PROPOSALS LIKE IT’S 2019

Writing and Illustrating Grant Proposals for the Information Age

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• Sir, your proposal to the Archbishop of Canterbury is on track for delivery next month.

• This pie chart has too much gold leaf, and we need to mention our history of shepherding serfs on the Earl of Shaftesbury’s land. And what about Friar Bernard’s exegesis on the parable of the barren fig tree?

• Got it. But if we make these changes, the archbishop won’t be getting our proposal for another six and a half years.
AND

THE DIGITAL REVOLUTION

THE INFORMATION AGE
Americans in 2013 consumed 6.9 zettabytes.

360 million times the amount of printed material in the Library of Congress.
Every minute, Americans together chomp through 18,264,840 megabytes. This is like reading through 304,414 NSF proposals.
Dawn of math and astronomy

3000 BC

Writing develops

Philosophical and religious texts appear

900 BC

Rise of scientific thought and texts

624 BC

Islamic Golden Age

721

Scientific Revolution

1543

First universities created

1960

Digital Revolution

2003
2019 35 GB per day

1989 .7 GB per day
CHANGED CONSUMPTION HABITS

- Average length of a television commercial: 8 SECONDS
- Selective sustained attention span: 20 MINUTES
- Amount read of any given text: 20 PERCENT
How many of you read print?

How many of you read on a screen?

How many of you work on proposals with relaxed guidelines?

How do reviewers read proposals?
HOW PEOPLE READ AND REMEMBER
THE TIMES,
THEY ARE A CHANGIN’
RESISTANCE IS FUTILE

RESILIENCE IS KEY
WHO MOVED MY PROTEASE ENZYMES?
EXAMPLES OF CHANGE
FINDING INSPIRATION

twitter chatter
#dataviz, #scicomm

Laura Kehoe @LauraJKehoe · 16h
Fantastic tips and tricks in #dataviz with all code given in #github! Spoiler: everyone’s axis labels are too small. Thank you @ClausWilke #Scicomm always needs clearer more captivating figures

Claus Wilke @ClausWilke
Very excited to announce my latest project, a book on data visualization. Approximately half of the book is written, and all completed chapters are now available as online preview. #rstats #dataviz...
Show this thread
FINDING INSPIRATION

twitter chatter #sciart

Jen Burgess @jenburgessart · 17h
Now adding graphical abstracts to my list of #SciArt services... I see this as a useful and growing trend in science communication.

Good work, @_sam_williams_

Sam Williams @_sam_williams_
Putting together a graphical abstract for the first time, for our recent paper on carnivore ecosystem services doi.org/10.1016/j.ecos...
FINDING INSPIRATION

twitter chatter
#dataviz
MAKING THE MOST OF GRAPHICS

The principles of design provide basic guidelines that dictate the arrangement of objects within a composition. They include:

- **Balance**: the symmetrical or asymmetrical arrangement of objects to create visual weight
- **Rhythm**: the repetition or alteration of elements to create movement, pattern, or texture
- **Proportion**: the comparison of dimensions or distribution of form where scale is relational
- **Dominance**: emphasis is placed on relationships of scaled design elements
- **Unity**: the relationship between individual elements to create wholeness
- **Repetition of Form**: Using similar design elements throughout the proposal
YOUR TOOLS DON’T MATTER

Both figures created in PowerPoint
BRANDING AND IDENTITY

A LESSON FROM BILLBOARDS
Keep the figure simple by creating a caption that defines the details.
ENGAGE YOUR SOPHISTICATED AUDIENCE

- Most useful if they are strategic
• Stylized tables and bullets can be just as effective.

<table>
<thead>
<tr>
<th>ASU Unit</th>
<th>Seed program name</th>
<th>Count of awards</th>
<th>Seed Award Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>New College</td>
<td>Scholarship, Research and Creative Activities (SRCE)</td>
<td>8</td>
<td>$3,333-20,000 ($50,000 total)</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>Assistance for Developing Multi-Disciplinary Proposals</td>
<td></td>
<td>$20,000</td>
</tr>
<tr>
<td></td>
<td>Assistance for Developing New and Bold Research Proposals within a Discipline</td>
<td></td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td>Editing Assistance for Proposals</td>
<td></td>
<td>$1,500</td>
</tr>
<tr>
<td></td>
<td>Bottom-up Seminar Series</td>
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<td>$8,000</td>
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<tr>
<td></td>
<td>Fostering Post-doctoral Research in the Life sciences</td>
<td></td>
<td>$7,500</td>
</tr>
<tr>
<td></td>
<td>Assistance with Facilities</td>
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<td>$1,500</td>
</tr>
<tr>
<td></td>
<td>Assistance with Fieldwork</td>
<td></td>
<td>$1,500</td>
</tr>
<tr>
<td></td>
<td>Fellowships for Graduate Training</td>
<td></td>
<td>$2,500</td>
</tr>
<tr>
<td>Plus Alliance</td>
<td>Global Sport Institute Seed fund: Sports 2036 and Race and Sports Around the Globe</td>
<td>19</td>
<td>$20,000 each</td>
</tr>
<tr>
<td></td>
<td>Herberger Institute</td>
<td>14</td>
<td>$88,000 total</td>
</tr>
<tr>
<td></td>
<td>Mayo Clinic Seed and ASU Alliance for Health Care held a Collaborative Research Seed Grant Program</td>
<td>?</td>
<td>$50,000 each</td>
</tr>
</tbody>
</table>
Define Properties

Low-Energy Structures

Synthesis

Device Assembly

Define Properties

Low-Energy Structures

Synthesis

Device Assembly

Specialized Characterization and Machine Learning

Materials by Inverse Design Approach

Device-Oriented Materials Design

High throughput Screening Candidates

Narrow Best of Class

Cause & Effect Analysis

High Computational Power
High Throughput Material Screening

Machine Learning-based
Advanced and Correlated Characterization
High Throughput

SET YOURSELF APART
CREATE A DISTINCT ADVANTAGE

Figure 1. A. Lungs are harvested from cadaver donor. B. Cells are then removed. C. Stem cells taken from patient recipient are seeded into donor lungs. D. Seeded lungs are transplanted into patient.
DESIGN IS NOT A SILVER BULLET

But it can be a silver lining.
YOUR BRAND EXTENDS BEYOND COLOR AND LOGO
RESPECT
THE SPACE
Our center is organized to quickly, efficiently respond to industry needs and concerns while maximizing input and ideas from participating faculty across all institutions and thrusts.
WRITING FOR THE 21ST CENTURY AUDIENCE
THE FIRST RULE OF PROPOSAL WRITING IS

A always
B be Compliant
THE SECOND RULE OF PROPOSAL WRITING IS

Know thy audience.
COROLLARY
TO RULE
TWO

Be Clear
Clear writing is an indicator of clear thinking.
“The main cause of incomprehensible prose is the difficulty of imagining what it’s like for someone else not to know something that you know.”

– Steven Pinker
WHAT’S IN IT FOR THEM?
THE ART OF RHETORIC

Ethos
Expertise, authority

Logos
Reason

Pathos
Emotions
CULTIVATING A CULTURE
• Proposal development vs. faculty development
• Encourage enthusiasm
• Work with faculty (especially early-career faculty) and teach them to stand up for proposals (*with merit) which also show an aesthetic
TRANSFORMING FACULTY FROM MECHANICS TO ARTISTS
FINDING THE SKILLS

Hire a consultant
Talk to your Marketing and Communications unit
Hire a graphic designer
Hire a student
BEFORE WE TAKE OFF