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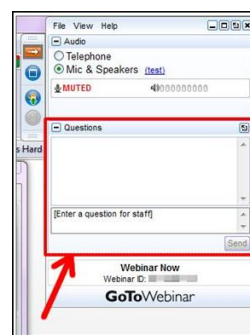


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Type them into
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“Why am I muted?”

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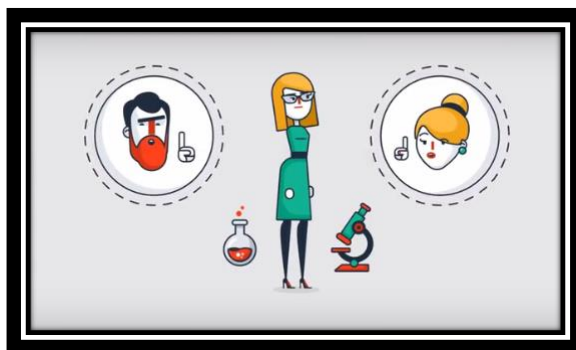


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- Know your career options
- Develop strategies to strengthen your skills
- Map a plan to achieve your career goals

ChemIDP.org

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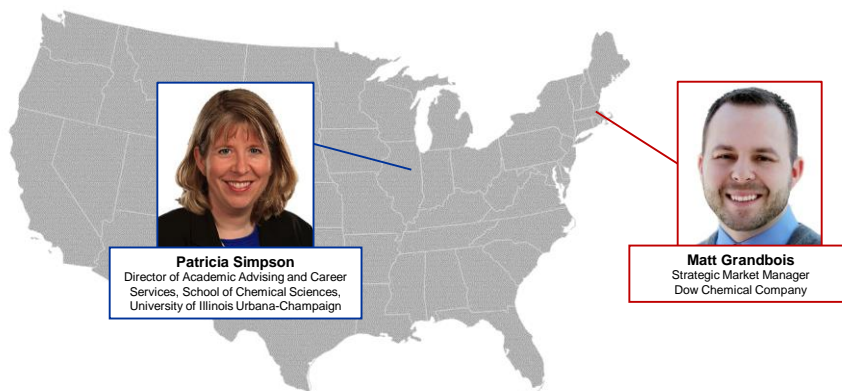
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“Metacommunication: Conveying Passion and Engaging Others”



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Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Picture in your mind the last great scientific presentation that you witnessed. What made it memorable?

- Non-verbal cues (body language)
- Storytelling
- Passion
- Data and Figures
- Something else (type it into the chat!)

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The scientist that stopped breathing and started talking faster....



- I am a scientist that has a problem with silence (seriously...Google it).
- No matter how hard I have tried, I have not been able to shake the persistent feedback:

“Wow! You should slow down and breathe more....”

- This has pushed me to harness passionate communication of science in order to create **memorable scientific messages**.



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Memorable messages are made up of three key communication concepts and attributes



Metacommunication

is non-verbal cues and structure used during the execution of your message.

Storytelling

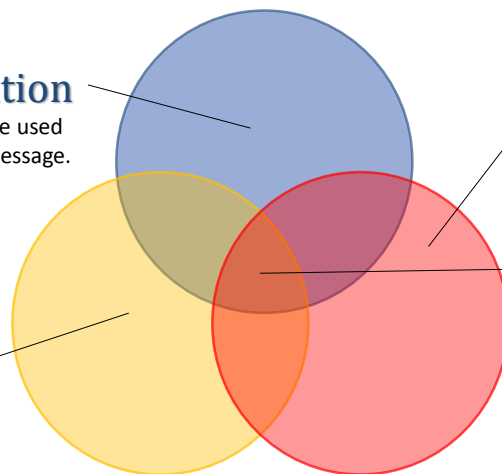
creates a logistical progression that allows your audience to be moved by your message.

Passion

is the emotional foundation that you project during the delivery of your message.

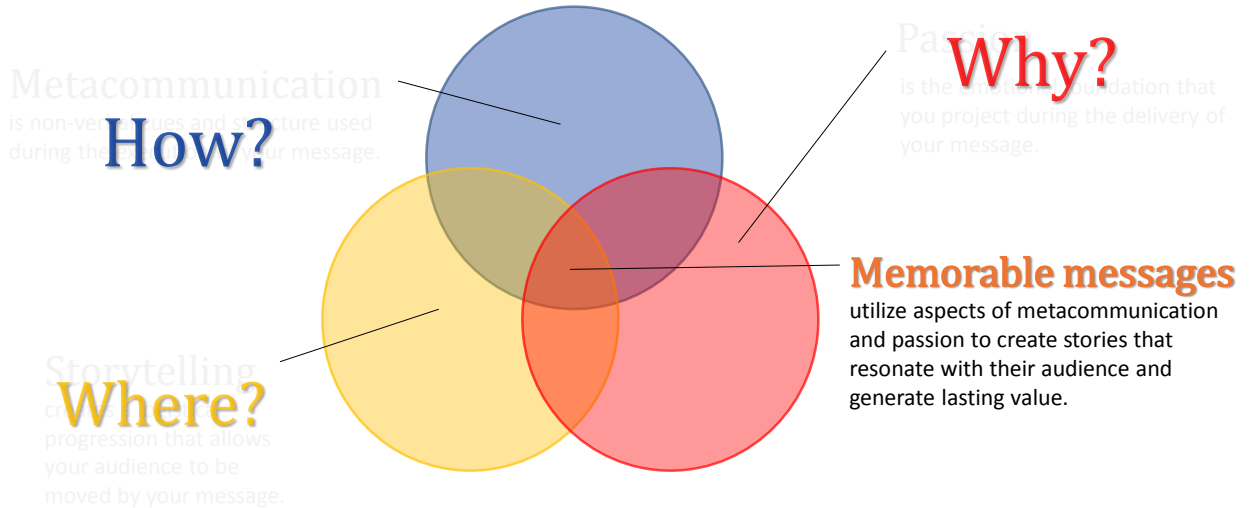
Memorable messages

utilize aspects of metacommunication and passion to create stories that resonate with their audience and generate lasting value.



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Memorable messages are independent of *'the what'*

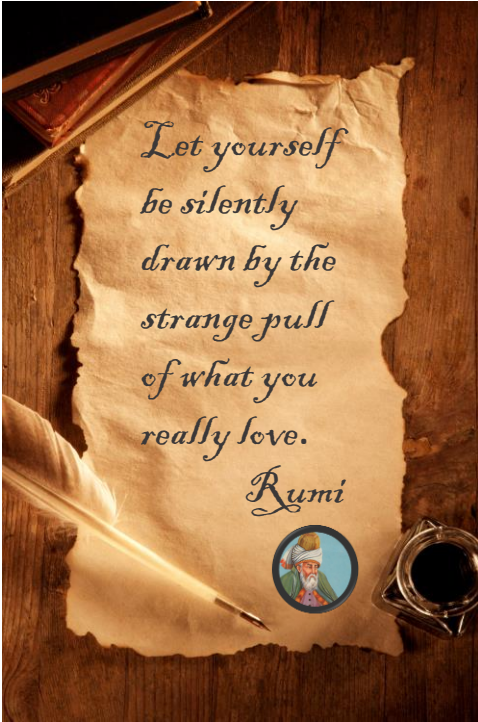


Memorable Messages = (Passion + Metacommunication) * Storytelling + Message

Why?

Audiences desire to be told engaging stories by **passionate** storytellers.





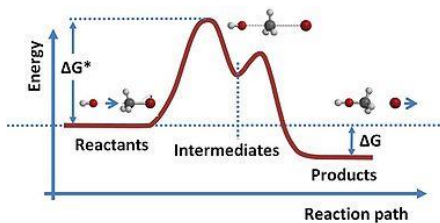
Passion fundamentally drives why you are engaging your audience



- Passion takes many forms, which is a testament to how critical it is to how we communicate.
- The difficulty is in self-identification and subsequent utilization and optimization.

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Your visual passion is what people see, but your underlying passion is what people feel and follow



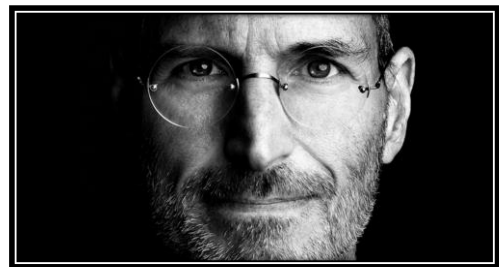
https://en.wikipedia.org/wiki/Electromotive_force

- **Chemical driving force** is the fundamental explanation for why a chemical reaction occurs.
- **Underlying passion** is the fundamental driving force that generates a visually apparent passion during communication.

Example: Steve Jobs

Visual Passion: computers

Underlying Passion: simplicity



<https://medium.com/the-mission/a-hidden-secret-to-success-connect-to-your-passions-mysterious-twin-d6b182ece912>

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Developing your elevator pitch can act as a springboard to identifying your underlying passion



1. Develop an elevator pitch by answering the following questions:
 - Who are you? • Why are you here?
 - What do you do? • Why should someone care?
2. Give elevator pitch to friend and then ask for feedback on what they perceive to be your passion.
3. Evaluate feedback by asking “does that feel right?”
4. Repeat elevator pitch while emphasizing this perceived passion.
5. Continue cycle of feedback, self-reflection and practice to hone in on your underlying passion.

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Conveying your underlying passion in future presentations will improve effectiveness and influence



- All presentation scenarios are appropriate to convey passion, so practice articulating the connection between your science and passion.
- Honing this in small groups will enable leverage at larger events.



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Audience Survey Question

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When practicing a talk what do most often do? (e.g. ACS National Meeting)

- I read over my notes but do not practice aloud.
- I practice aloud while standing.
- I practice aloud while standing and am in front of an audience.
- I don't practice for talks...I wing it!

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Metacommunication

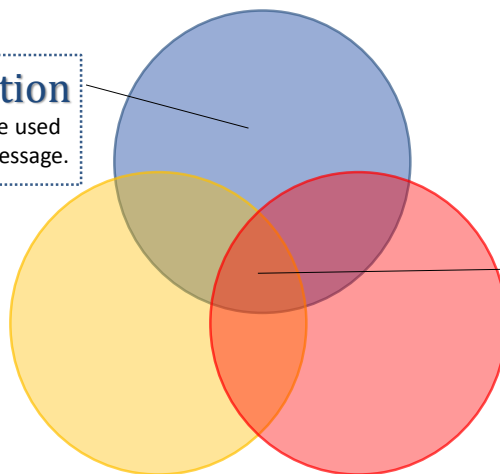
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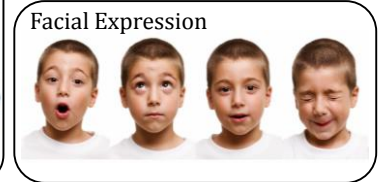
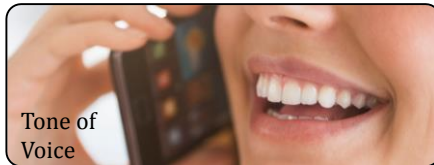
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Metacommunication is the nonverbal cues that impact the interpretation of the content being shared



Lack of coordinated metacommunication can provide mixed signals to your audience which distracts from their internalization of your message.

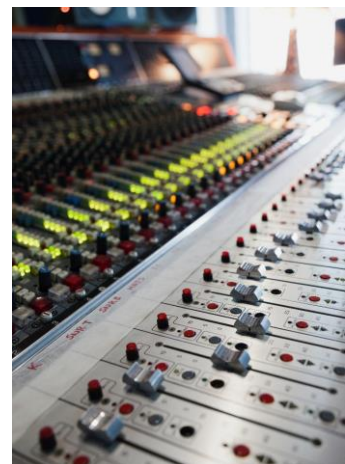
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Sliding Scale of Metacommunication



Establish your “standard settings” to affect impact through varied combinations and intensities.

Volume	Loud – Soft
Tone of Voice	Stern – Warm
Facial Expression	Happy – Neutral – Sad
Head position	Up – Down; Side to Side
Posture	Open – Closed
Hand Movement	Neutral – Extended
Cadence	Slow – Fast
.....



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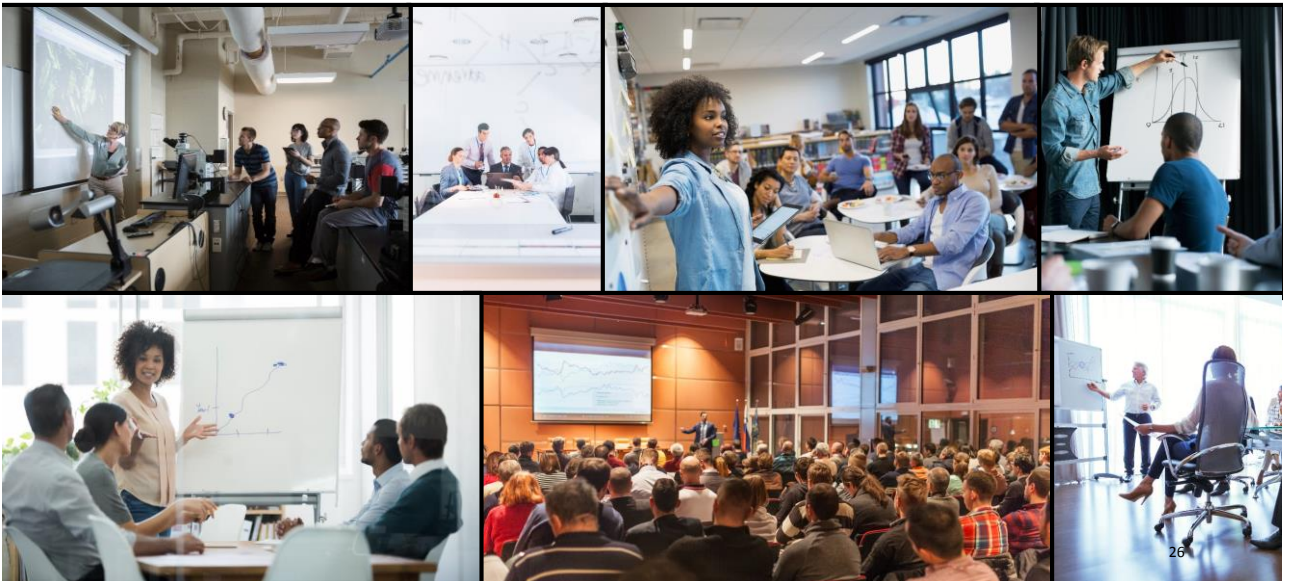
Practice both the message and the metacommunication to gain confidence and skill



- Practicing your message requires developing confidence in both the data and your method.
- Designate a “metacommunication” reviewer during practice sessions to make sure your verbal and non-verbal stories match.
- “Don’t forget a control!!”...Each presentation or practice is an experiment in communication.

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Every single presentation, and practice, is a chance to tell your story to an audience that wants to be taken on a journey



Audience Survey Question

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What is a “denouement”?

- French negotiation tactic known for overly dramatic proposals and counters
- The moment in a story when the plot coalesces to a resolution
- Dessert consisting of layered gelatin and powdered sugar
- The positions of your head, hands, and feet while speaking

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Memorable messages are made up of three key communication concepts and attributes



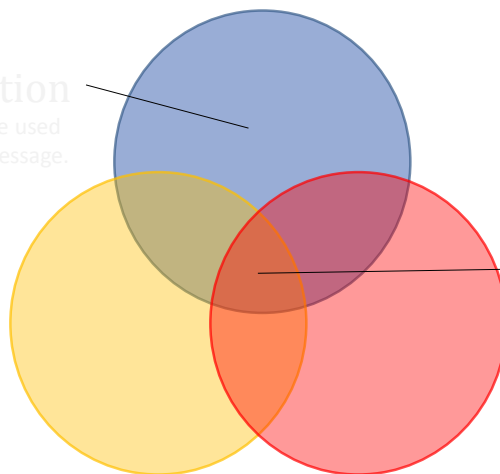
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Story Arc Principles for Scientific Storytelling

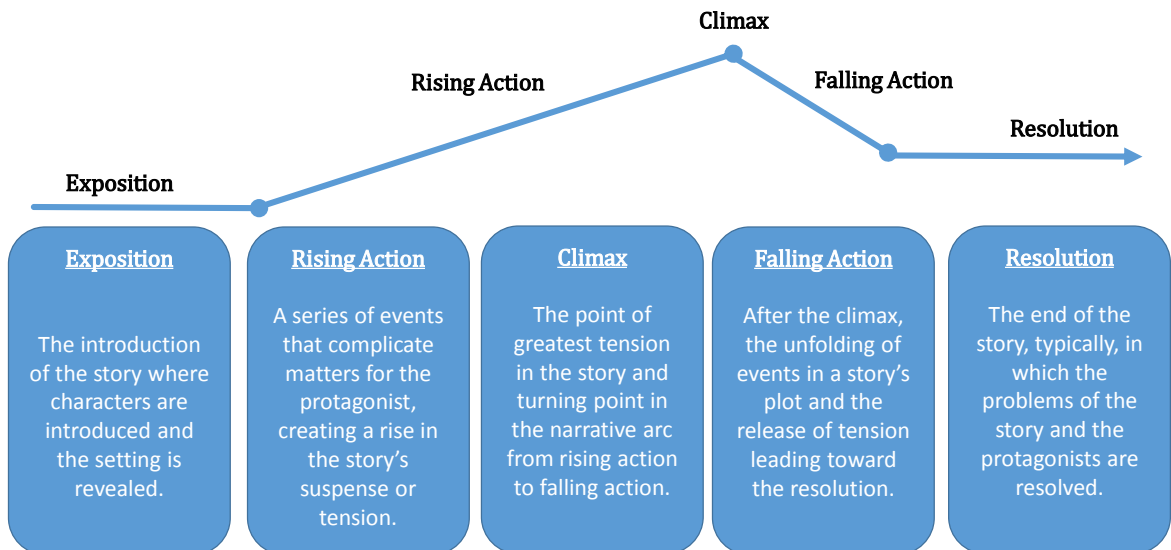


- Scientific presentations are not peer-reviewed publications
 - Minimal chance for rereading or cross-referencing
- Audiences need to be brought along at the same pace as the speaker
- Structuring your story using a story arc allows the audience to follow a comfortable model to enable easier data transfer



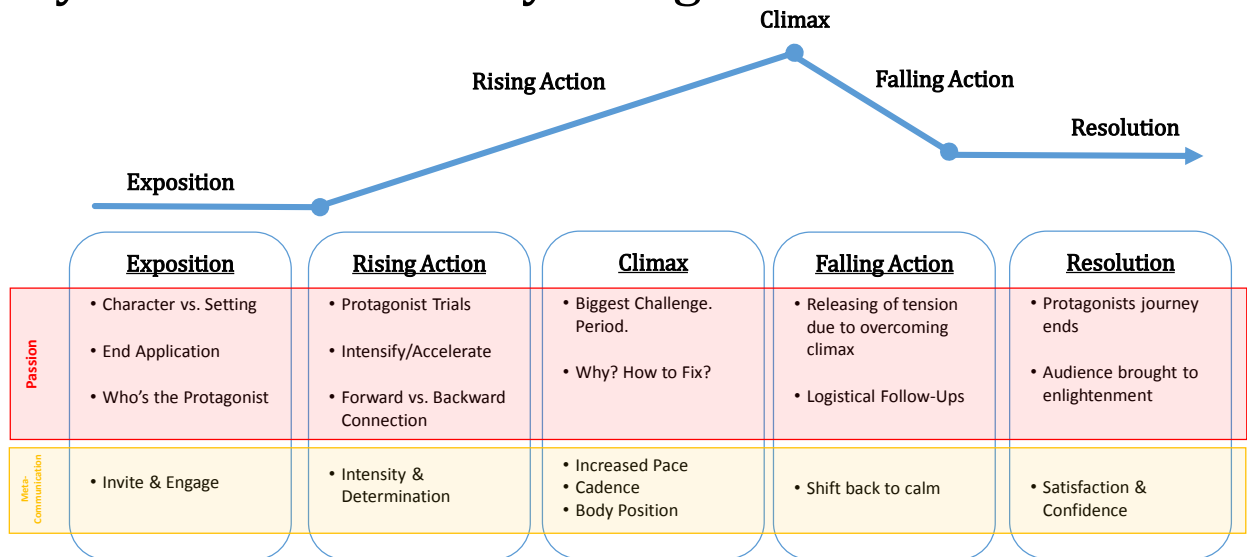
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Narrative Arc Principles



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Passion and Metacommunication help drive your scientific story along its narrative arc

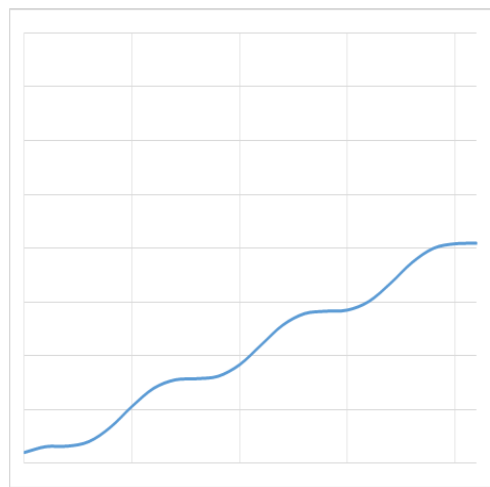


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Story arcs come in all sizes and it's the presenter's responsibility to tell them the right way



- In the same way that stories can be segmented into poems, short stories, novels; scientific stories can come in all different types of presentations:
 - ACS Meetings
 - Group Meetings
 - Department Reviews
 - Single Slides
 - Single Plots



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3 Next Steps & Resources:



1. Practice your elevator speech in order to hone in on inner passion
2. Use a 'metacommunication' review for your next presentation
3. Evaluate your current/next presentation in terms of story arc principles

Suggested Resources:

- **PROF:** The *Professional Development* Division of ACS (<http://prof.sites.acs.org>)
- Alan Alda "*I want to tell you a story*"

<http://theconversation.com/alan-alda-on-the-art-of-science-communication-i-want-to-tell-you-a-story-55769>

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Summary

Memorable Messages = (Passion + Metacommunication) * Storytelling + Message

- Memorable scientific messages can be created in any forum by **sharing your passion** through applied **metacommunication** and **storytelling principles**.
- Practicing your skills through **elevator pitches, small group meetings, designed presentation experiments** and others, will help you gain confidence in using these concepts on a daily basis.
- I'm still a scientist that has "**silence issues**", but by harnessing my **passion through structured storytelling** I am able to connect to my audiences and go on countless scientific journeys with each and every presentation.

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Matthew Grandbois

@GrandboisMatt
grandboismatthew@gmail.com

Current Employment and Volunteer Positions

Strategic Marketing Manager, Electronics & Imaging
ACS Younger Chemists Committee, Secretary
ACS PROF Younger Chemist Chair

Education

Ph.D. Chemistry (2010; University of Minnesota)
B.A. Chemistry (ACS) and B.A. Music Performance (2004; Augustana College – Sioux Falls, SD)

Personal Interests

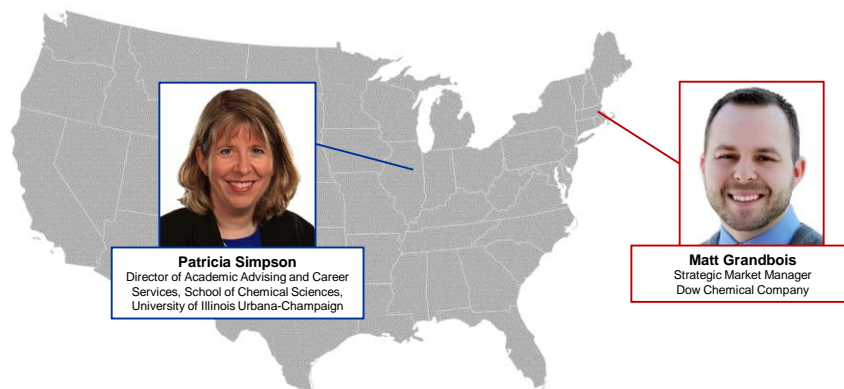
Family; Homebrew/Craft Beer Culture; Improvisational Comedy; Cooking



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“Metacommunication: Conveying Passion and Engaging Others”



Patricia Simpson
Director of Academic Advising and Career Services, School of Chemical Sciences, University of Illinois Urbana-Champaign

Matt Grandbois
Strategic Market Manager
Dow Chemical Company

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Additional Resources from ACS Professional Education

- Speaking Science – Effective Scientific Communications Seminar
 - 4 Hour course – live at your site
 - Class forming now
- Topics covered during fast-paced, high energy half-day session on-site:
 - Limiting jargon using real world examples
 - Making your case to non-scientists and your peers
 - Role-playing exercises to communicate scientific work
 - Presenting “pop-up talks”
 - Adapting your message to various audiences

<https://meetme.so/ACS-ProEd-conversation>

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Upcoming ACS Webinars

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Thursday, October 19, 2017

Avoiding the Next Chemical Catastrophe: Strategies for Chemical Threat Reduction

Andrew Nelson, Postdoctoral Appointee, International Biological and Chemical Threat Reduction Program, Sandia National Laboratories

Ralph Stuart, Chemical Hygiene Officer, Keene State College and Chair, Safety Advisory Panel, ACS Committee on Chemical Safety



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Psoriasis: Treatment and Novel Approaches

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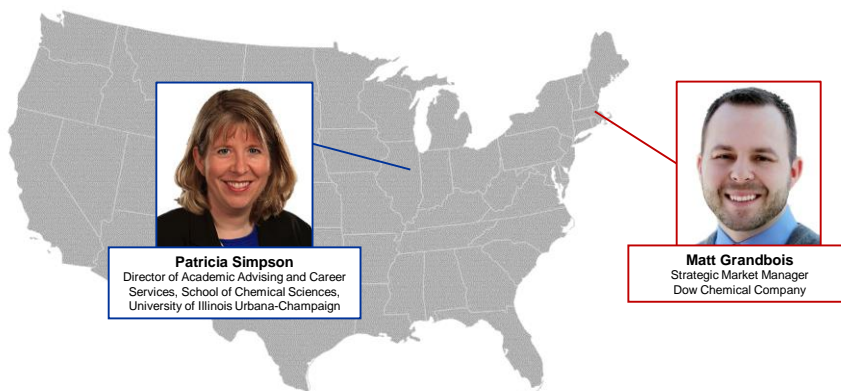
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Take Away: Memorable messages are made up of three key communication concepts and attributes



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