

# Tom Burnham's Accomplishments

## 1995 – 2014

V3

### Summary: Tom Burnham ...

- Identified the goals, nature and a measurable outcome of a statistical literacy course
- co-authored eight papers. Tom analyzed and validated some very complex algebra
- provided major support in six papers. Tom provided deep grammatical analysis
- provided consulting and/or editing in 16 papers.
- consulted with Schield weekly --if not daily --on a wide variety of topics for over 20 years

### Special Project (1) that Tom did independently

2003 [Statistical literacy: Purpose, Definition and Outcome](#)

### Computer programs (3) that Tom designed and developed: 2002 - 2007

2004 [Complex web-based Grammar-Parsing Program](#) (Visual Basic) Extended 2007

2007 [Web-based drill program: Identify part and whole in statements and questions](#)

### Papers (8) that Tom co-authored with Milo Schield: 2002 – 2008

2002 [Algebraic Relations between Relative Risk, Phi in 2x2 Tables](#) (ASA JSM)

2003 [Confounder-induced Spuriousity and Reversal: Algebraic Conditions for Binary Data](#) (JSM)

2004 [Confounder Resistance and Confounder Intervals for a Binary Confounder](#) (ASA JSM)

2005 [Online Grammar-Parser: Decode English descriptions & comparisons of Percents/Rates](#)

2006 [Binary Confounders as Mathematical Objects: Confounder Influence & Intervals](#) (JMM)

2006 [Introduction to an Online Ratio Statement Validator](#) (IASSIST)

2007 [Grammar of Statements Involving "Chance"](#) (ASA JSM)

2008 [Von Mises' Frequentist Approach to Probability](#) (ASA JSM) [Philosophical analysis]

### Papers (6) for which Tom provided major support: 2000 - 2012.

2000 [Statistical Literacy: Difficulty Describing & Comparing Rates & Percentages](#) (ASA JSM)

2001 [Statistical Literacy: Reading Tables of Rates and Percentages](#) (ASA JSM)

2004 [Statistical Literacy Curriculum Design](#) (IASE, Sweden)

2005 [Statistical Literacy and Chance](#) (ASA JSM)

2011 [Describing Arithmetic Relations Using Informal Grammar](#) (ASA JSM)

2012 [Coincidence in Runs and Clusters](#) (MAA JMM)

### Papers (16) in which Tom was acknowledged for consulting or editorial services: 1995 - 2014

1995 [Correlation, Determination and Causation in Introductory Statistics](#) (ASA JSM)

1996 [The Goal of Introductory Statistics: Reasoning About Data](#) (MSMESB)

1997 [Interpreting Statistical Confidence](#) (ICOTS, Singapore)

1998 [Evidential Statistics](#) (MSMESB)

1998 [Statistical Literacy and Evidential Statistics](#) (ASA JSM)

2000 [Statistical Literacy and Mathematical Thinking](#) (ICME, Tokyo)

2004 [Three Graphs to Promote Statistical Literacy](#) (ICME, Denmark)

2006 [Statistical Literacy Survey Results](#) (IASSIST)

2006 [Percentage Graphs in USA Today Snapshots Online](#) (ASA JMS)

2007 [Statistical Literacy: Factual Assessment to Support Hypothetical Thinking](#) (IASE Portugal)

2010 [The Social Construction of Rankings](#) (ASA JSM)

2011 [Teaching Statistical Literacy using Odyssey2Sense™: a Unique Web-Based Forum](#) (JMM)

2011 [Statistical Literacy: A New Mission for Data Producers](#) (SJIAOS)

2011 [Describing Arithmetic Relations Using Informal Grammar](#) (ASA JSM)

2013 [Statistics Education: Steadfast or Stubborn?](#) (ASA JSM)

2014 [Odyssey: A Journey to Lifelong Statistical Literacy](#) (ICOTS)

# Milo Schield's Acknowledgement of Tom Burnham

Tom Burnham had a world-class mind: the most tightly-integrated mind I have ever encountered. Tom suffered from ongoing depression that worsened as time passed.

Tom was absolutely ruthless in analyzing and evaluating a definition, an argument or an essay. If it didn't meet his standards, he didn't want his name on it.

He recognized that his exceedingly high standards may have resulted in his lower level of productivity.

When we worked together, we often came at things from two very different directions. Typically, we came to appreciate the benefit in each other's approach and the final product was better than either of us could have done separately.

I appreciated Tom's criticism of my ideas and my writing. Many times, I had a general idea of what I wanted to say. Tom's analysis sharpened the point and the supporting argument considerably.

We worked on a wide variety of projects together: math, grammar, programming, statistics, critical thinking and philosophy. Fortunately we shared a lot philosophically: An Aristotelian realism along with an appreciation of the Objectivism epistemology.

I first met Tom in 1969. Tom was a student at Iowa State University (Ames) majoring in Computer Science, minoring in Mathematics. I was on the faculty at the University of Iowa (Iowa City) in Physics.

In our first meeting, Tom mentioned some psychological issues he was dealing with. As I recall, I said something like this: "I'm not really interested in your psychological issues; I'm interested in your mind."

On that basis we proceeded. He worked for me as a programmer. He programmed in COBOL and PL1 on IBM 360 and 370 and then in BASIC on Datapoint micro-computers.

After the failure of my first two businesses, Tom was hired by Eagle Signal and then by Datapoint in San Antonio.

I visited him occasionally in Texas between 1976 and 1988.

We reconnected in San Antonio the late 80s. Tom was unable to work effectively at DataPoint because of worsening "brain fog." Since he never agreed to be tested, he never collected any workers compensation or Medicare. At that time he was active in Mensa.

While he was living in town, his goal was to live in the country where he thought the air would be cleaner. I helped him buy a car and move into a trailer in the country. Sometime later, I helped him move back to San Antonio. I financed his computer needs.

When I wrote the Statistical Literacy proposal to the W. M. Keck Foundation in 1990, Tom was a major line item. During the next four years, Tom was paid \$108,000 from the grant. During our 20 years together, I paid Tom another \$180,000. [E-mail to Cotton on March 5, 2016]

Tom was my colleague (1988-2017), my charity (1991-2016) and my life-long friend (1970-2017).