MOOSE Crossing:
Construction, Community, and Learning in a Networked Virtual World for Kids

by

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SUBMITTED TO THE PROGRAM IN MEDIA ARTS AND SCIENCES,
SCHOOL OF ARCHITECTURE AND PLANNING
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June 1997

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ABSTRACT

In research about the Internet, too much attention is paid to its ability to provide access to information. This thesis argues that the Internet can be used not just as a conduit for information, but as a context for learning through community-supported collaborative construction. A "constructionist" approach to use of the Internet makes particularly good use of its educational potential. The Internet provides opportunities to move beyond the creation of constructionist tools and activities to the creation of "constructionist cultures."

These issues are explored through a specific example: MOOSE Crossing, a text-based virtual world (or "MUD") designed to be a constructionist learning environment for children ages 8 to 13. On MOOSE Crossing, children have constructed a virtual world together, making new places, objects, and creatures. Kids have made baby penguins that respond differently to five kinds of food, fortune tellers who predict the future, and the place at the end of the rainbow—answer a riddle, and you get the pot of gold.

This thesis discusses the design principles underlying a new programming language (MOOSE) and client interface (MacMOOSE) designed to make it easier for children to learn to program on MOOSE Crossing. It presents a detailed analysis, using an ethnographic methodology, of children's activities and learning experiences on MOOSE Crossing, with special focus on seven children who participated in a weekly after-school program from October 1995 through February 1997.

In its analysis of children's activities, this thesis explores the relationship between construction and community. It describes how the MOOSE Crossing children motivated and supported one another's learning experiences: community provided support for learning through design and construction. Conversely, construction activities helped to create a particularly special, intellectually engaging sort of community. Finally, it argues that the design of all virtual communities, not just those with an explicitly educational focus, can be enhanced by a constructionist approach.

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This work was performed at the MIT Media Laboratory. Support for this work was provided by AT&T, British Telecom, Digital Equipment Corporation, Gruppo Grauso, Interval Research, The LEGO Group, The National Science Foundation (grant 9358519-RED), the Media Lab's News in the Future Consortium, Nintendo, and Telecom Italia.

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In memory of
my grandmothers:

Florence Fox Bruckman
Norma Brodney Cohen

Acknowledgments

A number of people deserve not just thanks, but direct credit for some of the work this thesis represents. In particular, much of the intellectual work of this thesis took place in conversations with my advisor, Mitchel Resnick. Mitch has been not just a great advisor, but a great friend.

A number of MIT Undergraduates worked on the project under the auspices of MIT's Undergraduate Research Opportunities Project (UROP). The UROP program is one of the best parts of being at MIT. Working on the MacMOOSE client in chronological order were: Greg Hudson, Adam Skwersky, Steve Tamm, Jon Heiner, and Drew Samnick. Steve Shapiro handled the port to JavaMOOSE. Special thanks are due to Steve Tamm for sticking with the project over time, and working hard to support his successors on the development team.

On the server and people side, Albert Lin helped with the launch of MediaMOO, and with early work on MOOSE Crossing. Trevor Stricker helped with the MOOSE language design, wrote the server modifications for data collection, and kept the kids laughing. Austina Vainius helped with every aspect of the project, including writing documentation, designing objects for the MOOSE Crossing world, helping with revisions of the MOOSE language and client based on feedback from kids, and taking terrific notes on the kids' learning experiences. She has spent countless hours working with children online. One visitor to a MOOSE-Crossing classroom commented that telling the kids he had met Austina was like admitting he knew Elvis.

A number of people gave thoughtful comments on drafts of this thesis. I'd like to single out Danny Bobrow and Carol Strohecker in particular, for giving me some new ways to think about things. Other extremely helpful comments came from Andy Begel, Aaron Brandes, Justine Cassell, Mark Guzdial, Greg Kimberly, Jon Orwant, David Shaffer, Vanessa Stevens, Michael Travers, Austina Vainius, and Terry Winograd. My advisor Mitch Resnick read each chapter of this document two to four times, carefully each time. My thesis readers Pavel Curtis and Henry Jenkins provided lots of helpful feedback.

Pavel Curtis wrote the MOO software, on top of which MOOSE is built. He made a number of modifications to MOO to make MOOSE possible. Special thanks to Pavel for being a diligent thesis reader despite having other tiny little things like a startup company to worry about.

Henry Jenkins is an inspiration in all of his work. I thank Henry for reminding me to believe not just in active readers, but in the basic creativity and intelligence of people.

Sherry Turkle taught me how to think about how people relate to media. It was Sherry who encouraged me that thinking about MUDs and people's relationships to them and within them was a topic worthy of intellectual study.

Brian Silverman gets a gold star for being there to help me pull the technical pieces together. One afternoon in 1994, I tickled Boo Boo Bear and then went to get a cup of coffee while I waited for him to laugh. That was when I realized we had some serious performance problems. Brian helped me tear the system apart and put the pieces back together more efficiently.

Glorianna Davenport, my master's thesis advisor, gave me the chance to be at the Media Lab in the first place, and has continued to support my work.

I'd like to thank members of the Media Lab's narrative-intelligence reading group for helping to create a greater sense of intellectual community at the lab. Other communities that have helped sustain my MIT experience are the AI Lab dance group, and the thirsty-magic gang.

Michael Maier made the nifty moose icon used on the MacMOOSE application and other parts of the MOOSE Crossing project.

Jon Callas, Randy Farmer, and Dean Tribble contributed ideas to the design of the MOOSE language. Developing a friendship with Randy online has probably been my best personal experience with use of this medium. I've benefited greatly from all of Randy's experience from Habitat and beyond.

I'd like to thank Brenda Laurel, Howard Rheingold, and Sandy Stone for existing. And for having more faith in my work than I deserve.

Thanks to the members of MediaMOO and MOOSE Crossing for making these projects happen. On MediaMOO, special thanks to members of MediaMOO's Membership Advisory Committee for all their time, especially Michael Day, Randy Farmer, Beth Kolko, and Diane Maluso. Thanks to Tari Fanderclai and Greg Siering for organizing The Tuesday Café. Finally, thanks to all of MediaMOO's volunteer janitorial staff, especially Judy Anderson, Gustavo Glusman, and Seth Rich.

On MOOSE Crossing, special thanks are due to the children who participated in the Media Lab's MOOSE Crossing after-school program, and to their parents—for letting me study their children, and for transporting them to and from the lab each week for almost a year and a half. I'd also like to thank residents of The Pond area of the lab for putting up with the noise and the litter of empty hot-chocolate cups each Monday. Special thanks are also due to the teachers who brought MOOSE Crossing into their classrooms, especially BJ Conn, Andrea Martin, and Richard Smyth. I hope it was worth the effort.

Thanks to members of the Epistemology and Learning Group for being such a great group of people to learn and play with. Special thanks to my officemate David Cavallo for many long conversations about the meaning of it all, and for putting up with my mess.

Thanks to Jon Orwant for moral and emotional support, emergency Perl scripting, and sharing his Nintendo 64.

Finally, thanks to my family: Mom and Bernie; Dad and Mari, Danielle, Alicia, Rachael, Lucy, and Yikes. Not to mention Gilda and Judy; Betty, Midge, and Drew. For everything.

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