

R E P O R T R E S U M E S

ED 019 835

EF 001 748

WHAT'S HAPPENING TO THE CAMPUS. A BRIEF REVIEW OF MANY INDIVIDUALS' OBSERVATION ON HOW PHYSICAL FACILITIES FOR HIGHER EDUCATION ARE CHANGING IN RESPONSE TO NEW NEEDS.

BY- BRUBAKER, CHARLES WILLIAM

PERKINS AND WILL, ARCHITECTS, CHICAGO, ILL.

PUB DATE APR 68

EDRS PRICE MF-\$0.25 HC-\$0.60 13P.

DESCRIPTORS- \*BUILDING INNOVATION, \*CAMPUS PLANNING, \*DESIGN NEEDS, \*EDUCATIONAL CHANGE, AUDIOVISUAL AIDS, COMMUNITY COLLEGES, COMMUNITY DEVELOPMENT, COMPUTERS, LEARNING PROCESSES, SCHEDULING, STRUCTURAL BUILDING SYSTEMS, URBAN AREAS, URBAN UNIVERSITIES,

TRENDS IN CAMPUS PLANNING ARE DEVELOPED IN TERMS OF CHANGING EDUCATIONAL METHODS AND SOCIAL DEMANDS. MAJOR TOPICS COVERED ARE-- (1) RE-EVALUATING THE NATURE OF LEARNING, (2) THE EFFECT OF TECHNOLOGY, (3) THE CAMPUS AS A COMMUNITY CULTURAL-EDUCATIONAL CENTER, (4) THE COLLEGE AND THE URBAN CRISIS, (5) THE MULTI-LOCATION COLLEGE, AND (6) EDUCATIONAL BUILDING SYSTEMS. WITHIN THESE CONTEXTS, DESIGN RECOMMENDATIONS AND SUGGESTIONS ARE OUTLINED, AND GRAPHIC EXAMPLES ARE PROVIDED. (MM)

ED019835

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE  
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE  
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS  
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION  
POSITION OR POLICY.

# WHAT'S HAPPENING— TO THE CAMPUS ?

A BRIEF REVIEW OF  
MANY INDIVIDUAL'S OBSERVATIONS  
ON HOW PHYSICAL FACILITIES  
FOR HIGHER EDUCATION ARE  
CHANGING— IN RESPONSE  
TO NEW NEEDS .

CHARLES WILLIAM BRUBAKER, ARCHITECT  
THE PERKINS & WILL PARTNERSHIP  
APRIL 1, 1968

EF 001 748

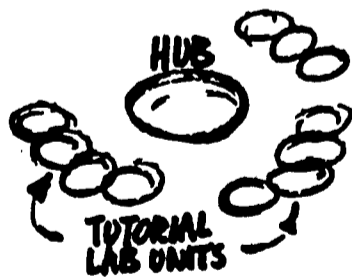
# THE NATURE OF LEARNING— IS BEING RE-EVALUATED

*How does the individual learn?  
... an ancient question  
demands new answers today.*

- \* *The classroom concept, hovering around groups-of-thirty-students, ...*
- \* *The rigid scheduling, insisting equal time for all, regardless of ability ...*
- \* *Departmentalization of "subject matter" into isolated territories ...*
- \* *Grades, degrees; separation from community, industry, technology ...*

*- all are being challenged by  
new research, experiments, innovative programs.*

*For example: Orchard Ridge Campus,  
Oakland Community College, Michigan  
is based on a tutorial system of learning  
which frees each student from the rigid demands  
of the lock-step classroom system.*



*We have "the responsibility of  
dispensing HOPE in the form of  
information, knowledge and skill"*  
- Jack Tirrell, Pres.  
Oakland Community College

EDUCATION CONTINUES TO BE AFFECTED  
BY TECHNOLOGY ... the new media,  
the computer, transportation, etc.

... but facilities (the campus form, and buildings)  
have seldom been designed in response to  
these new influences.

Television, dial access systems, computer assisted instruction  
and other electronic media should, theoretically, diminish the need  
to bring tens of thousands of students to a single location ...  
... but we continue to plan huge institutions.

Transportation systems make it possible to bring limitless numbers of students  
to one campus — but, if we wished, the transportation systems  
could disperse those same students.  
(The new expressway is a two-way road!)

"The world is becoming a  
little round schoolhouse."  
- McLuhan



Scientists predict: in the next century  
... we will have direct links between the brain and the computer...  
... education will be possible by direct recording on the brain. - Harold Gores

IN RECENT YEARS -  
ANALYSIS { GATHERING DATA,  
SEPARATION INTO PARTS,  
EXAMINATION } HAS BEEN EMPHASIZED.

THE NEED NOW =  
SYNTHESIS { COMPOSITION,  
COMBINING TO FORM A WHOLE,  
INTENT, = DESIGN.

*In recent years, we have been enchanted by the computer  
and its boundless capacity to store data ...  
... social, economic, political, technical, scientific ...  
.. but we are not yet skilled in using the data ...  
.. we have not yet skillfully used the computer as a creative design tool.*

*" Today functional problems are becoming less simple all the time.  
But designers rarely confess their inability to solve them.  
Instead, when a designer does not understand a problem clearly  
enough to find the order it really calls for,  
he falls back on some arbitrarily chosen formal order.  
The problem, because of its complexity, remains unsolved. "*

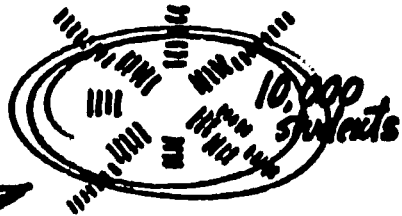
*- Christopher Alexander, in  
"Notes on the Synthesis of Form"*

THE NEED IS APPARENT:  
BUILD TOWARD GOALS...  
BUILD ON PHILOSOPHY.

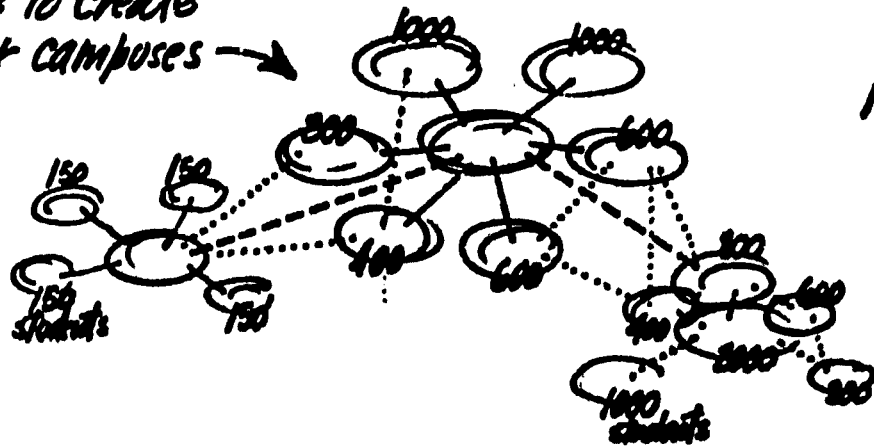
(We usually "build on  
Techniques"...  
- Bill Caodill

It is possible and proper to design and build  
facilities for education  
to achieve clearly stated goals.

For example, the institution may choose  
to create a single large, impressive campus →



.. or it may choose to create  
many smaller campuses →



... a philosophy  
is the starting point.  
... goals must be  
clearly stated.

A note on growth -

1) The birthrate is dropping. - Anthony Downs, demographer.

2) Some colleges & universities will get caught with too many facilities. - Hoover

# THE CAMPUS, I.E. - THE CULTURAL-EDUCATIONAL CENTER IS BECOMING THE COMMUNITY CENTER.

Whether a community college (with students from the immediate area)  
or a liberal arts college (with students from the entire country)  
or a large university (with students from the world)

... the campus is the rallying place for the community  
and is its cultural-educational center.

Examples:

Rockland County NY Community College  
will be the cultural and educational center  
for all Rockland County.



Knox, Kenyon, DePauw, Middlebury, Sarah Lawrence  
and a thousand other colleges make their towns  
college towns ... which are recognized as "good places to live".



Harvard and M.I.T. are Cambridge;  
Wisconsin and Madison are one; New Haven = Yale;  
Berkeley is a cultural center, and so is Palo Alto.



but...  
amoeba-  
like

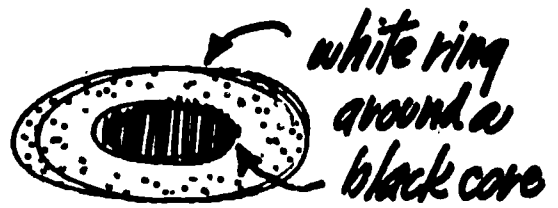


Stanford  
reaches out  
beyond the  
"campus".



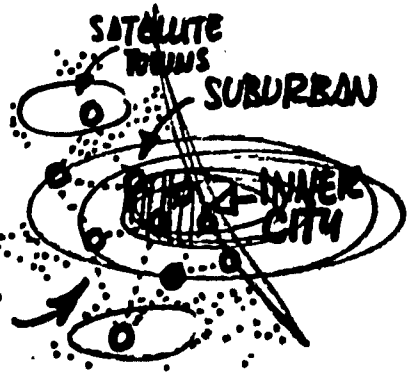
# THE URBAN CRISIS AFFECTS EVERY INSTITUTION.

No college or university can escape ...  
 ... from the conflicts of the inner city  
 and the growing metro dichotomy →  
 ... from the facts of poverty (the basic inner city problem...)  
 and the continued flight  
 of business & industry outward.  
 ... from the fact that our cities  
 are worn out.



- Edwin Barry,  
Chicago  
Urban League

A new need =  
metropolitan  
college systems



The college and university  
suddenly takes an active interest  
in its environment.

(Note the many new  
"centers for urban studies"  
established at universities.)

(The University of Chicago  
took an active interest years ago,  
fought to rebuild its urban neighborhood.)

The educational institution  
is the logical focus for urban renewal.

<sup>small</sup>  
(Detroit Inst. of Tech.  
proposes it be  
responsible for the  
100 blocks around it!)  
- H. Gores

Note growing interest in an alternate to "urban renewal"...

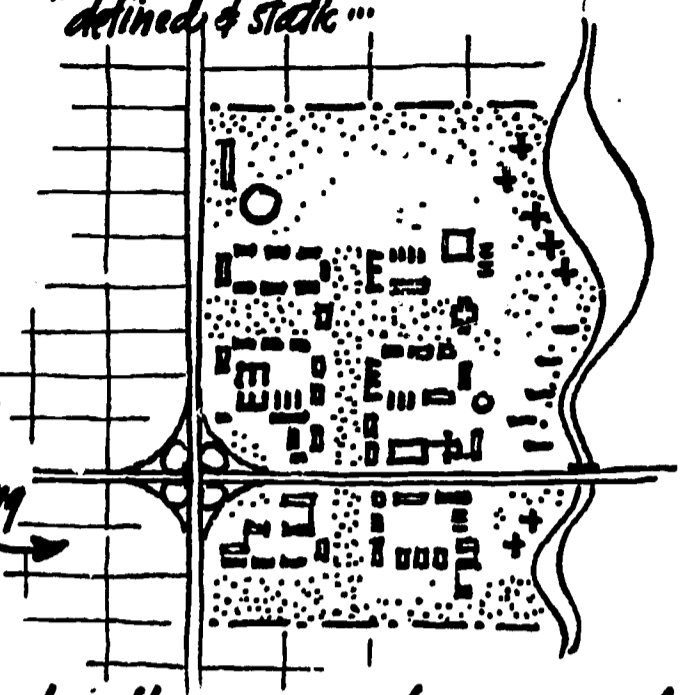
"New Towns" Question = are they the new hope, or an "Escape to Utopia"  
leaving urban problems behind,  
unsolved?

The need = New Towns in the city ...  
 Logical focus = the new community college !



**THE CAMPUS, SOMETIMES,  
HAS GOTTEN TOO BIG..  
.. TOO ISOLATED.**

"defined & static"



"The tidy square of real estate" school of planning

.. does this campus have a moat around it .. cutting it off from its community?

"Project-itis" =

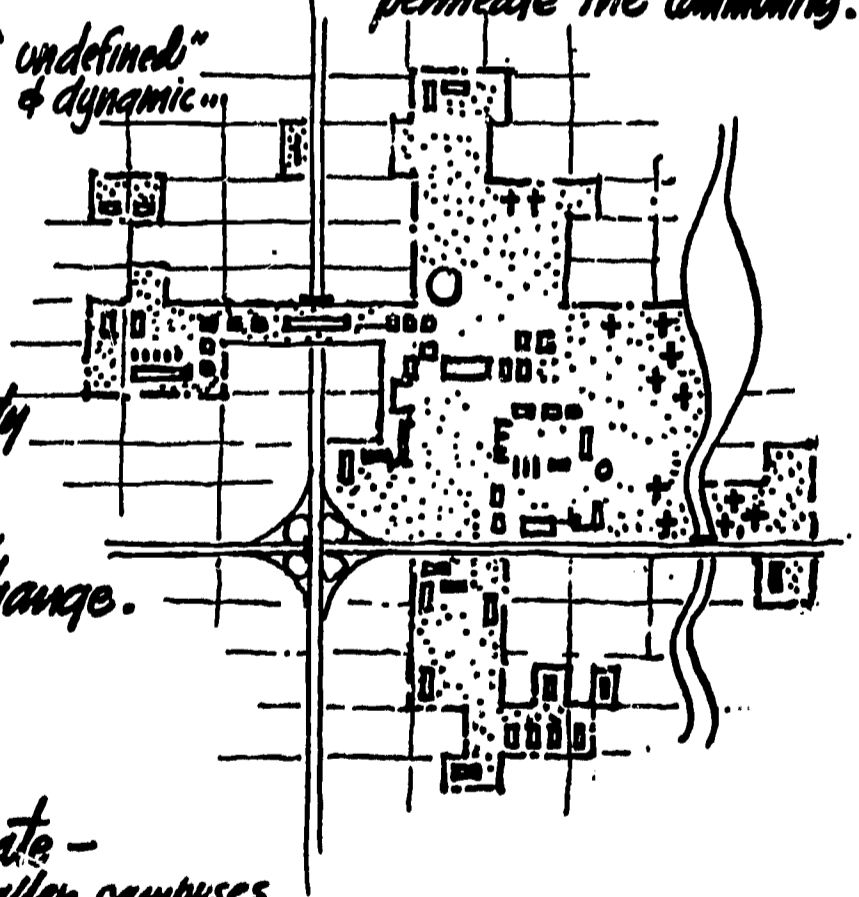
... designing projects without regard for the total neighborhood.

"Break down the isolation .. associated with universities"

- C. Price  
British architect

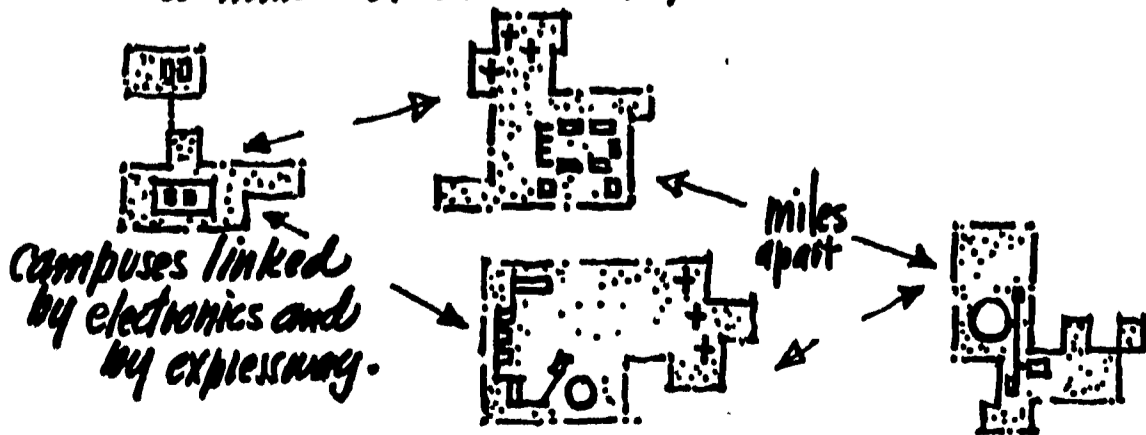
An alternate - let the campus permeate the community.

"undefined" & dynamic"



More perimeter =  
= more opportunity for interaction with the community especially other institutions  
= more flexibility in land acquisition and .. ability for growth & change.

another obvious alternate -  
... a number of smaller campuses

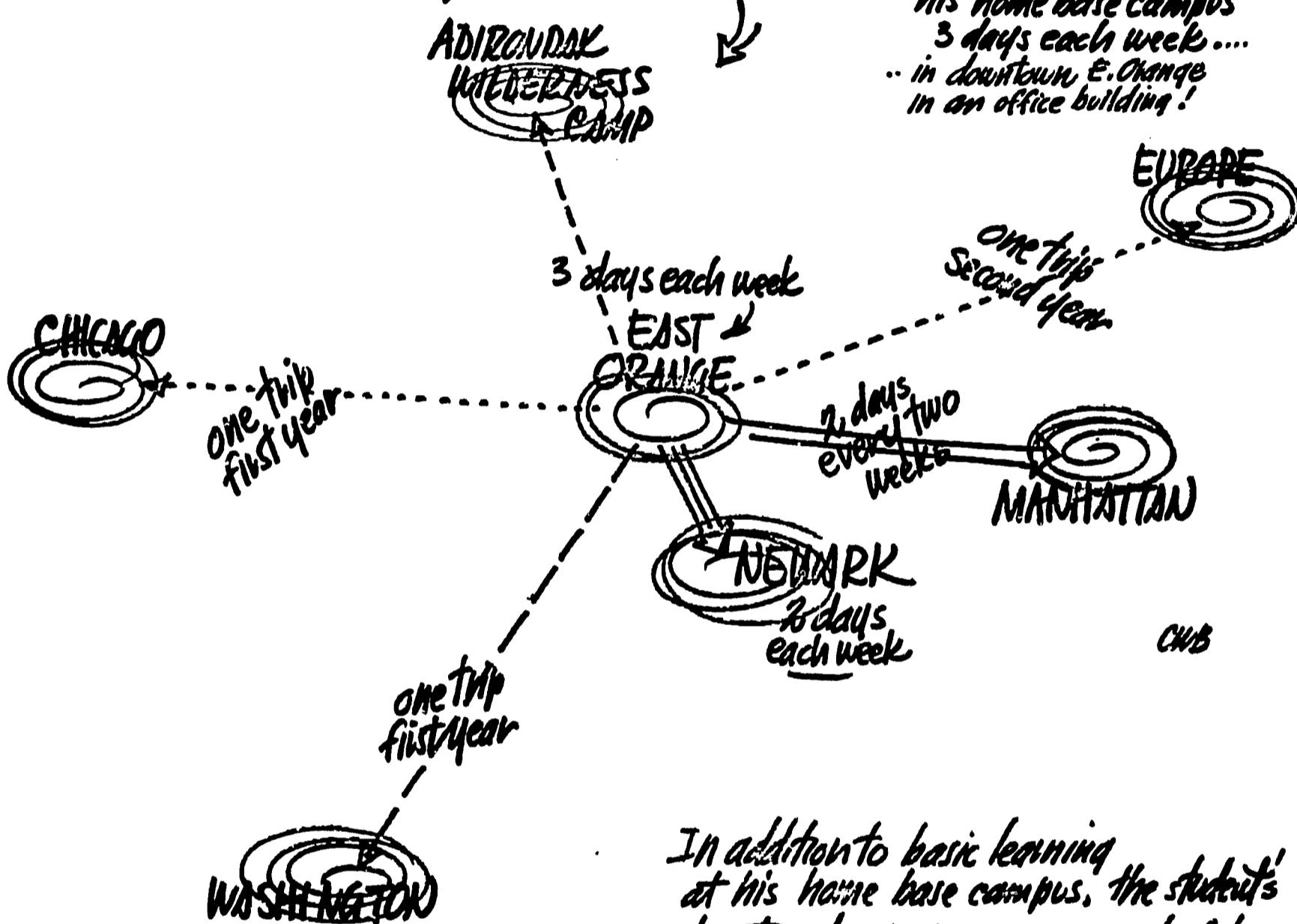


# THE MULTI-LOCATION COLLEGE -

... Why not?

One community college student's schedule =

(The student lives in E. Orange, N.J., goes to his home base campus 3 days each week ... in downtown E. Orange in an office building!



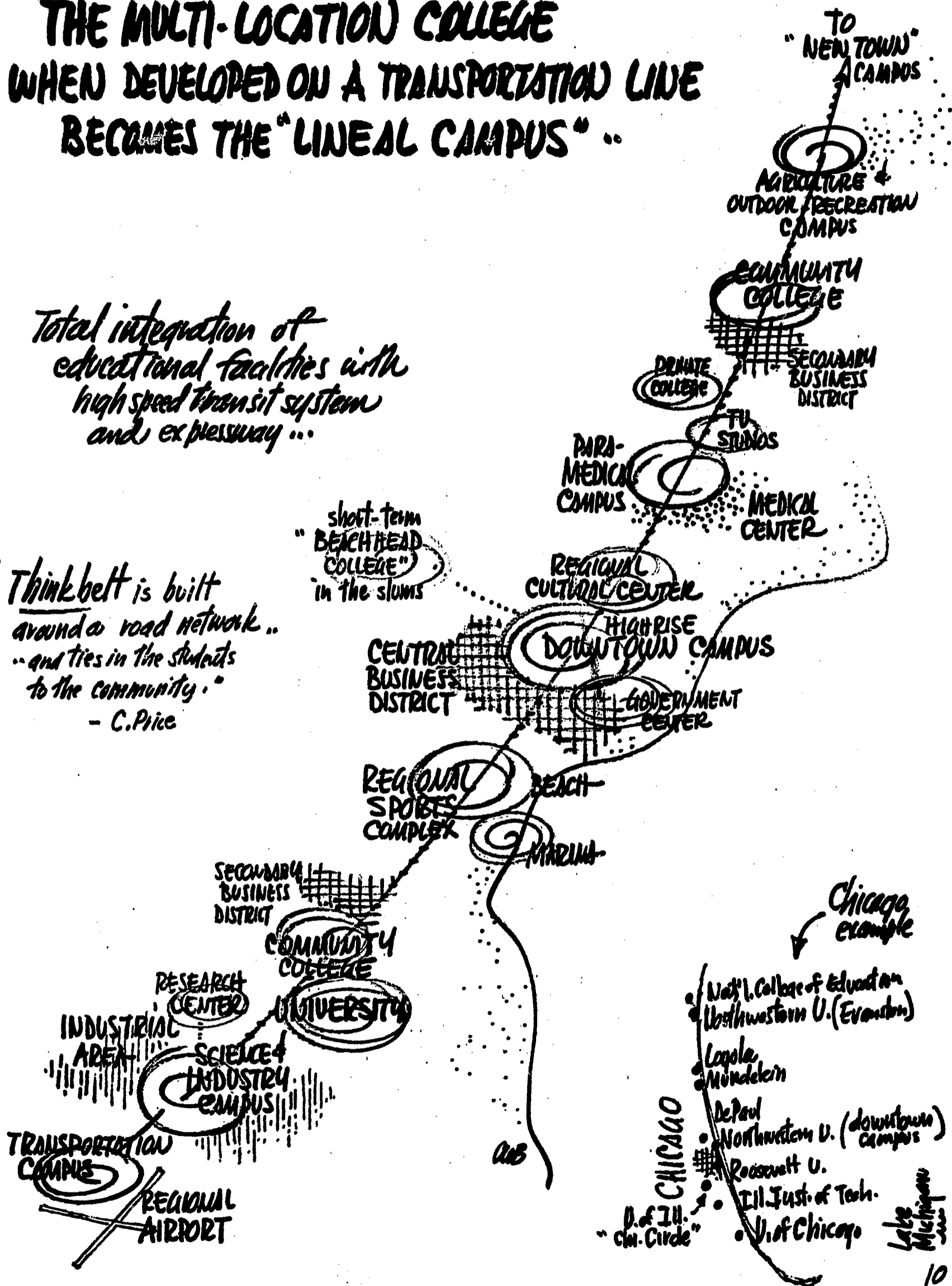
In addition to basic learning at his home base campus, the student's educational experiences are enriched by trips to six other locations =

- NEWARK COMMUNITY COLLEGE, for special technical labs, swimming team, broader social contacts.
- MANHATTAN, for cultural and business experiences.
- WASHINGTON, for government, associations, embassy visit, etc.
- ADIRONDAK WILDERNESS CAMP, for skiing, camping, hiking.
- CHICAGO for an exchange program with CHICAGO CITY COLLEGE.
- EUROPE - at the end of the two-year program.

# THE MULTI-LOCATION COLLEGE WHEN DEVELOPED ON A TRANSPORTATION LINE BECOMES THE "LINEAL CAMPUS" ..

Total integration of  
educational facilities with  
high speed transit system  
and expressway ..

"Thinkbett is built  
around a road network ..  
.. and ties in the students  
to the community."  
- C. Price



short-term  
"BEACHHEAD  
COLLEGE"  
in the slums

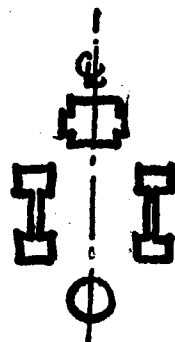
Chicago  
example

- Nat'l. College of Education
- Northwestern U. (Evanston)
- Loyola Mundelein
- DePaul
- Northwestern U. (downtown campus)
- Roosevelt U.
- Ill. Inst. of Tech.
- U. of Chicago
- U. of Ill. "Chi. Circle"
- Lake Michigan

# NON-PERMANENT STRUCTURES ARE USEFUL TO EDUCATION, TOO.

The future dynamic campus?

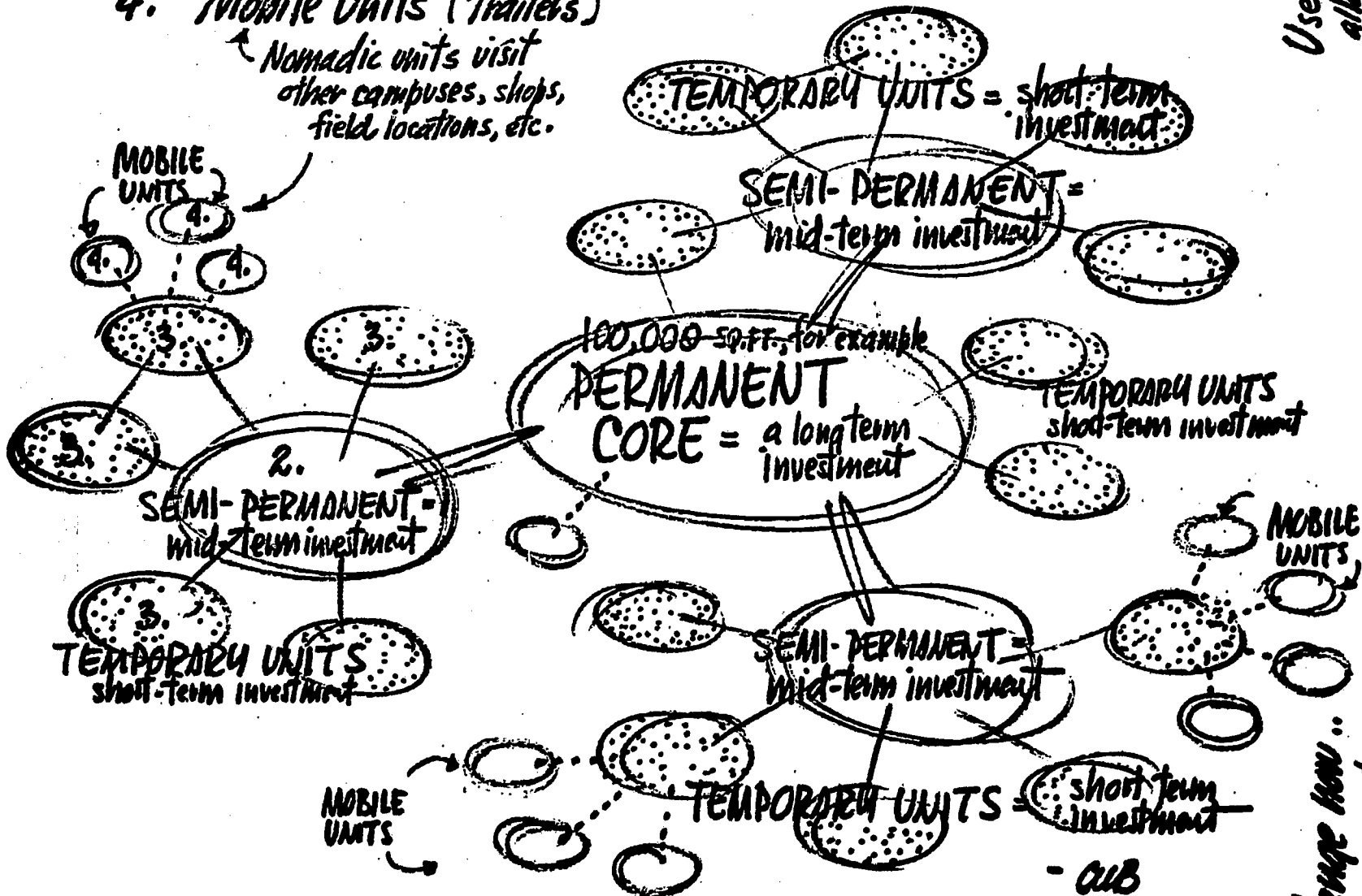
(contrast the static campus =



Cluster =

1. Permanent Core (100 year investment; cost = \$40 per sq. ft.)
2. Semi-permanent Units (15 year investment; cost = \$20 per sq. ft.)
3. Temporary Units (less than 5 year investment; cost = \$10 per sq. ft.)
4. Mobile Units (trailers)

↑ Nomadic units visit other campuses, shops, field locations, etc.



Use temporary structures to allow experimentation, encourage innovation. "Almost everything can be studied... in them." - C. Price.

Francis McKean, Chicago Schools =

- Chicago has 1000 mobile units, "our flexibility factor", and "a saving grace."
- "We need another kind of school building ... a semi-permanent unit that might stay 15 years ..."
- "It would be to our advantage to build 1/3 or 1/4 of a new school as a demountable structure."

The design challenge now... This concept needs a system!

==



# " BUILD ZONES OF SPACE "

- Harold Gores, EFL

## \* Committed Space and Uncommitted Space

Inflexible,  
but with character..  
.. as a theater, or  
swimming pool.

Flexible, changeable, convertible,  
but purposely lacking permanent character,  
.. as open loft for unknown future enterprises.  
( best USA example is Texas Instruments  
plant in Dallas.)

## \* Permanent Space and Temporary Space

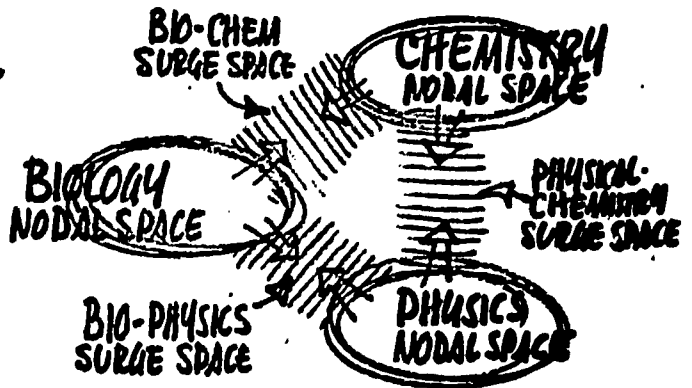
.. as the boiler room..  
.. or the Rare Books Library  
at Yale.

science and engineering need  
short-term space for experiments.

## \* Surge Space and Nodal Space

.. connecting "nodes"  
to allow programs to  
expand - and to  
encourage multi-discipline  
work.

.. committed to  
specific needs.

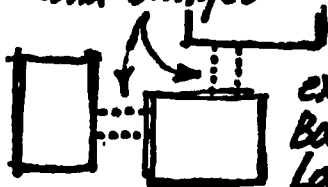


## \* Linked Space and Continuous Space

.. using tunnels  
and bridges

.. as opposed to separate buildings.

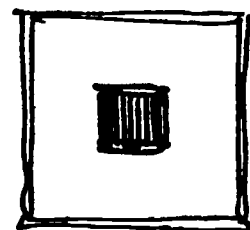
( best N. American example is  
Scarborough College, E. of Toronto.)



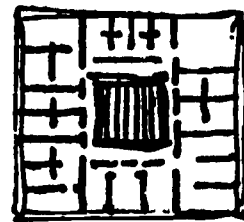
examples:  
Boston Univ. library-union.  
Lorain Co. Com. College  
W. of Cleveland

## THE MODERN OFFICE BUILDING SHOWS THE WAY ...

The office building, with a committed core,  
and open uncommitted space around it ...  
.. accepts all unknown future tenants gracefully ...





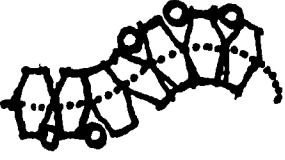
core &  
shell are  
long-term  
investments.



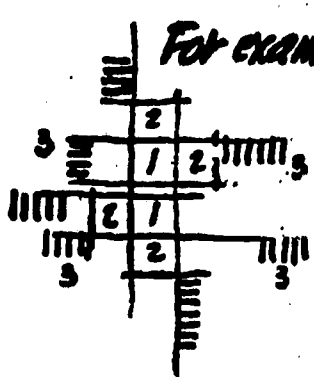
positions  
are  
short-term  
investments.

# WHITHER SYSTEMS ?

## - CONSTRUCTION SYSTEMS :

Current Examples: URBS (Univ. Res. Bldg. Systems) for U. of Calif.  
 ABS (Academic Bldg. Systems) for Indiana  
 Illinois Valley Com. College (one module:  three =  or contains = 

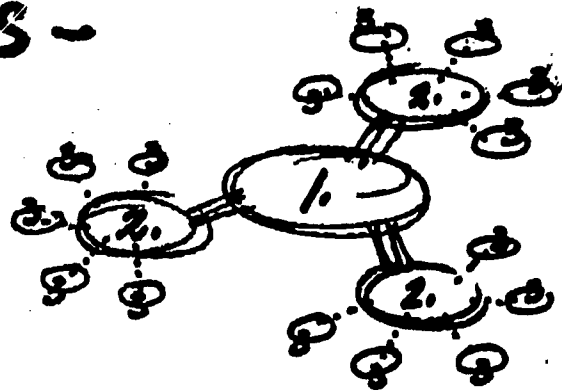
## NEXT = BROADER CONCEPTS -



For example ...

A system for related, interconnected, compatible

1. Permanent
2. Semi-permanent, and
3. Temporary Units



## Q. START WITH BUILDING SYSTEM ... ... OR START WITH LEARNING SYSTEM ?

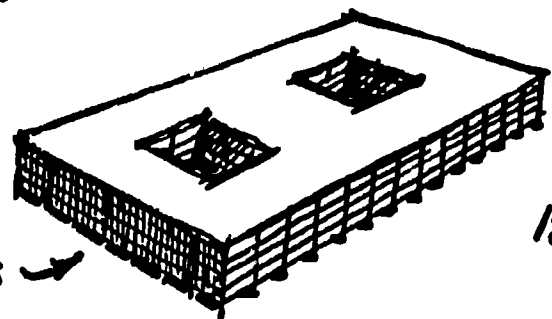
Learning System =

... An alternate to "building on technique" ...

- A. Begin planning with one student and a philosophy and stated goals.
- B. Plan facilities req'd. for the individual (whether at a "campus" ... or at home!)
- C. Plan clusters of facilities req'd. for small & medium groups of students.
- D. Expand planning to include large groups, specialized shared facilities
- E. Involve the community, related institutions, library systems, transit, etc.

This approach to design will generate complex relationships & forms

... and resulting structures probably will not look like this



.. to be continued