

EUROPE'S DIGITAL EMPIRE RISING: ART, CULTURE, AND INDUSTRY TRANSFORMED

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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, though the United States, China, and India have emerged as major players in the international tech scene, their involvement in the industry tends to be driven by commerce and less by art and culture. Europe is hub for digital media driven by art and culture, as well as industry. Because of this, it is likely that the continent will influence future trends of the global tech movement in ways that few tech professionals have predicted.

In terms of ideation, Europe is a player in the digital arena. Fresh ideas are everywhere. During my travels in Europe conducting research for this article, I interviewed tech innovators – artists, educators, and entrepreneurs – from around the continent and found that there is a lot of *new* there. 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 now creating art and starting businesses with new media that may have profound impact on the continent moving forward. Two capital cities leading this wave of change and where tech innovation is thriving are Vienna and Berlin.

VIENNA: CAPITAL OF DIGITAL MODERNISM

Vienna is a city populated by creative thinkers, historically and presently. 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 intelligentsia and artists think outside of the box in ways that other people in Europe, in or out of the vanguard, do not. The Viennese have done so for centuries. In particular, during the period of 1890 and 1918 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.”¹

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 while artistic expression in Vienna was stymied during the times when wars were fought on its soil – notably the Napoleonic Wars, World War I, and World War II – culture always seemed to flourish in society once the invaders left. With digital media in the 21st century, culture is flourishing again. Vienna is currently a hotbed of innovative applications of digital media in art.

Experiential tech-art

To the Viennese, avant-garde vision is something that should inspire everyone – the grocery clerk as well as the arts aficionado. And it does. Vienna’s museums are exhibiting new media art that is scintillating and expensive to produce. The exhibitions are made possible, in part, by industry partnerships, making it available to a wide audience at a modest ticket price.

On a 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 experienced firsthand how digital media in museums can be emotionally transformative. As I describe in more detail later in this section, I interacted with color, light, and physical forms – all part of art works made of technology: hard drives, light panels, software, sensors, and other tech components. By touching the art and triggering a sensor that would play a sound, or walking around the art and intercepting laser beams that would produce a color change, or speaking to the art and watching it grow or shrink in size, I had an emotional experience that was unexpected and positive.

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.”²

Because of the museum’s moderate size, you can see all of the exhibitions in a single visit. At Mumok, museumgoers have the opportunity to view the art, ponder its meaning, and discuss it with friends, all within a few hours. As you walk around the museum, the art is experiential. The art has broad appeal, and attracts a varied demographic of museumgoers – young, old, culturally minded locals, and curious tourists. The art is not on display behind glass cases or velvet ropes, so it is accessible, which is important for interactive works. The experience of viewing/experiencing the art is at first emotional, then practical, as you work to understand why the digital artwork is impactful. But most museumgoers forgo a belabored assessment, because the artwork is that engaging. Feeling it trumps thinking about it.

The tech-art on display at Mumok is evocative in its interactivity and sensuality, providing the museumgoer with an experience of emotional depth that begins with a physical interaction with the technology: touching panels, intercepting lasers, triggering sensors. But the whole museum experience encompasses so much more than physical interaction. So, why would either the average or seasoned museumgoer not assess or analyze the experience, and be okay with feeling it. The answer may come from author Marcia Ann Dobres, who 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.”³ At Mumok what begins as an experience in the physical world evolves into an

emotional transformation within the museumgoer. By experiencing the art, you are satisfied. The artwork has done its job. It has moved you – as you moved around it, with it, and sometimes in it.

Marcia Ann Dobres also defines technology as a “verb of meaningful social interaction and sensuous material engagement.”⁴ During my visit, I *walked* around large screens suspended from the ceiling, on which were projected sexually suggestive images that had been photographed at bizarre angles. I put on headphones 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 scantily clothed on the beach. And I *looked* at the screens of computer monitors displaying oversized human eyes. Technology prompted me to act, to interact with the art. Technology produced meaningful interaction.

A New Modernism

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. Technology made the art experiential. Being experiential, the art had lasting emotional impact on me.

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, making for a new kind of modernism, what I will call *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, put forth that we need “a greater levity, a more befitting levity, in our study of the arts.”⁵ On display in Vienna today is artwork that is refreshing and exciting. But more importantly, it has taken on greater levity because it is digital. Digital content – that is content created with binary code – lasts forever, ostensibly. But the levity here is not eternity. The levity is authentic artistic expression made relevant by technology.

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 in search of its future. On my recent visit for this research, I felt Berlin was 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. For four decades, post World War

II, the contrasting political ideologies that controlled East and West Germany bandied for international recognition, each asserting that their way was the right way to lead Berlin. There was international concern that the political games being played there would compromise the future of this once notable metropolis.

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. Industry leaders for years have believed that a tech-based economy could make Berlin a leader in digital media in Europe, and perhaps around the world.

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, and creating a new economy. The digital scene is flourishing with visionaries. And a lot of this has to do with Berlin’s 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.”⁶

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.

An economic engine for Europe

Berlin takes risks. It seems that risk has always been 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.”⁷

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 was stronger. “The digital sector accounted for 4.2 percent of Berlin’s gross domestic product, or €3.9 billion annually.”⁸ However, even with Berlin’s progress, European industry insiders still viewed the tech scene in London – with its close ties to Europe’s financial sector and its ostensible lack of language barrier with Silicon Valley – as the capital of tech

east of the Atlantic Ocean. Then, the United Kingdom voted to leave the European Union in June 2016. With this vote, a referendum commonly known as Brexit, it seems that London will be more the economic capital of Britain and less that of Europe. And Berlin's position as the leader of the tech industry and the "startup capital of Europe"⁹ seems inevitable.

More and more Berlin is being considered the "jewel in the crown"¹⁰ of Europe's tech industry. However, even with all the optimism about Berlin, it still lags behind Silicon Valley significantly in creating mega platforms like Google, Apple, and Facebook, the likes of which are necessary to be a worldwide tech giant.¹¹ So, all of us who are interested in where tech primarily will be situated in Europe watch Berlin with both excitement and incertitude.

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 creating innovative art 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, known as TOA, bills itself as an *unconference*. It is unlike any other tech conference I have ever attended. It is part tech meet-up, part media arts festival, part pitch event, and part digital media camp. And it takes place in unusual places, like 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. TOA "pushes an interdisciplinary message and a chance to connect with people from many different walks of life, all closely or loosely related to tech."¹² According to TOA founder Nikolas Woischnik, technology is "the common denominator that drives innovation in every angle of society. By connecting technologists with different disciplines, the disrupted better anticipate the future and technologists better understand the world they change."¹³

The list of invited speakers is large and varied. During the conference I attended, 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; a Swedish company whose engineers have created wearable technology devices that are as functional as they are fashionable; educators who want to revolutionize mobile education; philosophers who believe that the successful online experiences are transcendental; reporters in search of a scoop; and, a German company capitalizing on beacons – devices that track location via GPS coordinates – in business customer service.

Tech Open Air is a microcosm of the fascinating tech scene in Berlin. 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."¹⁴ The same can be said of digital media in Berlin.

CONCLUSION

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. German existentialist Friedrich Nietzsche 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.¹⁵ Europe is doing this with digital media: creating artistic and social cultures that are progressive and have technology integrated into them, and reinventing economies that will carry their societies into the future.

Because of the value and pervasiveness of technology in society 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, to the rise of their digital empire.

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