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Are We Stuck in the Past? The Need for New Thinking

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Differing Levels of Maturity Across Bidders

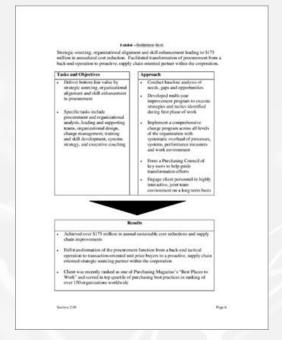
3 responses to the same requirements, Florida eProcurement, 2001...

Bidder A



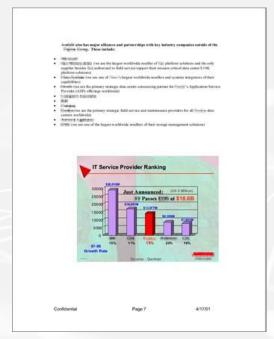
Rank 1/16 Score 94.80

Bidder B



Rank 4/16 Score 78.60

Bidder C



Rank **13/16** Score **49.25**



The 1970s

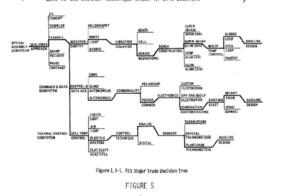
Figure 1-1-1 summarizes the trade alternatives and the selected approaches (the heavy line traces our decision paths to the baseline design).

Optical Assembly Subsystem Trade. We first studied different approaches to implementing a schileren system, including the JPL approach (Phase B study baseline)

Optical Assembly Subsystem Frace. We first studied different approaches to fine plementing a schiferen system, fincluding the JPL paperoach (Phase 8 study baseline) and a proprietary modification of it called planar-Z. The JPL approach was discarded because of the need to maintain stability of optical elements located on a three-dimensional optical bench. The toeppler system requires long path lengths; the other two systems do not readily allow the shedowgraph function to be included.

We examined three methods of implementing the interferometry requirement: classical white light planer-Z schlieren, coherent light holographic, and a hybrid white light/holographic (to include capability for absorption measurements). The classical system contains all the optics necessary to accomplish the RFP requirements for schlieren, interferometry, shadowgraph, optical absorption, and transverse microscopy.

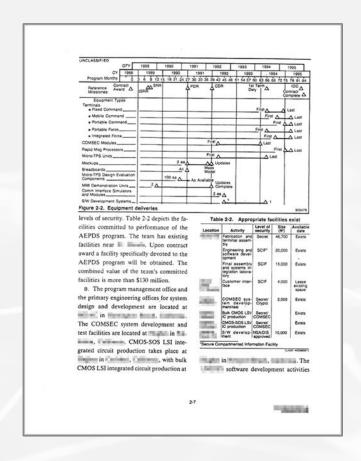
MOTE: The text went on to explain the entire tree. The explanation took 4 pages, so if your proposal is severely page-limited, you might want to use another technique shown in this booklet.



- Technical report format
- "River-raft" technique common: graphic rafts on a river of text
- No widespread use of thesis statements
- However, STOP in use at Hughes
- Single column
- Simple layout
- Not easy to revise
- Hand-drawn illustrations
- Simple covers
- Typewriters
- Carbon paper and mimeographs
- X-Acto knives and Magic Tape



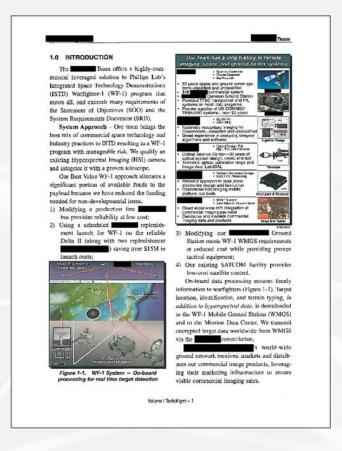
The 1980s



- Some double column formats
- Foldouts
- Word processor-based revisions, e.g. WordStar, WordPerfect, Word
- Tables made with IBM character set special characters
- Laser printers with monospaced fonts
- Simple vector graphic programs, e.g. GEM Draw Plus
- Desktop publishing using mainframes and workstations, e.g. LaTeX, Interleaf
- Color covers using photographic montages



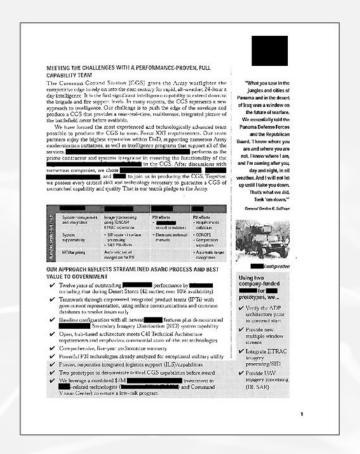
The 1990s



- Color!
- Cover tells the story
- Text "illustrates the graphics"
- Emphasis on graphical elements for ease of understanding
- Consistent use of themes
- Focus boxes for the hard sell
- Templates custom to the proposal
- Mandatory use of foldouts to tell the entire story
- Strategically-planned proposal widespread



The 1990s (with a bit of innovation)



- Innovative template design
- Use of pull quotes



The 2000s



- Consistent application of themes
- Improved crosswise integration of win themes through graphics, text and cost
- Big improvement in cost volumes
- Big improvement in IMP/IMS
- Visually, not much changed from the 1990s
- Use of the same tools (Word, PowerPoint, Illustrator) – just on faster PCs with different aesthetics



When Did We Start Doing it This Way?

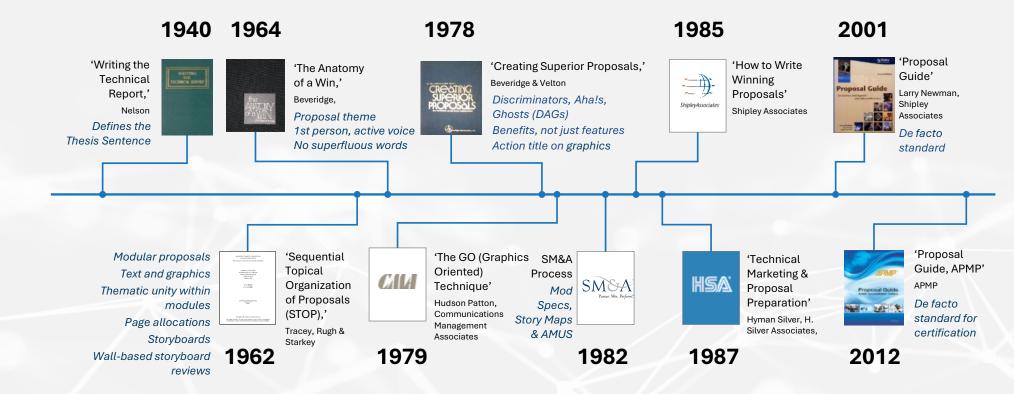
Ideas we accept as Best Practice have early origins:

Thesis sentences	""""""""""""""""""""""""""""""""""""""
Modular proposals	"Sequential Topical Organization "
Text and graphics	of Proposals (STOP), Tracey,
Thematic unity within modules	Rugh & Starkey, 1962
Page allocations	
Storyboards	
Wall-based storyboard reviews	
Proposal theme	
1st person, active voice	'The Anatomy of a Win,' Beveridge, 1964
No superfluous words	AND THE PERSON NAMED IN COLUMN TO TH
Discriminators, Aha's, Ghosts	
Panafite not just footures	"Creating Superior Proposals,"
Benefits, not just features Action titles on graphics	Beveridge & Velton, 1978
	4



Current "Best Practice" Has Early Origins

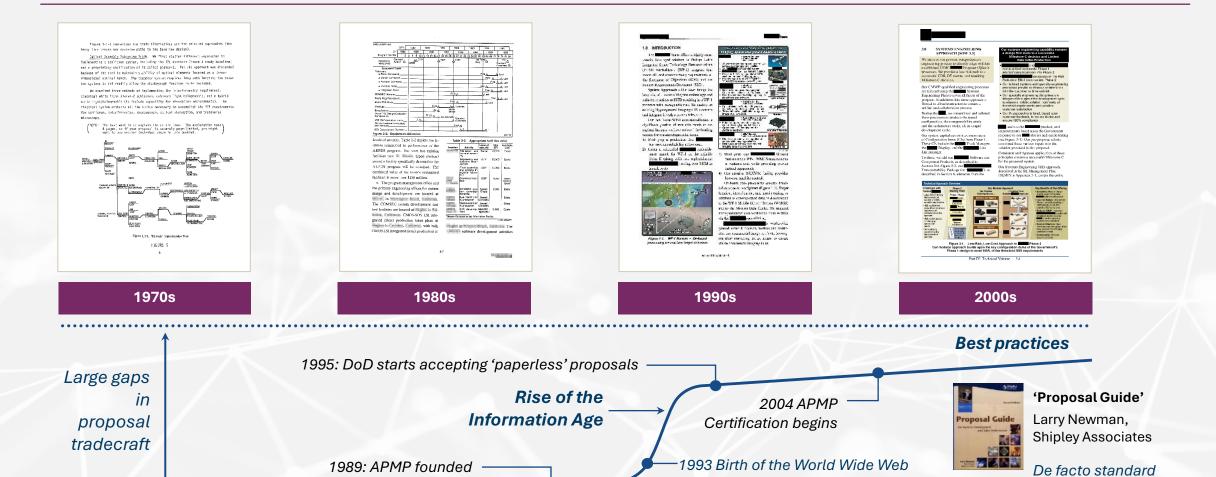
...and have since become codified into command media



A slow evolution over 40 years...



Through the Decades, Side by Side





First graphical web browser

Persuasion on the Cheap

Conventional wisdom now widely adopted in our profession as a best practice is that "a picture is worth a thousand words", yet there is a visual persuasion gap

What We are Taught in School (K-to PostDoc)



Since the advent of Gutenberg's printing press, our culture of learning is about reading and writing.

We are discouraged to learn how to read pictures (comics) in school.

Sources: 1) Arthur Brisbane, 1911 (exact reference cannot be cited with certainty) 2) Newstex, The Data Explosion in 2014 Minute by Minute – Infographic, October 21, 2014

Where the World is Heading



Five exabytes (one billion gigabytes) of content were created between the birth of the world and 2003. In 2013, 5 exabytes of content were created each day², the vast majority of this as a visual representation of information.

What We Need is Visual Literacy



We are flooded by information in images, from photographs to illustrations to flow charts to tables and information graphics, yet we were never taught how to read a picture in school. Is this skill so innate in our genetic makeup that it does not need to be taught?



What is this?

Two		Ctudy	
Trac	ıe	Study	

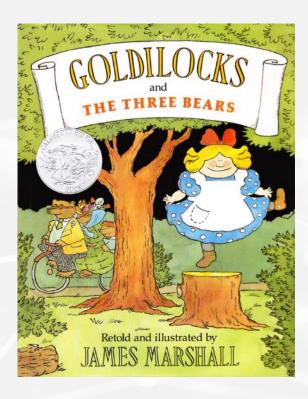
Product Feature	Defining Trait
A	Temperature
В	Dimensions
С	Modulus

Company	Defining Characteristic	Product Maturity	Confidence	Cost
Company Alpha	Light	8	High	Low
Company Beta	Dark	12	High	High
Company Gamma	Medium	11	Moderate	Medium
Company Delta	Exotic	3	Low	Medium-Low

Moral of the story: Selfish disrespect of property rights can put you in peril



Reference



Memorable

exclaimed...

Ince upon a time, there was a little girl named Goldilocks. She went for a walk in the forest. Pretty soon, she came upon a house. She knocked and, when no one answered, she walked right in. At the table in the kitchen, there were three bowls of porridge.

Goldilocks was hungry. She tasted the porridge from the first bowl.

"This porridge is too hot!" she

Not Memorable

	Tra	de	Stu	ıdy	
Product	Feature		Defining Trait		
Porridge			T°		
Chair			Size		
Bed				Firmnes	ss
Character	Traits	,	Age	Hunger	Size
Goldilocks	Blonde		8	High	Petite
Papa	Brown		12	High	Big
Mama	Tawny		11	Moderate	Medium
Baby	Red- Brown		3	Low	Small



What is this?

Context: Challenge to address diminishing supplies of scarce resources

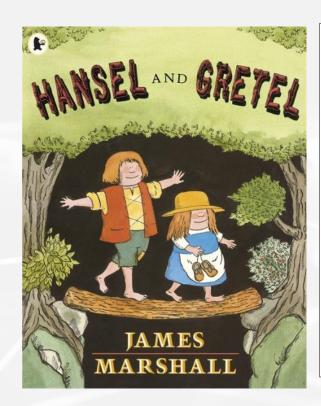
Supply Strategies

Competitor	Strategy	Teaming Approach	Critical Competency
Company Alpha	Monopolize supply	Go Alone	Profitability
Company Beta	Find adjacent sources	Team with similar size to take on larger competitors	Reliability
Company Gamma	Eliminate competitors	Team with similar size to take on larger competitors	Innovation
Company Delta	Find new sources	Opportunistic M&A	Past Performance

Moral of the story: be cautious around strangers, don't judge solely on appearance, and beware of evil influences that lead you to abandon your values



Reference



Memorable

nce upon a time, there lived a poor woodcutter with his wife and two children. The little boy called Hansel, and the girl named Gretel. There was never much to eat in their home...

"At the crack of dawn, let's take the children down into the deepest part of the forest. We'll make a fire for them out there and give them each a crust of bread...they'll never find their way back home, and we'll be rid of them..."

Not Memorable

Supply Strategies				
Strategy	Character	Critical Competency		
Monopolize supply	Stepmother	Greed		
Find adjacent sources	Hansel	Faith		
Eliminate competitors	Gretel	Cleverness		
Find new sources	Witch	Duplicity		



What is this?

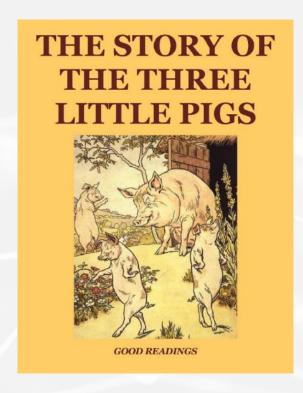
Evaluation of Competing Approaches

Main Choice	Company	Traits	Outcome
Bid at threshold KPPs	Company Alpha	Poor past performance	Lose
Bid above objective KPPs	Company Beta	Overpromising	Lose
IRAD investment to create low-risk bid above objective KPPs	Us	Practical & clever	Win
Bid below threshold KPPs	New Entrant	Overconfident	Embarrassed

Moral of the story: hard work and dedication pay off; take the time and expense necessary to do things the right way. You may get by for awhile with shortcuts and shoddy work, but in the long run it will cost you.



Reference



Memorable

... Presently came along a wolf, and knocked at the door, and said, "Little pig, little pig, let me come in."

To which the pig answered, "No, no, by the hair on my chiny chin."

The wolf then answered to that,
"Then I'll huff, and I'll puff, and I'll
blow your house in." So, he huffed,
and he puffed, and he blew his house
in and ate up the little pig.

The second little pig met a man with a bundle of furze, and said, "Please...

Not Memorable

Evaluation of Competing Approaches

Main Choice	Name	Key Traits	Outcome
Mud (straw)	Browny	Wallowing, but disobedient	Rescued from imprisonment
Cabbage (Sticks)	Whitey	Greedy & insatiable	Rescued from imprisonment
Brick	Blacky	Practical & clever	Savior
Deceit, Huff and Puff	Wolf	Deceptive beyond own good	Scalded to death



Narratives are Second Only to First-Hand Experience

Direct experience produces "experiential knowledge"

Analysis produces "evidentiary knowledge"

Narratives bring both alive for readers not at the creation

Captures complexity while communicating insights clearly

Moves others to understanding and motivates behavior

Provides the arc from mystery to discomfort to curiosity to credibility to empathy to solace to inspiration

Raison d'être for graphics to convey facts, data and evidence, processes and frameworks and abstract concepts

REASONED, COMPELLING AND MEMORABLE



We have a very hard job to perform

Our Audience	What We Want of the Audience	What Gets in Our Way
Mental capacity for processing information for most of us is 7, plus	Greater Knowledge transfer	Overly specified structure and other constraints imposed by the customer
or minus 2 (2.5 bits)	Higher level of understanding	, and a succession
Most evaluators have a day job with more things to do than time	Relief from boredom	Complexity of subject and numerous subtleties
All proposals are greeted with	Longer retention	Unclear burden of proof in sufficiency of data
skepticism, cynicism, lassitude, or derision (pick one)	Fewer interpretative errors	Conventional wisdom and over-reliance on best practices

Source: Miller, George, "The Magical Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information, Psychological Review, 63, 81-97, 1956



Role Reversal

Time to re-examine the role of text in proposals, and incorporate new methods of the "art of narrative"

For the past 20 years we've incorporated state of the art thinking and tools in the creative act of graphics in our proposal tradecraft, but have not paid much attention to new methods for narratives now in common use for other purposes

Lacking visual literacy as an innate skill, surplus of data in graphics and proliferation of meaning creates a burden on the reader to reason for him/herself.

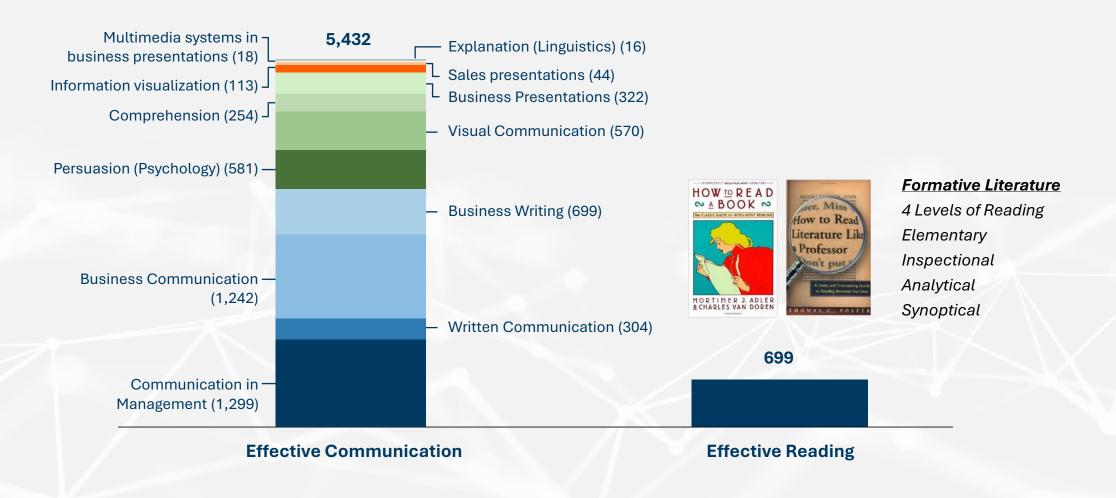
Tracey and others in 1965 set out to solve this same problem with STOP to shift the burden of logical coherence back to the author.

Have We Come Full Circle?





Books by Subject (Library of Congress)





Five Models of Non-Fiction Storytelling

Think of these as models for: Communication, Persuasion,

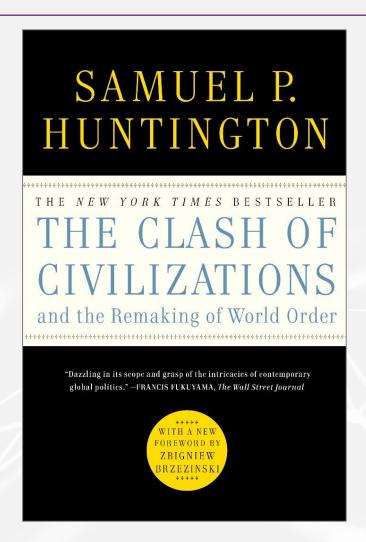
Engagement and of course... information sharing

(but in many cases, that's not really the most important function)



Iconic Social Science Argument Trajectory

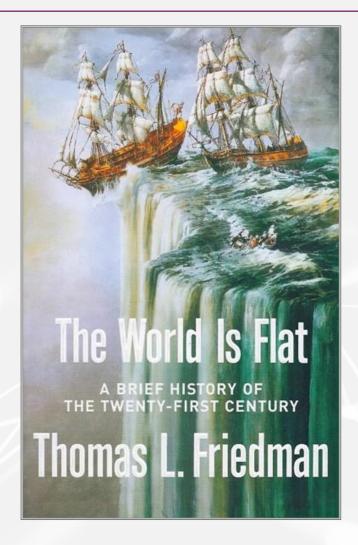
- What's the question/problem?
- Where does the question come from?
- What's the (hypothesized) answer?
- How did we arrive at that 'answer'?
- So what? If our answer is correct, what else of interest happens?





Medical Rounds

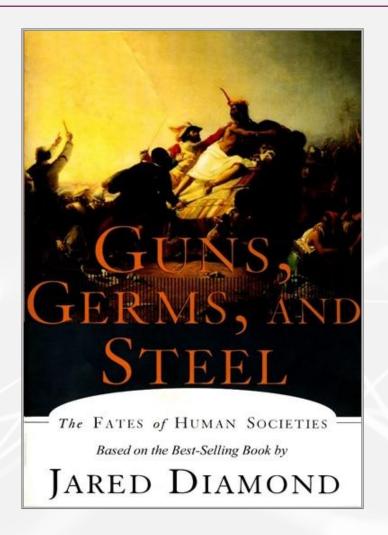
- Presenting Snapshot, then SOAP
- Subjective
- Objective
- Assessment
- Plan





Iconic Inductive Reasoning Path

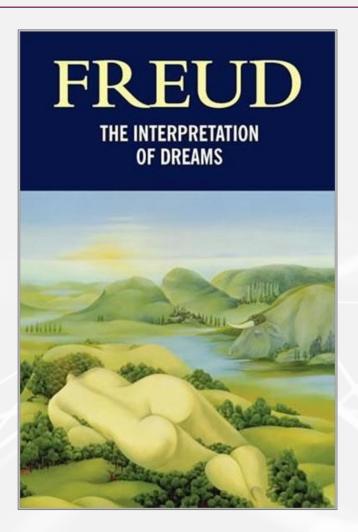
- From Data Points, to Generalizations
- No 'theory' per se, at least not as guiding principle for the story
- The story emerges from the details
- The more data, the better





Iconic Deductive Reasoning Path

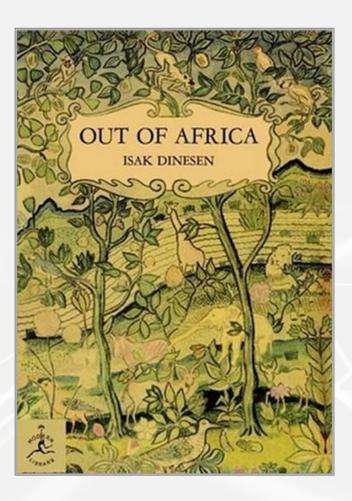
- From Theory to Hypotheses
- A big 'story' generates expectations about what you will see in the world
- The details follow from the theory
- The more generative and precise the theory, the better





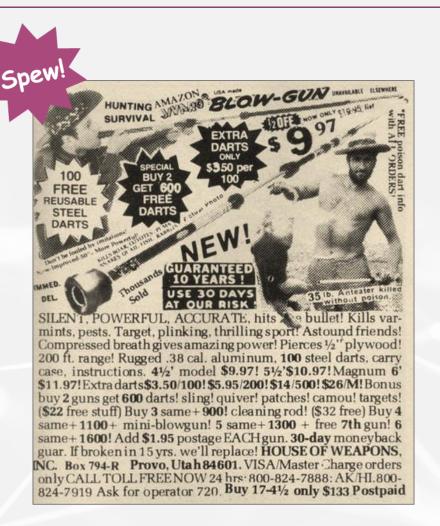
Ethnography

- 'Deep' narrative
- 'Embedded' storytelling the storyteller puts herself in the position of the subject
- Capturing 'Culture' is more important than explicating causality





Communication & Persuasion Has Changed



Memorable and Compelling





What's Next for our Industry?

Typical proposal for the last 10+ years



Tomorrow's proposal





Interesting Books

(Not a comprehensive catalog of worthwhile reading)



Adler, Mortimer J. and Charles Van Doren.

How to Read a Book: The Classic Guide to Intelligent Reading.

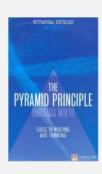
Touchstone, 1972.



McCloud, Scott.

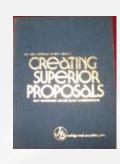
Understanding Comics: The Invisible Art.

William Morrow Paperbacks, 1994.



Minto, Barbara.

The Pyramid Principle: Logic in Writing and Thinking, 3rd Ed. Prentice Hall, 2010.



Beveridge, James M and Edward J Velton.

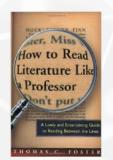
All you should know about creating superior proposals, but somehow never fully understood.

J. M. Beveridge and Associates, 1978.



Newman, Larry PFF APMP. Shipley Proposal Guide, 4th Ed.

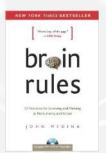
Shipley Associates, 2011.



Foster, Thomas C.

How to Read Literature
Like a Professor: A Lively
and Entertaining Guide to
Reading Between the
Lines.

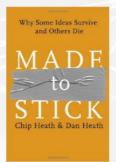
Harper Perennial, 2003.



Medina, John.

Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School.

Pear Press, 2009.



Heath, Chip and Dan Heath.

Made to Stick: Why Some Ideas Survive and Others Die.

Random House, 2007.



Interesting Articles

(Not a comprehensive catalog of worthwhile reading)

- Angier, Natalie. "A new mind meld: Merger of science with humanities." International Herald Tribune, May 29, 2008.
- Fryer, Bronwyn. "Storytelling That Moves People: A Conversation with Screenwriting Coach Robert McKee." Harvard Business Review, June 2003.
- Gurri, Martin, Craig Denny, and Aaron Harms. "Our Visual Persuasion Gap." Parameters. Spring 2010 (2010): 101-109
- Miller, George A. "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information." The Psychological Review. Vol. 63 (1956): 81-97
- Randall, Doug and Aaron Harms. "Using Stories for Advantage." Strategy and Leadership. Vol. 40-1 (2012): 21-26
- Tracey, J.R., D.E. Rugh and W.S. Starkey. "Sequential Thematic Organization Of Publications (STOP): How to Achieve Coherence in Proposals and Reports." Journal of Computer Documentation. Vol. 23-3 (1965): 4-68



