Software Engineering is Not Enough

TTYP – turn to your partner
◆ Think about your answer, turn to your partner and discuss, develop an answer, write the answer, put your names on the answer.
◆ Off-campus
– Pause the lecture and compose your answer. Send the answer to me in an email

How to read an article
◆ Was the abstract useful?
◆ Conclusions?
◆ References?

Main thesis?
◆ A. management approaches are not useful, technical approaches are useful
◆ B. software engineering is not useful
◆ C. textbooks are not useful
◆ D. none of the above

Pressman’s quote
The only design decisions made at the coding level address the small implementation details that enable the procedural design to be coded.\(^1\)

What does Whittaker think of this quote?
What do you think Pressman meant by this quote?

Design vs Code
◆ What should be the relationship between design and code?
Fairley’s quote

Simplicity, clarity and elegance are the hallmarks of good programs; obscurity, cleverness, and complexity are indications of inadequate design and misdirected thinking.  

What does Whittaker think of this quote?  
Are obscurity, cleverness, and complexity good?

Brook’s quote

Many programs don’t need flow charts at all; few programs need more than a one page flow chart.  

What does Whittaker think of this quote?

TTYP - Documentation

◆ What needs to be documented?

Problem vs solution

◆ What is the difference between  
  – Problem domain  
  – Solution domain

Design and coding

◆ Validation

◆ Failures

Maintenance

◆ Minimize the need for other programmers to modify their code  
◆ Make their programs as maintainable as possible
TTYP - Counterpoint

◆ If you were going to write a rebuttal to this article, what would you say?

◆ What would be your thesis?

Quotes out of context

◆ Does anyone have a quote from Whittaker that might look dumb taken out of context?

that only the code has to be up-to-date; the comments do not.

For Tuesday, Sep 3

◆ Read “The art, science, and engineering of software development” by McConnell and “Experimental Models for Validating Technology” by Zelkowitz and Wallace

◆ Interactive Session – Tuesday, Sept 3