

mber Holkenbrink, senior designer at Raven Software, remembers asking her dad to help her learn how to read when she was 5 years old so she could play "Legends of Zelda." Then, after spending years playing Nintendo games with her brother, she was officially hooked on video games when "Perfect Dark" was released.

"The protagonist in that game was actually a woman and she was a badass. And I thought, 'wow, this is very different from the Barbie game that we rented at Blockbuster," she savs.

But even when she stepped on the campus of the Illinois Institute of Art in 2004, game design wasn't something she'd considered. She had dreams of working on Disney and Pixar movies. When she was offered an internship at a small game design studio doing user interface work, she decided to try it out. She ended up spending 10 years at that studio and fell in love with creating user experiences and graphic design in video games. Eventually, she sought out something bigger and landed at Raven Software in Madison, which is known as one of the top cities in the nation for game development companies.

In the past couple of decades, the landscape of games and game development has changed at lightning speed. Gaming competitions have evolved from the gaming parties of the 1990s, where gamers would haul their desktop computers to the same room and connect them, to eSports, a halfbillion-dollar industry for video game competitions that fill large arenas. Sitting solo in a room or with friends playing games on a console still exists, but the rise of mobile phones as a gaming platform has become just as mainstream.

As games have gotten more diverse, so have the people consuming them. A recent statistic from the Entertainment Software Association shows that 46% of gamers are female, yet the industry that creates the games continues to be a male-dominated world, often clouded by a "boy's club mentality." The 2017 International Game Developers Association Developer Satisfaction Survey showed that only 21% of game developers are female. This is on-par with women in STEM roles, but the push to recruit and retain women in game development is growing.

There have been well-publicized setbacks, like so-called Gamergate, in which Boston game developer Zoë Quinn's disgruntled ex-boyfriend caught the attention of Internet trolls and harassment influencers by claiming that she'd slept with a gaming site's writer, even though the writer hadn't reviewed her games. Twitter bots and angry male gamers piled on, going after women in the industry. Quinn was plagued by explicit rape and death threats and driven from her home, and the rampant misogyny meant that taking a stand against harassment in gaming could land you on a list resulting in doxing (the practice of broadcasting private information on the Internet about an individual), hacking attempts, or worse. Five years later, the harassment is still common. but female and other diverse voices are louder.

Rhea Vichot, assistant professor in the Media and Game Development program at UW-Whitewater, studies how online game players communicate, and the cultural, social and political impact of games. She believes much of the behavior exposed through Gamergate is related to the "gamer" identity.

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very vocal, motivated minority of selfdescribed gamers who have built their hobby as some kind of all-consuming identity and boys-only treehouse club," she explains. "This community has done a lot to openly harass and intimidate women developers, journalists and media critics and academics for simply being visible."

She likens it to the backlash against the female leads in "The Last Jedi" and "Captain Marvel" movies in recent years fueled by men who have built their identity around being a "Stars Wars" junky or comic book expert trying to protect the status quo of those worlds.

"[It's] anything that challenges their group identity of what a 'gamer' is and they feel it needs to be corrected," Vichot says.

When a Pastime Becomes a Career Path

Many feel the solution is to continue building diversity and equality in the world of gaming, as well as game development. Some women who end up in this industry stumble on game design without ever thinking of it as a career path. Iva Ivanova, an immigrant from Bulgaria whose parents expected her to find a financially stable job when they moved to the U.S. in 2013, came across Madison College's animation program in 2015 and was hooked.

"I could no longer picture doing anything else," Ivanova says. "I had never stopped to think that game art and digital drawing was something I could do as a career."

Ivanova was hired at Gear Learning, a game development studio at the Wisconsin Center for Education Research through UW-Madison, after completing an internship there.

"At Gear, you have the opportunity to be a Swiss Army Knife. If you want to do something outside of your comfort zone you can, like this year I'm getting into sound effects. This is the end-all be-all career choice for me. I can't imagine doing anything else," she says.

Allison Salmon was raised with computers in her house in the '80s and '90s, learned programming in high school and even owned a gaming



center on State Street as she earned her computer science degree at UW-Madison. She thought about game development as a career option but was never sure how to break into it. That's until she was laid off from her first job



in 2000 doing special effects at a small startup company.

"I was hunting for a job and had an interview with a programmer at a microscopy company who had a brother who worked at Raven Software," she recalls. "He said to me, 'I don't think you'd really be a good fit for this job, but do you want to apply over at Raven?"

She jumped at the chance, landed a role as a developer at Raven and spent the next 10 years there. Now she's a developer at Flippfly, a small independent studio in Monona.

For these women, having the bravery to try something they'd never done was the first hurdle to getting into game design. Sheryl Sandberg, Facebook's chief operating officer, quotes a statistic in her book "Lean In" that states men apply for a job when they meet only 60% of the qualifications, but women apply only if they meet 100% of them. This is common across industries, but especially apparent in STEM jobs where women are vastly underrepresented.

"My advice to people is always 'just apply," says Salmon who has been in the industry now for almost 20 years. "Like other industries, the game industry puts out these job postings that have a laundry list of things. And that's their wish list. I've done a lot of talks and panels and young women will show me their resumes and ques-

tion if they're qualified for any job in the industry. Often they're more qualified than most of the male candidates."

Raven Software's Holkenbrink says her proudest accomplishment in the industry is having the fortitude to push herself into something bigger.

"Doing the scary thing of leaving a place that I've been at for 10 years to find something that was more fulfilling is something I'm really proud of," she says. "I absolutely love my team from my last job, but at a larger company I work with and for a group of people who have all these other experiences, and they have expectations for me that I never had for myself."



Salmon also points out that game development and design is a creative industry and it's critical to hone your craft, no matter what part of the industry is of interest, from programming to animation to sound design.

"Just doing it more, even on your own, seeking out other people who are doing it and getting feedback on your craft, and producing more. It's necessary, and then you can use that to apply for jobs," says Salmon.

Creating a Safe Space for Marginalized Groups

This underrepresentation in the industry has sparked local women and other marginalized groups to create their own safe places for discussion and feedback in Madison's booming game development scene.

Katherine Stull, community manager at Human Head, remembers what it was like being isolated as one of the only women in the Media and Game Development program at UW-Whitewater in 2012, and even in the local games industry now. So, she started FemDev, a group to bring women together in the Madison area to meet up, network and do what they love—create games. Stull recently rebranded the group to Pixel Picnic to include others of diverse genders working in the game industry.

"It's a great place to be able to talk about the things we love without fear of judgment or condescension. It's just an uplifting environment and a great sounding board," she says.

She's also the vice chair of the Wisconsin Games Alliance, a group focused on promoting Wisconsin as a premier site for game development and design. By having a female voice involved, she hopes that developers from the coasts will recognize Stull's efforts toward greater inclusion.

Most of the women BRAVA spoke with said they are fortunate to not have experienced the type of online or workplace harassment that has come to light in the years during and since Gamergate. But they do feel the "no girls allowed" mentality when they play online.

Vichot still loves losing herself in games but knows what to do to keep it enjoyable. "'Activision-Blizzard' has had a difficult time with their character-based shooter game 'Overwatch' because, while they have taken pains to create interesting, diverse characters with rich backstories for a relatively fast-paced game, many women, including myself, can't communicate over voice because the second you open your mouth it tends to be an invitation for male players to harass or up the trash talk to personal attacks. It goes back

to that same root of the gatekeeping impulse," she says.

Does this behavior ever deter these women from being in an industry that is slow to drive diversity and equality? Stull says that having opportunities

like being a community manager helps highlight that most of the derogatory behavior comes from a small minority.

"I was in college during Gamergate and it made me afraid to talk to other gamers. But my job by default is all about speaking with them so just having to combat that hurdle has been good," she says.

In Salmon's tenure in the industry she has rarely felt discriminated against because of her gender, but recalls times at industry events where she was assumed to be someone's wife or girlfriend, and not a game developer. She also notes that while studios are doing a better job of giving women opportunities, retention is still a challenge.

Workplace Culture and Employee Retention

A problem that has historically plagued the game development industry is rolling layoffs, sometimes tied to a crunch period, where employees work 60-100 hours a week to push



toward a big release deadline. After that release, or as direction shifts, studios may lay off large chunks of teams. Salmon experienced this at Raven Software in 2010. She says even though the company handled the layoff well, it made her question if she should stay in the industry.

"It was a question of 'do I want to stay in games, and more so, can I stay in games in Madison?" I didn't know what was out there," she says.

She was surprised to find that even almost 10 years ago, there were many opportunities in the area, ideal for her young family that wanted to stay in Madison.

While crunch periods and layoffs are still a concern, these local game designers agreed that their employers put a strong focus on work/life balance. Holkenbrink, a current Raven employee, notes that they've added a paternity leave equal to maternity leave, and she hasn't seen any retribution for people that need to leave work at a normal hour for their kids' baseball games.



To completely avoid the crunch periods (when salaried employees are often not compensated for overtime), there is a growing voice for unionization, similar to other creative industries like filmmaking. Organizations like Game Workers Unite sprung up in the last year and sessions on unionization at the Gaming Development Conference fill breakout rooms to overflowing. These groups are pushing the idea at a grassroots level, studio by studio. But some female employees say those who stand up for the cause risk retaliation by their employers.

Beyond fair hours, Holkenbrink says that Raven makes a big splash for International Women's Day and Pride Month to support their diverse employees, as well as a Lean In circle for female employees.

"We discuss things like imposter syndrome, career development and biases that we have about ourselves," she says. "It's great because the percentage of the women at the company is low compared to the men and we're spread out across different departments, so we never get to see each other. It's awesome to connect."

Salmon found a good balance for her lifestyle at the smaller indie studio, Flippfly. The demands are different than at a large studio and she has more flexibility and freedom for using her passion and skills.

The future will tell how women and others of diverse genders adapt to this evolving industry. For students like Liz Beine, a senior in UW-Whitewater's Media and Game Development program, there are concerns about crunch periods and finding a job, but she knows this industry has potential for a real career.

"All the games that are being produced right now are so exciting and it makes me think, 'oh, I want to create that someday.' Not one game looks exactly like another and there are so many artistic styles and that is really cool," Beine says.

She also notes that the skills she's

learning in the program can easily be expanded into other industries like movies and animation, giving her (and her parents) confidence in her program choice.

Women Are an Emerging Market

According to WePC, a website with resources for people building a gaming computer, the video games market is expected to be worth over \$90 billion by 2020, meaning more job opportunities for women like Beine. And as the market expands, how gamers consume games is changing. The world of eSports has a global fascination, but in the U.S., it is gaining professional sport-like following. Nine states recognize eSports (or competitive video gaming) as a varsity sport in high

schools, and 130 colleges have eSports programs, giving away more than \$15 million in scholarships. So far, Wisconsin has not joined their ranks.

In this arena as well, women are vastly underrepresented but there is a recent push to get more females involved. The global eSports organization GenG recently partnered with Bumble, the dating app, to create a community for female gamers and fans. Given the large female base of gamers, these groups see women as an untapped fanbase and hope to give women a place to feel welcome and confident in their gaming skills.

Other groups like the Girl Gamer eSports Festival are vying for the same participants. While some players question if an all-girls focus is a detriment to advancing women (since



The video game market is expected to be worth \$50 billion by 2020.

-WePC.com

all you need to play are two hands and a brain), others feel an all-girls tournament could draw more females into the mix.

Other growing areas of the game development industry include educational games. Mary Romolino isn't a self-described gamer, but after many years in the world of marketing and advertising, she stumbled on the idea of using games to change behavior.

"We were making TV commercials and radio commercials and brochures, and I thought, 'oh my gosh, games are so much more powerful than all of those things,'" she says.

What she quickly found is that the talent needed to create games is not the talent typically found inside an ad agency. So, she and her husband, an app developer, decided to launch Acme

Nerd Games in 2015.

"The whole idea is that we're a B2B game development company," says Romolino. "Let's work with businesses to create games that are not only good for the business, but are also good for the customers and prospects as well to drive engagement and retention."

She says that being a female gaming company owner is not the challenge, but convincing people that games can educate and change behavior has been, although she sees her younger clients grasping the concept quickly.

Holkenbrink agrees.

"The women that are coming into the industry now...have so much less of the cultural influences around what's considered 'unladylike' or expectations of what girls 'should' be doing," she says. "And it's the same for the younger men. They're more aware of the inequities, and the conversations are more comfortable than even 10 years ago."

Vichot sees this new generation of female game designers firsthand as the instructor for the introductory course in UW Whitewater's Media and Game Development program. Part of that course is computer programming and she watches women come in leery of programming, unsure of the wall of text and numbers.

"But they get really excited to see that programming is not this scary thing. This is a tool to build things. And I think it's really important to get people the access and the space to be able to try things out in order to help remove the larger cultural stigmas about women in technology that sometimes they don't have the aptitude," she says.

While the online gaming and eSports communities may have an uphill battle still, equity in game development is up for grabs as women find their voices and their seats at the table, with a goal to become respected peers instead of the marginalized few.

