

Visualizing Diversity: A Character Design Tool For Creative Reflection

Mikael Jakobsson

Massachusetts Institute of Technology
77 Massachusetts Ave
02139 Cambridge, MA
Tele+1-617-452-3218
mjson@mit.edu

Noah Houghton, Uche Okwo, William Wu

Harvard University, Massachusetts Institute of Technology
nhoughton@college.harvard.edu, uokwo@mit.edu, willywu@mit.edu

Keywords

creativity tool, inclusive design, diversity, intersectionality, character design, interactive data visualization

INTRODUCTION

When Anita Sarkeesian was invited to a large European game development studio to talk about gender inclusive game design, some of the developers left with a feeling that they as a company needed to do better. This sparked the idea for a tool that helps the user reflect on and evaluate character designs as the characters are created.

Character design was chosen as the point of intervention both because of the crucial role it plays in relation to identification among players and because characters play a central role both in worldbuilding and the establishment of a repertoire of abilities that the player can access through the character (Chess 2017, Shaw 2012, Taylor 2002, Yee 2006).

THE DIGITAL DIVERSITY SPACE TOOL

The Diversity Space Tool started out as a pen-and-paper prototype used in workshops with game designers from a number of studios around the world belonging to the same parent company. The workshops were a success which led to a desire to scale up the project. This was where our research lab was brought into the process. Our assignment was to develop a web tool that character designers can use without facilitators walking them through the process. The creators also wanted us to provide our expertise within feminist game studies to make the digital tool better at targeting the issues it was built for.

In both versions of the tool, the user takes a character they are working on and plots out its characteristics along a number of axes in a so called radar graph. As an illustration, we have plotted out Zarya from *Overwatch* (Blizzard 2016) in figure 1. The position of a point on an axis represents how far from the norm a character is. Here we use first-person shooters as the norm.



Figure 1: The Diversity Space Tool graph for the *Overwatch* character Zarya.

The digital version of the tool adds a great number of features including secure user accounts, a tutorial, saving, comparing, commenting, different modes of collaboration, and a number of customization options (see fig. 2).

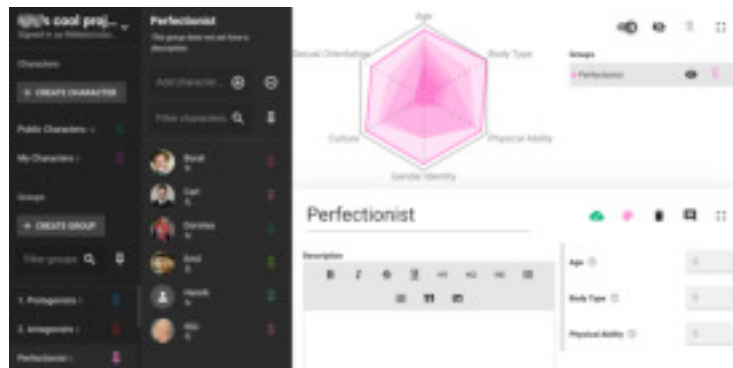


Figure 2: The Digital Diversity Space Tool showing a group of characters superimposed in the radar graph.

Along the way, we also created a number of design sketches (Eladhari & Ollila 2012) to explore the design space (see fig. 3).

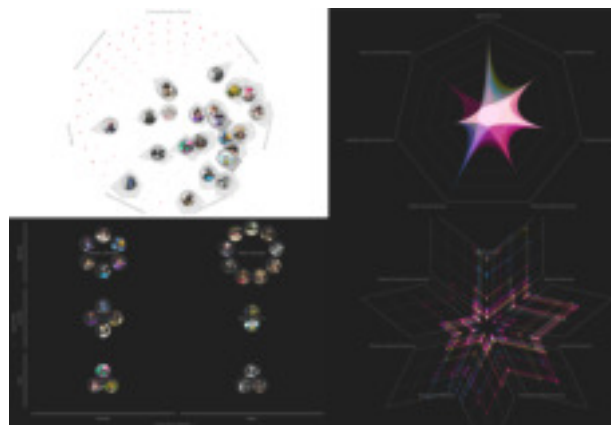


Figure 3: Four interactive mockups created to explore different dynamic visualization possibilities.

The tool is currently a fully functional prototype undergoing user testing before being made available to the public. We are also exploring the possibility of expanding the tool with more features and possibly adding more tools to the companion website.

DISCUSSION

We wanted to create an experience that engages the user so that they stay with the design choices they are exploring long enough for deep reflection to occur (Lawson 2006, Schön 1983); so that this in turn can lead to insights that the designer would not have reached otherwise. Our approach was to try to create a tool that invites the user to play around with the dynamic visualization of the characters in a way that resembles how we play with games or toys. In our user testing with game design students, participants at a game jam, and professional game designers, we paid particular attention to *pliability* as a desired use quality (Löwgren 2007). This part of the study is explored more deeply by Wu (2019).

Beyond the user experience, we also needed to make sure that the tool has the intended effect. It was clear already from the pen-and-paper version that users have a tendency to think that a larger area covered is better, when in reality, this is not necessarily the case.

First of all, a character can diverge from the norm on several parameters but still be a stereotype such as an evil genius being old and in a wheelchair. Since the digital version is intended to work without facilitators who can pick up and problematize these things, we have made it possible to share character designs for comments and discussion asynchronously. Our guiding design principle has been that the systems cannot, and should not, try to take over the role of human expertise in terms of determining what constitutes high and low quality when it comes to diversity and inclusivity in character design.

Secondly, the geometric area is not a measure of diversity, only a visual representation of diversion from norms. The area covered can for instance be manipulated by swapping the positions of the different parameters. Through iterations of testing, we made a number of incremental changes that led the users to focus less on the visualizations as quantifications and more as a malleable representation of the character that can be interacted with to generate new ideas. However, the tool can still be misunderstood in this regard, especially by users who have a desire to operationalize and quantify the world around them.

CONCLUSION

This type of design research typically generates both the type of insights we have shared here and an artifact which carries knowledge contributions which are hard to put into words (Gaver 2012). Our study is no exception, but beyond this, we have also come away with a richer understanding of the particular challenges of collaborating with a commercial industry partner on a grassroots project informed by critical media studies. Our team members at the development studio put themselves in a vulnerable position by pushing for funding for the project, and as women in the games industry they already face systemic hegemonic pressures. Through the course of the project, it became increasingly clear to us that the usual dynamic of us as the academic partner pushing for more experimentation, more exploration of critical angles, and an overall more explorative approach was putting our embedded allies at risk and had to be tempered.

BIBLIOGRAPHY

Blizzard Entertainment. 2016. *Overwatch*. Online Game. Blizzard Entertainment.

- Chess, S. 2017. *Ready Player Two: Women Gamers and Designed Identity*. U of Minnesota Press.
- Eladhari, Mirjam P., and Elina M. I. Ollila. 2012. "Design for Research Results Experimental Prototyping and Play Testing." *Simulation & Gaming* 43 (3).
- Gaver, W. 2012. "What Should We Expect from Research Through Design?" In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 937–46. CHI '12. New York, NY, USA: ACM.
- Lawson, B. 2006. *How Designers Think: The Design Process Demystified*. 3rd revision. London: Architectural Press.
- Löwgren, Jonas. 2007. Pliability as an Experiential Quality: Exploring the Aesthetics of Interaction Design. *Artifact*, 1 (2).
- Shaw, A. 2012. Do you identify as a gamer? Gender, race, sexuality, and gamer identity. *New media & society*, 14 (1).
- Schön, D. A. 1983. *The Reflective Practitioner: How Professionals Think in Action*. London: Temple Smith.
- Taylor, T. L. 2002. Living digitally: Embodiment in virtual worlds. In R. Schroeder (Ed.), *The social life of avatars: Presence and interaction in shared virtual environments*, 40–62. London: Springer.
- Wu, W. W. 2019. Game Design Tools for Creative Reflection: Interactive Digital Visualizations of Character Diversity. Bachelor Thesis.
- Yee, N. 2006. Avatar and Identity in MMORPGs. Retrieved January 8, 2016, from http://www.nickyee.com/daedalus/gateway_identity.html.