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Upcoming ACS Webinars

Thursday, October 9, 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

Thursday, October 26, 2017

Psoriasis: Treatment and Novel Approaches

Frank Narjes, Principal Scientist, AstraZeneca

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"Metacommunication: Conveying Passion and Engaging Others"

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!)
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**.

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

- **Metacommunication**: non-verbal cues and structure used during the execution of your message.
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Memorable messages utilize aspects of metacommunication and passion to create stories that resonate with their audience and generate lasting value.

Memorable messages are independent of ‘the what’:

\[ \text{Memorable Messages} = (\text{Passion} + \text{Metacommunication}) \times \text{Storytelling} + \text{Message} \]

**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.

Let yourself be silently drawn by the strange pull of what you really love. — Rumi

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

**Example: Steve Jobs**

Visual Passion: computers
Underlying Passion: simplicity


*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.

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?
   - What do you do?
   - Why are you here?
   - 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.

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.
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 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.

### Sliding Scale of Metacommunication

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

<table>
<thead>
<tr>
<th>Volume</th>
<th>Loud – Soft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tone of Voice</td>
<td>Stern – Warm</td>
</tr>
<tr>
<td>Facial Expression</td>
<td>Happy – Neutral – Sad</td>
</tr>
<tr>
<td>Head position</td>
<td>Up – Down; Side to Side</td>
</tr>
<tr>
<td>Posture</td>
<td>Open – Closed</td>
</tr>
<tr>
<td>Hand Movement</td>
<td>Neutral – Extended</td>
</tr>
<tr>
<td>Cadence</td>
<td>Slow – Fast</td>
</tr>
</tbody>
</table>

...
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.

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

Narrative Arc Principles

Exposition
The introduction of the story where characters are introduced and the setting is revealed.

Rising Action
A series of events that complicate matters for the protagonist, creating a rise in the story’s suspense or tension.

Climax
The point of greatest tension in the story and turning point in the narrative arc from rising action to falling action.

Falling Action
After the climax, the unfolding of events in a story’s plot and the release of tension leading toward the resolution.

Resolution
The end of the story, typically, in which the problems of the story and the protagonists are resolved.
Passion and Metacommunication help drive your scientific story along its narrative arc.

Exposition
- Character vs. Setting
- End Application
- Who’s the Protagonist

Rising Action
- Protagonist Trials
- Intensity/Accelerate
- Forward vs. Backward Connection

Climax
- Biggest Challenge. Period.
- Why? How to Fix?

Falling Action
- Releasing of tension due to overcoming climax
- Logistical Follow-Ups

Resolution
- Protagonists journey ends
- Audience brought to enlightenment

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](http://prof.sites.acs.org))
• Alan Alda “I want to tell you a story”
  
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.

Matthew Grandbois
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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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  • 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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Thursday, October 19, 2017

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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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Contact ACS Webinars ® at acswbinars@acs.org
Take Away: Memorable messages are made up of three key communication concepts and attributes

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