

A stylized, colorful illustration of a landscape. The foreground features rolling green hills with a brown path. On the left, there is a green tree, a purple flower, and an orange flower. A red bird is flying in the sky. The background consists of layered blue and white waves, suggesting a sky or water. The overall style is clean and modern.

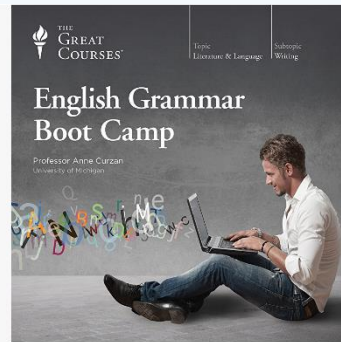
# Effective (Business) Writing & Communication

Byron Shen, PhD MBA

*(A Technologist, Entrepreneur & Writer in Combination)*

# What I will not be covering...

- English grammar
  - (Actually you can break the rules, but you need to know the rules first.)
- Writing love letters/fictions/movie scripts
- TED-style presentations
- BUT if you are interested, check out these books:



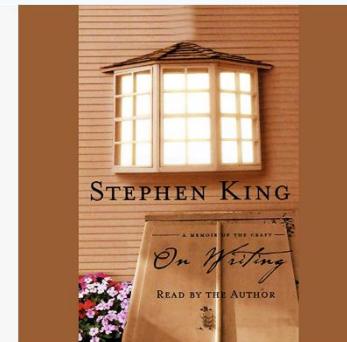
By The Great Courses  
Narrated by Professor Anne Curzan  
☆☆☆☆☆ (0) | 6 hrs 12 mins

Summary

Reviews

Grammar! For many of us, the word triggers memories of finger-wagging schoolteachers, and of wrestling with the ambiguous and complicated rules of using formal language. But what is grammar? In fact, it's the integral basis of how we speak and write.

As such, a refined awareness of grammar opens a world of possibilities for both your pleasure in the English language and your skill in using it, in both



By Stephen King  
Narrated by Stephen King  
★★★★☆ (6972) | 8 hrs 5 mins

Summary

Reviews

"If you don't have the time to read, you don't have the time or the tools to write." Here is Stephen King's master class on his craft.

*On Writing* begins with a mesmerizing account of King's childhood and his early focus on writing to tell a story. A series of vivid memories from adolescence, college, and the struggling years that led up to his first novel, *Carrie*, offer a fresh and often funny perspective on the formation of a

# TED TALKS

The Official TED Guide to Public Speaking

CHRIS ANDERSON  
Head of TED

By Chris Anderson  
Narrated by Chris Anderson, Tom Rielly, Kelly Stoetzel  
★★★★☆ (1908) | 7 hrs 31 mins

Summary

Reviews

For anyone who has ever been inspired by a TED talk...

...this is an insider's guide to creating talks that are unforgettable.

Since taking over TED in the early 2000s, Chris Anderson has shown how carefully crafted short talks can be the key to unlocking empathy, stirring



## Tell Me a Great Story (and Throw Away Your PPT)

Published on May 12, 2015



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

Dale Olseth, former CEO of Medtronic (1976 – 1986) and to whom I paid tribute in [my previous post](#), always had a good story, which is not a surprise considering he had done and seen a

974 clicks on your article

90 Likes • 7 Comments • 1 Share

Like

Comment

Share

[Article link](#)

# To Tell a Story

- Elementary school – I was a traveling “professional” storyteller
- High school – I started a literary publication; and I almost went into journalism
- College – I wrote play and poetry
- Graduate school – I was courting my wife-to-be and translated Chinese poetry
- ... ..
- 60+ essays on LinkedIn and other media

Assuming you are not writing just for your own amusement...

- Who is your audience?
- What are you trying to communicate, and what kind of response/action are you trying to elicit?
- How are you trying to make your case?
- What is your takeaway?
- Examples:
  - College admission essays or Job applications
  - Reports/project or business plans/presentations
  - Articles/essays to communicate some central ideas (examples on next slide)
  - Grant application or pitch investors for startup funding



## Are there Angels, in the Investment World?

Published on May 7, 2015



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

I am embarking on an exciting medical device diagnostic technology startup in China with a friend. We are in the middle of raising money to get this start-up launched. We often say to

📈 1,427 clicks on your article

176 Likes • 42 Comments

👍 Like    💬 Comment    ➦ Share

[Article link](#)



## Velox Q1 2018 Quarterly Newsletter

Published on Apr 22, 2018



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

Right off the bat, we will tell you that this Velox newsletter is different from the previous ones. We will be talking about UTI (Urinary Tract Infection) and a huge **clinical milestone** that Velox has completed: a blinded clinical feasi-

📈 637 clicks on your article

50 Likes • 10 Comments • 3 Shares

👍 Like    💬 Comment    ➦ Share

[Article link](#)



## The Seasons of Life

Published on Mar 8, 2016



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

I am writing this post on a UA flight from Los Angeles to Shanghai. My mom was hospitalized during the Chinese New Year, and I rushed back to Shanghai then and stayed for a few days to arrange good medical care for her. But

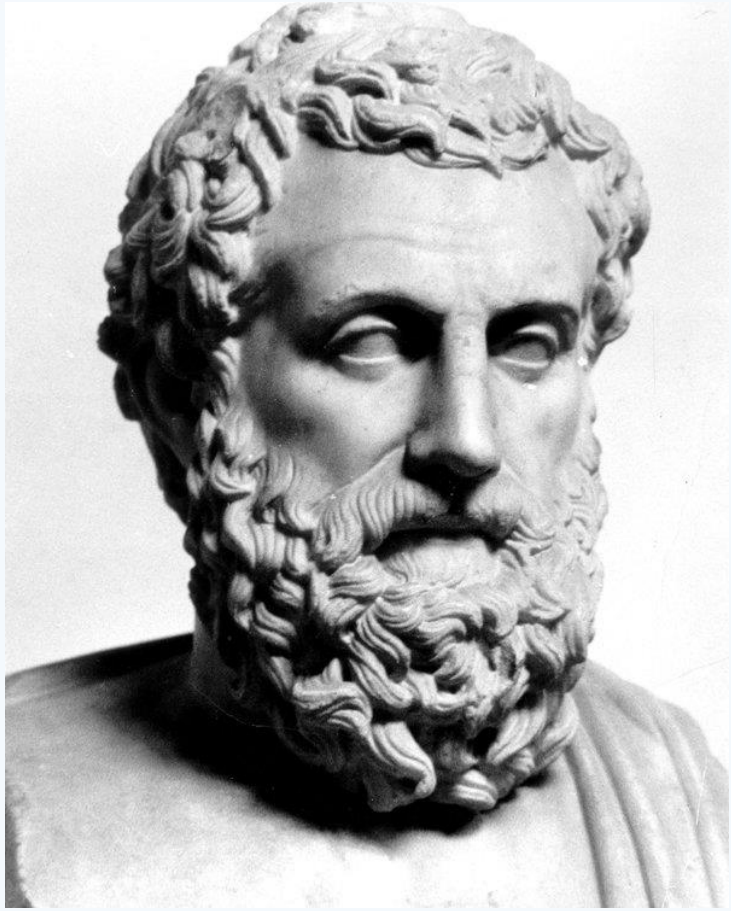
📈 2,344 clicks on your article

196 Likes • 43 Comments • 3 Shares

👍 Like    💬 Comment    ➦ Share

[Article link](#)

# Persuasion – from Greek to Modern



Aristotle

(384–322 BC)

- Ethos
- Pathos
- Logos

# Rhetoric & Persuasive Writing

- Ethos (ethic; the ethical appeal)
  - to convince an audience of the author's credibility or character
- Pathos (empathy; the emotional appeal)
  - to persuade an audience by appealing to their emotions, i.e., to build a connection to your audience
- Logos (logic; the appeal to logic)
  - to convince an audience by use of logic or reason

# “To Tell Heads from Tails (and True from False) ...”

[Article link](#)

## *A New Primer on “Sensitivity, Specificity, PPV, NPV” in Clinical Diagnostics*

- “... But one time, someone asked me to add up the numbers 1 through 10 quickly, without using paper and pencil (or abacus - we did not have calculator back then). I had to give this some thought in my head, and then I came up with 55 for the total (by doing pairing of (1, 10) (2, 9) ... (5, 6) first). The adults were quite impressed, and I thought, “*wow, math was fun.*” So I started a monthly “*Fun with Math*” extracurricular program for my fellow elementary school kids (OK, I’m not sure how much fun they really had with it). By middle school, I had taught myself calculus, and I wrote a paper on calculus that improved a calculation of the famous irrational number  $e$  (or Euler’s number).”
- “... Now while I always enjoyed math, statistics was a different beast. How does one pin down imprecision with precision, and make sense with the probability of rolling a dice?”

Ethos

Pathos



# Mix in some humor and personal touch

- “Indeed, if one takes simple averaging at its face value, one could come to some crazy conclusions such as the average person has one testicle. Oops, that just does not seem to be right even if you do not have a PhD in statistics.”
- “Some simple diagnostic products can even be used at home for self-diagnosis. For example, our older son has become pretty adept at using the family thermometer in the early morning to decipher whether he may have an ‘unfortunate’ fever and therefore maybe he ought not to attend school for the day.”

*Final copy above & original draft below, with some minor wording change*

- “...our older son has become pretty adept at using the family thermometer in the early morning to determine whether he may have an ‘unfortunate’ fever and therefore whether he should not attend school for the day.”

# Everyone likes stories, esp. good ones...

✕ Velox Q1 2018 Quarterly Newsletter 📖 ...

## And to wrap up with a micro-story (a reflection on “smoke and mirrors”) ...

While optical mirrors are critical components for any optical detection system, the on-going negative news of Theranos perhaps reflects the problem of hype and sometimes “smoke and mirrors” in the high-tech startup space. How could a company which raised \$750 million (with a \$9 billion valuation) crash and burn so spectacularly? Some of the initial ideas and hype are probably well-intentioned. A few drops of blood can give you all the diagnostic results? OK, it is a catchy sound bite, but is it even realistic scientifically? While one drop of blood can give you pretty decent blood glucose readings and a few other basic readings, does it even pass the basic statistical test sampling principle, especially when you need to assess low abundance targets? In the startup space,

📈 594 clicks on your article

48 Likes • 7 Comments • 3 Shares

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[Article link](#)



## On Startup: a Reflection on Hype and “Smoke and Mirrors”

Published on Apr 22, 2018



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

*(Note: I usually conclude every Velox Newsletter with an interesting micro-story. And here is an expanded version of the micro-story in the [Velox Q1 2018 Newsletter](#).)*

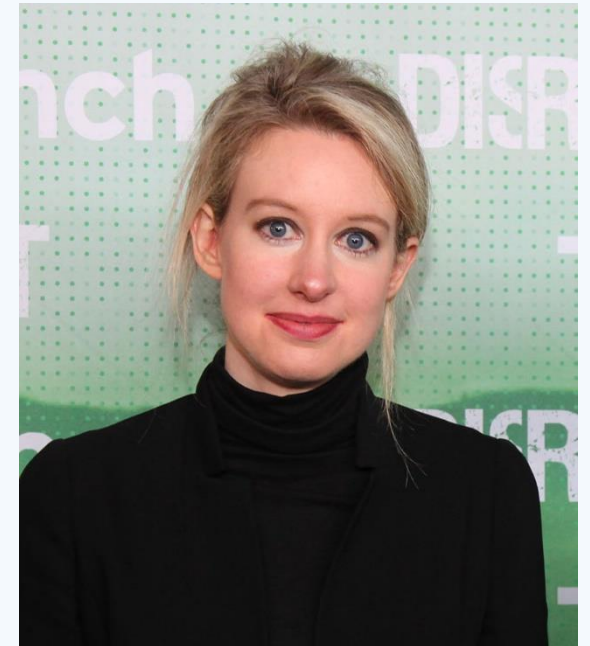
📈 679 clicks on your article

17 Likes • 6 Comments • 1 Share

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[Article link](#)

Liz Holmes / Theranos



(commons.wikimedia.org)

# Organize your writing...

- Draw an overarching arc throughout your narrative
- Be consistent and stay close to your point(s)
- Have rigor in your reasoning and logic

## Opening

- Framing
- Background
- Stake out your position(s)

## Main Body

- Argument
- Supporting evidence

## Closing

- Bring it back together
- Conclusion/Takeaway

# “Velox Q1 18 Newsletter”

## Background - Problem - Solution

[Article link](#)

1. **UTI** is a big problem and can affect nearly 50% of the population at least once in their lifetime. An aging population and increase in chronic health problems are contributing to the increase in the overall UTI incidents (*e.g., people with type 2 diabetes have a UTI incidence rate almost double that of those without, probably due to diabetic neuropathy and/or excess sugar in the urine*). In short, UTI diagnostics is a big market with steady growth (the Asia Pacific region is seeing even faster growth).
2. One may say, “no problem, we can use antibiotics.” But we have a crisis of **antibiotic resistance**. In the fierce arms race between pathogens and our antibiotics, we are losing (*per CDC, each year in the U.S. alone, at least 2 million people become infected with bacteria that are resistant to antibiotics*). At the moment, antibiotics resistance is also a huge problem in UTI due to overuse or empirical use of antibiotics. And if a patient is given an antibiotic to which the pathogen is resistant, a simple infection can become very nasty as the antibiotic can kill off the good microbiome and actually allow pathogenic bacteria to take over. Ideally, doctors would rely on the **Antibiotic Susceptibility Test** result to prescribe the right antibiotics. BUT currently it takes several days to get test results.
3. Based on the clinical feasibility study data (26 patient samples, a panel of 6 antibiotics, and 156 independent data points), we are now confident that we can develop a UTI diagnostic product with rapid diagnosis in **10 minutes** and Antibiotic Susceptibility Test result in **2 hours**. The initial clinical data already showed good test sensitivity in determining whether the pathogen in the clinical sample is sensitive or resistant to a specific antibiotic drug. Therefore, doctors can now decide on an effective drug quickly versus having to make an empirical choice of drug to treat patients with UTI.

And use **bold**, *italics*, underlines to highlight key words and information

# Include some *specifics* for your argument

1. **UTI** is a big problem and can affect nearly 50% of the population at least once in their lifetime. An aging population and increase in chronic health problems are contributing to the increase in the overall UTI incidents (*e.g., people with type 2 diabetes have a UTI incidence rate almost double that of those without, probably due to diabetic neuropathy and/or excess sugar in the urine*). In short, UTI diagnostics is a big market with steady growth (the Asia Pacific region is seeing even faster growth).
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# Business & Technical Reports

(\*Image of a Velox Study  
Report example redacted)

Start with Summary (“Conclusion”)

Introduction/Background

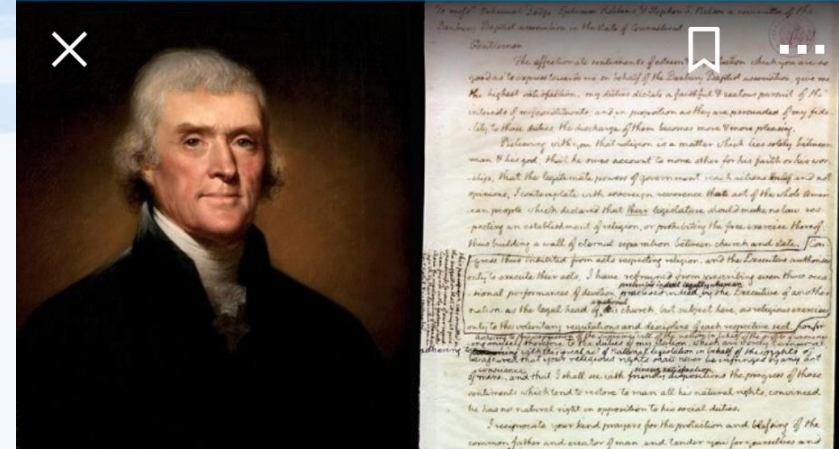
Lay out your Objectives

- Main body
- Data/graph
  - Analysis
  - Conclusion

Use appendix for background details

# Email Writing...

- Keep it succinct and keep it clear
- Bullet points are useful for clarity
- Spell out actions needed (and when needed)
- The goal is that you would not have to write a follow-up email to explain the email you just sent
- Don't be make it too long (write separate emails or use attachment if needed)
- Be careful if you are emotional (read it again before hitting "send", or let it sit a while)



## What if Thomas Jefferson were to write his email to Danbury on "Separation of Church and State"?

Published on Sep 23, 2016



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

- On Writing (Email) Well

📈 902 clicks on your article

27 Likes • 3 Comments

[Article link](#)



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# Original Letter by Jefferson...

To messrs. Nehemiah Dodge, Ephraim Robbins, & Stephen S. Nelson, a committee of the Danbury Baptist association in the state of Connecticut.

Gentlemen

The affectionate sentiments of esteem and approbation which you are so good as to express towards me, on behalf of the Danbury Baptist association, give me the highest satisfaction. my duties dictate a faithful and zealous pursuit of the interests of my constituents, & in proportion as they are persuaded of my fidelity to those duties, the discharge of them becomes more and more pleasing.

Believing with you that religion is a matter which lies solely between Man & his God, that he owes account to none other for his faith or his worship, that the legitimate powers of government reach actions only, & not opinions, I contemplate with sovereign reverence that act of the whole American people which declared that their legislature should "make no law respecting an establishment of religion, or prohibiting the free exercise thereof," thus building a wall of separation between Church & State. Adhering to this expression of the supreme will of the nation in behalf of the rights of conscience, I shall see with sincere satisfaction the progress of those sentiments which tend to restore to man all his natural rights, convinced he has no natural right in opposition to his social duties.

I reciprocate your kind prayers for the protection & blessing of the common father and creator of man, and tender you for yourselves & your religious association, assurances of my high respect & esteem.

Th Jefferson  
Jan. 1. 1802.



Fri. 1/1/1802, 11:30 pm

To: Friends@DanburyBaptist.org

Subject: Separation of Church and State

*Re-written as a modern-day email  
and use bullet points to clearly organize key points*

Dear friends,

I am deeply grateful for your genuine affection towards me and your generous congratulations on my recent election to the highest duty and obligation for our new nation.

To address the weighty concerns you have raised, I shall share with you my thoughts on the matter and I hope this may alleviate your concerns:

1. I believe as you do that religion is a matter which lies solely between Man & his God, and we owe to no one (including government) for our faith or our way of worship.
2. Furthermore, the American people have clearly declared that their legislature should "make no law respecting an establishment of religion, or prohibiting the free exercise thereof," thus building a wall of separation between Church & State.
3. In reverence to the will of the nation and by the rightful conscience, I shall see to the progress that shall restore to man all his natural rights.

I reciprocate your kind prayers & blessing, and tender you & your religious association assurances of my high respect & esteem.

Thomas Jefferson

Fri. 1/1/1802, 11:30 pm

To: Friends@DanburyBaptist.org

Subject: Separation of Church and State

And use *bold*, *italics*, underline to further emphasize key concepts and central idea

Dear friends,

I am deeply grateful for your genuine affection towards me and your generous congratulations on my recent election to the highest duty and obligation for our new nation.

To address the weighty concerns you have raised, I shall share with you my thoughts on the matter and I hope this may alleviate your concerns:

1. I believe as you do that **religion** is a matter which lies solely between Man & his God, and we owe to no one (including government) for our faith or our way of worship.
2. Furthermore, the American people have clearly declared that their legislature should "make no law respecting an establishment of religion, or prohibiting the free exercise thereof," thus building a wall of **separation between Church & State**.
3. In reverence to the will of the nation and by the rightful conscience, I shall see to the progress that shall restore to man all his natural rights.

I reciprocate your kind prayers & blessing, and tender you & your religious association assurances of my high respect & esteem.

Thomas Jefferson




# PowerPoint

- Organize your narrative
- Clarify your points
- What is your takeaway?
- Create visual focuses on your slide (even on busy slides)

# “A Career Journey on One Slide and in 5-minute!”

[Article link](#)

- Here is an example for a LEAP career development talk; but I was asked to only use one slide!
- “Less” usually requires more planning and more work
- It takes me hours just to prepare this one slide



**Journalism or Science (and China or USA)?**

- I was a storyteller, but I went into science...
- USTC, UC Berkeley

**Academia or Industry?**

- 3M Healthcare, SurModics, DSI – from medical device to pharmaceutical industry; Big company and small company...

**Technical or Business (and USA or China)?**

- From R&D to Marketing/sales, Biz Dev, General Mgmt (setting up and running a subsidiary company in China/Asia)

**And What's Next?**

- Consulting, Investment, and Starting up my own company...
- And can I pull that off? (a Writer, Technologist, and Businessperson in combination)

Byron Shen, PhD MBA  
(on LinkedIn, Twitter, etc.)

鹏飞瀚墨天下书，山隐卧龙谗治志。诚诺本伴基石石，替换原为君子思。

## A Career Journey on One Slide and in 5-minute!

Published on Nov 12, 2015

**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

I recently spoke on a panel discussion at the LEAP 4.0 Annual Conference (Leadership, Excellence, Aspiration, and Platform) event at Caltech. It was a great event and platform for professional growth and career advancement

1,157 clicks on your article

76 Likes • 15 Comments • 1 Share

Like Comment Share



## Journalism or Science (and China or USA)?

- I was a storyteller as a kid, and I almost went into journalism in college; BUT I went into science instead (USTC, UC Berkeley)...



## Academia or Industry?

- 3M Healthcare, SurModics, DSI, & Velox Biosystems; from medical device to pharma to diagnostics; from big company to small company to startup...



## Technical or Business (and USA or China)?

- From R&D to Marketing/sales, Biz Dev, General Management (building a subsidiary company in China/Asia), and now Startup



## And What's Next?

- To take Velox to the next level...
- And to be a Technologist, Entrepreneur, and Writer in combination



Byron Shen, PhD MBA  
CEO, Velox Biosystems

瀑飞瀚墨天下书，山隐卧龙澹泊志。诚诺本作基柱石，德操原为君子思。

# Examples of our Company Prez Slides

(sorry, I have to redact some of the slides here)

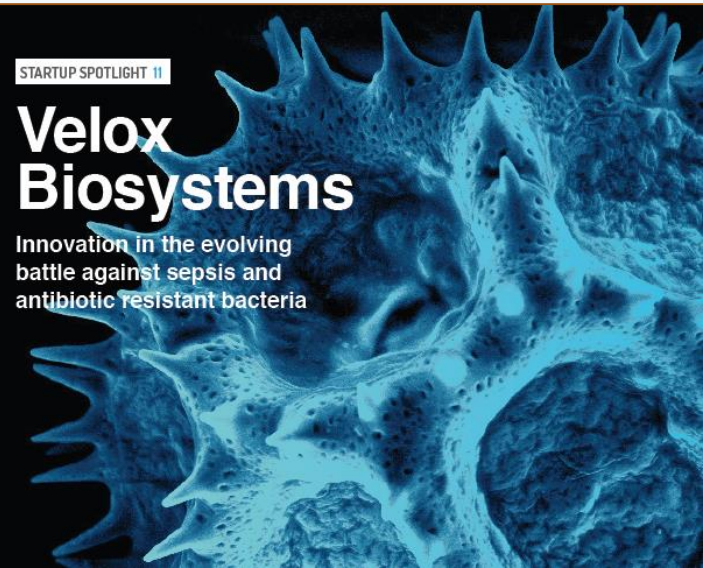
JAN/FEB 2017



STARTUP SPOTLIGHT II

## Velox Biosystems

Innovation in the evolving battle against sepsis and antibiotic resistant bacteria



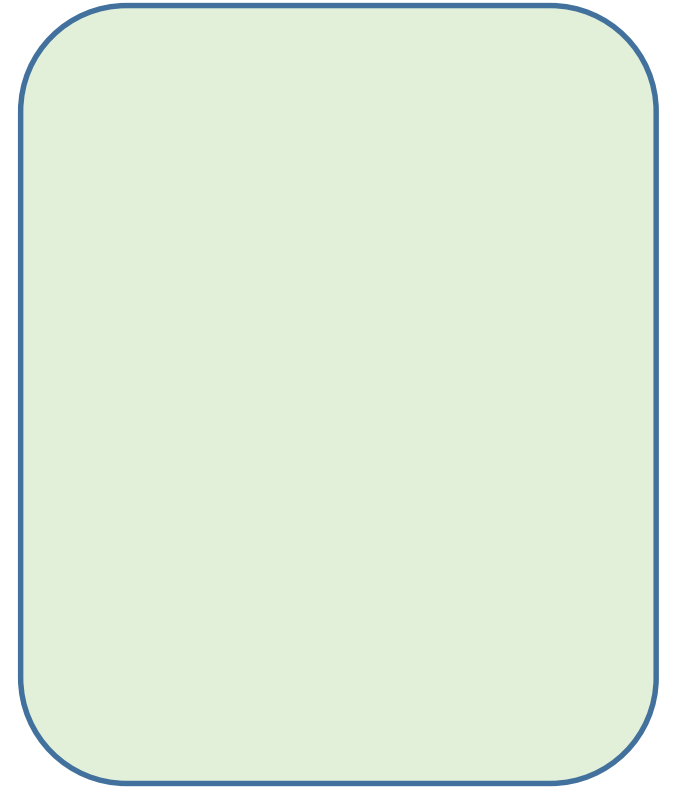
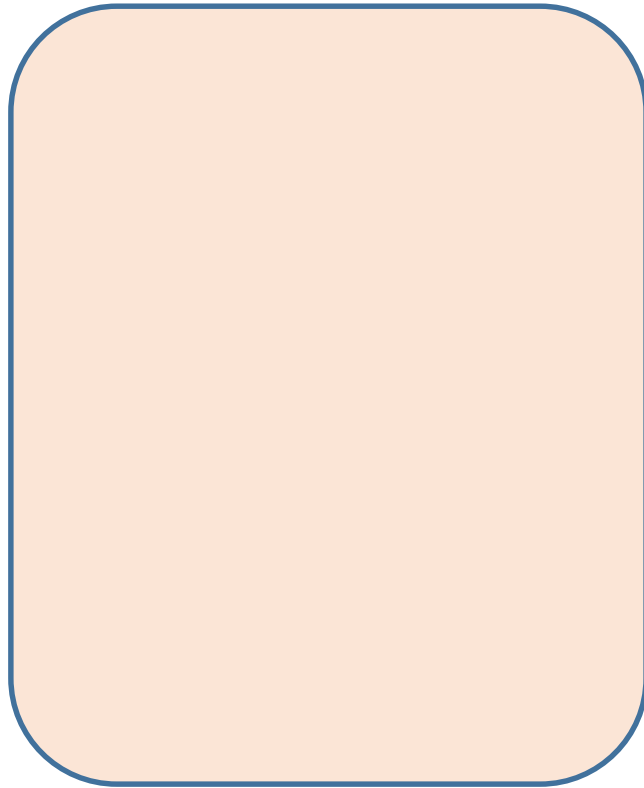
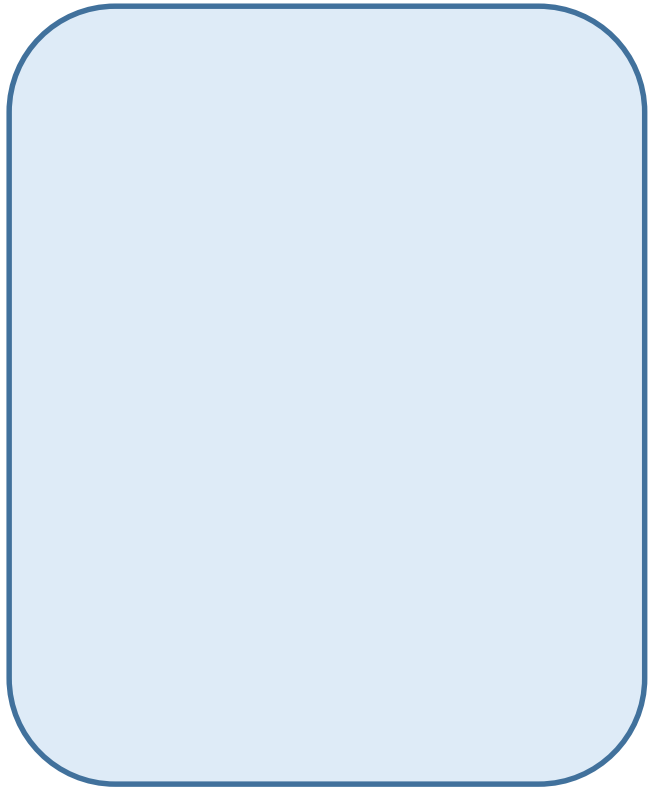
# A “Simple” Question for Diagnostic Applications

**Can a diagnostic technology achieve exceptional sensitivity and rapid speed in combination?**



# Digital Detection of Pathogens in Unprocessed Blood Using One-Step Blood Droplet PCR

- *(Redacted)*





# Velox UTI AST Rapid Diagnostic Product

- *(Redacted)*



# We have a Clear and Winning Roadmap

- *(Redacted)*





# Acknowledge Different POVs

- There will be different Points of View (POVs)
- Do not ignore or evade
- Acknowledge and organize different POVs, compare and preempt...

	<i>Other POV</i>	<i>Your POV</i>
<i>Area A</i>	...	...
<i>Area B</i>	...	...
<i>Area C</i>	...	...



©ApertureGreen

## On Writing Well

Published on Jun 18, 2015



**Byron Shen, PhD MBA**

Chief Executive Officer at Velox Bi...

I can still recall, vividly, that I woke up stunned one night, shaking in a cold sweat, with my neurons firing in spasms. I had a nightmare because I just realized I was dreaming in English! This happened during the second year af-

📈 1,457 clicks on your article

92 Likes • 20 Comments • 3 Shares

[Article link](#)

👍 Like

💬 Comment

➦ Share

# In Summary...

- *A Captivating Title.* “To Tell Heads from Tails...”
- *Tell a Good Story.* Michael Lewis (*The Blind Side*, *Moneyball*, *The Big Short*, etc.)
- *A Good Opening.* *A Tale of Two Cities*: “It was the best of times, it was the worst of times, ...”
- *Be Original.* Do not just “copy and paste” and rehash clichés
- *Does it Sound Right to the Ear?* Rhythm and tempo. Martin Luther King, Jr. “I have a dream”
- *Be Innovative.* Shakespeare, “To be or not to be...”
- *Be Crisp and Disciplined.* Avoid meandering and “too much information”. Cut out the fluff and even throw out good materials
- *Editing, Editing, and Editing.* Good writing is in the rewriting...



Topic  
Literature  
& Language

Subtopic  
Writing

# Analysis and Critique: How to Engage and Write about Anything

Professor Dorsey Armstrong  
Purdue University



And a great writer is a great reader first...



## A Love Affair, with Books and Audible (Part I)

Published on Aug 20, 2017



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

First of all, just to reassure all my friends out there, my wife has no issue whatsoever with my “love affair” with books and Audible. And as a matter of fact and [with her background in art history](#) I think one of the main reasons she

📈 900 clicks on your article

26 Likes • 8 Comments • 2 Shares



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[Article link](#)



## A Love Affair, with Books and Audible (Part II)

Published on Sep 2, 2017



**Byron Shen, PhD MBA**  
Chief Executive Officer at Velox Bi...

Audible has its own A-List collection, a series showcasing Hollywood stars (as narrators) such as Anne Hathaway, Colin Firth, Nicole Kidman, etc. [As promised in Part I of this post](#), here is my own A-List the ones I would consid-

📈 707 clicks on your article

31 Likes • 7 Comments • 2 Shares



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*Questions?*

*(and thank you for coming)*