For four decades the contrasting political ideologies that controlled East and West bandied for international recognition, each asserting that their way was the right way to lead Berlin. There was international concern that political games being played would compromise the future of this once notable epicenter of culture, and that Berlin's future might not be as illustrious as its past. However, diplomatic maneuvering in the 1980's prompted Mikhail Gorbachev, leader of the Soviet Union, to launch a program in his country of political restructuring, called glasnost, and social openness, called perestroika. Communism collapsed in the Soviet Union and Europe. And the Berlin Wall came tumbling down.

Though the scars from cold war division remain today – pock marks on buildings from WWII bombs, a public transit system that lacks citywide connectedness, and abandoned warehouses in the east that are a reminder of a failed economy there – there is remarkable resiliency in Berlin, zeal to move forward, and viable plans to do so. Germany's scheme for a twenty-first century Berlin is focused in large part on the reinvention of the city's economy into one that is tech-based. A tech-based economy could make Berlin a leader in digital media in Europe, and perhaps around the world.

In 2013 Berlin was viewed as *the* startup ecosystem in Europe. That year it raised more investment capital for startups than London, which up to that point had been viewed as the hub for EU tech startups. In 2015 the situation in Berlin is stronger:

> One out of eight new jobs in the city is now generated in the digital economy, according to the state senate. More than 500 new tech companies start up in Berlin each year. A total of 62,400 people work in the sector, accounting for 3.5 percent of Berlin's workforce. The digital sector accounts for 4.2 percent of Berlin's gross domestic product, or €3.9 billion annually. (Meyer 2015)

Technological Eclecticism

Berlin's unique blend of then and now is apparent in its approach to digital media, or rather its approaches to digital media. Digital media is many things in Berlin. It is technology, art, commerce, education, and lifestyle. Digital media is bringing together high society and bohemianism, again, in an effort to create a new economy. The digital scene is flourishing with visionaries. And a lot of this has to do with the Berlin's cultural history, specifically and ironically the years of division during the Cold War: "Because of its isolation during the Cold War and the fact that West Berliners were exempted from the military draft, the city has long been a magnet for artists and counter-culture types. It's a cheap place to live and work (though less so), and offers a vibrant nightlife for young techies."[13]

The start-up scene in Berlin is eclectic, both in terms of the different demographics of techies founding innovative ventures and those of the investors backing them. This cross-

[13] David Myer, "Berlin beats London," August 11, 2015, accessed August 30, 2015, http://www.politico.eu/article/berlin-beats-london-tech-investments-startups-venture-capital/.

pollination of tech visionaries with global funding sources creates an environment where new concepts are culturally significant as well as commercially promising.

The economic engine created by technology brings together partners from industry, the private sector, and government to both build and benefit from the city's tech future. By design, partnerships that begin in the public space can transfer into the private space. That is, companies can obtain private investment after seed money has been provided by a governmental or educational grant. And there seems to be more time to develop projects than in Silicon Valley. In Berlin funding comes to projects over a longer period of time, different than just the three to five rounds typical in Silicon Valley. This longer gestation period means that entrepreneurs can experiment without losing their shirts. The all-or-nothing paradigm of Silicon Valley is absent in Berlin. Tech CEO's seem less concerned to go public than to get it right and produce quality.

Because of the longer gestation period, those searching for the next great tech product or company have to be more patient in Berlin. But patient does not mean safe. Berlin takes risks. It always has. Usually innovative ideas are riskier ones, and riskier ones pay off with greater reward. Risk is woven into Berlin's social fabric, integrated into its businesses strategy, and part of its history. "[Berlin] was known as Elektropolis because of the profusion of electrical gadgets being invented and developed by Siemens and AEG, which were both rooted in the city. The electric tram and electric lifts were two inventions which originated there."[14]

Berlin's International Unconference

The players in Berlin's tech scene are many. They are entrepreneurs interested in Berlin as a home base for their companies, media artists pushing the creative envelope with binary code, researchers investigating unconventional applications of digital media, programmers engineering systems to reinvent user experience, and investors funding all of this. There is an annual conference that attracts all of these players. It is Tech Open Air Berlin.

Tech Open Air Berlin bills itself as an *un*conference. It is unlike any other tech conference I have every attended. The experience there is as eye opening and inspirational as it is frustrating and unfocussed. It is part tech meet-up, part media arts festival, part pitch event, and part digital media camp. And it takes place in a relic of a warehouse in the east that used to manufacture carpets. Professional tech meet-ups do not get much more eclectic than Tech Open Air Berlin.

The list of invited speakers is large and varied. During the 2015 conference, the list included representatives from American tech companies Kayak and SoundCloud; a robotics engineer from France who wants every family to have its own, affordable, three-foot high robot (which looks strikingly similar to the character of Rosie from the *Jetsons*); a Swedish company whose engineers have created wearable technology devices that are both functional and fashionable; educators who want to revolutionize mobile education; philosophers who believe that the right online experience is transcendental; artists who explore and keep exploring; reporters in search of a scoop; and, a German company capitalizing on beacons in business customer service.

(Beacons are small devices that track location, usually with Bluetooth technology, and communicate the changes in location as GPS coordinates to a device, such as a smartphone, or a larger computer system, where the data can be stored. There are also web-based beacons, which monitor user experience within a browser. These usually take the form of cookies.)

Tech Open Air is a microcosm of the fascinating tech scene in Berlin. Like the conference, the scene is growing. Next year there will be more ideas, funding, products, companies, and art than the year prior. In Berlin innovation is happening and excitement for it is mounting. Albert Einstein, a Berliner by birth, has been described as "daring, wildly ingenious, and passionately curious."[15] The same can be said of digital media in Berlin.

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[14] Steven Evans, BBC, "Next Silicon Valley? Berlin's battle to be a tech hub," March 31, 2014, accessed August 14, 2015, http://www.bbc.com/news/technology-26770568.

[15] "Einstein," accessed August 30, 2015, http://www.amnh.org/exhibitions/past-exhibitions/einstein.

Conclusion

Back to existentialism, first mentioned in this paper when I discussed the city of Prague. Existentialism traditionally emphasizes the existence of the individual person as a free agent determining his or her place in the world through free will, choice, and personal responsibility. Technology is usurping individual control and becoming a determinant of a person's place in the world in all of Europe. Individuals organize and accomplish daily tasks with smart phones. However, the roots of existentialist philosophy there have Europeans thinking profoundly about how and why these devices are in their lives and the impact the technology will have on the development of their centuries old cultures.

German existentialist Friedrich Nietzche advocated for cultural rebirth in Europe. He wanted Europe to veer away from culture that he viewed as plebian and toward culture that was strongly instinctual and uniquely creative – Dionysian, he called it. He advocated for "the resurrection and fuller release of Dionysian artistic energies."[16] Europe is doing this with digital media: creating artistic and social cultures that are wildly interesting and progressive and have technology integrated into them.

Because of the value and pervasiveness of technology in social culture on their continent, Europeans are pondering if they will remain people who live with free will, or if their will will be that of their devices. They seem to open to both possibilities. And this is the key to their unique approach to tech innovation.

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REFERENCES

American Museum of Natural History. "Einstein." Accessed August 30, 2015. http://www.amnh.org/exhibitions/past-exhibitions/einstein.

Ars Electronica. "Ars Electronic Center: About." Accessed August 15, 2015. http://www.aec.at/center/en/.

ArtUNIQA. "Museum of Desires." September 9, 2011. Accessed August 8, 2015. http://www.artuniqa.at/home/event.php?comp=MuseumderWuensche_EN.php&langcode=EN.

Dirda, Michael. Introduction to *ABC of Reading*, by Ezra Pound. New York: New Directions Publications, 2010.

Dobres, Marcia Ann. "Meaning in the Making: Agency and the Social Embodiment of Technology and Art." In *Anthropological Perspectives on Technology*, edited by Michael Brian Schiffer. Albuquerque: University of New Mexico Press, 2001.

Evans, Steven. BBC. "Next Silicon Valley? Berlin's battle to be a tech hub." March 31, 2014. Accessed August 14, 2015. http://www.bbc.com/news/technology-26770568.

Handel, Eric R. *The Age of Insight: The Quest to Understand the Unconscious in Art, Mind, and Brain*, *From Vienna 1900 to Present.* Random House, New York, 2012.

Kafka, Franz. *The Blue Octavo Notebooks*. Edited by Max Brod. Translated by Eithne Wilkins. Boston: Exact Change Press, 2012.

[16] Stanford Encyclopedia of Philosophy, http://plato.stanford.edu/entries/nietzsche/ published April 29, 2011, accessed September 10, 2015

Kafka, Franz. *A Hunger Artist and Other Stories*. Translated by Joyce Crick. New York: Oxford University Press, 2012.

Lubecka, Anna. "Economic, Sociocultural, and Technological Contexts in the New Europe." In *Culture and Technology in the New Europe: Civic Discourse in Transformation in Post-Communist Nations*, edited by Laura Lengel. Stamford, CT: Ablex Publishing, 2000.

Myer, David. Politico. "Berlin beats London." August 11, 2015. Accessed August 30, 2015. http://www.politico.eu/article/berlin-beats-london-tech-investments-startups-venture-capital/.

Nafziger, James A. R., Paterson, Robert Kirkwood and Dundes Renteln, Alison. *Cultural Law: International, Comparative, and Indigenous*. New York: Cambridge University Press, 2010.

Steineider, Brigitte and Legrady, George. *Interdisciplinary Collaboration in Digital Media Arts: A Psychological Perspective on the Production Process*. Boston: MIT Press, 2004.

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