The Connector
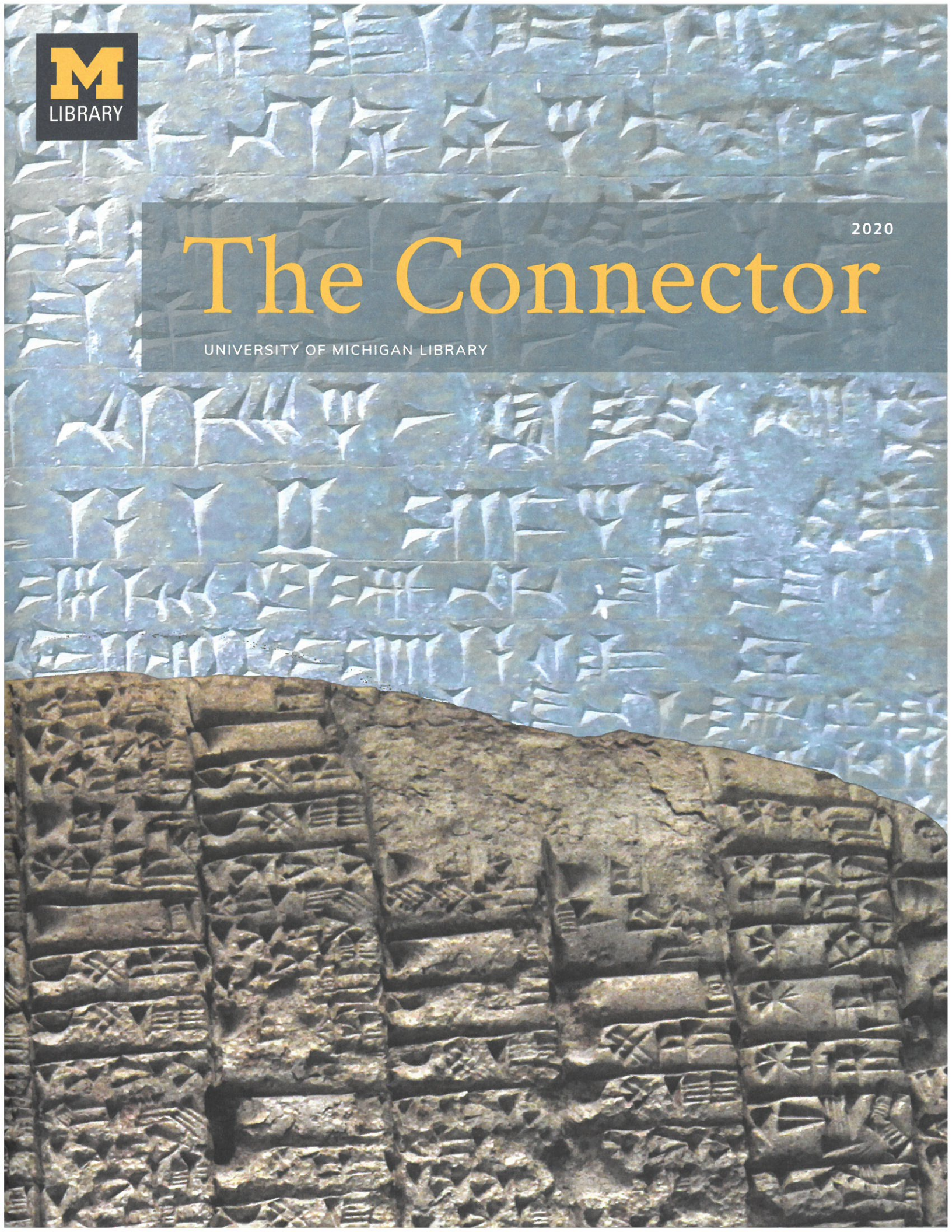
2020

UNIVERSITY OF MICHIGAN LIBRARY

In this game, everyone wins

by Lynne Raughley

It's a blustery wet October day, and some of the students assembled in the Shapiro Design Lab are still wearing the raingear they'd donned for the morning walk to class.

They've come to play.

They're seated around tables stocked with a variety of games, some of them familiar (chess, mahjong) and some of them less so (Xiangqi, aka Chinese chess). With minimal prodding, they take their positions, put the game pieces in place, negotiate ground rules as needed (who goes first?), and then they begin.

There's some laughter, some frustrated groaning, lots of quiet, close concentration, and a variety of game piece handling methods — at least one that involves spinning a die on one of its corners, à la the Cube.

The games here are analog, with one important exception: a large touch screen on the wall displays a new game, called Collect/Connect. There the students are on their feet, and alongside them is Librarian Barbara Alvarez, who guides them through the unfamiliar interface.

There's also a whiteboard that offers a framework for student observations and note taking, because all this play is meant to be purposeful.

First, why the games?

The class, Global Gaming (ASIAN 253, Introduction to Asian Studies) is a new syllabus for Christi Merrill, associate professor of comparative literature, South Asian literature, and postcolonial theory, but it combines several of her longstanding research and teaching interests: translation, literary and otherwise; games and meaningful play; and cultural collections — specifically, the untapped potential for student exploration and discovery within the campus's vast, diverse library and museum collections.
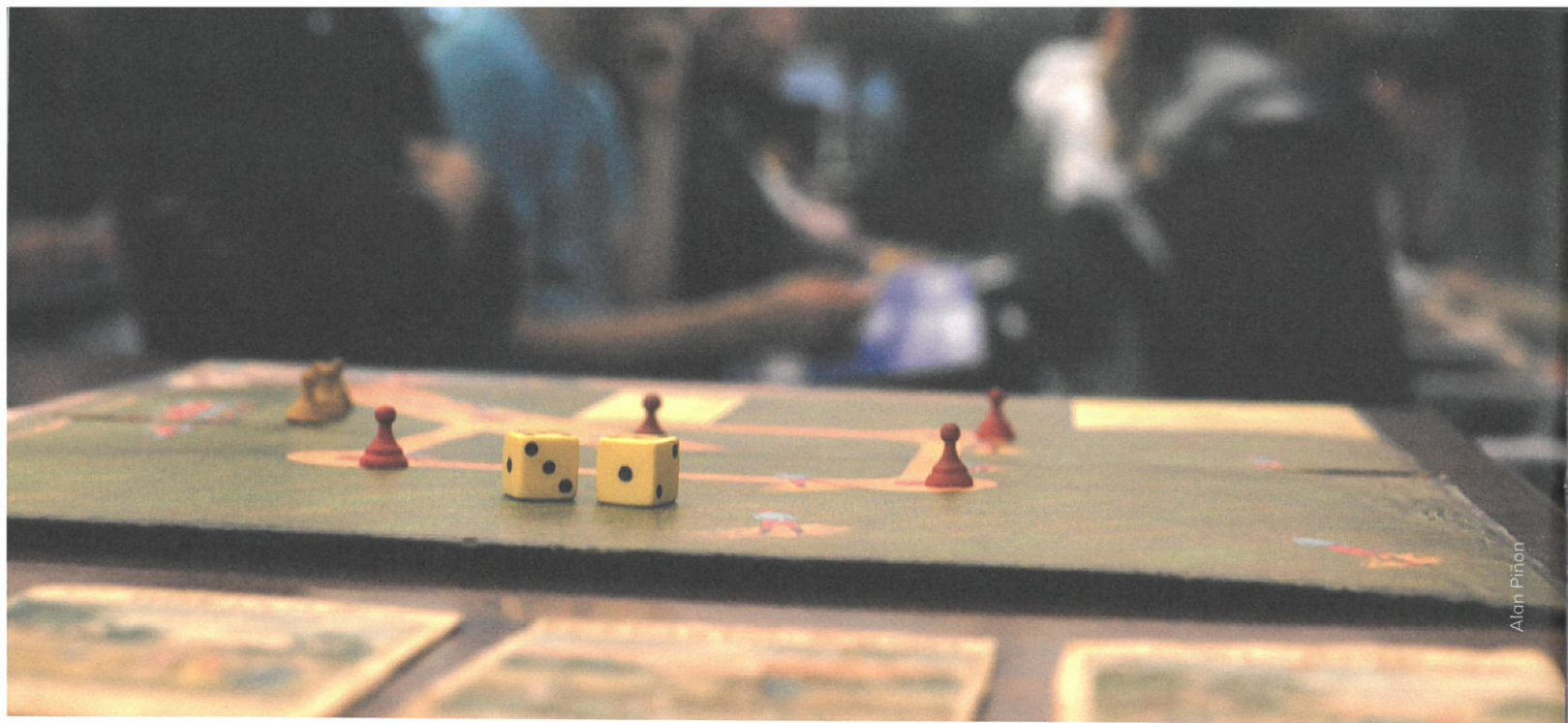
Playing games in the Shapiro Design Lab

The new video game, Collect/Connect, is the most recent product of these interests and the ways in which they overlap — more on that later — but Merrill has been thinking about the playful aspects of translation for a long time. The first book she wrote, *Riddles of Belonging: India in Translation and Other Tales of Possession*, was about translating humor, something she'd wrestled with in her own work as a translator.

During the LSA Translation Theme Semester in 2012, she got funding from a few sources, including Mcubed (a university-sponsored program that awards grants to cross-disciplinary collaborative projects), toward making translation at Michigan more visible. This led to the creation of That Translation Game, a game-show-style iPad app first played in a course she co-taught called 22 Ways to Think About Translation.

In that game, teams worked together to produce brief translations under a ticking clock and with varying levels of difficulty and conditions (formal to informal, or from one format to another). The teams' translations were judged in real time by applause levels when time ran out.

Lynne Roughley

An 1887 baseball board game, from the Clements Library collection

Those grants also led to the creation of the Translation Networks, a set of digital tools aimed at enabling students to build their own connections between translation-related ideas, creative practices, and sources.

During the theme semester, Merrill became especially interested in expanding the campus understanding of translation to encompass relationships and connections between and among the collections held by the cultural and academic campus units. But there were barriers to this, beyond even the well-known reticence of

students — especially undergraduates — to delve into and interrogate museum and library collections beyond catalog searches for source materials like books, articles, and databases. Such searches tend to be literal and narrow, and they can't connect searchers to related materials held elsewhere, even if "elsewhere" is only the distance between, say, Shapiro Library and the U-M Museum of Art.

And even within a given catalog, the associations are limited. Merrill, while teaching a class on translation, had trouble finding materials for student projects because of these limitations. "Often, the translator's name was not even included in the catalog record, or you didn't know which language a work was translated from; so you couldn't just find all the work by a certain translator, or look for precedents in translating a given genre from one language to another," Merrill explains. The Translation Networks offered a platform via which students could expand upon the catalogs by recording the associations they discovered among and between items.

It was a place to start, but Merrill knew she'd need more people working to discover and record these hidden connections if the network was to become a robust and useful resource. And as she looked to expand the effort,
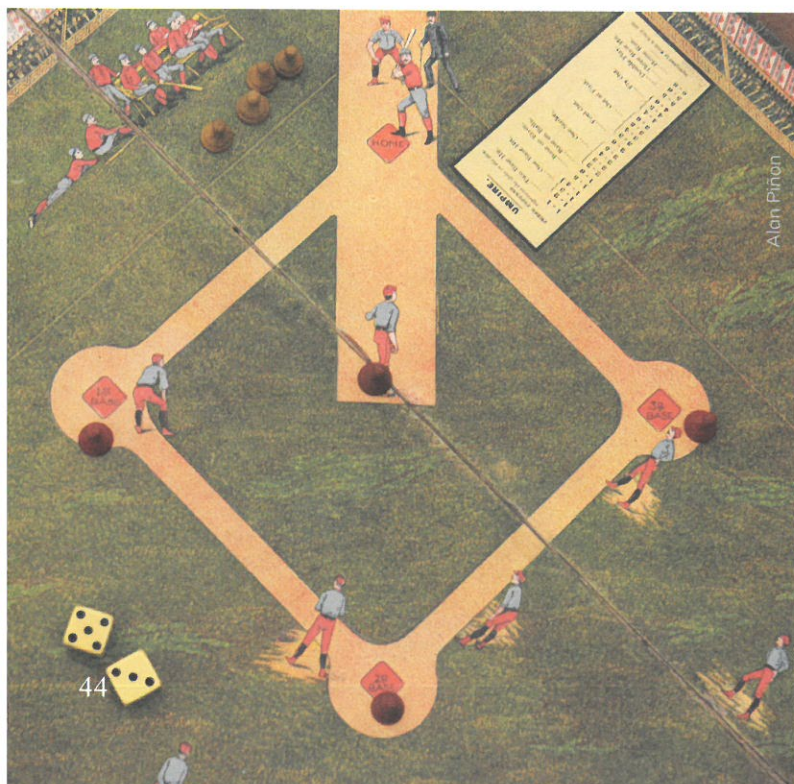

Curator Clayton Lewis shows Global Gaming students the Sugoroku in the Clements Library

Merrill once again turned to the fertile territory of games and gaming.

A group effort, to say the least

Given that games almost always involve some collaboration — even competitive games require people to agree upon rules and procedures — Merrill looked around for partners. Alvarez, head of international studies at the library, was already on board — they'd worked together on the Translation Networks, and Alvarez was especially interested in one of the project's goals, an exploration of whether and how library and museum catalogs might be enriched by user input.

Other team members would bring creative design and technical expertise. The listed collaborators on the two Mcubed project grants are Heidi Kumao, professor in the Stamps School of Art & Design, who connected the team to several graphic designers and worked on streamlining game play; Bruce Maxim, professor of engineering and computer and information science at UM-Dearborn, who enlisted a series of student
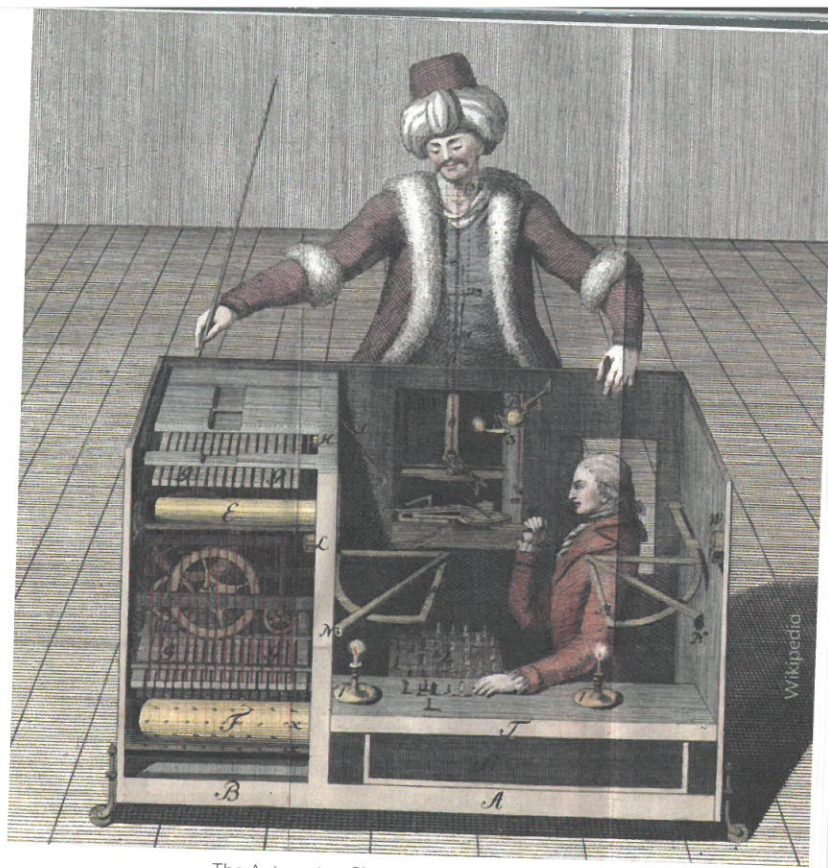
The Automaton Chess Player, also known as the Mechanical Turk

gaming programmers and also made the work part of his senior design class; and DeLean Tolbert, assistant professor of industrial and manufacturing systems engineering at UM-Dearborn, a recent addition to the team.

When the group first got together, they started playing.

"It makes my academic work so much more fun to collaborate and play games with people," Merrill says. "If I'm ever chair of a department, I'm going to start every meeting by playing a game."

"At the beginning," Alvarez recalls, "we did not have a specific concept in mind, beyond 'a game' and a set of goals we wanted to accomplish."

To refine their approach, they played many games, Alvarez says, pulling out the ones that stood out as having aspects most relevant to the things the group was trying to achieve. They developed their own taxonomy. "We began to talk about our game in terms of other games," she says. For example, "this should happen like in Dixit, and this should be like Scrabble."
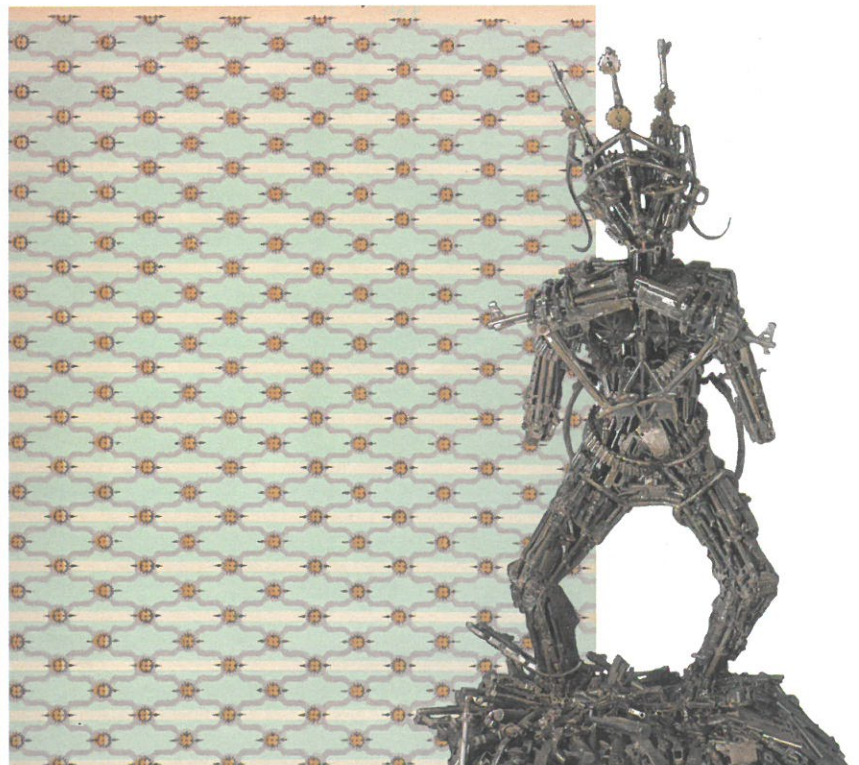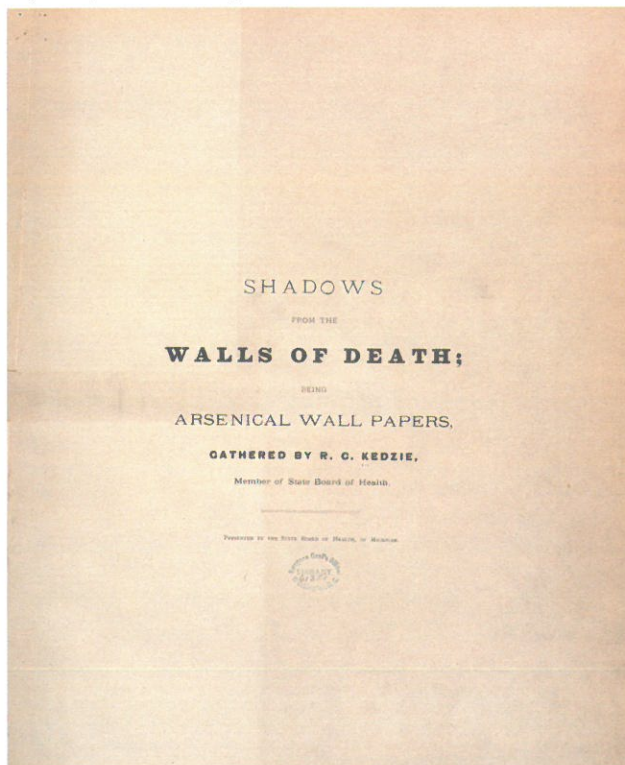
In addition to board games, the group drew inspiration from the eighteenth-century Automaton Chess Player, a fake chess-playing machine that had a concealed human player, and Turing's Imitation Game, which tests a computer's ability to generate human-like responses, an important concept in the philosophy of artificial intelligence (AI).

They also asked the curators of various collections on campus — the U-M Library, the Clements Library, the U-M Museum of Art, the Kelsey Museum of Archaeology, the U-M Museum of Natural History — to select a subset of items to contribute to the game. From those items, they created a set of playing cards with images and descriptions based on their catalog records.

The original iteration, built for a touchscreen, required players — three human and one that was styled as a kind of artificial intelligence — to associate the cards dealt to them with randomly selected keywords that reflected common elements among them. They earned points based on the conceptual complexity of the keywords.

Merrill offers as an example the relationship between the arsenic-infused wallpaper sample book in the library's collection and the U-M Museum of Art's Apsara Warrior, a sculpture by Cambodian artist Ouk Chim Vichet fabricated from decommissioned AK-47s. Their common element, or one of them, would be "lethal history," but these two objects would not show up together in a standard search even if the two catalogs spoke to each other.

Objects repesented in the game Collect/Connect

SHADOWS
FROM THE
WALLS OF DEATH;
BEING
ARSENICAL WALL PAPERS,
GATHERED BY R. C. KEDZIE,
Member of State Board of Health.

Barbara Alvarez (right) helps students play the game Collect/Connect in the Shapiro Design Lab

That first version of the game began the process of building a network of connections.

The next version evolved into a two-player, cooperative game that requires players to figure out which connections their partner finds between two distinct objects. For two months it was installed on the ground floor of Shapiro as part of the exhibit Bookmarks: Speculating the Futures of the Book and the Library, which was co-sponsored by the Stamps School. The team was able to observe the game and its players in action, and to collect data on which connections they were, and weren't, making.

The information they gathered feeds into an intriguing aspect of the project: artificial intelligence. To expand the game beyond the relatively small sampling of objects currently in use, the team is looking to harness AI in in three different categories: literal AI, which simply scrapes the metadata from all the catalogs and connects items based on what it finds there; image AI, which uses Google image search to connect items; and a subjective AI, which is the most human, given that it makes associations based on context, emotional responses, or other "hidden" aspects of objects.

Using Collect/Connect in her course is part of Merrill's effort to press forward with the project, which will not

end with this version of the game. To achieve some of their important goals, she and Alvarez explain, they have to take the game into the mobile environment, which will make two things possible: it will allow users to contribute, in real time, to the objects' metadata, so the connections they're making in the game will become available to others; and it will enable a geolocation component, to encourage players to visit the collections and experience the objects in person.

There is also the potential for a pool of game players beyond students. Once the game becomes an app, it will be available to everyone.

Christi Merrill offers the class a framework for meaningful game play.

Detail from the Sugoroku

Alan Piñon

Real life

Because the game is a product, it's easy to mistake it for an endpoint, rather than a beginning. But there's something important that goes beyond the Collect/Connect team's ambitions for the interface; beyond even its potential to harness artificial intelligence to create an online network that offers rich, human-centered descriptions of the many collected, curated objects held by the university.

Ultimately, the work of the game is to lead students and others to the physical collections themselves.

Merrill offers an anecdote that is, for her, a touchstone in this effort. "It was during a class visit to the library a while back, a session taught by Barbara," she says. "We were using Translation Networks, and she was teaching them specifics about library discovery, research, and resources for translation projects."

Afterwards, one of the students approached Merrill and said, "I heard that there's a library here that has books in other languages." The student, a junior who had advanced proficiency in a language and so was well-equipped to translate, was amazed. Yes, Merrill told him: there were books, and Alvarez could help him

find them. "And I can check them out?" he asked. (The answer was yes.)

"He was so excited."

It was a reminder of how students today live so much of their lives online, and how it might not even occur to them that the objects in the collections are theirs to seek out, study, enjoy, and sometimes even take home, if only temporarily (though not ever, if it happens to contain arsenic-laced wallpaper samples).

Back in Shapiro Design Lab

This visit to the Shapiro Library is just one stop on the class's schedule of visits to campus collections. They've already been to the Clements Library to look at the Sugoroku, an eighteenth-century Japanese game about world travel (there's a reproduction on one of the tables here, with cards the students created to make it playable). They've been to the Language Resource Center with its collection of games, and later in the semester they'll make a second visit to the Computer & Video Game Archive in the Art, Architecture & Engineering Library.

Today, the students playing Collect/Connect are wary

at first. This is a freshman seminar, and they've been on campus for less than two months. They don't want to break anything, and they don't want to get it wrong.

But as Alvarez guides them through the process they get more comfortable. These are digital natives, after all. They start to cooperate, building their scores by reaching past the literal and pictorial, and by trying to think like someone else — the person standing next to them, who's made a connection between objects that isn't at all obvious.

They complain, inevitably, about the subjectivity of the keyword associations. "That plate is definitely obsolete," someone insists. No one eats off of it, and it's in a museum. "Case closed!"

Following the instructions Merrill has written on the whiteboard, the students make notes about these kinds of observations and conflicts. They're building their own taxonomies, and hopefully becoming curious enough about the items they're seeing on the screen to take deeper dives and make some in-person, self-guided visits to the many collections on campus — some of them in this very building.

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