COMMONS KNOWLEDGE
(a library for rare books yet to be written)

david dewane
christopher hight, advisor
This thesis is a typological investigation of the library - specifically examining how digitizing information informs design. The agency of the book, which has historically been the protagonist of library design, is being radically transformed by the migration to the digital. An analysis of this shift reveals opportunities where new and provocative juxtapositions can be sought within this ancient and well-known building type.

This library seeks to respond formally to the current condition of the book, which, as it is translated to the electronic, is divided into three phases: the absent, the common, and the unique. The absent is an acknowledgement that information is now produced in a wide variety of media whose representation can no longer be accommodated by the book alone, the common is an affirmation that the mechanically reproducible book is still legitimate, and in fact can be radically recast using existing technologies, and finally the unique is an understanding of how to treat objects resistant to digitization.
THESIS STATEMENT

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1_plan:
From the plan one can discern the two basic space types that compose the library. The first is the regular, modulated series of archive structures that repeat at consistent intervals. The second system that consists of the knowledge production spaces, register in a more irregular, fluid language.
The section describes the stark difference between organization at grade and in the upper levels of the building. The archives, which have a rigid, repeating logic, are elevated to create a shaded, open ground plane. Knowledge production spaces trace across the ground but also leap up into the zone of the archive when it is programmatically advantageous.
3. theater:
This image depicts the act of knowledge production taking place within the building. Foregrounded is a group of children around a traditional Kathakali dancer. In the building, all aspects of the Kathakali can be accommodated: from production of the costumes, to staging of a production, to recording a production, to editing that recording, to publishing online, to the archiving of Kathakali artifacts (archives are in the background). Patrons in the library are free to observe and/or participate in the production and dissemination of this knowledge.
4_books
The physical book is still alive and well in this library. Instead of having an ever-growing supply of the same books, individual volumes are printed on demand and unread books are recycled. In this library the building system used to construct the walls literally become the bookshelves, whose deep section allows for protection from sun and rain while allowing for breeze.
The ambition of the library is to provide increased access to materials available online, while also providing opportunities to access that which cannot be easily reproduced. It stages a relationship between the two, and in the process tries to strengthen its position as an agency of culture. In this image, the viewer is positioned in the archive, but looks into the production space that is in immediate juxtaposition. This super-flat relationship between production and consumption of knowledge is meant to be an appropriate reflection of our society in the digital age.
The project is located on a broad river in the backwaters of Kerala State, India. The project’s goal is to have significant formal presence, without being overwhelming in form or materiality.
Thesis Defense

INTRODUCTION
My name is David Dewane, and the title of my thesis is: Commons Knowledge, (A Library for Rare Books yet to be Written).

This thesis is a typological investigation of the library - specifically examining how digitizing information informs design. The agency of the book, which has historically been the protagonist of library design, is being radically transformed by the migration to the digital. An analysis of this shift reveals opportunities where new and provocative juxtapositions can be sought within this ancient and well known building type.

DEFINITION
Since “library” is a word I’ll be using repeatedly today, I’d like to start off by clearly stating what I mean when I use the term:

First, the standard architectural definition is a collection of sources, resources, and services AND the building in which it is housed.

Also, I feel it is important to highlight the urban role of the library as a critical piece of the public domain, a symbolic space that accommodates the persistent desire for collectivity.

This last notion, what Koolhaas, in the midst of his library projects of the 90s, calls the “persistent desire for collectivity,” is very compelling to me. He doesn’t specify if it is the desire for humans to collect together socially or our persistent desire to collect physical objects. Regardless of which he is referring to, the fact of the matter is that despite the pervasiveness of the web, libraries are serving more patrons and buying more books than ever.

EVOLUTION
This graph represents a simplified evolution of the library. The horizontal axis represents time and compresses as it goes back. The vertical axis (or the width of the white band) represents the amount of people who have access to that information – starting small, but getting progressively bigger. Also you will note the interruptions. These mark advancements in technology that increased the ease of recording information, and led to subsequent revolutions in the culture of the library, such as Gutenberg’s invention of movable type.
A significant event for the contemporary library came in 2004, when the Google Books project was launched with the mission to "...organize the world’s information and make it universally accessible and useful...The tremendous wealth of knowledge that lies within the books of the world will now be at our fingertips."

This mass scanning process has led to a strange phenomenon: while the vast majority of books can be translated, there exists a minority of content that resists digitization. These materials, often found in rare materials collections, serve other cultural roles and therefore their digital status is among their least important qualities.

It is also important to note that scanning existing books is only one part of the growth of digital knowledge. WEB 2.0 is the catch phase that describes the shift from a one-way interface where the user simply access information, as opposed to a two-way interface where users both access and create content. The classic example is Britannica’s online encyclopedia (composed by Britannica’s experts), versus Wikipedia (composed by users). Library 2.0 is actually a term used by the library science community to describe a focus on user-centered participation in the creation of content.

DIAGRAMS
So here is a series of diagrammatic plans that represent my reading on the evolution of the library through a series of canonical projects, starting with the monastic library of St.Gall on the left and finishing with the Sendai Mediatheque on the right. What you see happening, is that between intervals the white figures, which represents what we think of as the traditional, rigidly specified program of the library, gives way gradually to the black ground, which represents the influx of open, public space. You can also observe an internal mutating away from a central organization. The result is a move from a homogeneous, closed system on the left to a more heterogeneous, open system on the right.

PROPOSITION
I’d like to turn now from the typological research to the thesis proposition itself. My project operates at two scales: first, I’m proposing a new network of global libraries – represented by the cubic figure in this projection - and second, I’m investigating, in detail, the design of just one of those libraries – represented here by one individual dot. I'll begin by presenting the global as a way of framing the local condition.

The Carnegie Library Endowment had a very significant influence on my thinking here. Over a thirty year period from 1890-1920, Carnegie personally underwrote the construction of 1,700 libraries in the US, which in 1920 represented about half the public libraries in the country. This was achieved using a very simple formula consisting of these four points.

My proposal is for a new wave of global libraries, financed through the United Nations, and, unlike the Carnegie model, operating as both independent individuals AND a single entity. One of the limitations of the Carnegie project was that those libraries could not effectively function as a network (in fact it was part of the deal that the Carnegie Foundation completely detached itself once the grant was executed). Our historic
moment is different; we could realistically conceive of all these individual libraries functioning as one singular, interconnected body.

**DIGITAL NATIVES/IMMAGRANTS**

a. If you were to envision what this new wave of libraries would look like, it would probably be fairly similar to this, which is a graphic showing the worlds daily flight patterns.

b. One of the interesting things about the image is that the three hot spots, over the US, Europe, and Japan/Korea, are the same zone that, in internet terms, are referred to as digital natives – or countries where you already have generations that grew up online.

c. On the other hand, you have the digital immigrants, who are still largely offline, but represent more than half of the world’s population. If you view this population in WEB 2.0 humans=knowledge-producer terms, this is an enormous untapped resource.

d. So in looking for a site, I chose to focus on India for a few reasons:
   1. large population of digital immigrants
   2. culture predisposed to heterogeneity
   3. democratic government allows for less obstructed flow of information
   4. ‘stay in your village’ campaign, which tries to slow urbanization which has already surpassed their infrastructural capacities

**PROTOTYPE**

It is important to pause here and ask an important question, which is, “Are these libraries prototypical and, if so, what is the prototype?”

At the time the Carnegie Endowment was funding all these building, you never actually had to define what a library was because everyone knew what it was and, additionally, what it basically looked like – in other words there was a commonly assumed prototype. Why is this?

Those libraries came into existence at the moment when print as the sole means of communicating information climaxed. However, since 1920 new forms of communication have been gradually introduced, each of which has worked to unravel the pure, closed, heterogeneous diagram of the library, as represented by the Carnegies.
It is still reasonable to think that book will be the basis of library design. Historically speaking, whether you were talking about a stack of clay tablets, or a roll of papyrus, an illuminated manuscript on parchment, or a printed volume – each is just a different reincarnation of the book.

The question, therefore, is what is the current status of the book? As previously noted, we are in the early stages of the digital age, and currently the book is undergoing yet another transformation.

The process of digitization is passing the current book through what could be thought of as an electronic filter. When that occurs, what we currently understand as the book is divided into three parts, which I am terming: the **absent**, the **common**, and the **unique**.

The **absent** is an acknowledgement that information is now produced in a wide variety of media whose representation can no longer be accommodated by the book alone. Typologically speaking, the mediatheque is a useful reference, that is, spatially the **absent** is by nature indeterminate, fluid, or gaseous in its organization.

The **common** is what we understand as the current, physical, leaf-bound book, which, despite the pervasiveness of computation is far from dead. It is, however, capable of being radically recast using slightly evolved combinations of existing technologies. For example, Google has acquired a machine known as the ESB (espresso book machine), which is basically a printer with a binder Frankenstiened on the side of it. If, instead of printing books on a cellulose-based paper, we printed them on a material with a high recycling coefficient, such as a polymer film, then you could imagine a scenario where someone goes to the library, requests a book, which is instantly printed, and then when it is returned it is ground up and recycled into a new book. A highly functional, 50 million+ volume library could be achieved with a few hundred pounds of print material. So, typologically, the common phase reads like a book store crossed with a factory crossed with a recycling plant, which endlessly consumes physical reality and redistributes it.

The **unique** is an understanding of how to treat those objects resistant to digitization. It is interesting to realize that as library collections become more and more similar, the rare materials – that part of your collection that makes you different, and is often a potent embodiment of the local culture – increase in value. While objects suitable for such a collection would certainly include things like ancient manuscripts, early on the question came up “what if there were no rare artifacts in a community? Could they be created?” The immediate answer was yes! Certainly! In fact, the creation of such artifacts is unavoidable – the question just becomes: what is your attitude towards their curation?

The desire of this project is to understand these terms, and bring them back together to reform the library.

**PROGRAM REDISTRIBUTION**

Taking another look at a typical library, such as our University Library here at Rice, you’ll find each of these programs represented.
What is different about what I’m proposing here, is that you reorganize the library to reflect the reality of how digital culture and material culture are manifest in the 21st century.

NEW DIAGRAM
Thinking diagrammatically, you group the mediatheque and microbook factory into knowledge production spaces and set that into relation with the archive.
When activated, the production spaces begin generating information that is either digitized (if it can be) or archived (if it can’t). The building itself, therefore, takes on the role of both producer AND consumer of knowledge.

I feel it is necessary now to redefine what I mean when I use the term library in regards to this design proposal as:

A space which collapses the hierarchy between virtual and physical content, provides equal access to all forms of information, and stimulates the production of new knowledge.

INSTANCE
With that prototypical framework in mind, we’ll now down-shift in scale and look at an a-typical individual building within the network.

KERALA
Returning to India, I chose to locate this project in the Southern State of Kerala, both for practical and symbolic reasons. Practically, Kerala is something of an economic wonder, gaining first-world levels of life expectancy, infant mortality, and low mother-to-child ratios all with a third world GDP, which, to me, suggests it already has a tremendous amount of knowledge to share that the network as a whole would greatly benefit from.

SITE
The site itself is a relatively rural area with about 40,000 residents within a 3 km radius, located 17 km north of the city of Calicut (with some 400,000 residents) and between the Indian ocean and a large river.

In drawing up a brief to develop the design off of, I found it relatively easy to size the common and unique spaces, but more difficult to quantify the absent (or mediatheque-type) spaces. The solution I employed, which borrowed from a planning method employed in Price’s Fun Palace, was to draw up a list of typical, potential activities, and create a series of flexible spaces that could reasonably accommodate the entire list.

Next, in looking at the site I divided it sectionally into two zones: a lower and an upper. The upper zone would house the archive, which, being elevated a) raises it above the flood plane and b) creates an area that
is shaded and allows for the breeze, both passive design moves featured regularly in this hot, tropical climate. The lower zone is left free to be inhabited by the ambient, fluid programs of the mediatheque spaces.

In terms of site organization, I started by mapping out on the ground plane centers of activity around which to organize the mediatheque spaces.

I located three: one on the river, a second on the road, and a third set off the street into the forest.

Then, I distributed a field of archives that connected each of these centers.

The knowledge production spaces are then organized around the activity centers. They can move freely across the ground plane and, if desirable, grow up into the archive spaces.

*Move to talk off the drawings.*

Last sentence: Conceptually, the ambition of the library is to provide increased access to materials available online, while also providing opportunities to access that which cannot be easily reproduced. It stages a relationship between the two, and in the process tries to strengthen its position as an agency of culture.
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Library
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2. a critical piece of the public domain, a symbolic space that accommodates the persistent desire for collectivity

"...organize the world's information and make it universally accessible and useful...

The tremendous wealth of knowledge that lies within the books of the world will now be at our fingertips.

Google Book Project

Digital
Stubbornly
Physical
Division of Content

digital natives
digital immigrants
ideal site

absent
common
unique
Library

1. A space which collapses the hierarchy between virtual and physical content, provides equal access to all forms of information, and stimulates the production and sharing of new knowledge.

Carnegie Library Endowment

Formula:
1. Demonstrate the need for a public library
2. Provide the building site
3. Annually provide ten percent of the library's construction to support its operation
4. Provide free service to all

Global Library Project

Formula:
1. Demonstrate the desire for participation in the GLP
2. Provide the space for library functions
3. Continually respond to programmatic needs of the patrons
4. Provide free service to all