

# Building Virtual Communities

Learning and Change in Cyberspace

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**CAMBRIDGE**  
UNIVERSITY PRESS

PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE  
The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS  
The Edinburgh Building, Cambridge CB2 2RU, UK  
40 West 20th Street, New York, NY 10011-4211, USA  
477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
Ruiz de Alarcón 13, 28014 Madrid, Spain  
Dock House, The Waterfront, Cape Town 8001, South Africa  
<http://www.cambridge.org>

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First published 2002

Printed in the United States of America

*Typefaces* Janson Text 10.5/13 pt.    *System* L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> [TB]

*A catalog record for this book is available from the British Library.*

*Library of Congress Cataloging in Publication Data*

Building virtual communities : learning and change in cyberspace / edited by  
K. Ann Renninger, Wesley Shumar.

p. cm.

Includes bibliographical references and index.

ISBN 0-521-78075-6 – ISBN 0-521-78558-8 (pb.)

1. Electronic villiages (Computer networks) 2. Internet – Social aspects.

3. Computer networks – Social aspects. I. Renninger, K. Ann. II. Shumar, Wesley.

TK5105.83 .B85 2002

004.67–dc21

2001052485

ISBN 0 521 78075 6 hardback

ISBN 0 521 78558 8 paperback

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# 1 The Mystery of the Death of MediaMOO

## Seven Years of Evolution of an Online Community

*Amy Bruckman and Carlos Jensen*

### What Happened to MediaMOO?

*A typical Tuesday evening, 1993–1996:* In the online cafe, writing teachers begin to arrive. Twenty-five teachers will spend an hour discussing how to handle inappropriate student behavior in electronic environments. Afterwards, a few will stay for a game of Scrabble<sup>T</sup> and good conversation. Some will also attend the poetry reading on Wednesday. In a virtual hallway, an anthropologist stops to chat with a computer programmer about some recently released software. A communications professor in Seattle, Washington, meets with a graduate student in Queensland, Australia, to discuss a survey of online behavior they are developing together. More than one thousand people from thirty-four countries are active members.

*A typical Tuesday evening, 1999:* The space is empty. The writing teachers found another place to meet years ago. The communications professor drops by, finds no one else connected, and immediately leaves.

The “place” is MediaMOO, a text-based virtual reality environment (multiuser domain or MUD) designed to be a professional community for media researchers (Bruckman & Resnick, 1995). MediaMOO was founded in 1992 by Amy Bruckman as a place where people doing research on new media could share ideas, collaborate, and network. MediaMOO’s environment was designed to recreate the informal atmosphere and social interaction of a conference reception. Members came from a wide variety of disciplines, creating a diverse environment that fostered interdisciplinary research and learning.

MediaMOO reached its peak of activity in the mid-1990s but had fallen into disuse by 1998. What caused MediaMOO’s decline? Could it have been avoided? Is this a story of failure, or is change inevitable and

desirable? What broader lessons about the design of online communities can we draw from this experience?

### **Methodology**

To explore these questions, we began by holding a public forum. We chose the topic “The Future of MediaMOO: Autopsy and Redesign” for discussion at MediaMOO’s annual birthday celebration on 20 January 1999. Sixty members participated. Attendees included many former leading members of the community who are now less active.

After the forum, we conducted a series of interviews. First, we interviewed five former MediaMOO regulars. We tried to understand how their perspective had changed over time: What brought them to MediaMOO initially? Why did they choose to invest their free time in this community? Why do they no longer participate? Initial telephone interviews were complimented with follow-up email conversations with both interviewees and several other key members of the community.

To understand whether our observations are part of a broader trend, we also interviewed the leaders of three similar communities: Diversity University (DU), Tapped In, and Meridian. A combination of telephone, email, and MUD interaction were used for these interviews. We also corresponded with the founders of The Netoric Project, BioMOO, and CollegeTown.

With this work we hope to contribute both to our understanding of a particular historical moment in the evolution of the Internet, and more broadly to our understanding of online communities as not static but rather continually evolving entities.

### **Defining Success**

Many people obsess about the definition of “community.” The word is often used in a value-laden way. If your group qualifies as a community, then it has almost magical properties; if it does not earn this sacred term, then it is debased. We believe these arguments are a waste of time. Instead, we use the word “community” in the loosest possible, value-neutral fashion: a community is a group of people interacting with one another in some fashion. This definition frees us to address the more important underlying question: what value does a given group bring to its members? What are our criteria for “success” of the community/group?

These questions have no easy, objective answers. Most simply, one can say that a community is successful to the extent that it meets the needs of

its members. In geographic communities and other communities where participation is either required or difficult to change, the degree of activity in the community may not be closely correlated with its degree of success. The fact that the residents are still present may not mean that they are happy – they may simply be trapped. In online communities in which participation is genuinely voluntary, success is somewhat easier to judge. If people chose to participate, they likely think that they are benefiting from the experience in some way. If this were not the case, they would not spend their valuable time participating in the online community. (This, of course, assumes that people are good judges of how to spend their own time, a statement that many would dispute.) In the case of voluntary participation communities like MediaMOO, level of activity is a useful measure of the success of the community.

By the simple metric of degree of activity, MediaMOO was a grand success from its inception through roughly 1996; then it began to decline. Through our research, we have identified these factors as contributing to its decline:

- Splintering off of subgroups
- Technical obsolescence
- Historical change in the history of the Internet
- Choice of target audience/population model
- Lowered enthusiasm of the leadership

In the rest of this paper, we will discuss each of these factors and then conclude by outlining our plans to redesign MediaMOO based on what we have learned.

### **Splintering Off of Subgroups: A Victim of Success**

MediaMOO was designed as a place for researchers involved in some aspect of media studies to meet, share ideas, and explore the Internet as a social space. In a time before the Web, when the Internet was just starting to become a popular phenomenon, MediaMOO provided a space for researchers to “discover” online communities and their potential. In this role, MediaMOO succeeded admirably, spawning dozens of new research projects and online communities. In some ways, MediaMOO’s success led to its decline, as large groups of its core members “graduated” to form their own online communities.

The original goal of the MediaMOO project was to explore the application of the constructionist theory of education (Papert, 1991) to the

design of online communities (Bruckman & Resnick, 1995). Constructionist theory argues that learning by doing, learning through design and construction activities, is better than learning through passive receipt of information. A professional community is a kind of learning community. To increase users' involvement with MediaMOO, we decided to encourage them to build the virtual space themselves. Through this process, they would make the virtual world reflect their interests and needs better than we could ever anticipate those needs for them. The act of construction of the world also provided opportunities for professional networking, community building, and learning about programming and online community design.

The approach was largely successful: one group built The Netoric Center for writing teachers. Inside Netoric, they built The Tuesday Cafe for their weekly Tuesday-night seminars on how to use the Internet in their research and teaching. A graduate student built the Science, Technology, and Society Center. Special places were created for poetry readings and Scrabble<sup>T</sup> games. Employees of Apple Computer built a model of their offices, complete with a robotic front desk guard mimicking the friendly personality of its real-world counterpart.

However, as time progressed, some of these subcommunities splintered off to become full-fledged independent communities. MediaMOO in effect served as an incubator where fledgling groups began, grew, and eventually chose to go off on their own. Tari Fanderclai and Greg Siering founded The Netoric Project, the largest subgroup to emerge on MediaMOO. We estimate that more than a third of MediaMOO members at one time were Netoric affiliates. Fanderclai gives this account of the evolution of Netoric and The Tuesday Cafe:

We – the computers and writing community – found MediaMOO because Eric Crump and Michael Day found it and started encouraging people to join. Soon Greg and I started to get some ideas about organized activities there. We organized a big discussion as a sort of special event. Paul Bowers and Glenn Mayer helped us a lot in the beginning, too. That worked pretty well; then some people started talking about how it would be nice if we had a regular discussion time, and so Greg and I built the Netoric Headquarters and the four of us started organizing Tuesday Cafe discussions. Eventually Paul B. and Glenn dropped out, but Greg and I kept going. MediaMOO happily accepted all the computers and writing people who wanted to join, and we also got some regular members (some of whom are still with us) who weren't computers and writing folks per se, but who were interested in a lot of our topics. Although the computers and writing crew was pretty much ripe for whatever kind of online synchronous forum got invented, the multidisciplinary community at MediaMOO contributed a lot to our initial growth, and we got a lot smarter about

all sorts of technological developments and other topics a lot faster because of all the people we had access to there.

Eventually we moved to Connections for several reasons. I administrate Connections, and it's much easier for us to say to just write us for characters than to have them go through the whole application process on someone else's MOO. Also, Connections has a realm system that makes it super easy for a whole bunch of people to collaborate on a space, and so we were able to have the community participate in Connections, without having to get room owners to deal with exit permissions and such every time they want to connect a room. That's been a nice community builder, as we had hoped it would be.

The main reason, though, is that the Netoric Project members spend a lot of time talking about using MOOs in classes. It was frustrating for people to learn all about MediaMOO only to find out they couldn't bring their classes there. We wanted to be on a MOO that people who got excited about could use for their classes, and we also wanted to take advantage of the presence of classes on the MOO to be able to get students to come to Netoric events such as the Tuesday Cafe. That's turned out to be a great resource; Connections and the Netoric Project have really contributed to each other's growth. (Fanderclai, personal communication; quoted with permission)

MediaMOO was intended as a space for professional researchers to network. A short application was required to join. While anyone could visit as a guest, only those who were doing some kind of media research could become full members. This requirement was essential to creating the kind of atmosphere that made MediaMOO successful – more like meeting colleagues gathered for a professional conference than like meeting random people on a street corner. Consequently, while writing teachers exploring how to use the Internet in their classes qualify for membership, their writing students do not. This MediaMOO policy is fundamental to what made the environment a successful professional community, but it was ultimately problematic for Netoric Project writing teachers.

The same policy issue affected the splintering off of another subgroup, CollegeTown. CollegeTown was founded by Professor Ken Schweller of Buena Vista University in Storm Lake, Iowa. Schweller writes:

College Town was founded in January 1994 as part of a class project in a class I was teaching called "Living and Learning in CyberSpace." My first MOO experience was on LambdaMOO where I learned to program MOO code and made a huge set of annoying objects such as MOO Brew and MOOtercycles. I quickly tired of the "gee whiz" aspect of one-upmanship MOO coding and became very interested in how this amazing and versatile platform might be applied in a useful educational setting. That's when I discovered MediaMOO. I liked it at once because of its serious purpose, its restricted admissions and its deemphasis on role playing. I set up a TV studio and built cameras, TVs, tapes, and VCRs to allow users to record

MOO events for later playback and distribution. I have always felt that archives were an essential element for sustaining community and this seemed like a fun way to enable that.

I eventually became a wizard on MediaMOO and gained experience in MOO management and administration. Eventually, however, I decided that I needed to develop a new MOO more in line with my own personal goals. I wanted a MOO where classes could be held and teachers could meet to collaborate and do research. I wanted a place where undergraduates could experiment with MOO coding and the creation of serious virtual environments without the distraction of anonymous identities and D and D type role-playing. I saw a MOO as an excellent instrument for teaching my computer science students the elements of object oriented programming. And so I worked together with my CyberSpace class to create CollegeTown. We worked together to plan the layout, basically a Campus, a Town, and a Wilderness Area. We insisted on users using their real names and connecting all rooms to existing rooms using a graphic layout. We disabled teleporting and encouraged everyone to walk about. As a result of my experiences on MM we were able to create CollegeTown in a very short time in a remarkably smooth manner. (Schweller, personal communication; quoted with permission)

When Schweller left MediaMOO to start CollegeTown, MediaMOO lost one of its most energetic and dedicated leaders. When Fanderclai and Siering left MediaMOO to move to Connections, MediaMOO lost their leadership as well as a third to one half of MediaMOO's active population. The departure of The Tuesday Cafe was the single biggest factor in MediaMOO's decline.

Nevertheless, it's impossible to view these departures as "failures." MediaMOO played a crucial role in the development of The Netoric Project, CollegeTown, BayMOO, BioMOO, and others. As the subgroups matured, they grew to a point where establishing their own separate community was appropriate and necessary. The problem, then, is not that subgroups splintered off but that new subgroups were not present on MediaMOO in earlier stages of development.

One solution to the problem of splintering subgroups is to adopt a distributed architecture that allows subgroups independence while maintaining connection and affiliation with the parent group. This solution has the added advantage of supporting scalability.

We can explain the concept of a distributed architecture with an analogy. Imagine trying to show a new movie to as many people as possible. One approach would be to build the biggest movie theatre you can possibly build. You might be able to make one the size of a large football stadium where 100,000 can see a movie at the same time; however, there will be traffic problems as everyone tries to arrive and leave for the show. It would be impossible to construct a theatre for 1,000,000 people. Instead,

imagine that you show the movie in 10,000 separate theatres. It would be easy to show the movie to millions of people at once, with no traffic tie ups. This is analogous to a distributed architecture.

Affiliated groups and subgroups may chose to share policies. While the theatres are separate, they might agree to show the same movie, sell popcorn for the same price, and prohibit smoking during the show.

Not every subgroup needs to adopt the same policies. To continue the analogy, suppose that, in the single large theatre model, some people want to prohibit advertisements before the show, but the majority want to show ads to subsidize the cost of the event. The minority is out of luck. However, in the distributed, multiple-theatre model, one theatre can easily decide not to show ads and instead charge a higher admission. They do not necessarily need to renounce all affiliation with the federation of theatres to make this local policy change. Or to return to The Netoric Group on MediaMOO, a distributed architecture would allow this subgroup to let students participate in their subcommunity without affecting the greater community of which they form part.

A hierarchy of groups and subgroups with separate computers and separate leadership at each level can comfortably grow to a much larger size than one unified group for both technical and social/policy reasons. We plan to design and implement a distributed system for the next version of MediaMOO.

Many of MediaMOO's fragmentation problems could have been addressed through a distributed architecture. However, the problem was not just that subgroups were splintering off, but rather that new subgroups were not forming to take their place. Why were there no new subgroups forming on MediaMOO? Two intertwined answers concern history and technology.

### **A Historical/Technical Moment**

Development on MediaMOO began in the fall of 1992, and MediaMOO's official opening party was held on 20 January 1993. MediaMOO predates the World Wide Web as we know it. Tim Berners-Lee had the original idea of a World Wide Web in 1989, but the real beginning of the Web can be traced to the release of the first web browser, NCSA Mosaic, in September 1993.

MediaMOO is a text-only system and is based on the MOO software developed by Curtis and White (Curtis, 1992). A MOO, or Multiuser Object Oriented environment, is a kind of a MUD – MOO stands for

MUD Object Oriented. MUDs are text-based virtual worlds that were originally invented in the late 1970s as Dungeons and Dragons games (Bartle, 1990); however, they have been adapted for a wide variety of applications since then. Users can connect from any computer with an Internet connection using a simple Telnet program. These minimal hardware and software requirements made participation possible for a wide range of people.

Though it is hard to imagine now, in 1993 the real-time communication afforded by the MOO software was cutting-edge technology. In general, MUDs were on the technological forefront, and Curtis and White's MOO software was particularly strong in its support for end-user programming. Other MUD languages either are accessible only to professional programmers (e.g., LPC) or have only very limited capabilities (e.g., MUSE and MUSH). MOO was the first system to make a full-featured programming language accessible to naïve users. In 1990, Curtis used MOO to start a recreational community called LambdaMOO. LambdaMOO members displayed an astonishing amount of creativity and dedication in building the virtual world. However, as Schweller noted, the recreational nature of LambdaMOO did not make it suitable for more serious pursuits. Together with astrophysicist David Van Buren, Curtis planned to start AstroVR, a MOO designed to be a professional community for astrophysicists. AstroVR itself never became a thriving community; however, it did inspire Bruckman to create MediaMOO.

In 1993, the Internet was about to explode in popularity. Many people in both industry and academia understood that this was about to happen. Few could have predicted the magnitude of the growth of the Internet, but many sensed that something significant was coming. Those people came to MediaMOO. They came to MediaMOO to try to understand this emerging medium first hand. At the time, MediaMOO was the latest hot new technology. In this environment, they planned their future involvement with Internet research and business, and networked with others similarly inclined.

Three to five years later, MOO technology was out of date. At the simplest level, a plain text environment with no fonts, graphics, or links is awkward compared to the World Wide Web. It's clear that MediaMOO would be improved if it supported at least Web-style graphics and links. This has already been implemented by a number of developers by creating a Java-based Web front end to access the virtual world (a particularly good example is Tapped In, a community for teacher professional development, [www.tappedin.org](http://www.tappedin.org)).

Some argue that it would be desirable to have a two- or three-dimensional dynamic representation of objects within the virtual world. This is more problematic. Although such environments are visually appealing, they may actually impede human communication. In a text-based world, users have access to a full range of body language and emotion, limited only by their writing ability and imagination. It is possible in text for a user to raise an eyebrow skeptically, wiggle their nose mischievously, or lean against a wall exhaustedly. Graphical avatars are generally limited to a short list of basic gestures explicitly implemented by the developers, such as nodding and smiling. Researchers like Vilhjalmsson are exploring solutions to these problems, but for now they remain unsolved (Vilhjalmsson & Cassell, 1998). The higher production values of such environments currently make them much less expressive and less user-extensible. The use of these techniques may be viable in the future, but they are not yet mature enough for widespread use.

We believe that technological improvements are necessary but not sufficient to revive the community. Something subtler than mere lack of desirable software features is at the root of the problem. In the early years of MediaMOO, its form and content were intertwined: it was both a place to meet people interested in new media and a participatory exploration of a new media form. The former remains, but the latter does not. By 1997, MOO was old technology and of little interest in itself.

To stay on the cutting edge of technology, MediaMOO would have to reinvent itself not once but continually. This requirement is unfortunately so labor intensive that it is impractical. It leaves a question: to what extent is there a need for a place for media researchers to network using well-understood technology that is not inherently interesting? Our answer is that the need remains but for a different population than MediaMOO's original audience.

### **Changing Population Models**

Throughout our lives, we form a part of many different communities. Most of these affiliations are transitory. An individual may move from being a member of a kindergarten class, to a college fraternity, to a homeowners' association, to a retirement home. Even if each individual is only part of a group for a short period of their life, that group may have a stable population: seniors leave the fraternity, but new freshmen arrive to take their place.

Groups in which membership is lifelong are increasingly rare. Individuals may choose to remain in the same geographic or religious community for a lifetime; however, even this is becoming less and less common in many industrialized societies. Kim points out that many online community designers fail to understand the difference between “stage-of-life” and “lifelong” population models (Kim, personal communication; quoted with permission).

MediaMOO’s initial design assumed that most members would join and continue to participate indefinitely. If a few left, more would hear about the community by word of mouth. From 1993 through 1996, the population was stable at roughly 1,000 active members.

In 1993, professionals in the “multimedia” industry came to MediaMOO to gain a first-hand understanding of the next big thing, the Internet. By 1997, professionals in the industry already understood the Internet and were too busy with their research and corporate positions to have time for the kind of casual networking MediaMOO affords.

We believe that the solution to this problem is to change both our population model and our target audience. The group of people who have a compelling need to make new professional contacts in this field and who would most benefit from what MediaMOO has to offer are young professionals and graduate students in media-related fields. These people are unlikely to participate indefinitely. In our redesign of MediaMOO, we need to assume a “stage of life” population model. To replenish the ranks of the established members who opt to leave, we need to constantly attract new professionals.

### **On Leadership**

The decline in the level of activity on MediaMOO coincided with a decline in the activity level of the community’s founder and lead administrator, Amy Bruckman. It is likely that the two are related.

Bruckman began MediaMOO in the fall of 1992. In October 1995, she launched MOOSE Crossing, an online community designed to be a constructionist learning environment for children and the subject of her PhD dissertation (Bruckman, 1997, 1998). As time went on, she spent increasingly less time greeting new MediaMOO members, answering questions, organizing events, and encouraging users to begin new projects.

MediaMOO’s waning is in contrast to the increasing success of Tapped In, a community designed to support teacher professional development

(Schlager, Fusco & Schank, 1998, this volume). Visitors to Tapped In are almost always greeted enthusiastically and cheerfully by volunteers or paid staff immediately on arrival. Four to seven organized community events typically happen per week, of which roughly half are usually organized by staff and half by volunteers. Part of what makes this possible is that Tapped In has five paid staff members. (They devote different percentages of their time to the community, adding up to approximately 2.5 full-time paid positions.) The paid staff in turn encourage and organize a volunteer staff of ten to twenty. With this amount of energy invested in leadership, Tapped In is a lively and growing community with 4500 members at the time of this writing, growing at a rate of 200 per month (Schlager, personal communication; quoted with permission).

Similarly, Diversity University (DU) has a much more active leadership than MediaMOO and also has stayed more active as a community. DU's founder Jeanne McWhorter agrees that leadership is a factor in their success:

As you alluded to, there is considerably more wizard/manager presence on DU [than MediaMOO]. From the very beginning I have spent every available waking hour online or semi-accessible. One thing I have always emphasized for our administrative (as opposed to just programming) wizards/managers is personal attention. . . . I really do think this has a lot to do with ongoing population. Despite how we might feel, there is a certain celebrity status to being a wizard or manager, and when people log onto a world, they like to see us there and interacting. . . . People hate logging onto an empty world too, so regardless why the admins or users are there, it is a draw (McWhorter, personal communication).

As McWhorter indicates, leaders fill not just a practical but also a symbolic function. When that role is left vacant, the community suffers.

### **Looking Forward**

The essential idea of an online professional community for media researchers still seems to have promise. Based on this research, we plan the following changes to MediaMOO:

- Introduce a distributed architecture that will allow subgroups to retain some connection to the parent group while growing in autonomy.
- Add static two-dimensional Web-like graphics and links (but NOT dynamic or three-dimensional graphics).
- Emphasize graduate students and young professionals as the target audience with a "stage of life" population model.

- Develop a new leadership staff (led by Carlos Jensen) with more time and enthusiasm for MediaMOO and its future.

Designers of online communities might find these lessons more broadly applicable:

- It's important to be aware that there are multiple population models (ie., stage of life, life long), and to make sure to chose the right population model for a given community.
- Subgroups will inevitably form, and may splinter off. Community managers should anticipate this, and may adopt strategies such as fostering the growth of new subgroups, and giving mature subgroups a degree of autonomy while maintaining connection to the parent group.
- Enthusiasm of the leadership of the group is essential. If original leaders become too busy or tire of playing that role, they must be replaced with new, enthusiastic leaders, or possibly supported behind the scenes in maintaining a public presence in the group.

In this paper, we have tried to summarize some of the changes that occurred over MediaMOO's seven-year history. We hope that the lessons learned will be of interest to other community designers and will contribute to our understanding of the delicate interactions of technology, policy, and leadership, which create online culture.

### Acknowledgments

The authors thank all the members of MediaMOO and leaders of other online communities who shared their thoughts and insights with us. Special thanks to B. J. Berquist, Isabel Danforth, Tari Fanderclai, Judith Fusco, Gustavo Glusman, Richard Godard, Amy Jo Kim, Jeanne McWhorter, Daniel Rose, Mark Schlager, Ken Schweller, and Greg Siering.

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