The Last Lecture

The survey:

Friday, April 29, 2011, is the last lecture I will ever be responsible for at the University of Nebraska. It's a real temptation to try to do something different, whatever that might be, and I have several possible candidate presentations, some based on other talks outside the institution, some used for special occasions in other classes, etc. For your attendance quiz, please choose two possible ones from the following list. Mark your first choice "1" and your second choice "2." I'll try to get the vote up on Blackboard this evening so you can sort of know what's coming.

The results:

Here are the results of your voting this afternoon for what you would like to hear:

(1) More community ecology and population biology (from Chapters 52. 53. and 54): #1 = 27; #2 = 9; **total = 36.**

(2) How students have changed over the past 44 years (with special reference to this class): #1 = 95; #2 = 47; **total = 142**.

(3) The Big Picture in Biology: #1 = 13; #2 = 37; **total = 50**.

(4) Ideas as evolving entities: #1 = 12; #2 = 28; **total = 40**.

(5) What is a human being? #1 = 45; #2 = 52; **total = 97**.

(6) The Cedar Point Biological Station experience: #1 = 26; #2 = 45; **total = 71**.

UNL STUDENTS:

1966-2011

BIOS 103 042911


WHO ARE THESE PEOPLE, ANYWAY???
WICKED

The Evidence and Experience:

- ~15,000 grades awarded
- ~150 Undergrad research students in the lab
- ~2000 hours of listening to students talk while driving in the van at Cedar Point
- ~300,000 pages of student writing read
- Watching our own children grow up
- 44 years of Friday bar talk
- 15 years of Friday Coffee

What do you see, hear about, and learn from all this academic and social activity over the course of a career?

- Success
- Failure
- Romance
- Words from ~15,000 future citizens
- Kids who will be doctors that operate on your own children
- A microcosm of your evolving nation

Heterogeneity in the current student population*:

- Economic diversity
- Religious diversity
- Family history
- Employment
- Military service
- Major; career goals
- Co-curricular activities
- Ethnic background
- Gender
- Advice from high school*
- Appearance
- Talents
- Drug and alcohol use
- Significant others
- Sexual orientation
- Age and maturity
- Reading skills*
- Attention span*

Globalization in a freshman biology class

(languages spoken or studied for more than a year by my fall, 2007, BIOS 101 students):

- Spanish*
- French*
- German*
- Tamil
- Persian
- Arabic
- Norwegian
- Chinese
- Japanese
- Lakota
- ASL
- Hindi
- Gujarati

*JJ has studied for more than a year.
NOTE: Nobody listed computer code, html, etc.

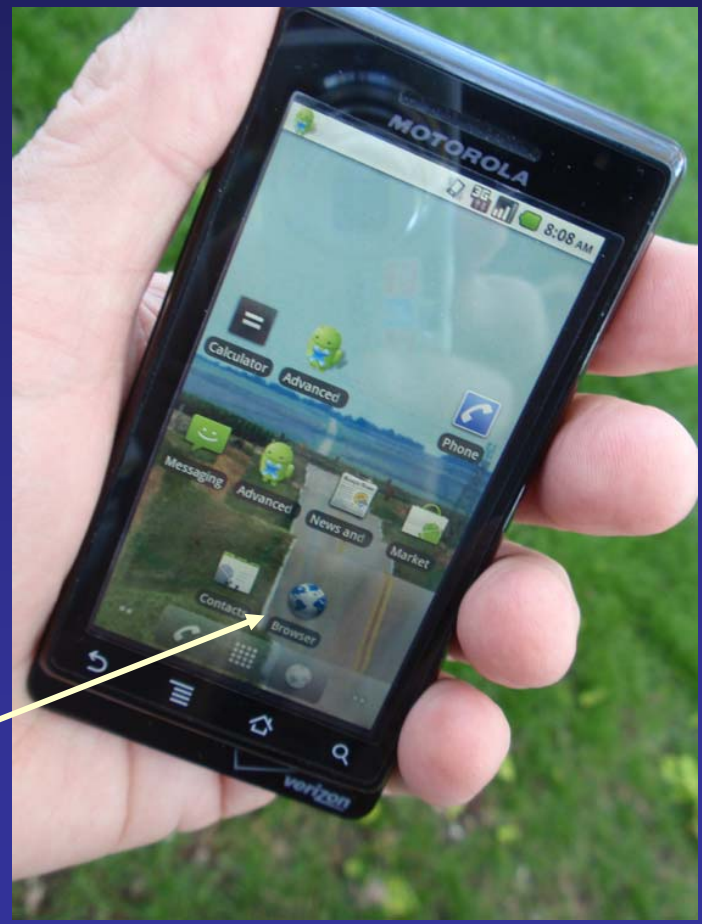
Globalization in a freshman biology class (countries visited by my fall, 2007, BIOS 101 students):

- Australia
- Austria
- Belgium
- Belize
- Bosnia
- Brazil
- Canada
- Caribbean (several)
- China
- Costa Rica
- Croatia
- Czech Republic
- Denmark
- France
- Germany
- Greece
- Guatemala
- Honduras
- Hungary
- Iceland
- India
- Iran

Globalization in a freshman biology class (countries visited – cont'd):

- Ireland
- Italy
- Japan
- Kenya
- Lithuania
- Lichtenstein
- Luxembourg
- Malta
- Mexico
- Monaco
- Netherlands
- Pakistan
- Philippines
- Poland
- Portugal
- Puerto Rico
- Russia
- Saudi Arabia
- Spain
- Sudan
- Switzerland
- Taiwan
- Thailand
- Turkey
- UK
- Venezuela

The #1 factor influencing higher education is information technology



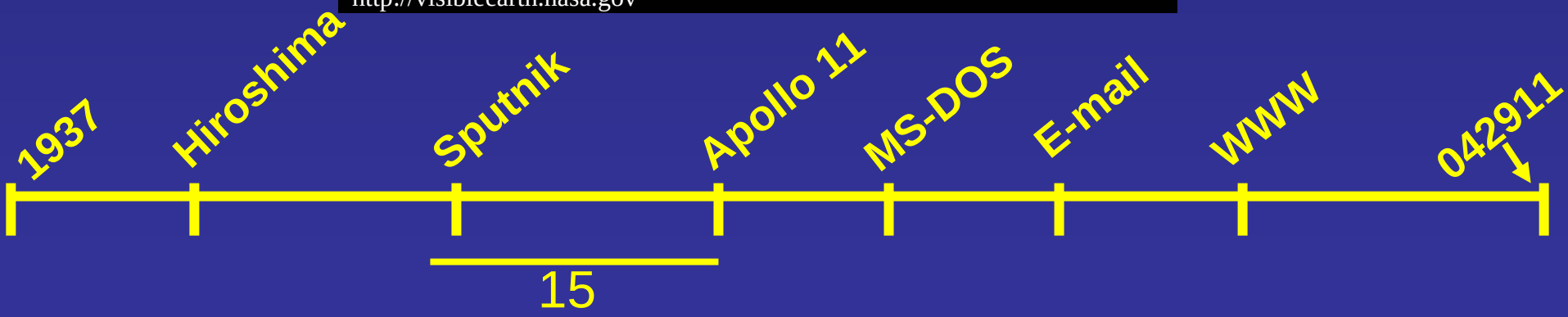
(The Keystone to Roscoe Road, Keith Co., NE)

I'm going to make a mummy out of that cat.

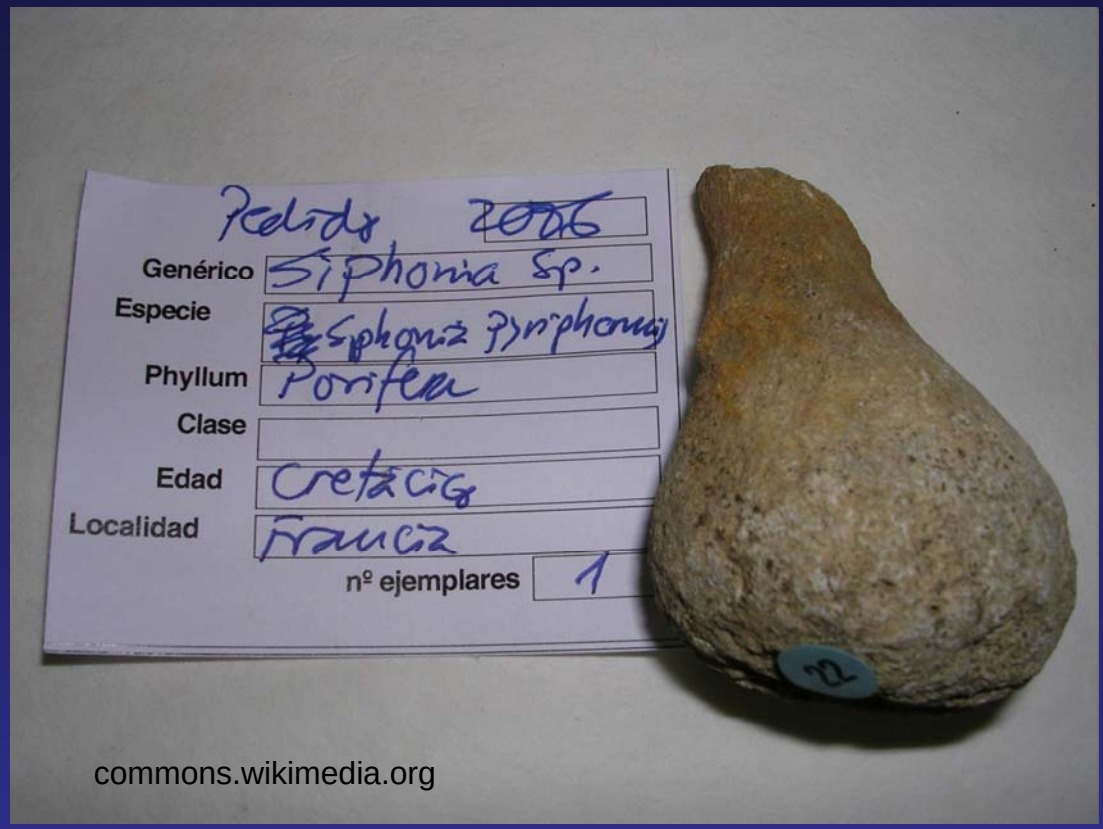
I'm going to charge up my iPod, download some music, then e-mail digital photos of this stuff to my friend in Mexico.

Technological change

http://visibleearth.nasa.gov

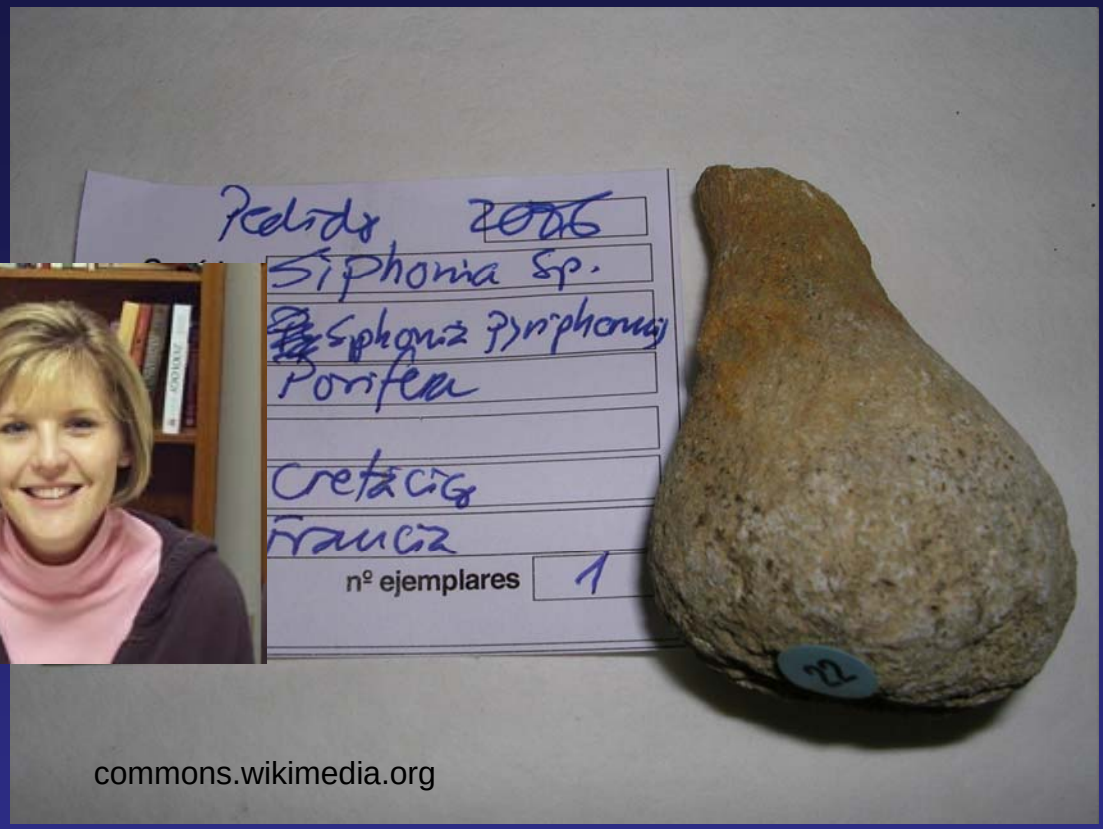


http://www.webopedia.com/DidYouKnow/Internet/2002/BirthoftheInternet.asp



So, ~~like~~, what's the use of some fossil sponge from the Cretaceous?

cretaceous.de



commons.wikimedia.org

So, ~~like~~, what's the use of some fossil sponge from the Cretaceous?

Information age culture (hourly lives of students):

- iPods*
- Podcasting*
- Smart phones*
- Text messages
- Ring tones*
- Google*
- Blackboard (CMS)*
- Free downloads*
- E-mail*
- Digital images*
- YouTube/Facebook*
- Electronic library access*
- Sound bite reporting
- Political stridency
- PowerPoint*
- UNL wireless network*
- Video games
- Classroom Response Systems*
- TV drone in Union

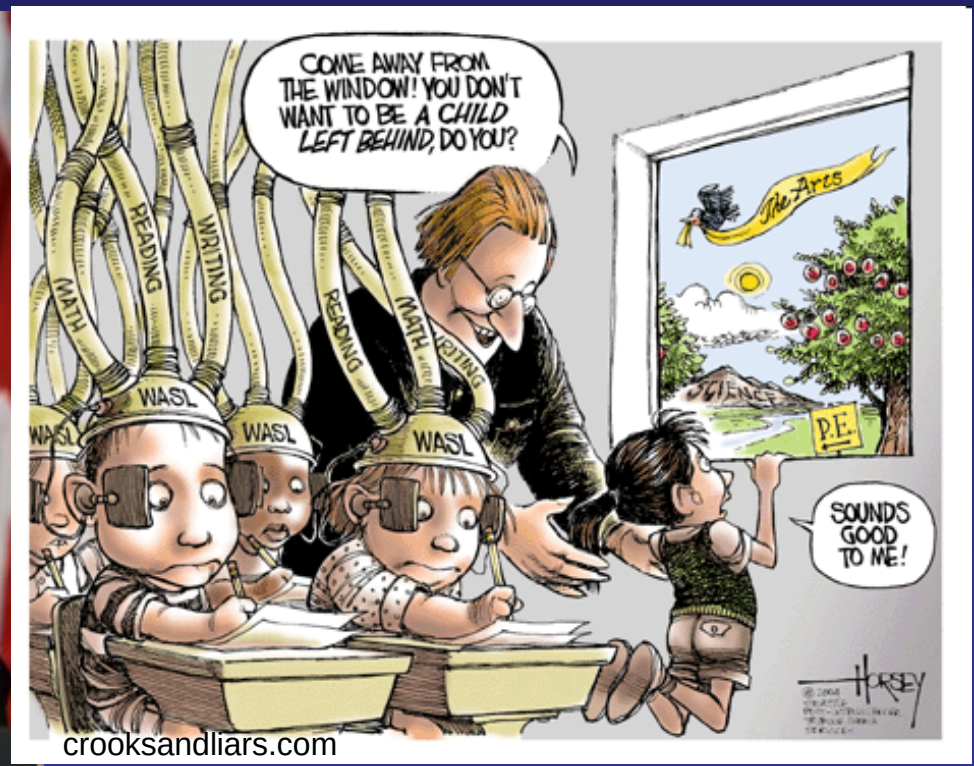
* = JJ uses regularly

So, ~~like~~, what are the main differences between these students and their parents (or grandparents)?

You are ***far more*** deferential to authority than your parents were, and certainly more than students from the late 1960s.

Pre-dent essay

You are ***far more*** inclined than were your parents to turn to authority instead of yourselves for answers to problems.



You are ***far more*** concerned about grades than your parents were, and certainly more than students from the late 1960s.

Num	Dept	Title	Cr	Grade
109	CHEM	Gen Chem	4	C+
101	BIOL	Gen Biol	3	C
101L	BIOL	Gen Biol L	1	D+
150	ENGL	Comp	3	C+

antifascistencyclopedia.com

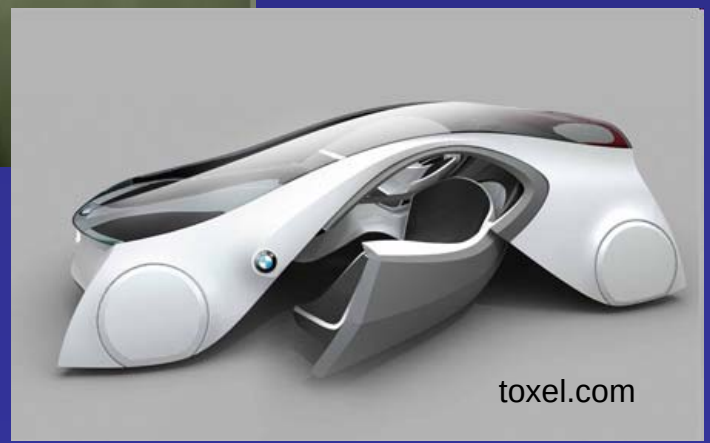
tvtropes.org

Num	Dept	Title	Cr	Grade
109	CHEM	Gen Chem	4	A
101	BIOL	Gen Biol	3	A
101L	BIOL	Gen Biol L	1	B+
150	ENGL	Comp	3	B+

You are ***far less*** concerned about ideas than your parents were, and certainly far less than students from the late 1960s.

Google images for “idea.”

Google images for “concept.”

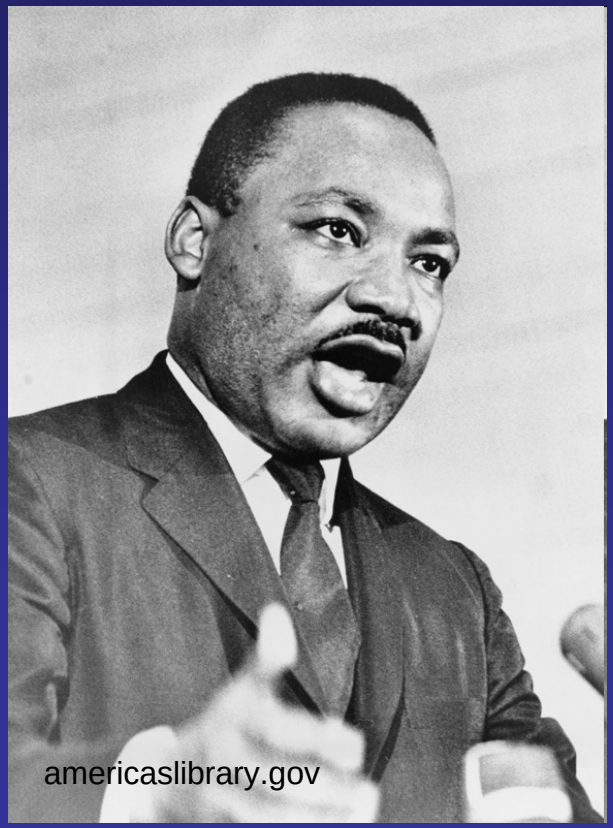


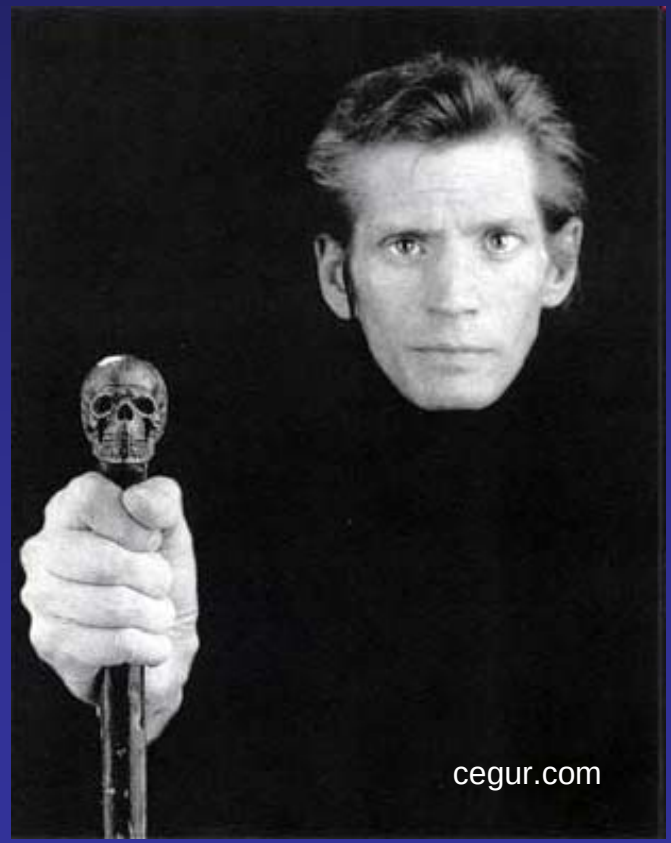
You are ***far less*** patient with your dislikes than were your parents.

"Evolution is a touchy subject . . . ,"

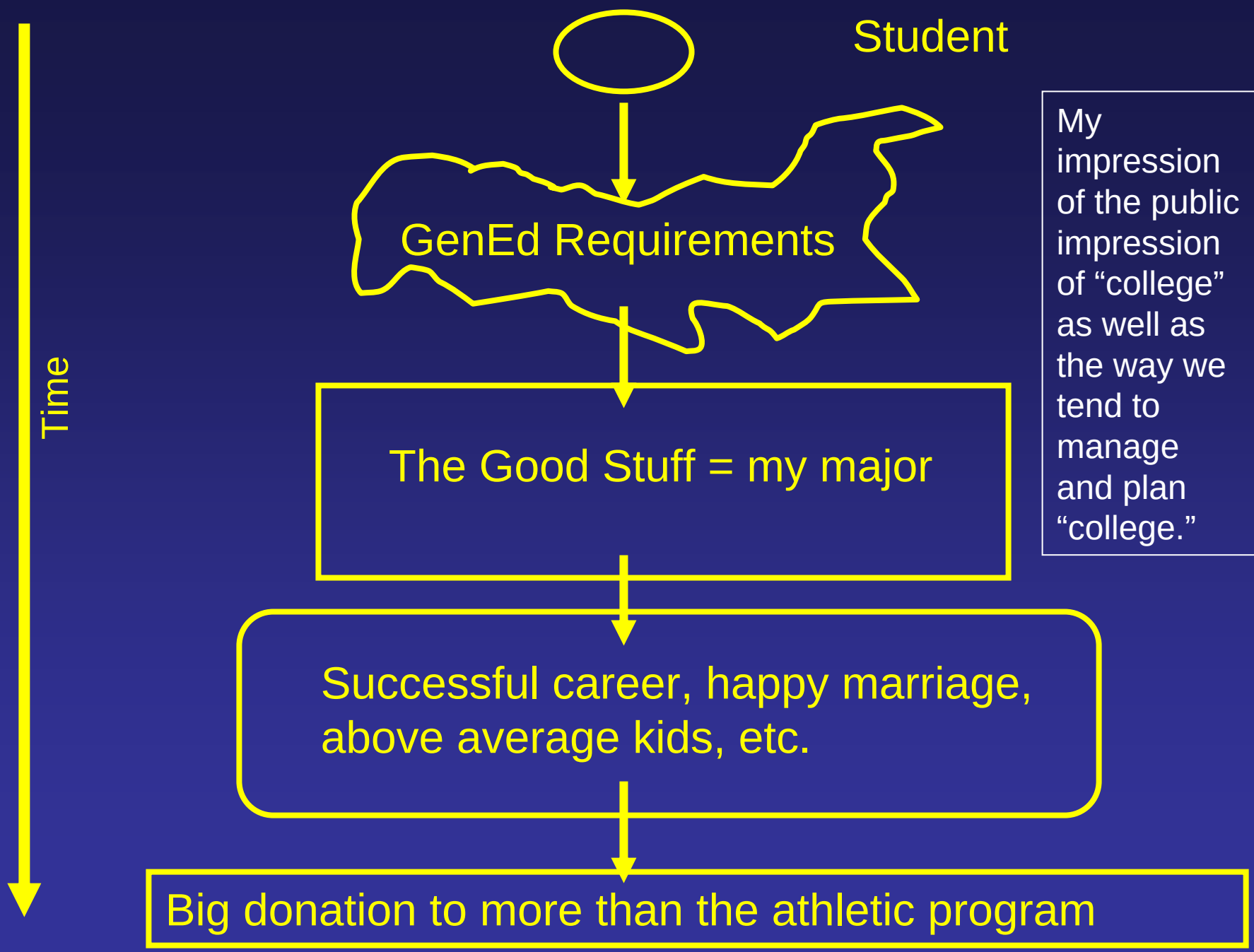
spie.org

You are ***far less*** concerned about ethnicity and sexual orientation than your parents were, and certainly less than students from the 1960s.





You are ***far more*** committed to a career track than your parents were, and certainly more than students from the 1960s.

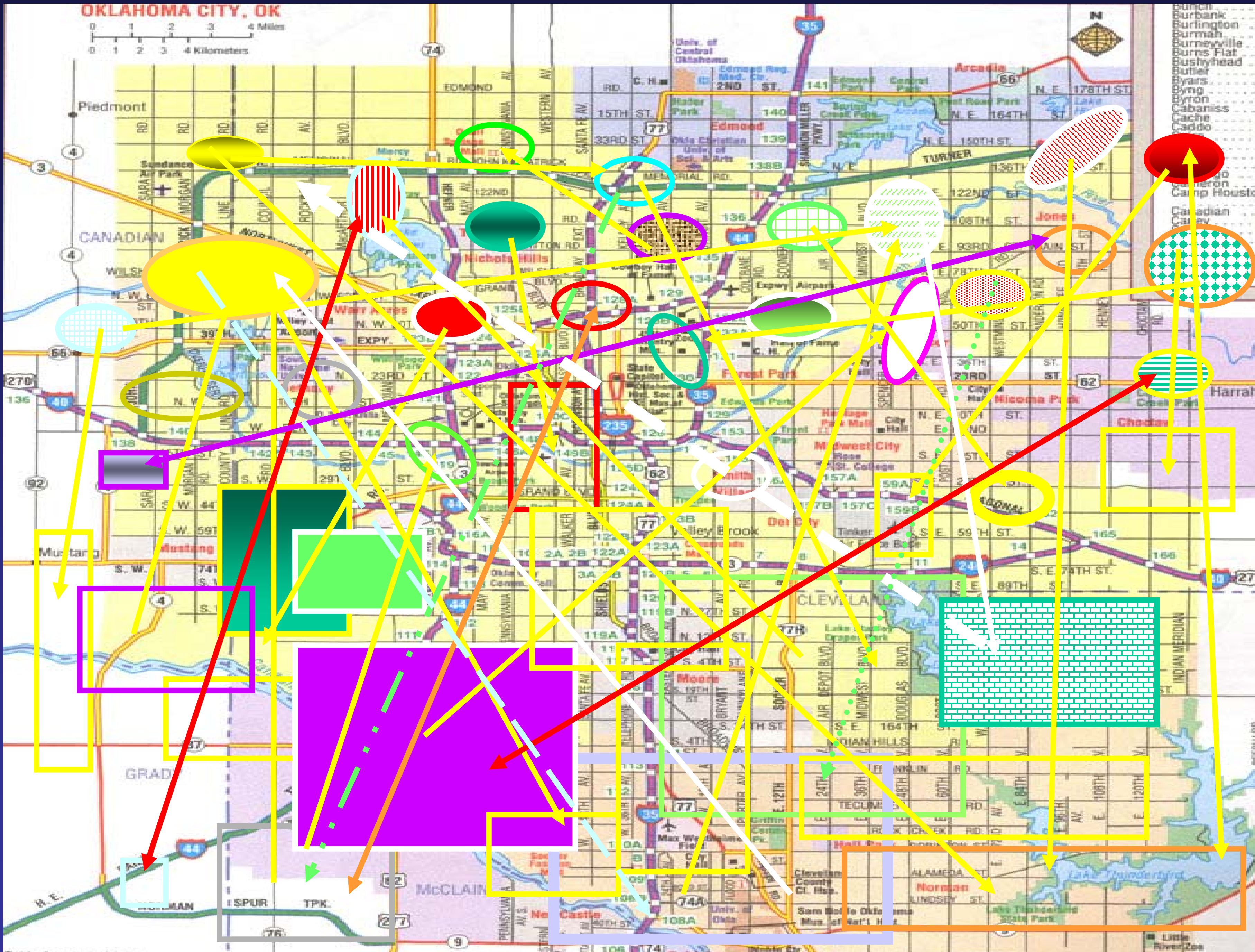

Student
GenEd Requirements
The Good Stuff = my major
Successful career, happy marriage, above average kids, etc.
Big donation to more than the athletic program
Time
My impression of the public impression of “college” as well as the way we tend to manage and plan “college.”

How do we turn this group of truly wonderful people into skilled writers, critical thinkers, and habitually analytical citizens with a true understanding of the arts, humanities, social sciences, and sciences?*

*(When what they really want to be is doctors, dentists, med techs, employed, married, etc.)

= Students = opportunities = interactions

(What the flow of human resources actually looks like.)


OKLAHOMA CITY, OK
0 1 2 3 4 Miles
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N
Piedmont
CANADIAN
Univ. of Central Oklahoma
Edmond
Arcadia
Nichols Hills
Warr Acres
Bethany
State Capitol
Forest Park
Nicoma Park
Midwest City
Del City
Valley Brook
Smith Village
Tinker Air Force Base
Harrah
Choctaw
Mustang
CLEVELAND
Moore
McCLAIN
Norman
Lake Thunderbird
Lake Thunderbird State Park
Newcastle
Goldsby
Cleveland County Cl. Hse.
Univ. of Okla.
Max Westheimer Field
Sam Noble Oklahoma Mus. of Nat'l Hist.
Little River Zoo
SPUR
TPK.
NORMAN
INDIAN MERIDIAN
PEEBLY RD.
© UniversalMAP
Bunch
Burbank
Burlington
Burmah
Burneyville
Burns Flat
Bushyhead
Butler
Byars
Byng
Byron
Cabaniss
Cache
Caddo
Cameron
Camp Houston
Canadian
Caney

Take-home message from getting acquainted with our students and paying attention to the lives they lead:

<u>They're not their parents! Or their grandparents!</u>

(But they are our nation's future.)

And they have some truly MAJOR problems to solve!

THE TWO BIG TAKE-HOMES:

Many of our most difficult social and political problems have a major biological component:

Racism, sexism, unwanted pregnancy, global energy distribution, intellectual and cultural richness, the definition of "human being," narcotics, global water distribution, genetic "engineering" and its consequences, infectious disease evolution and transmission, our relationships with insects, etc.*

***This list could go on for several more pages.**

AND . . .

The scientific and technological explosion is not going away any time soon; it's better to be educated than ignorant about all scientific and technological issues.

(For one obvious example: evolutionary biologists never started any shooting war, but the information technology you use minute by minute is taking away your privacy about as fast as it can be done.)

Sam and Georgia, their kids, getting taken to where Mike and Mary Ann did their research at UNL's Cedar Point Biological Station

“The natural world need not be logical in any obvious way. Science does not consist of imposing our reason on the world but rather reducing our preconceptions to the point that the world imposes its logic on us. This is very difficult indeed, involving a minimalization of our ego while maintaining our full powers of observation and receptivity. The capacity to perform this feat is what the teacher of science attempts to foster in the student. No one succeeds completely.”

--L. Slobodkin (from *Simplicity and Complexity in Games of the Intellect*)