Designing Games for Social Change

An Interview with Colleen Macklin[1]

Laura Scherling[2]

"Play has the potential to reveal new things about books, music, culture itself, and the material world. The idea is that play lets us take something and *stretch it, push it, and play with it*. We take it from its original form and try new things with it. Play is ultimately at the core of what it means to be human. We learn about the world by playing with it. When we were little babies, we were constantly touching things, throwing things, and playing with things to understand how the world works. We have to continue retaining that playful spirit, especially today in the world of complex systems. In a world where we are dealing with climate change and other humanitarian emergencies, to understand things through play is to get beneath the surface and understand them a bit more deeply."
— *Colleen Macklin, US*

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Games have long played a role in shaping societies and belief systems. Ancient Olympic games were designed to honor Zeus, and the mancala game, popular in Western Africa, is one of the oldest two-player strategy board games in the world. Games have the power to educate, entertain, and to interpret existing cultures, reinvent them, and make them more playful. More recently, social impact game design has contributed to helping communities to solve complex problems, from disaster preparedness to urban renewal. Games that tackle social issues have been at the center of Colleen Macklin's work.

In this interview, Macklin describes her experiences as a game designer and as a professor at Parsons School of Design. Macklin has observed that designers and creative professionals are increasingly positioned to have a positive social impact and that games function as an "active literacy for the 21st Century." In her 2017 TedXCambridge talk, for instance, she described that, "Games help us understand concepts and systems better than many other approaches to learning. Game design might be key to modeling some of our most complex systems, including climate, finance, and politics."

Throughout her career, Macklin has engaged with organizations, students, and her close collaborators at Local No. 12 to create positive social change and to ask challenging questions about "what it means to be human in the 21st century" and how to "make design more equitable," departing from the more traditional or fundamental roles that games have frequently played. In this interview, Macklin recalls her work designing Dear Reader (a game of literary wordplay), her work for the American Red Cross, and her recent experimentations with using artificial intelligence in game design and development.

Interview

Dr. Laura Scherling: Can you tell me about your work as a designer and educator?

Professor Colleen Macklin: I teach at Parsons School of Design and have been teaching there since the mid-90s. I started teaching interaction design and began to transition into game design, which was a return to something I loved doing when I was a kid. When I was nine years old, I designed video games and programmed them in Basic, so you could say it was a full circle for me. I also run a research lab called PetLab, which stands for Prototyping Education

and Technology Lab at Parsons. We create games in the social interest. We have worked with partners such as the Red Cross, the U.S. Holocaust Memorial Museum, the Boys and Girls Club, and many others, creating interactive and game-based learning and approaching difficult subjects with the notion of play and games.

LS: I saw your app Dear Reader, a game of literary wordplay. Can you tell me about Dear Reader?

CM: Dear Reader was released on Apple Arcade in September2019, and we continue to be an exclusive game on the Arcade platform, a subscription-based service. The idea behind the game came when my colleagues Peter Berry, John Sharp and Eric Zimmerman—the four of us who comprise the company Local No. 12—were thinking about how we might create a game that you could play using a text-based application. In particular, we were looking at how to make a game you can play on Twitter. Of course, we have moved far away from that initial idea, but over time, when we were first prototyping, we wondered what texts we should use for this word puzzle idea. We thought we might pull something from Project Gutenberg or open-source libraries of different kinds of literature.

We picked up Alice in Wonderland and started to use sentences from the book as the basis for these word puzzles. We quickly realized that the exciting thing about this project is not so much the puzzles, although I think we did a nice job with the different word puzzles and gameplay we have in the game. Instead, it is about rediscovering this amazing literature that is out and available in the public domain. Dear Reader has over a hundred books, from a diversity of perspectives and genres, from Pride and Prejudice to the poetry of Phillis Wheatley Peters. We highlight not only European and American "classics" that people are most familiar with in the English-speaking world, but also a wide range of literature from around the world, as well as works by indigenous authors, authors of color, and writing from queer and feminist perspectives.

The gameplay is essentially taking different snippets from these texts and putting them back together so that you can remake the book. It is as if someone jumbled everything up, and you have to go through and make sense of everything. There are over twenty different word puzzle types in the game.Some puzzles scramble words up, some turn words into anagrams or ask you to find words within words, and some work at a paragraph-level where you

try to put sentences back into order. Ultimately, one of the goals of the game for us was to develop a deeper appreciation of these amazing works of literature and the beauty of language itself. Local No.12's primary goal is to take existing culture and make it playful. There is plenty of learning that can be had when you are looking at some of these books and revisiting them. You can enjoy the craft of these beautiful sentences, the meaning of the texts themselves, and being playful with language and literature.

LS: The suggested age is twelve and above. Who is playing the game?

CM: We have a great audience and some really dedicated players. In fact, we even have some folks who have almost finished all 100 books, which is a major task. That means playing Dear Reader for hundreds of hours! Nonetheless, the majority of our players are those who like word puzzle games and are interested in reading. They might not necessarily be what you would consider " gamers," but they are fascinated with literature and word puzzles, and they like to keep their minds moving. Many of our players are super dedicated and reach out to us and speak to us directly with suggestions for books to add and some really great design ideas. In addition, we have players from all over the world. Some players are from nonEnglish-speaking backgrounds; they might be learning English, and they are using the game as an opportunity to practice English.

LS: When you update Dear Reader, do you add some additional books?

CM: We add new books to Dear Reader all the time, as well as new design features – again often inspired by what we hear from our players. In addition, every year new books go into the public domain, which means that we get to choose which ones to add.

LS: Do you do the design work? Do you work with a studio?

CM: We are a small team of about seven at the moment. Everyone has a say in the overall game design, and most of us work on adding the books and editing the content into bite-sized chapters, which is incredibly labor-intensive. We also have our specialties. Karina Popp is our lead book curator, she helps us decide what to add and does the lion's share of adding books to the game. Peter Berry is the lead programmer, John Sharp is our lead visual designer, Diego Garcia does visual design and animation, Alexander King does a lot of game

balancing and analytics, Eric Zimmerman is lead game designer and puzzle-crafter, and I focus primarily on player experience and user interface. That is a simplified rundown, however – we all wear many hats!

LS: Can you talk about the importance of literary apps?

CM: Play has the potential to reveal new things about books, music, culture itself, and the material world. The idea is that play lets us take something and stretch it, push it, and play with it. We take it from its original form and try new things with it.

Play is ultimately at the core of what it means to be human. We learn about the world by playing with it. When we were little babies, we were constantly touching things, throwing things, and playing with things to understand how the world works. We have to continue retaining that playful spirit, especially today in the world of complex systems. In a world where we are dealing with climate change and other humanitarian emergencies, to understand things through play is to get beneath the surface and understand them more deeply. At least that is my opinion.

Therefore, when we are talking about literature, that is one aspect. However, play can be applied to all kinds of things in the world to get us to think in new ways about the form of things.

LS: You have had a lot of experience with these systems in your work for the Red Cross. I would like to hear more about this work.

CM: My work with the Red Cross started with the Red Cross/Red Crescent Climate Centre, and then expanded to other Red Cross branches, including the American Red Cross and their affiliates around the world. They were primarily dealing with the impacts of climate change and resilience in the face of flooding, drought, and natural disasters. Our work together spanned about nine years, between 2009–2018. The funny thing about it is that we designed ourselves out of the project by the end. We created a training framework in games and co-design that enabled the Red Cross to facilitate the program on their own. Therefore, our work is still used in the Red Cross, but we are not as actively involved.

When I started working with the Red Cross, the first project was meant to facilitate conversations between meteorologists and those involved in the climate science side of things, people who live in places hardest hit by climate

change related events, and logistics people at the Red Cross. We created this game to bring all these folks together to talk about the challenges and knowing what kind of response to take when a forecast comes out. For instance, flooding. If you get a forecast that has a lot of rain, how do you know when it is important to evacuate to higher ground?

The game was meant to show how difficult it is to make that call, and discuss how to work together to be more resilient. It did not necessarily teach you what to do; it just revealed difficulties and was a place to have a conversation. I developed the game with several of my design students at Parsons after meeting with some great people from the Red Cross, and we designed it quickly. It only took about three weeks to design the initial prototype, which I, along with local and international Red Cross members brought to Senegal to an island called Doune Baba Dieye, a fishing village and an island off the coast of Saint-Louis. We designed this game to "playtest" there.

When I visited, I was immediately struck by the fact that play was a universal language. We made a card game that was simple, translated it to French, and tried it out. That also created the opportunity to talk about shared experiences. That was the main takeaway with this project: you could have folks whose profession is fishing—people in a village where fishing was the main economy—and climate scientists and people from the international aid community working together by playing together. From these different perspectives, the game created common ground and a shared experience that prompted incredible conversations.

The gameplay was simple, similar to Apples to Apples or Cards Against Humanity, but with a very different deck of cards and purpose! One player deals out a series of weather forecasts with different time-horizons, and everyone else plays a response. One response might be to evacuate, whereas the other might be a longer-term response such as creating communication networks or putting a go-bag together. We also included blank cards for players to write-in a response. These were shuffled into the deck to be played by others. We ended up learning what local communities were doing and the game became a way for different communities to share knowledge. For example, one intervention included replacing chickens with ducks for communities prone to seasonal flooding because ducks float, whereas chickens do not! This "crowd-sourced" deck of cards sparked conversation and new ideas about how communities could mitigate climate risks.

Three years later, the island of Doune Baba Dièye, where we first playtested the game, disappeared underwater. The villagers had to be relocated to a

very different place from the island they lived on. Their whole way of life was upended, a tragedy in the deepest sense. Of course, no game can stop a flood, and even if we're better prepared after playing one, the magnitude and complexity of the world can't be matched in even the most realistic simulations. However, games can help us talk about the problems we have on a shared basis. Games can't replicate reality, but they can help us practice the skills needed to deal with it. Climate-related disasters are increasing in Senegal and around the world. A game will not necessarily give us the answer to how we deal with that, but it could get us talking about it; thinking about it, and hopefully also forming social ties and bonds to be more resilient because it is going to take everyone working together.

LS: As an outsider working with the residents of Doune Baba Dieye, what did you need to learn or do in order to join the community while working with them?

CM: I studied international affairs at the graduate level, so I learned how one might work in an international context, which was somewhat helpful. I also taught abroad for several years, which was a humbling learning experience. However, the key thing is that we got things wrong several times; and in order to learn, you need to own and learn from your failures. In those early years working with communities outside the US, what we did wrong is that we designed games based on the ones we play here. While play may be a universal language, games are cultural – they reflect the cultures in which they're played. I would advise a designer joining another community to go without even designing anything at all first and learn the games that community plays. That's what we ended up doing, and as a result, we ended up learning the games people played in different places around the world.

In Uganda, we learned probably fifteen different versions of mancala (and lost each game!) We learned different playground games and other games that children were playing. We also learned the games the adults were playing and ended up co-designing games together. Therefore, you have to go in without anything. With hands empty, go learn from the community that is there. The other benefit to playing local games is that when we arrived, we were outsiders. But as soon as we started playing games with people and failing or falling down literally—we were learning a jump rope game, and my colleague John had a big wipeout. Once we made sure he was ok, it was an exciting moment because everyone laughed in a kind of celebration of our shared fallibilities as humans.

Playing with each other is a great way to start designing with each other, and that was ultimately the takeaway.

LS: In our current situation with the Covid-19 pandemic, how do "games" and "play" help us?

CM: If anything, games have more of a place in helping us connect to each other at a moment where it feels like we are all in our little bubbles. I've been playing games with friends online and at home. There are more hours in the day now that we are not commuting as much as we used to, and games are a great way to fill that time while also finding ways to connect. I am not talking about video games only but also traditional tabletop games that have been converted to online games to enable remote play.

LS: Have you seen anything interesting happening with board game design during this crisis?

CM: Board games are experiencing an incredible renaissance right now! I would say that board games, video games, and tools become more accessible as people realize that you can make a game yourself. We are experiencing a time where more and more hobbyists and independent designers are in the space making games and getting them out there. People are realizing that there is a real value to the connection that games can create. There's a resurgence in tabletop role-playing games like Dungeons and Dragons as a social alternative to single-player games. And of course, video games do not have to be only single-player; there are many online multiplayer games.

LS: A lot has changed with digital transformation in design. We have a lot of variety! How do you personally view the development of digital technologies in design today?

CM: Designers are increasingly becoming public figures. Whether you are on Twitter writing short things or online writing a medium post, there is much more writing about design and the design process today than there was twenty years ago. This is a great development because it provides more of a sense of community practice. That is one thing I have seen change, which is funny. Writing is not high-tech; it's ancient, but with social media and

online platforms there is more of it out there now about how games and other designed technologies are made.

I think that designers need to increasingly partner with scientists and engineers, especially to understand the impacts of what they are making in the world. And that could be anything from something physical—like the computer mouse and its impact in terms of material and lifecycle—or some computer code and understanding how the user interface impacts people. Accessibility is incredibly important. Therefore, the increasing use of technology in everyday life necessitates more thoughtful and ethical design, placing designers in a position of great responsibility to ensure that their products are sustainable, accessible, and not creating evil in the world.

LS: When you think about young designers being in this position of responsibility, is there anything particular you would tell them?

CM: Everyone makes mistakes! Try to make your mistakes early in the process, prototype, and test your designs. In game design, we call it playtesting. Everything has externalities. Everything you make has an impact. Just think about it, and learn from failure. Try to make things better in this world, but experiment, explore, and talk to people from different fields, practices and life-experiences. An important sense for designers to cultivate aside from seeing, hearing, and touching, is empathy—knowing how what you make impacts others, and playtesting is a good method for figuring that out. Be humble, and do not be fooled. If somebody says they like something, look at their expression and body language. If things don't go the way you intended, accept failure, learn from it, and integrate it into your practice.

LS: This is an important piece of advice! When it comes to products, especially digital products that are not tactile, it can be especially challenging to grasp these impacts. Is there anything else you would like to share about the work and research you have been doing?

CM: My interests have expanded! Lately, I have been looking at artificial intelligence and what it means to interface with other forms of intelligence other than our own. I am far more interested in what the creative potentials of these alternate viewpoints are in the world and what happens when AI stops working and starts playing. Therefore, I am doing a project called "Cloud Theory," a simple little game where you can talk to an AI about the shapes

they see in clouds. I'm using these tiny, very rudimentary language models that say funny and often nonsensical things about the clouds. Just like we see shapes in clouds, we can find meaning in the strange strings of words these little language models put together. This, to me, is more interesting than the state of the art research in making large language models that replicate human intelligence.

LS: When you are in a dialogue with an AI, what do you learn from these conversations and from some of your other research?

CM: The game works by talking to a very small and early GPT-based language model that I train with the public domain writing of different authors and thinkers. Therefore, you can have a conversation with a fictional character that sounds kind of like Alice from Alice in Wonderland. Alternatively, you can have a conversation with the philosopher Bertrand Russell about what they see in the clouds. However, as I've been working on this project, I have started to feed the outputs of the models back into themselves, which is kind of like copying something with a Xerox Machine so many times that it becomes something else. Each time you play, you have a different "artificial friend" to talk to.

I am also interested in how we can make games differently. In other words, in addition to making games for social change, how can we change how we think about game design? Most games are based on core mechanics and genres that are pretty well-trodden. There is the first-person shooter, the platformer, racing and sports games, and other common design patterns and narrative tropes that players expect.

I am interested in how games can explore other spaces. For example, can we create experiences that help us understand non-human ways of being? Games can do this – they can help us think about systems, and experience new worlds, and forms of agency. With the climate crisis, with inequalities in the world, to ensure that we survive and thrive and that everyone has an opportunity for a good life, we need to be able to think differently.

Games are a reflection of culture, society, and our desires as humans. Therefore, they can also reflect the less desirable aspects of humanity. Games can reinforce a belief in ideas like the meritocracy that does not exist because we live in an unequal world. Therefore, games are part of both the problem and the solution. This is where my latest interests regarding change for games come from; we need to be thinking about not only what a game is about but also what it does and what it reinforces under the surface.

We are at a time when algorithms define much of how we live and the information we get, and they are applied unequally. Algorithmic bias is a well-researched and existing thing in the world. Games are the original algorithms. They are rules-based systems with a great deal to reveal about rules and laws and algorithms in real life. My hope for the field of game design is that we continue developing new ways for games to connect us, to reveal the workings of the world and that helps us think about what the future might be. I believe in striving for utopia. I am an optimist. I feel like games can give us a space where we playfully try things out, where we can connect and have shared experiences to build a baseline for making the world a better place.

LS: That should always be the goal, making the world a better place!