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Storytelling Shapes the Future

Alex McDowell University of Southern California USA

I started my career in narrative media in 1976, designing albums and music videos for artists like Iggy Pop and the Cure. From 1990 to 2012 I was a production designer in the film industry, working with Steven Spielberg, Terry Gilliam, Tim Burton, David Fincher and others. In 2012 I joined USC as a professor of practice and research. In these past four decades I have worked in cinema, animation, theater, opera, video, graphic and web design, publishing, commercials, music videos, fine art and printmaking. I am now co-founder and creative director of radical design studio *Experimental Design* in Los Angeles, and a professor at USC School of Cinematic Arts where I run a lab, institute and class devoted to worldbuilding.

Worldbuilding is a narrative and systems design practice that exists at the intersection of design, technology and storytelling. For 30 years I've been working in film, and over the years that has made me think deeply about the notion of storytelling.

Storytelling started as a way to make sense of the world around us. The earliest tribal storytellers, as they told their evolving stories around the fire, used metaphor to explain the unknown in terms that their community would understand. They looked at that silver disc crossing the sky and translated it into a story of a princess in a chariot, and these metaphors established the first principles of storytelling. Tribal storytelling not only made sense of the world, but also started creating codes for that world.

Multiple storytellers collaborated to create the great mythologies, which passed from generation to generation to ensure our survival through complex and evolving narratives that represented the DNA of our human survival, our knowledge of the world. These giant mythologies that emerged – the Roman and Greek Sagas, the Bible, the Quran – were the cumulative work of countless storytellers, all adding layers to the narrative.

And then, in 1440, this socially-embedded and adaptive storytelling was massively disrupted by the arrival of the printing press, and the notion of storytelling started to shift. The printing of books allowed religious authority to lock the words and control the content of these stories and their distribution. And gradually the author started to own the story, and its audience. The writer, the composer, the director, the artist, the 'starchitect', the photographer, the designer: for six centuries now, we have become habituated to the idea that we are an audience waiting to be fed. Although this in no way undermines the power of the single-authored narrative (Shakespeare, Picasso, and Mozart), the theatre proscenium, the frame of the screen, the pages of a book all direct us.

We are now entering an era that one could call 'post-cinematic', as we do at the USC School of Cinematic Arts. The tools that have now come upon us – virtual reality, augmented reality, mixed reality – do something more than provide a new gimmick to sell hardware. They demand that we shift away from linear narrative, the fixed or controlled frame, into a new multi-dimensional narrative space. We now need to pay attention to the entire worldspace, the sphere of narrative opportunities around us. But in the process, it begins to looks as if we have returned to the tribal narrative, the oral, non-linear, collaborative and evolutionary origins of story. This is as big a disruption as the invention of cinema. It is going to fundamentally change the way we think about storytelling. We now are returning full circle: those tribal stories we were told to help us survive become a

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framework again for us to make sense of the unprecedented complexity of the world around us, just as we need them most. (Figure 1).

Figure 1. A Brief History of Storytelling (2019 version), c. Alex McDowell

Worldbuilding as a design practice, which has evolved for me over the past two decades, seems suddenly more and more relevant, because its holistic and collaborative structure specifically supports organic and fluid narratives that are embedded within and driven by the intricate world around us. I was trained, as are most filmmakers, in a factory-line Victorian industrial process that is transforming into this deeply collaborative and nonlinear methodology - like jazz - with the human at the center. This design-driven, media-agnostic, multi-platform capability flips the twentieth century model on its head and paves the way for new story practices ahead.

There are some high-level ecologies that form around the questions one might ask of a storyworld. You start with an origin story - this can be very simple, the first question asked. Then you move onto the contextual questions: *Where are you? When are you?* High level provocations - *What If, Why Not* - ask what is driving the world. Bit by bit, supported by deep research and What If provocations, we create a high-level, horizontal ecology of the world. The more questions you ask of the world, the more narrative details start to emerge, raising questions in themselves. As you 'core-sample' through the world, it becomes more and more robust, at multiple scales (state, region, city, neighborhood, street corner) simultaneously.

Two important things are going on in a worldbuild. First, you are dealing with a massive interdisciplinary collaboration. When you begin research you are listening to domain expertise beyond the knowledge of the design and story teams, and these seeds and pathways start to build infrastructure, resources, socio-politics and culture into the worldsystem being created. Secondly, the worldspace, the larger context, is constantly informed by what is most important – that is, the human story at the center. We start developing personal stories inside the world. These stories question it and push it forward across different scales – the human in the neighborhood, the neighborhood in the city, the city in the world – all inform each other, and the world evolves (Figure 2).



Figure 2. The World Building Mandala © 2018 Alex McDowell

This was really put into practice for me in a film called *Minority Report*.¹ Steven Spielberg hired me as Production Designer on the same day as he hired the writer Scott Frank. There was no script when we began conceiving of the world of Minority Report, and we didn't have a complete script for a year. Significantly in this case, the design of the world *preceded* the telling of the story. The world had become a container for narrative – not just one narrative, we could have told hundreds of stories in this space. We knew the world intimately (Figure 3). If Steven Spielberg had wanted Tom Cruise to turn left instead of right out of any doorway, we knew what was there. And it was clear that you could apply completely different lenses to the world developed for the film. Although our work supported a linear cinematic narrative, it could also have been used as a way of looking into the future of urban planning; targeted advertising; wearables; gesture-based interfaces; autonomous mobility, many diverse aspects of the world (Von Stackelberg & McDowell, 2015).

A kind of real-time, nonlinear process evolved throughout the production of this film, which tested not only how one might think differently about film production, but also how to think differently about developing a story. For the first time there were digital sets and design visualization allowing the director's interaction with the film environment and digital characters long before shooting. What was also significant was that scenes emerged from the development of the world that would not have been in a script written in advance of production by a writer sitting in a bungalow in the Hollywood Hills and typing out 120 pages. The world had incepted the narrative in a really fundamental way. The fabric of the world had triggered the story.

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Figure 3. Minority Report's Vertical City in Washington DC, 2054 © Alex McDowell

Over the years since it was released, there has been a constant stream of innovations that could be directly tied back to the film (Liptak, 2012). These include developments in bio-mimicry, driverless cars and drones, as well as the gesture system that John Underkoffler, our in-house scientist in the art department, developed as part of his research at MIT Media Lab.

We began to notice that worldbuilding could be used to stimulate really complex systems, quite separately from the narrative, an aspect that defines much of the research and outcome of our current and evolving work. Any world is an interlocking system, driven by a rigorous methodology and logic. We investigate all the possible societal, technological, economic, environmental, and political influences on a given world. As a result, multiple stories – provocative, inviting and immersive – begin to grow rapidly and organically from the systems of a world.

I'd like to give you a brief introduction to four of the projects we have worked on that use worldbuilding techniques to develop sustainable solutions to real-world problems.

First, the early stages of a project developed for the legendary oceanographer Sylvia Earle, called *The Future of the Ocean*. The starting point for this project is that the ocean is impenetrable: those of us who live by it mostly see the surface; those of us who dive in, dive down 30 feet or 100 feet, but the vast bulk of the ocean is unexplored. How do you allow people to enter that worldspace? Imagine a giant column of water in a museum, being projected virtually. The column expands towards you, its surface passes by your field of view, and suddenly you're inside the depths of the ocean (Figure 4). You hear sound overhead, look up, and see the massive propellers of a ship on the surface, and you understand the effect of noise pollution on fish. You look down to the coral and see the effects of acidification. You can move back and forward in time and see what the coral used to be, what it is now, and what it could be again. You go deeper still, and change scale, and get down to the level of plankton. Virtual reality gives us a level of access and completely compelling immersion that change space, time and scale.



Figure 4. 'Pre-vis' from the Future of the Ocean project, Sylvia Earle and Experimental Design studio

Second, we have been working with a foundation in Saudi Arabia on a housing and sustainability development project called *Al Baydha*.² We were asked to look ten years into the future of a specific Bedouin tribe, a nomadic tribe who had been settled and fallen into abject poverty, with failing crops and decaying shelter. We were asked to create digital and design visualisations that would allow members of this community to look 10 years into their own future, and to own it. It allowed them to see alternative choices for their people - from sustainable housing to permaculture that establishes new and robust crops, are all being implemented in the real world (Figure 5).



Figure 5. Al Baydha Village project by Experimental Design studio

Third, we have worked in collaboration with Situation Lab - building on their imagination game *The Thing from The Future* - to create a website for the Cook Inlet Tribal Council, who were

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deeply engaged in connecting the Alaska Native Youth to their millennia-old culture of innovation. In the vision developed for the interactive story space, narratives speak of the next 20 years, and the innovations achieved in the future by indigenous youth.

Finally, with the World Building Media Lab that I run at USC, we staged *Leviathan* (Figure 6) - an augmented reality experience of an 80-foot whale flying over 5000 people at the Consumer Electronics Show, CES.³ The next phase of this fantastical world took the project to the Sundance Film Festival. The augmented reality whale developed into a full virtual reality immersive and interactive laboratory experience, set in a parallel universe in 1896. Within this environment, you are a visiting scientist to the lab. First, on 'rails', you approach the structure slung beneath the massive whale, without agency. As you enter the Lab you are instructed to go through a series of tasks to create a hybrid flying creature. As you reach out in the virtual world to touch a virtual object, you feel physical objects aligned exactly with the virtual, a haptic experience. The cause-and-effect series of actions creates a flying creature that you begin to interact with in real time. And then the creature decides to exchange bodies, and you begin to fly up in the air until you can see yourself far below. In five minutes, the user has experienced a magical set of interactions that fully exploit the possibilities of a non-linear, organic and fueled narratives that could not have been told in the western world for the past 600 years. The story of Leviathan offers a self-contained ecosystem, a completely fantastical world in which we can develop multiple intricately woven threads, and use this fictional space to discover new ways to tell stories for the future.



Figure 6. Leviathan project by Experimental Design studio and World Building Media Lab USC

As designers and storytellers, we are faced with incredible possibilities now and just over the horizon, and we are just scratching the surface of what storytelling can do. Worldbuilding is about collaborating across art and science. The next generation I see emerging – through the students and teams with whom I am fortunate to collaborate – are taking on the role of art-scientists. They are turning storytelling into a new form, one that can powerfully change the world.

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Correspondence

Alex McDowell University of Southern California Los Angeles USA E-mail: alexmcdowell1@mac.com

Notes

1. https://experimental.design/portfolio/minority-report/

2. https://experimental.design/project/al-baydha/

3. https://experimental.design/project/leviathan/

References

Liptak, A. (2012, June 21). *Minority Report* really did predict the future. *io9*, https://io9.gizmodo. com/minority-report-really-did-predict-the-future-5920302

Von Stackelberg, P., & McDowell, A. (2015). What in the world? Storyworlds, science fiction, and futures studies. *Journal of Futures Studies*, 20(2), 25–46

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