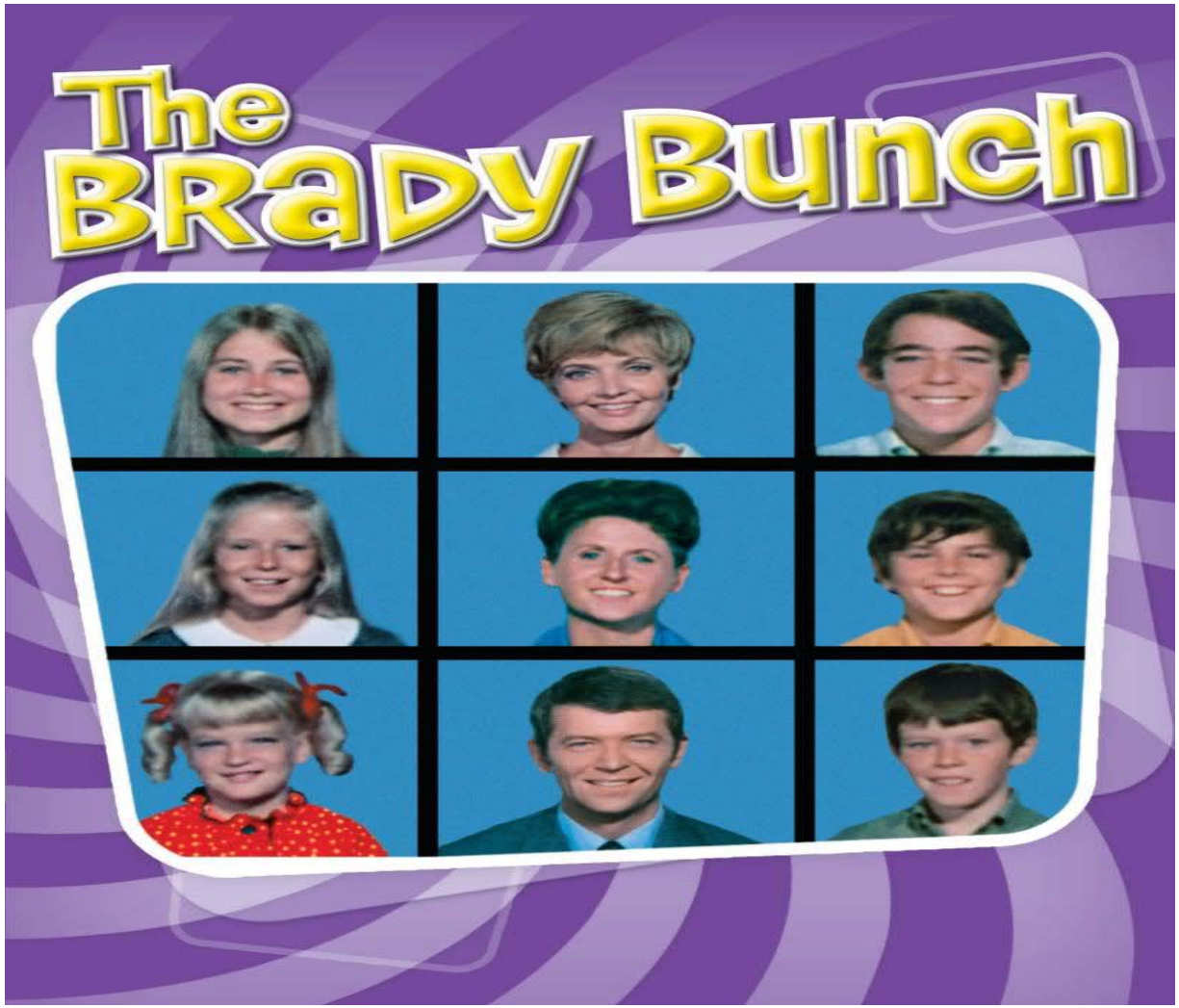
Making Change Happen: A Story of Daring, Dancing, Designing, and Other Dumb Stuff

Hollylynne Stohl Lee
North Carolina State University

Here's a story of a lovely lady…

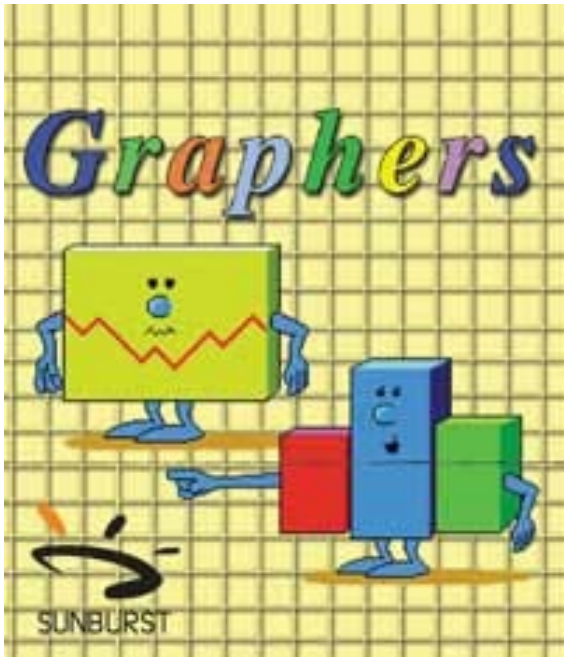


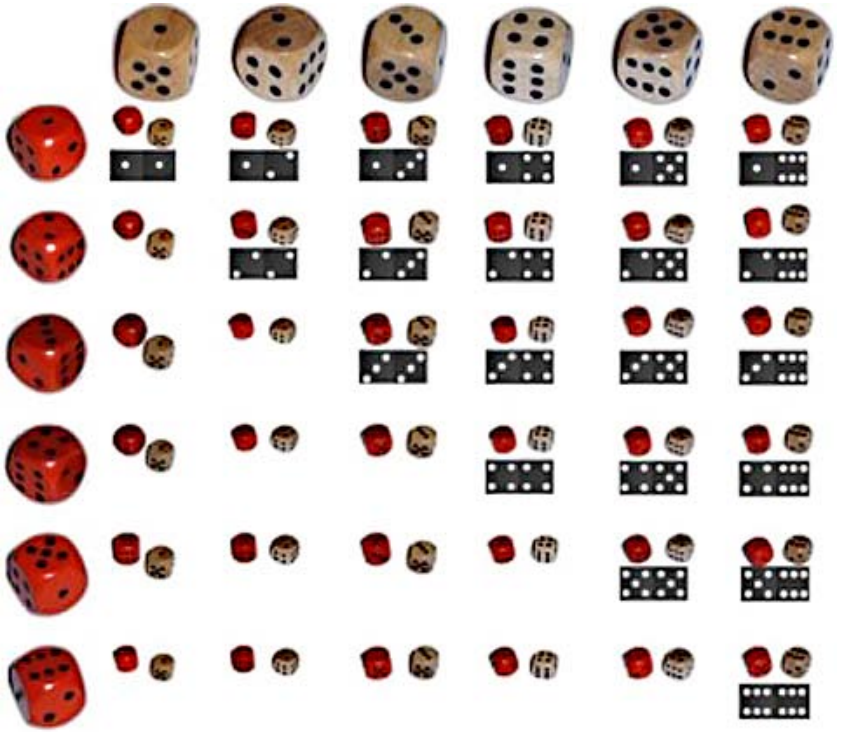
Where the magic happens
Your Comfort Zone

Teach kids!

You may surprise yourself ….

and others!





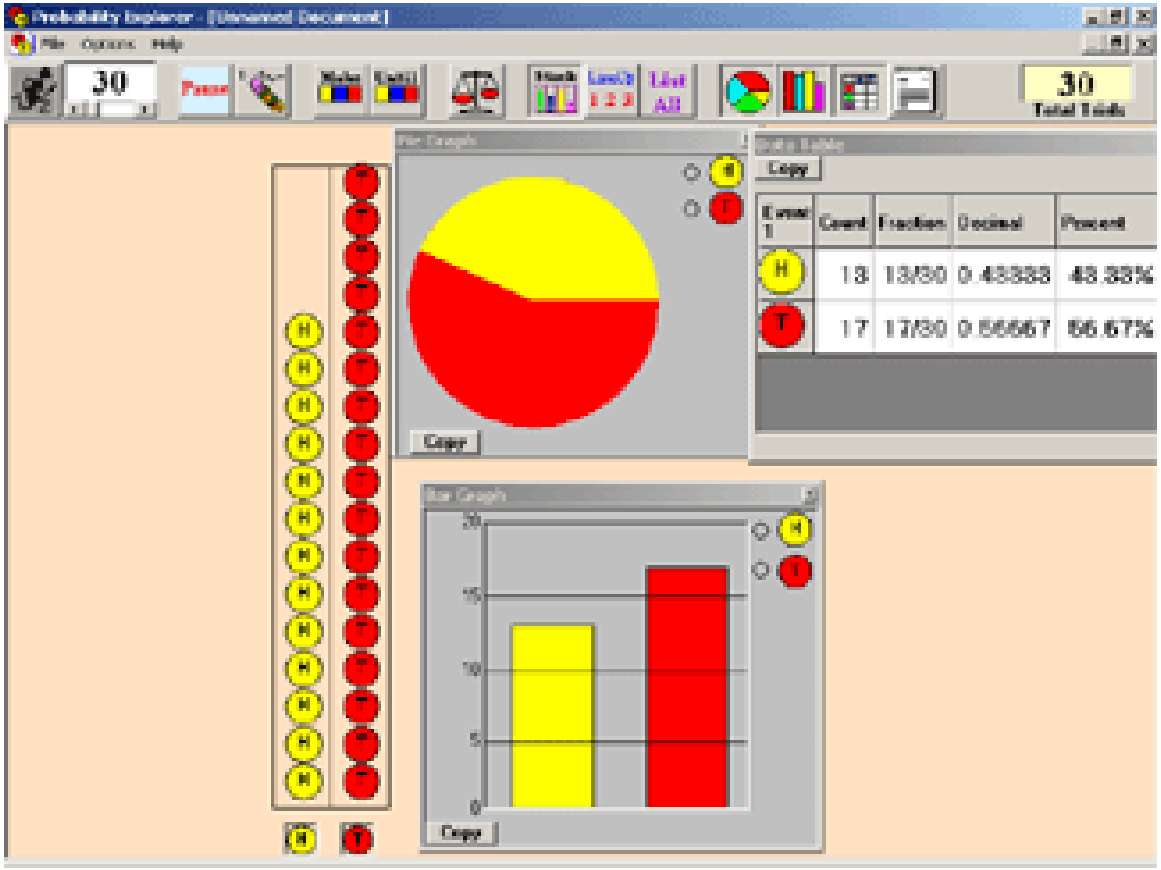
Be imaginative … and critical

But I don’t know how to program!

You are a smart girl, I bet you can figure it out.

ACCEPT the triple dog dare!

She’s a maniac, maniac, in the lab ….



Probability Explorer: debuted at NCTM 1999!

I found myself in the very small group of mathematics educators working in teaching and learning “stats and probability”

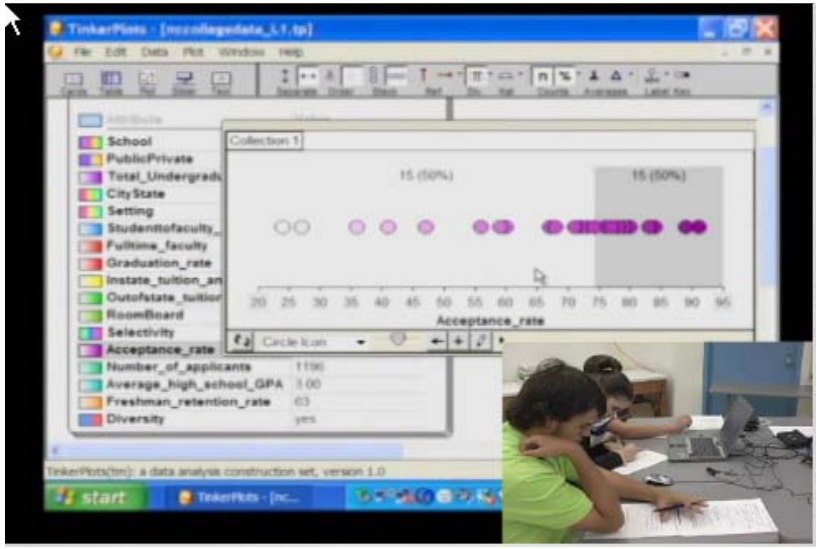
AND software design

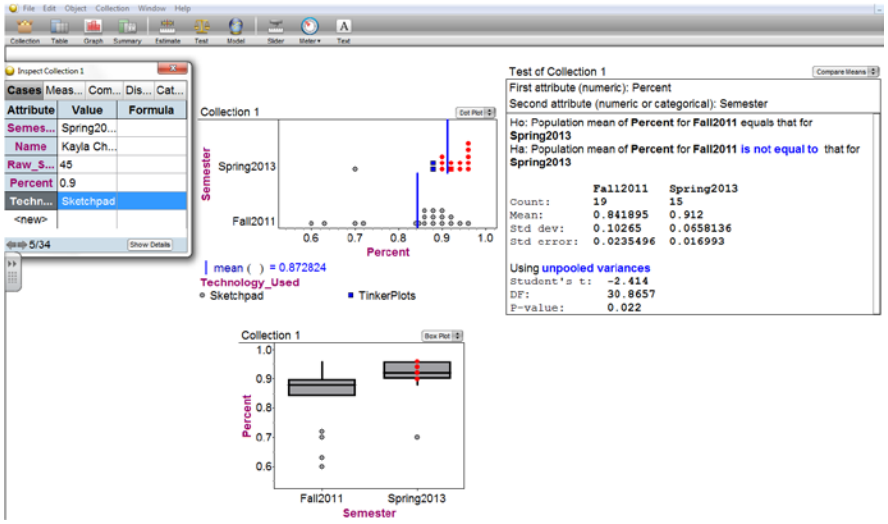
Then I started meeting these people that called themselves “Statistics Educators”

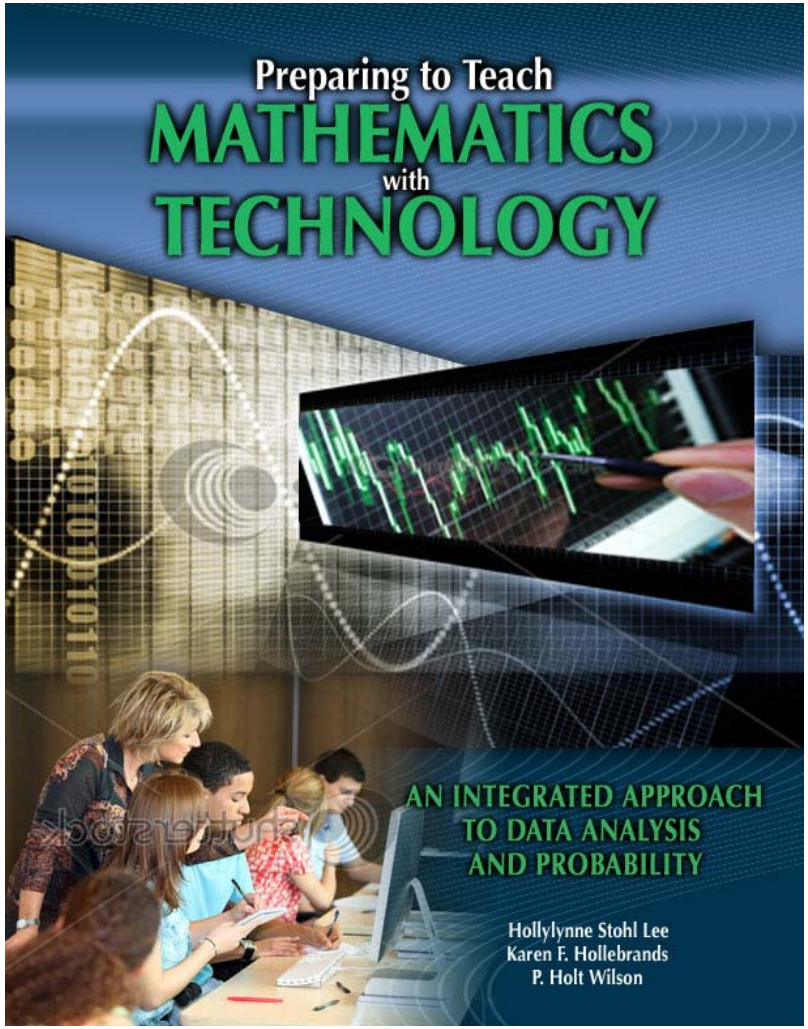
WOW! What a brand new world!

Circa 2004
An idea for merging my worlds…

Design Mathematics Teacher Education Curricula Focused on Teaching Data and Probability with Technology


TinkerPlots - [nccollegedata_1.1.tp]
School
PublicPrivate
Total_Undergrads
City State
Setting
Studentstofaculty_
Fulltime_faculty
Graduation_rate
Instate_tuition_an
Outofstate_tuitior
RoomBoard
Selectivity
Acceptance_rate
Number_of_applicants
Average_high_school_GPA
Freshman_retention_rate
Diversity
Collection 1
15 (50%)
15 (50%)
Acceptance_rate
start

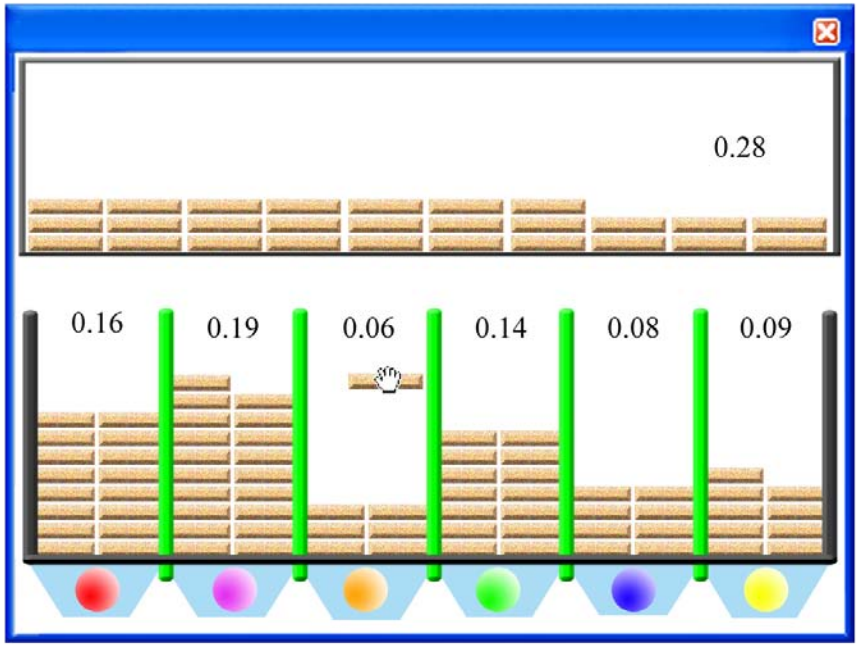

Inspect Collection 1
Cases Meas... Com... Dis... Cat...
Attribute Value Formula
Semes... Spring20...
Name Kayla Ch...
Raw_S... 45
Percent 0.9
Techn... Sketchpad
<new>
5/34
Show Details
Collection 1
Spring2013
Fall2011
Semester
0.6 0.7 0.8 0.9 1.0
Percent
mean ( ) = 0.872824
Technology_Used
Sketchpad
TinkerPlots
Test of Collection 1
First attribute (numeric): Percent
Second attribute (numeric or categorical): Semester
Ho: Population mean of Percent for Fall2011 equals that for Spring2013
Ha: Population mean of Percent for Fall2011 is not equal to that for Spring2013
Fall2011 Spring2013
Count: 19 15
Mean: 0.841895 0.912
Std dev: 0.10265 0.0658136
Std error: 0.0235496 0.016993
Using unpooled variances
Student's t: -2.414
DF: 30.8657
P-value: 0.022
Collection 1
1.0
0.9
0.8
0.7
0.6
Percent
Fall2011 Spring2013
Semester

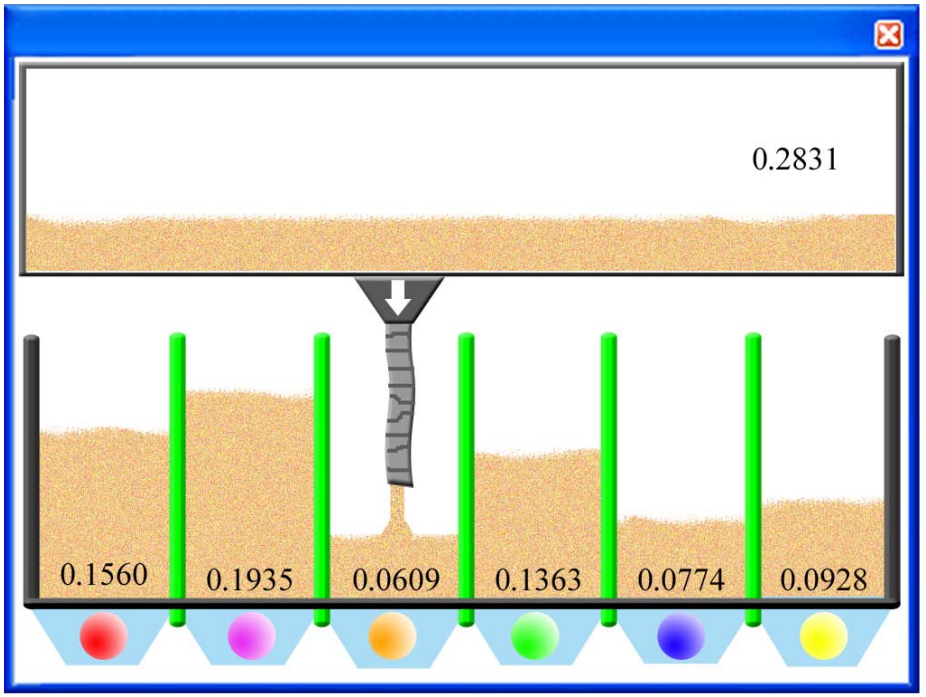

Preparing to Teach
MATHEMATICS
with
TECHNOLOGY
AN INTEGRATED APPROACH
TO DATA ANALYSIS
AND PROBABILITY
Hollylynne Stohl Lee
Karen F. Hollebrands
P. Holt Wilson

Design new courses or radically change the ones you have!

EMS/ST 519

Teaching and Learning Statistical Thinking

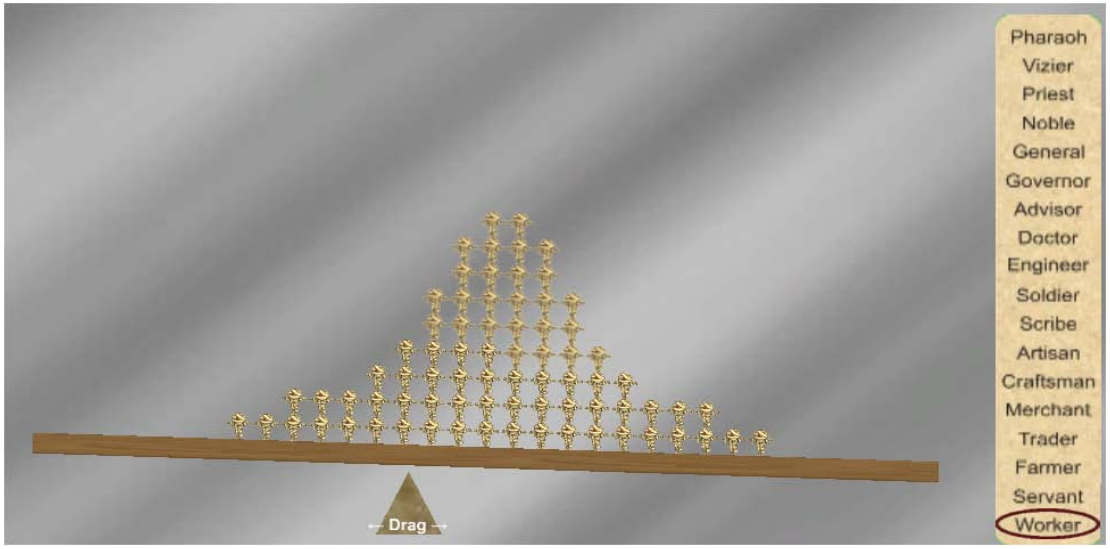




Take Time for Retrospective Analysis and Synthesis

New ideas emerge!

Get back to what you love…



Be passionate.

Play your music loud and go after what you love!

And, be bold….

Change your name a few times ….

Stohl

Drier

Stohl

Lee

but ***not*** Stohl-Lee

Of course, there ARE academic advantages …

Experts in the field agree (Drier, 2000; Stohl, 2002; Lee, 2005)…