CAMPUSES 2060

Four Versions of a University within Four Alternative Futures

developed by students and faculty members of School of Architecture College of Education Hawaii Research Center for Futures Studies Department of Political Science University of Hawaii at Manoa, Honolulu
Our presentation today summarizes, displays, and evaluates one of a series of research and applied projects on the futures of higher education within four different societal futures.
It has been developing since August 2008 by professors and advanced students in futures studies, architecture, and education at the University of Hawaii at Manoa.
Professor Ray Yeh is the architect in the School of Architecture University of Hawaii at Manoa (UHM)

I am the futurist in the Hawaii Research Center for Futures Studies Department of Political Science UHM.
Seongwon Park is a PhD student of Alternative Futures within the Department of Political Science.

Heather Frey is a MA graduate of that program.
Many other students who participated in aspects of the project cannot be with us today.

But there are some in the audience who can also help explain our project and answer your questions.
While there have been many studies of the futures of education on pedagogy, administration, or technology, and others on future classrooms and campuses, we believe this is the first time that specialists in education, architecture, and futures studies have worked jointly within an alternative futures perspective.
Considerable time was spent in our project first on understanding

the historical co-evolution of

society,
education,
technologies,
and the environment across many cultures.
Historical lessons learned were combined with theories and methods of futures studies to develop four fundamentally different alternative futures of society.
These futures contained a set of common driving forces that varied in each of the four futures.
The driving forces are population, energy, economy, environment, culture, technology, and governance.
It was the differences of each of those forces that created the differences between each of the four futures of society.
For one example
In one future, we assumed continued global population growth.

In another future, we assumed a major reduction in total population.

In another future, we assumed stable, no-growth population.

In the fourth further, we assumed the rise of robots, artilects, and posthumans.
And so on for each of the seven driving forces.
We then used the internal logic of each of the four futures to deduce plausible educational futures suitable for each of the four societal futures, across a set of common dimensions.
The six **dimensions** for each of the four educational futures are:

- assumptions,
- mission,
- participants,
- resources,
- pedagogy, and
- physical campus.
For example
The mission of higher education in one future is to produce high-tech creators and entrepreneurs.

For another future, the mission is to learn and teach self-sufficient survival skills.

The mission in a third future is to research and teach energy and material efficiency.

The mission in the fourth future is to expand consciousness and mind-control.
The missions of education differ because each of the four futures requires different knowledge and skills for different environments (social and natural), with different kinds of available technologies.
The resulting information has been displayed in written documents, posters, and three-dimensional models of a **campus** and **prototype buildings** for each educational system in each future.
It is very important to understand that
none
of the four alternative futures
is intended to be

a preferred future

of society.
None
of the four universities
is offered as

a preferred future
of higher education.
Rather, each of the four universities is intended to make the point that thinking about and planning for the futures of universities must always be done within the context of a prior assessment of social and environmental futures.
Regrettably, this is seldom if ever done.

Typically, a future that is more or less a continuation of what is thought to be happening now is assumed, and improved processes of higher education are planned for it.
Our extensive experience in the field of futures studies has made it crystal clear that consideration of \textbf{plausible alternative futures} is an absolutely necessary step that must be undertaken prior to trying to imagine and move towards preferred societal futures, or preferred educational processes.
Without a careful consideration of alternative futures, one's naive preferred future will most likely be a response to current or past problems and may have little to do with actual problems and opportunities yet to come.
Our project depicts one way that alternative societal futures might be developed, and how systems of higher education created specifically for each alternative future might be developed.
After this has been done, it is then possible to move towards conceptualizing preferred futures of society and preferred systems of higher education for them.
Seongwon Park
will next explain very briefly
the process by which we did our work
and the basic theories and methods of futures studies
that we used in developing
four alternative futures of Hawaii in 2060
and four models of
"The University of Hawaii at Manoa"
fit for each one of the four futures.
Professor Yeh will then discuss the importance of futures studies for architecture, and the mutual challenges involved.
Architecture students will then each present one alternative future of Hawaii in 2060 and one plausible "University of Hawaii at Manoa" for that future.

We intend to leave plenty of time for discussion and questions.
The fundamental perspectives of what is called “the Manoa School of Futures Studies" state that

THE future cannot be predicted,
but that several
alternative futures
can be forecasted
and their implications considered,

and then that
preferred futures
can be envisioned and invented,
all the while continuing to **scan the horizon for** new opportunities and problems that might suggest new visions of preferred futures, or reinforce existing visions.
To repeat:

**THE Future** cannot "predicted"
(accurately foretold), but
**Alternative Futures** can be "forecasted"
(logically constructed), and
**Preferred Futures** "envisioned" and "invented"
(on the basis of values and political action),
on a continual basis
(constantly *scanning the horizon* for new things).
The Manoa School has developed a typology of four generic images of the future.
The typology was *empirically* derived by collecting and evaluating as many *images of the future* as could be found in national and corporate plans for the future in scholarly studies of the future in movies and science fiction in songs, prayers, liturgies— in short, *wherever images of the future appear.*
From this empirical base, the Manoa School concluded that all of the millions (if not billions) images of the future existing in the minds of people can be categorized as specific examples of one of four generic images of the futures.
The four generic images are:

- Continue
- Collapse
- Discipline
- Transform
The overwhelming majority of all images of the future, including the images of higher education futures, are variations of **Continuation**; especially continued economic growth.
Continued economic growth is the "official" future of all advanced nations and hence of all components of nations, including universities.
The fundamental purpose of every modern university was and is to enable the community it serves to grow and prosper economically by virtue of the research and development it does and by the human resources it produces.
It is very difficult for university funders, administrators and researchers to imagine any other future or any other kind of university.
And yet *nothing is forever.*

Everything that now exists at one time did not exist and at one time will not exist.

Societies, and their components, constantly

emerge, rise, mature, decline and die.
Currently, collapse images of the futures are gaining some popularity as more people than usual worry about the unsustainable environment and economy.
In part to avoid collapse, and in part in recognition of the impossibility and undesirability of continued economic growth, many more people now share some kind of a disciplined image of the future, often currently expressed as "sustainability."
It is necessary to adopt certain values (other than "growth") and to discipline our life and actions around them if we are to survive and thrive,

many people believe.
Finally, many futurists agree that continued economic growth is unsustainable, but insist that many technologies are *converging* rapidly in such a way as to *transform* society as profoundly and unpredictably as a caterpillar is transformed into a butterfly, or as liquid water is transformed into steam (or ice).
A world of abundance and leisure

with humans, transhumans, and artilects

on Earth and the inner solar system is potentially imminent.

The timid views and actions of sustainability are unimaginative and uninspiring, they argue.
(There also are versions of Transform that are based on spiritual and not technological factors).
Please note that these four futures are not simply variations on a common theme such as "high, medium, and low", or "optimistic or pessimistic".

Each future makes very different assumptions about a number of common driving forces discussed earlier.
I will now explain very briefly the process by which we did our work.
As Prof. Dator has said, we began our inquiry by considering the history of higher education from its earliest origins in Asia and Europe through its creation and growth of universities in the United States and the University of Hawaii at Manoa.
Next, we engaged in a review of theories and methods of futures studies, including age-cohort analysis, trend analysis, emerging issue analysis, and alternative futures creation.
We followed
Dator’s second law of the futures:
ANY USEFUL IDEA ABOUT
THE FUTURES
SHOULD APPEAR TO BE
RIDICULOUS

Dator's "Second Law of the Futures"
We then formed four teams.

Each team had three broad tasks:

(1) flesh out the details of their assigned alternative future for Hawaii in 2060 according to the seven "driving forces";
(2) devise one possible "University of Hawaii at Manoa"
    in response to that future

    according to the first five of the six
    "dimensions" of universities;
and (3) develop the sixth "dimension" by designing and constructing three-dimensional models of the relevant "campus" of the University of Hawaii at Manoa in 2060, as well as one "prototype" building for that campus.
Each team researched the seven *driving forces* pushing and pulling higher education for their particular future and developed a written description of *Hawaii within the world of 2060* for their specific future.
This matrix presents a simplified overview of the distinguishing features of each driving force for each societal future.

<table>
<thead>
<tr>
<th>Futures:</th>
<th>Continue</th>
<th>Collapse</th>
<th>Discipline</th>
<th>Transform</th>
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</thead>
<tbody>
<tr>
<td><em>Forces:</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>Growing</td>
<td>Declining</td>
<td>Diminished</td>
<td>Posthuman</td>
</tr>
<tr>
<td>Energy</td>
<td>Abundant</td>
<td>Scarce</td>
<td>Limited</td>
<td>Abundant</td>
</tr>
<tr>
<td>Economics</td>
<td>Dominant</td>
<td>Survival</td>
<td>Regulated</td>
<td>Trivial</td>
</tr>
<tr>
<td>Environment</td>
<td>Conquered</td>
<td>Overshot</td>
<td>Sustainable</td>
<td>Artificial</td>
</tr>
<tr>
<td>Culture</td>
<td>Dynamic</td>
<td>Stable</td>
<td>Focused</td>
<td>Complex</td>
</tr>
<tr>
<td>Technology</td>
<td>Accelerating</td>
<td>Stable</td>
<td>Restricted</td>
<td>Transformative</td>
</tr>
<tr>
<td>Governance</td>
<td>Corporate</td>
<td>Local</td>
<td>Strict</td>
<td>Direct</td>
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With the futures and forces concretely specified, the teams then developed written descriptions of "the University of Hawaii" appropriate for their societal future.
Then they engaged in *architectural planning* and decision-making leading to a design of *three-dimensional models* for their "University of Hawaii".
The teams employed concepts grounded in architectural design theory, especially those of *A Pattern Language* (Alexander, Ishikawa, & Silverstein, 1977).
The teams created *parti*, or visual representations, for each of the campuses, using them to guide their construction of plastic three-dimensional models for each of the alternative campuses, and a prototype building for each.
Before we take a look at each of the four designs for University of Hawaii at Manoa in 2060,

Professor Yeh will discuss the relationship between architecture and futures studies.
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