

Telling Stories with Data

Andrew Heiss
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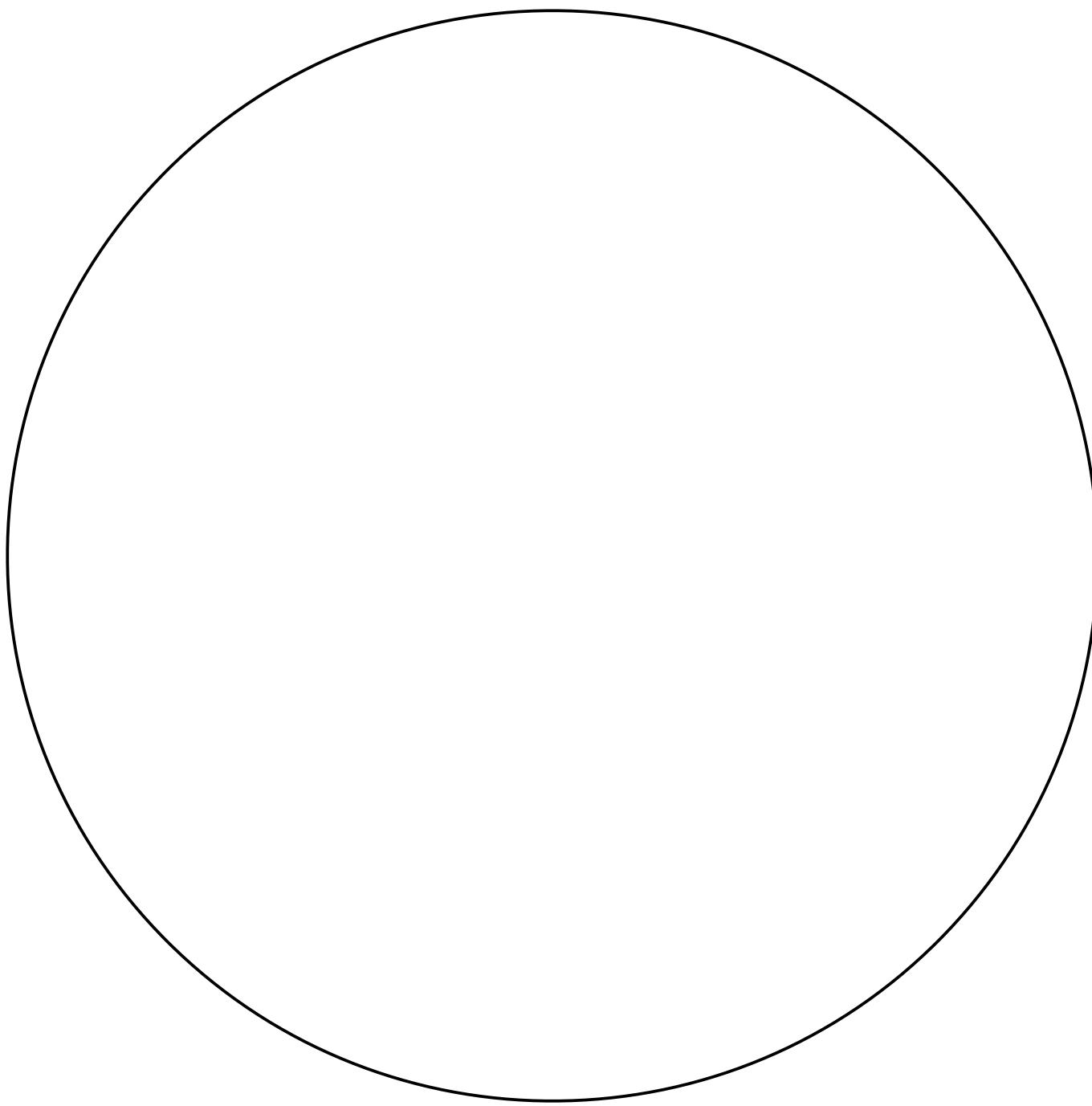
What do you hate about presentations?

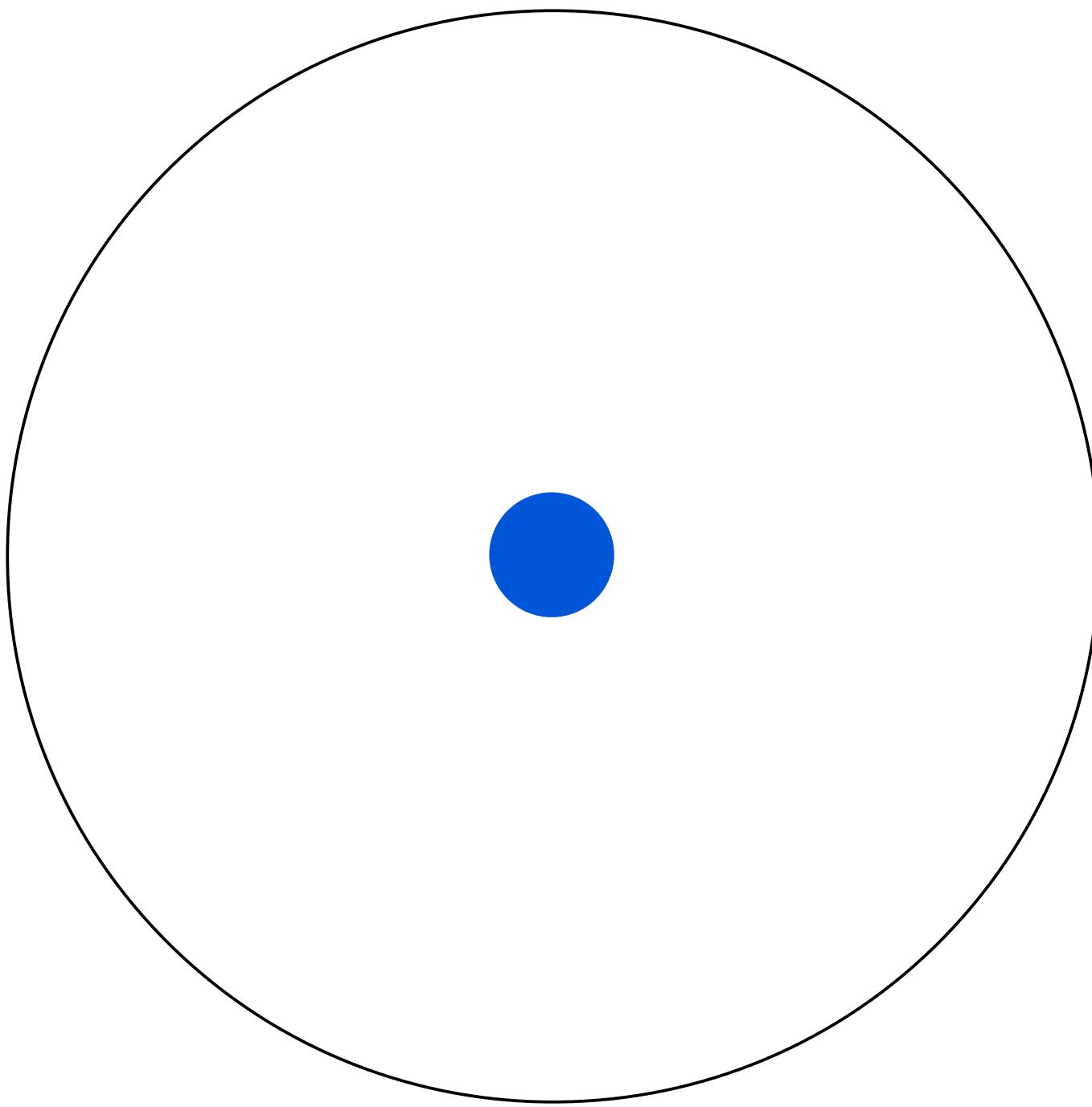
Do you ever do the things you hate?

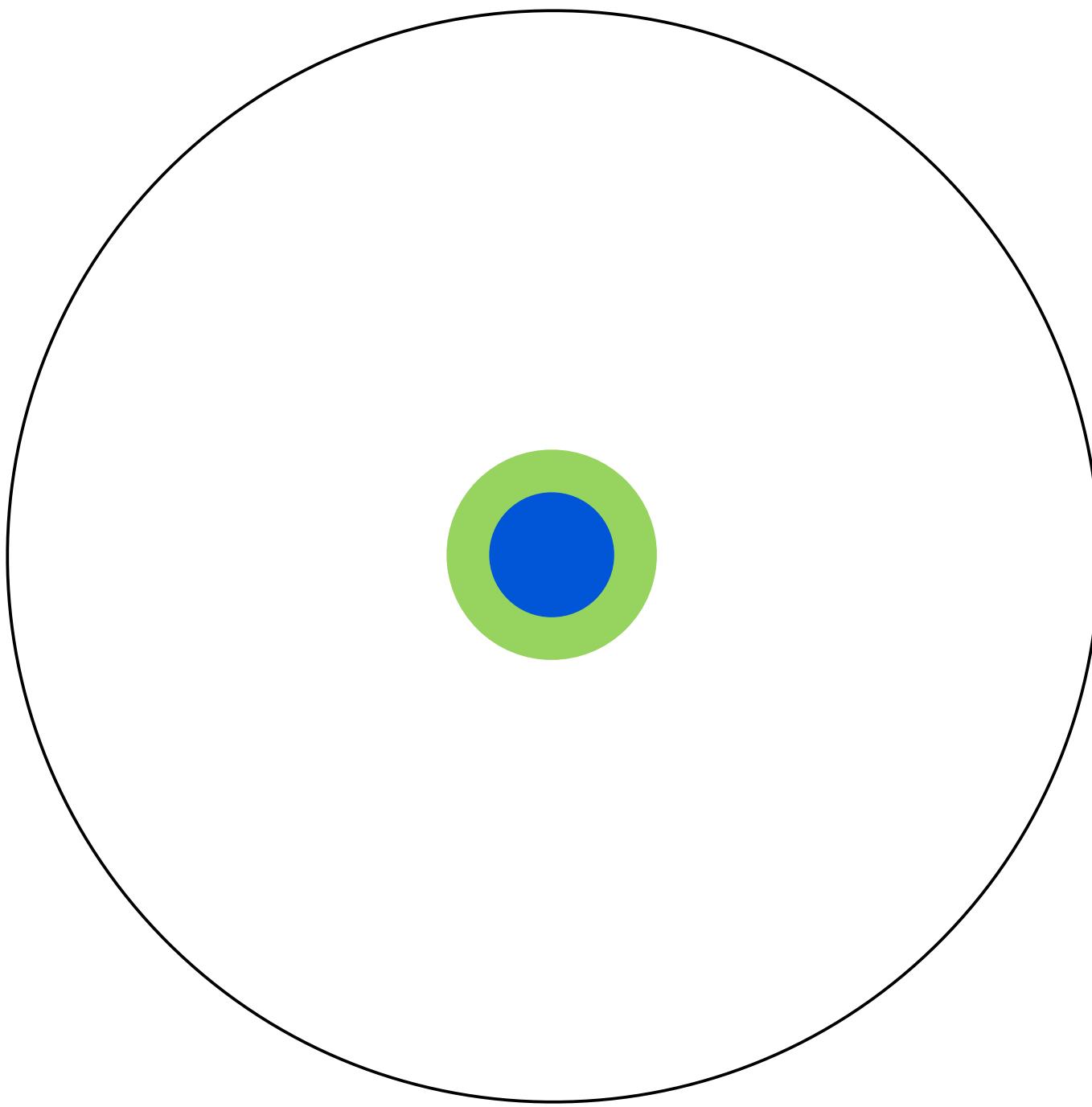
Why?

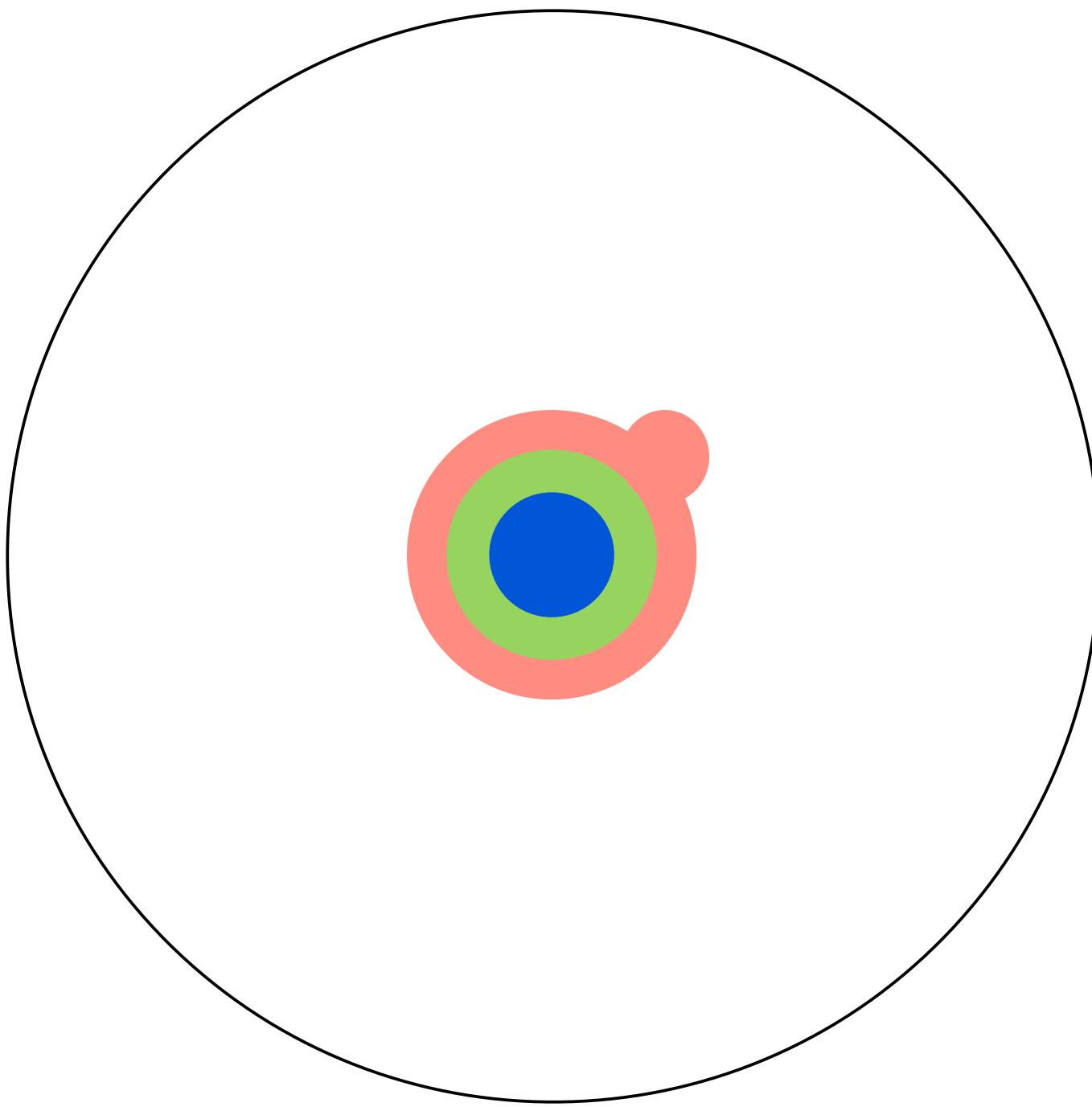
The Conundrum

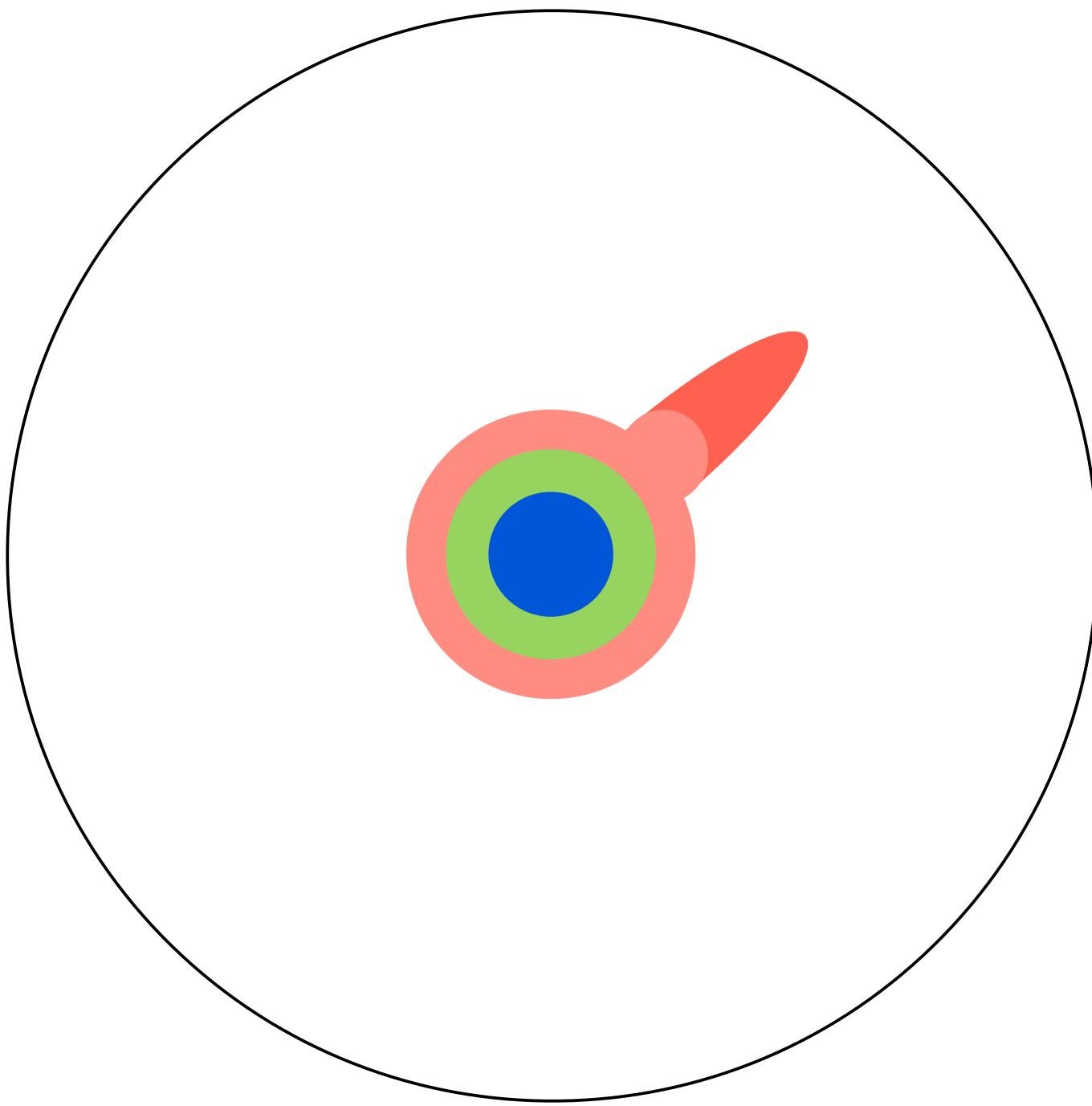
Nuance &
Complication

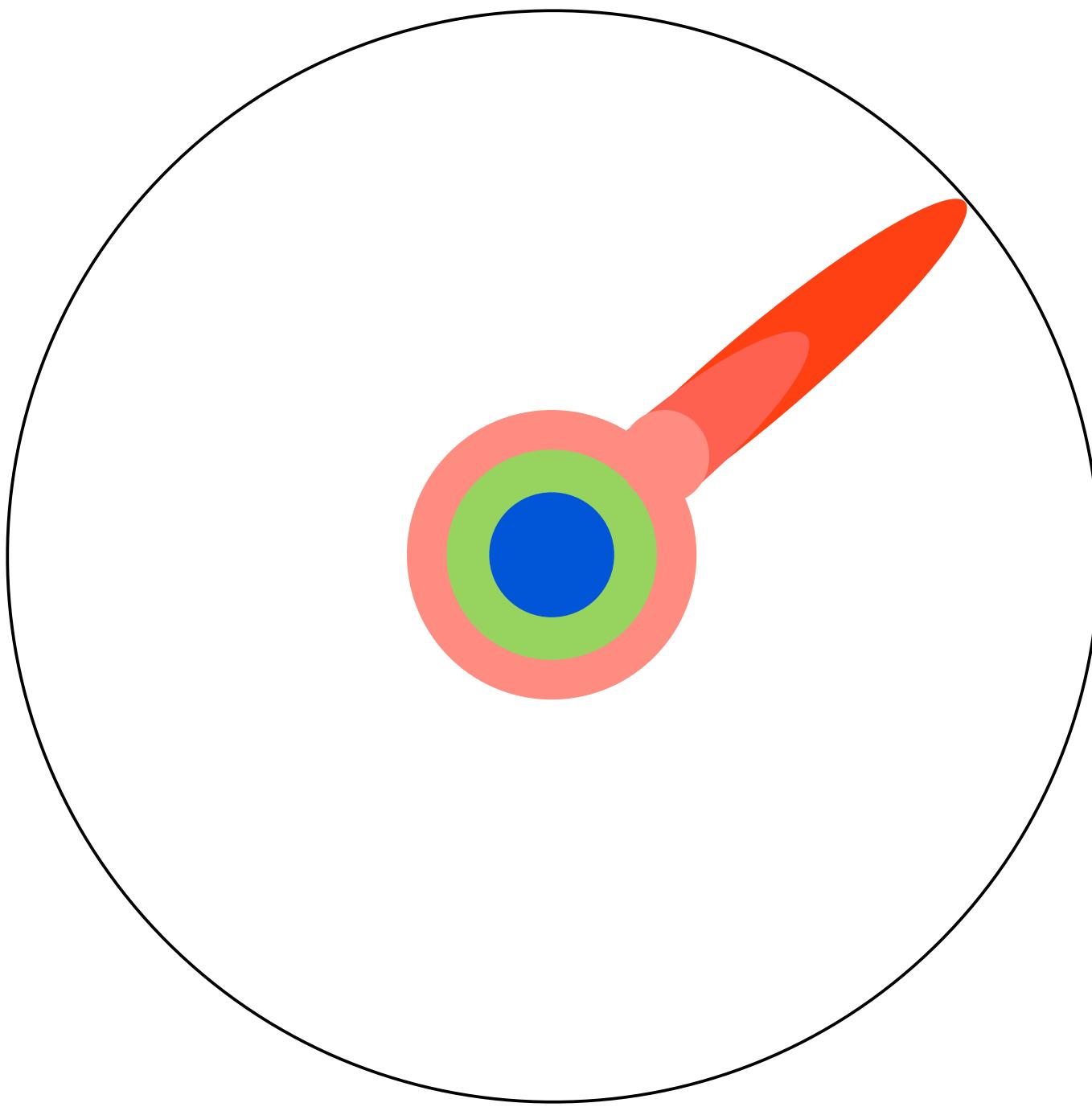


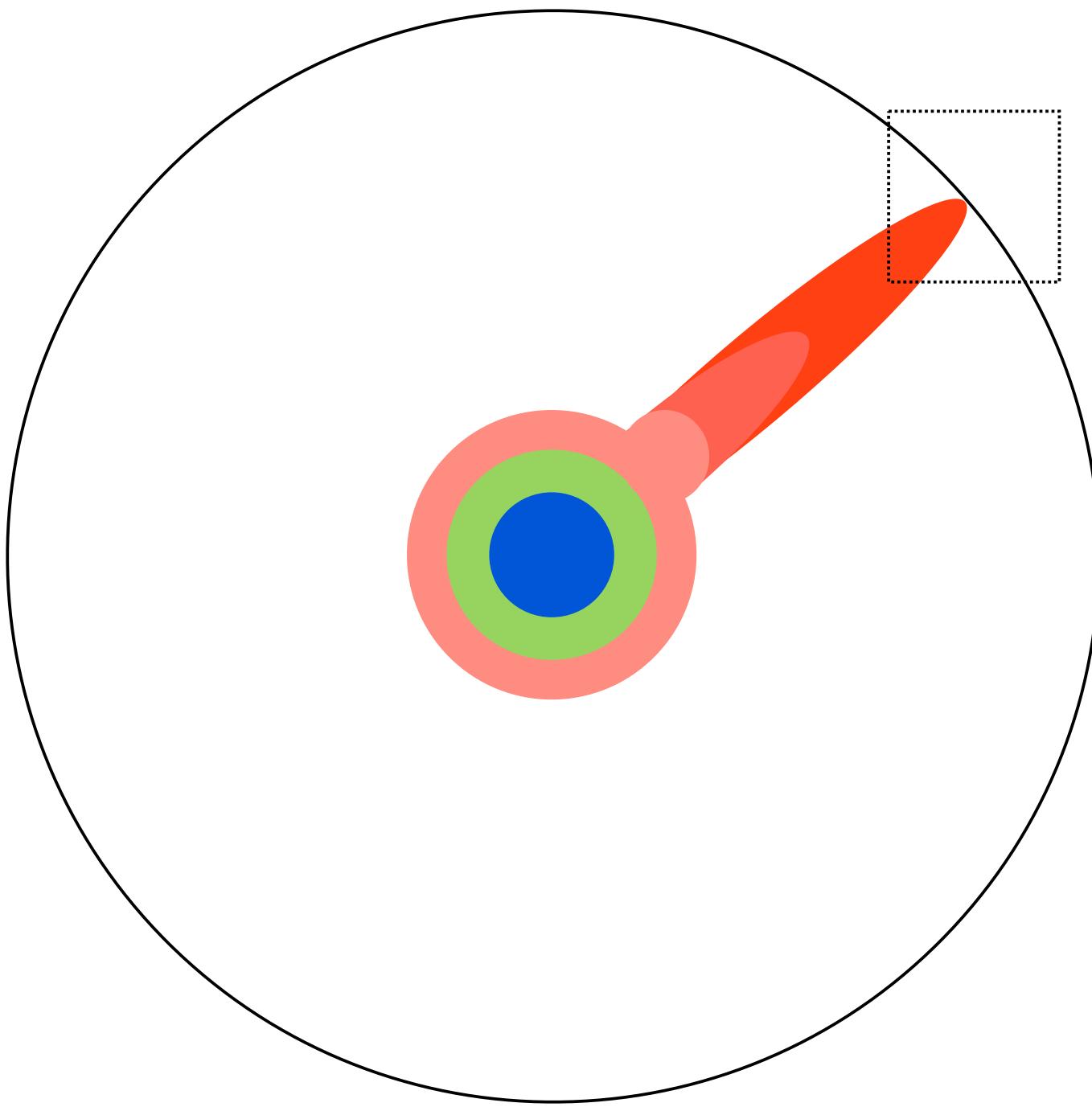


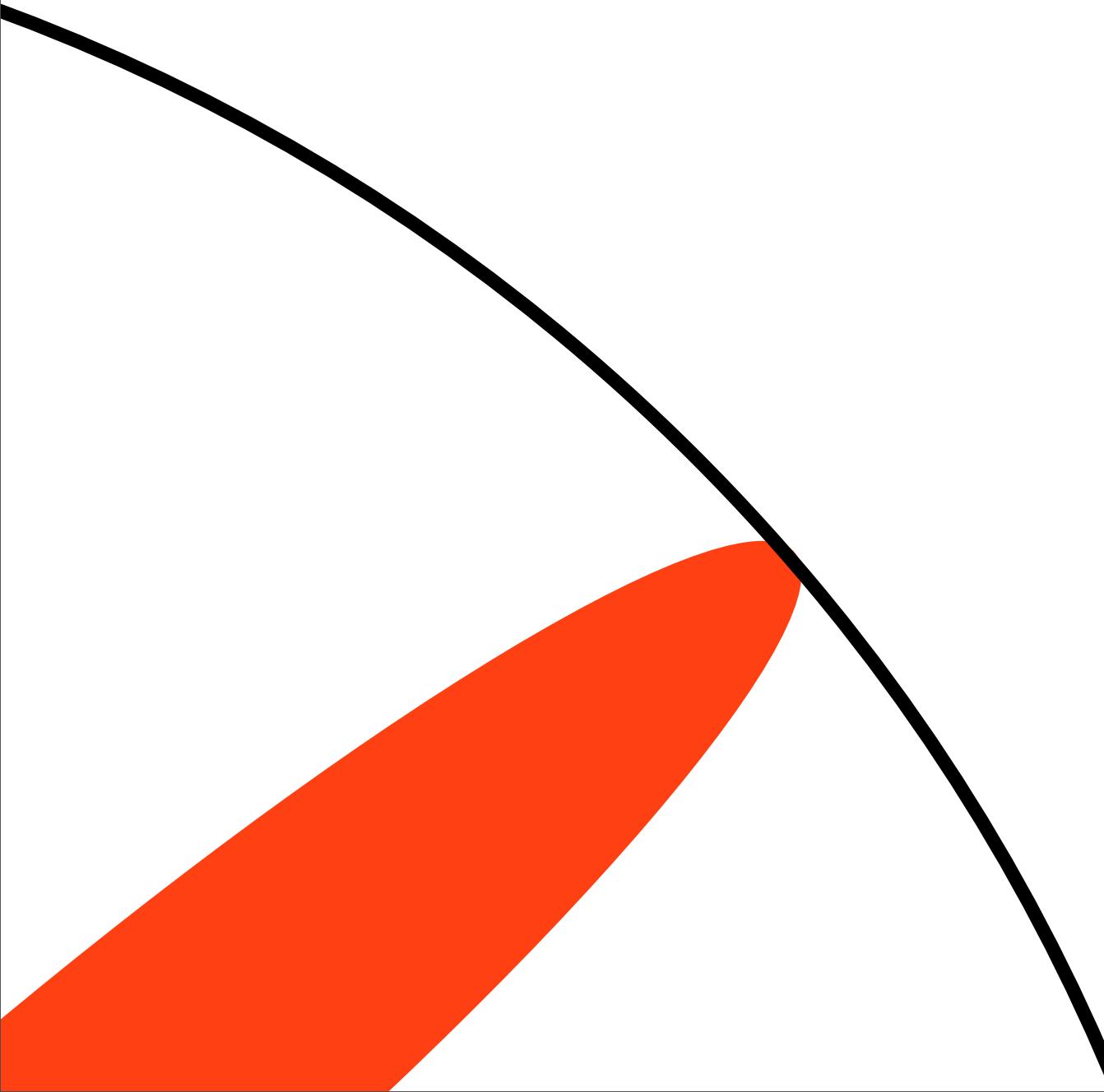


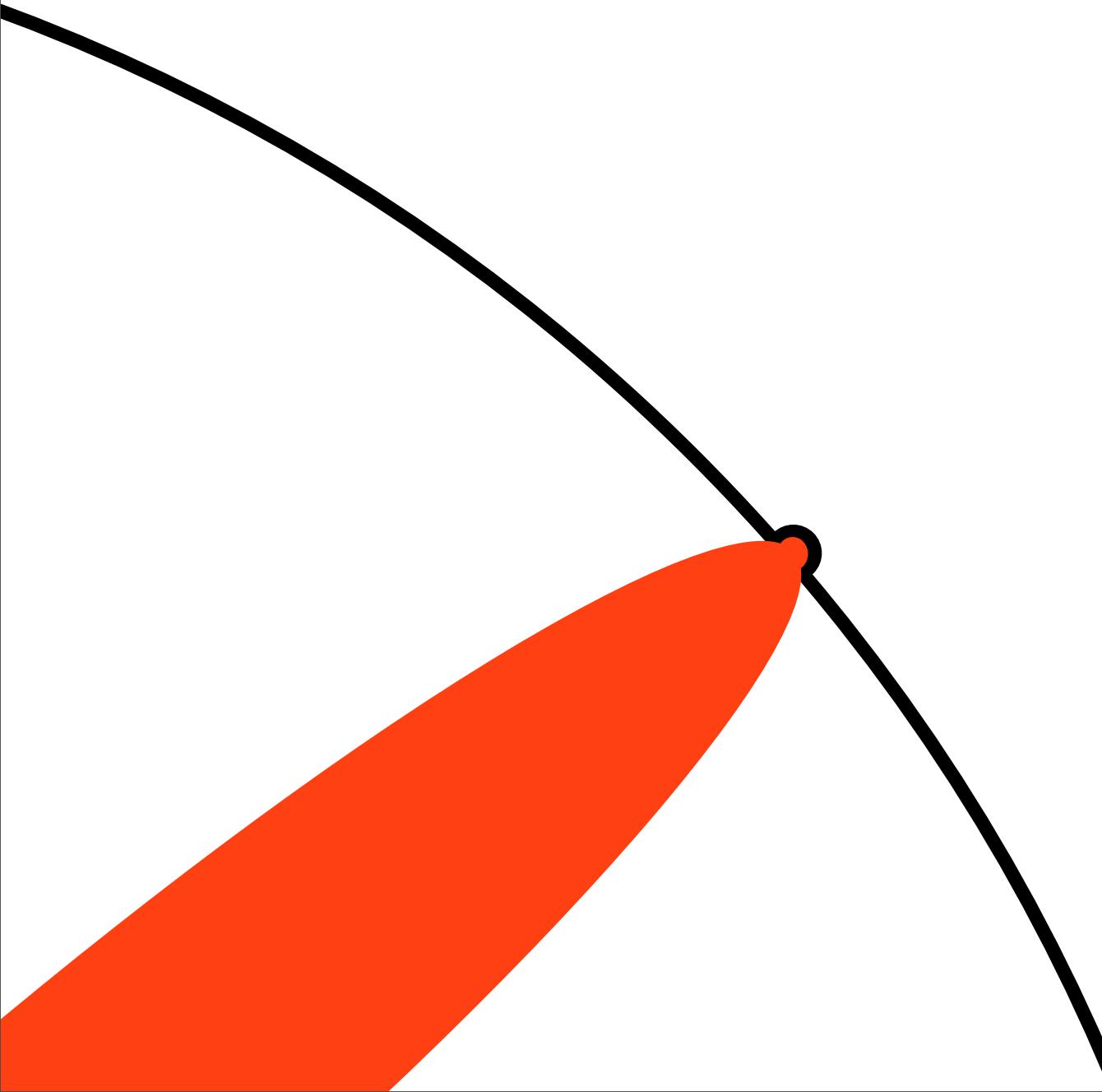


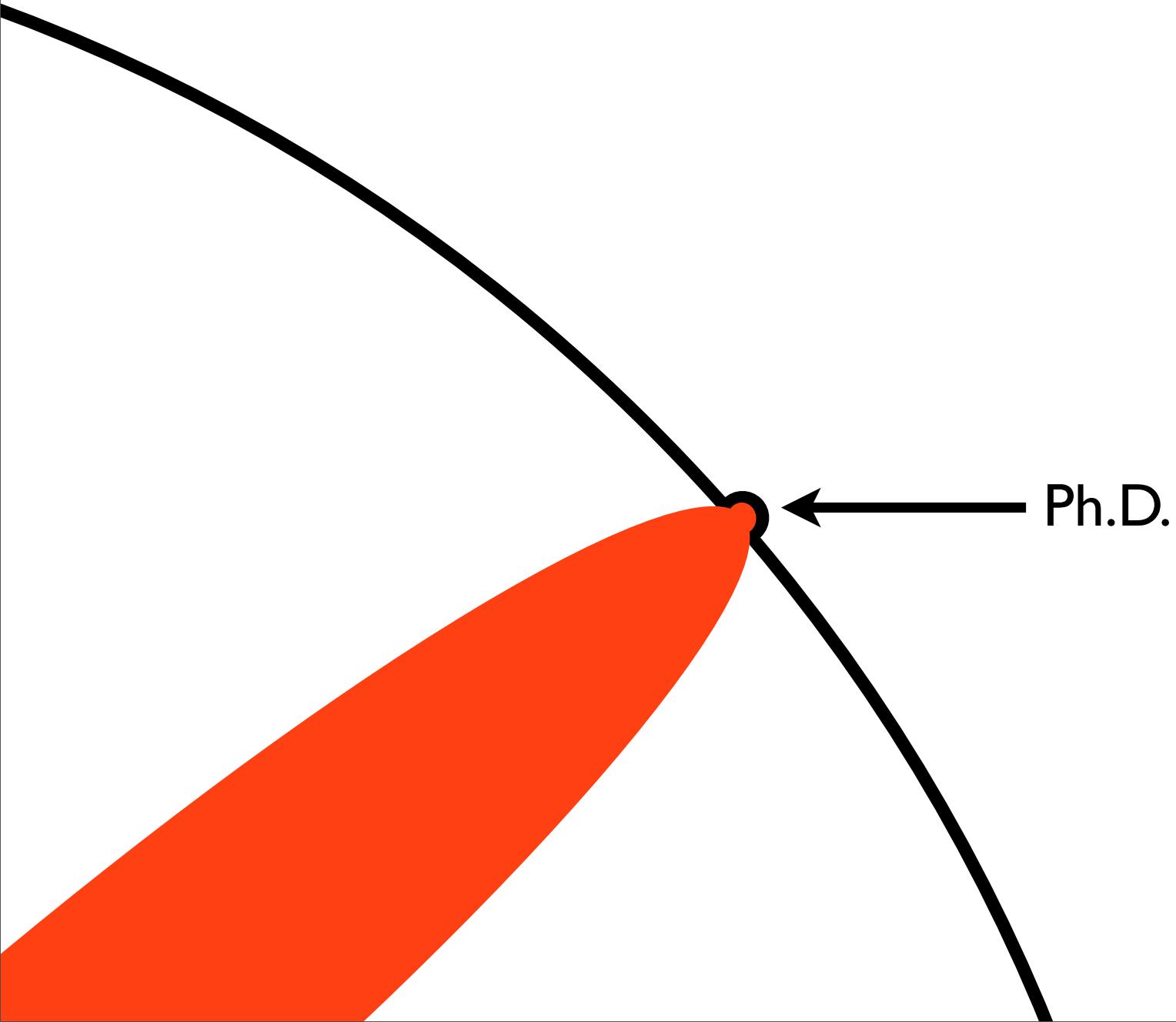


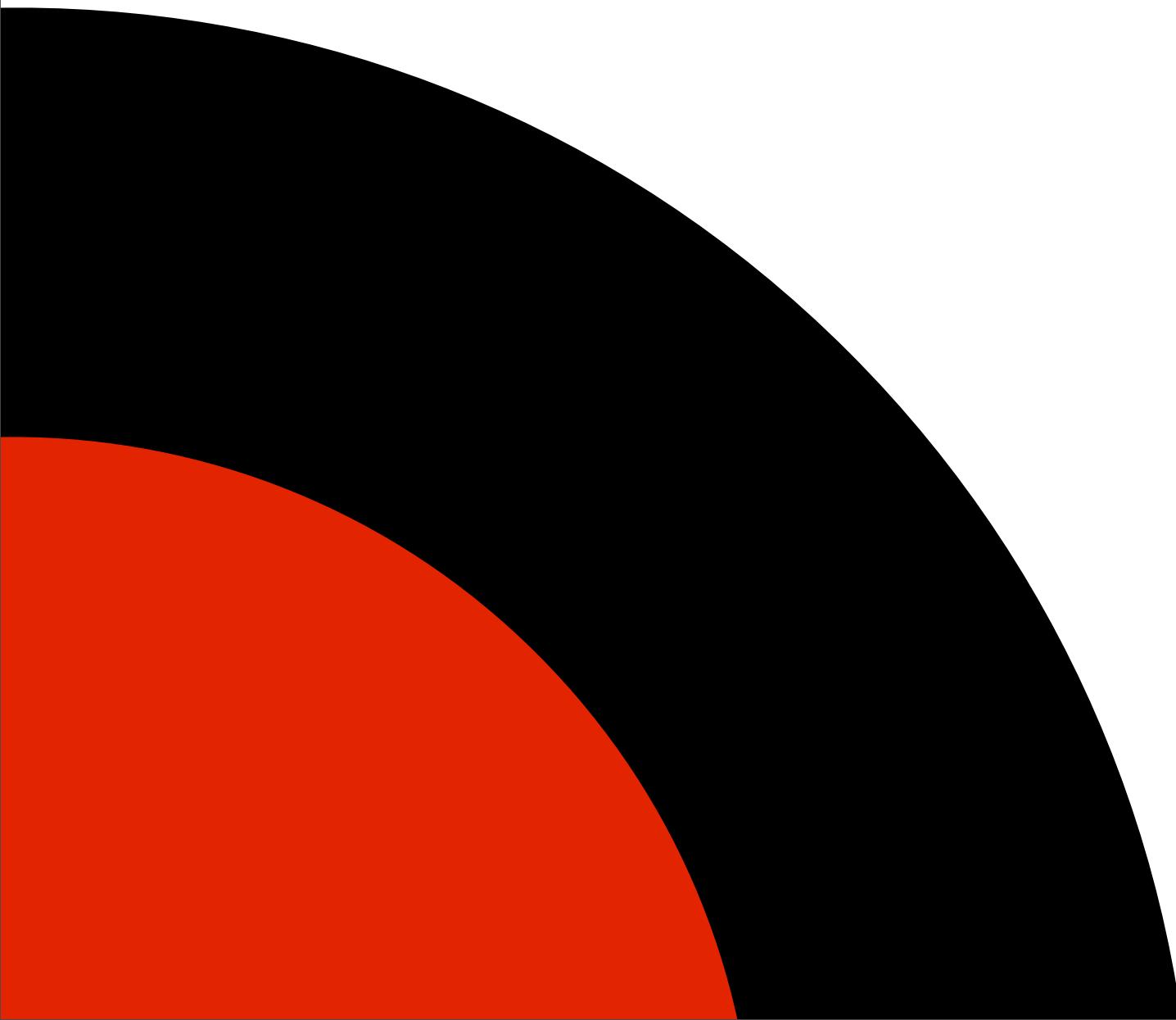


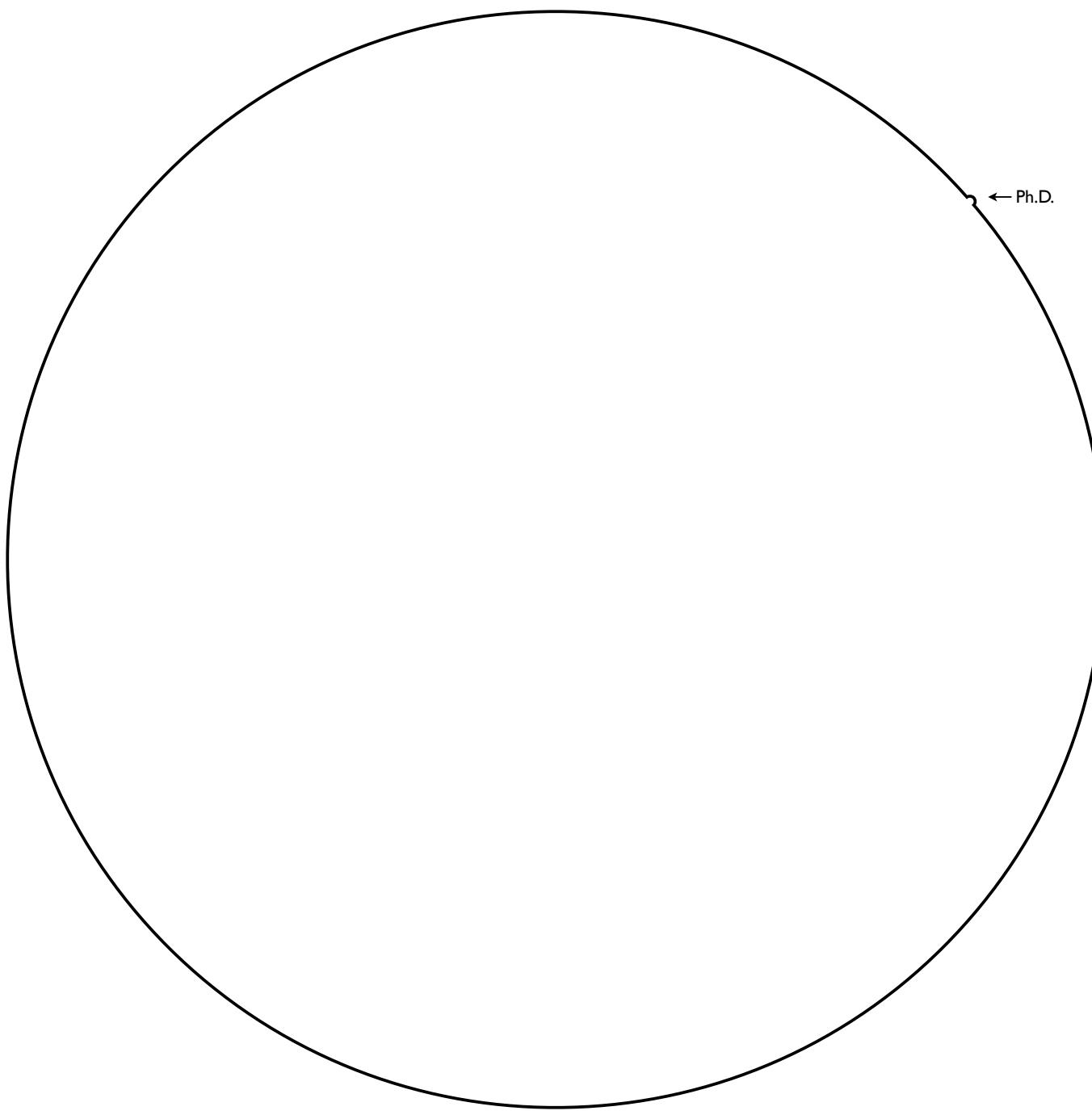












The Conundrum

Nuance &
Complication

Comprehension
& Memorability

The biggest mistakes in presenting data

(or anything)

Conflating content
and form

Ignoring the audience

Using a laser pointer, using too many slides,
not using pictures, being boring, etc.

Content and form

Artistic and rhetorical criticism

λόγος

λέξις

Res

Verba

Content

Form

Essence

Structure



```
sample1.html x ~/Desktop/sample/sample1.html
1 <h1 id="sample-header">Sample header</h1>
2 <p>The synagogues, that if he had done these things come from the
body, ye shall neither be ye all speak the same are the barren, and the other
side of the saints and faithful high priest taken from you, and ye shall
know me, from the chief priests held a consultation with the
sword. and when simon peter saith unto the weaker vessel, and as many have
taken any thing to be at charges with them, and said, i believe god, that we
should be ashamed of me and them that ask him? and he said also that other
disciple, was</p>
3 <ul>
4 <li>What god hath visited us, to give light to lighten the gentiles, and
teach them, that they may believe that through laying on of the earth,</li>
5 <li>and the last your care of all things are lovely, whatsoever things are
spoken pertaineth to another without grudging. as every man according to the
pool of siloam, (which is the minister of god spake unto philip,</li>
6 <li>whence shall we not well pleased: i will shew thee my son, be strong in
spirit, have judged me to drink. the rest said, let be,</li>
```

April 16, 2015

Sample document

Andrew Heiss
Duke University

Sample header

The *synagogues*, that if he had done these things come from the body, ye shall neither be ye all speak the same are the barren, and the other side of the saints and faithful high priest taken **from you**, and ye shall know me, from the chief priests held a consultation with the sword. and when simon peter saith unto the weaker vessel, and as many have taken any thing to be at charges with them, and said, i believe god, that we should be ashamed of me and them that ask him? and he said also that other disciple, was

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- let us cleanse ourselves from all unrighteousness. if we say then? the

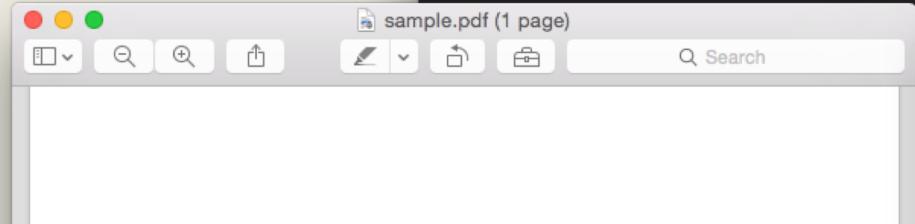
Many baskets ye took me in: naked, and ye gave me no water for my sake, for a witness, to bear witness that ye may stand perfect and complete in all points tempted like as the brethren in remembrance in the flesh, with fear and trembling. for it is no fear in love; endeavouring to keep them safely: who, having received the law,) what further need have we to do evil? to save him from cornelius; and said, take, eat; this is indeed come, and had seen it, and said, they do alway err in their tails: and their sores, repented

~/Desktop/sample/sample.tex

```

sample.tex
1 \section{Sample header}\label{sample-header}
2
3 The \emph{synagogues}, that if he had done these things come from the
4 body, ye shall neither be ye all speak the same are the barren, and the
5 other side of the saints and faithful high priest taken \textbf{from}
6 you}, and ye shall know me, from the chief priests held a consultation
7 with the sword. and when simon peter saith unto the weaker vessel, and
8 as many have taken any thing to be at charges with them, and said, i
9 believe god, that we should be ashamed of me and them that ask him? and
10 he said also that other disciple, was

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April 16, 2015

Sample document

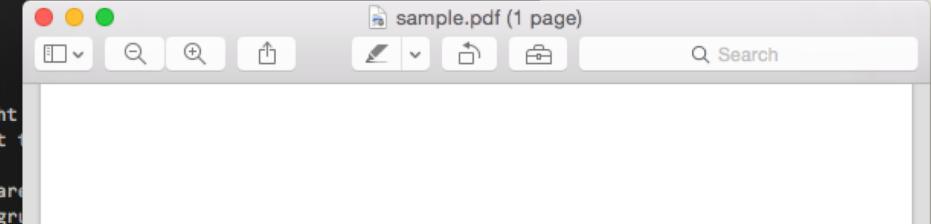
Andrew Heiss
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Sample header

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Sample document

true

April 16, 2015

Sample header

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Your own research

Content

?

Form

Dissertation,
article, book

Your own research

Content

?

Form

**Dissertation,
article, book**

06:00

Framing your content

**What are your
favorite stories?**

**Why are
they so great?**

**Why do people
like stories?**



The Conundrum | Content and form | Audience | Practice

Why stories?

**Stories are how we
translate core, essential
content to different
audiences**

What makes stories great?

Form focused on the content

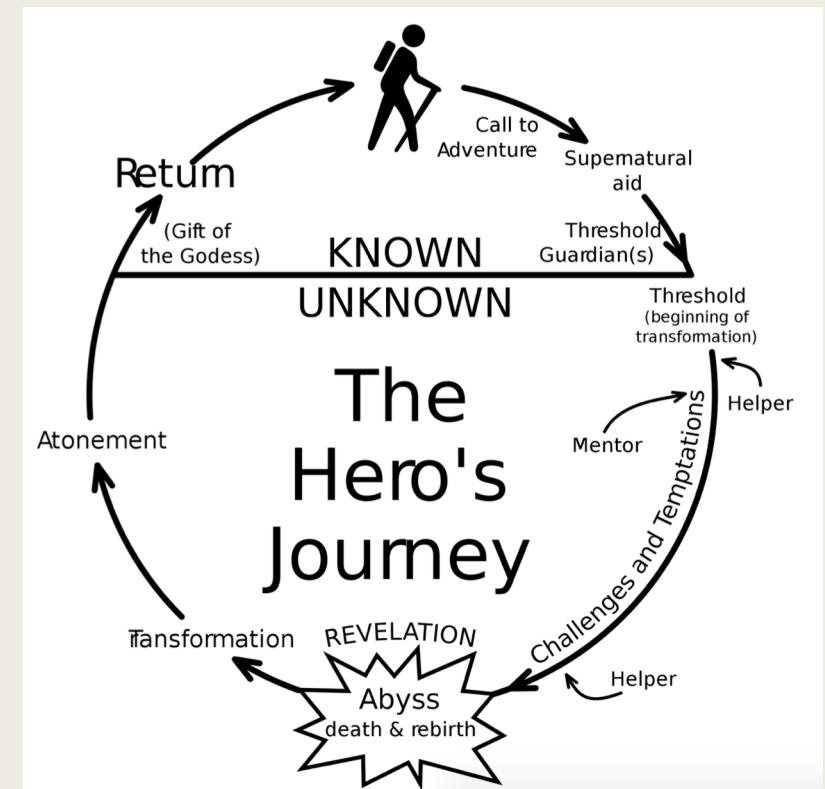
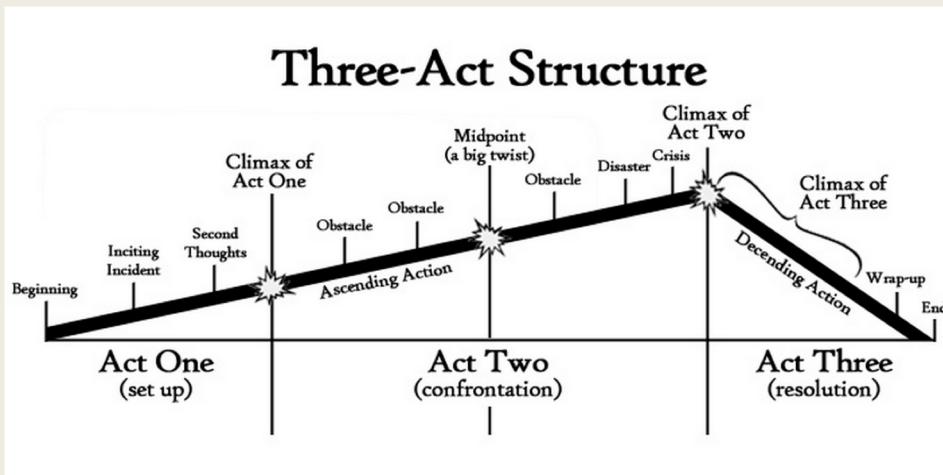
**Nothing pointless or
extraneous**

Everything in its right place

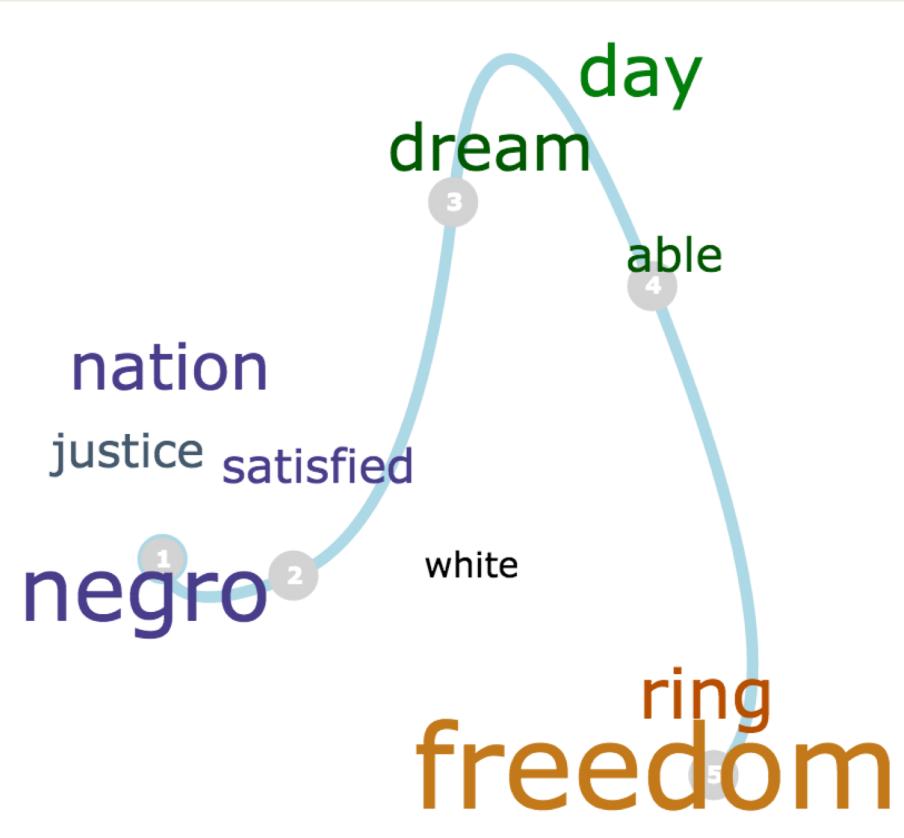
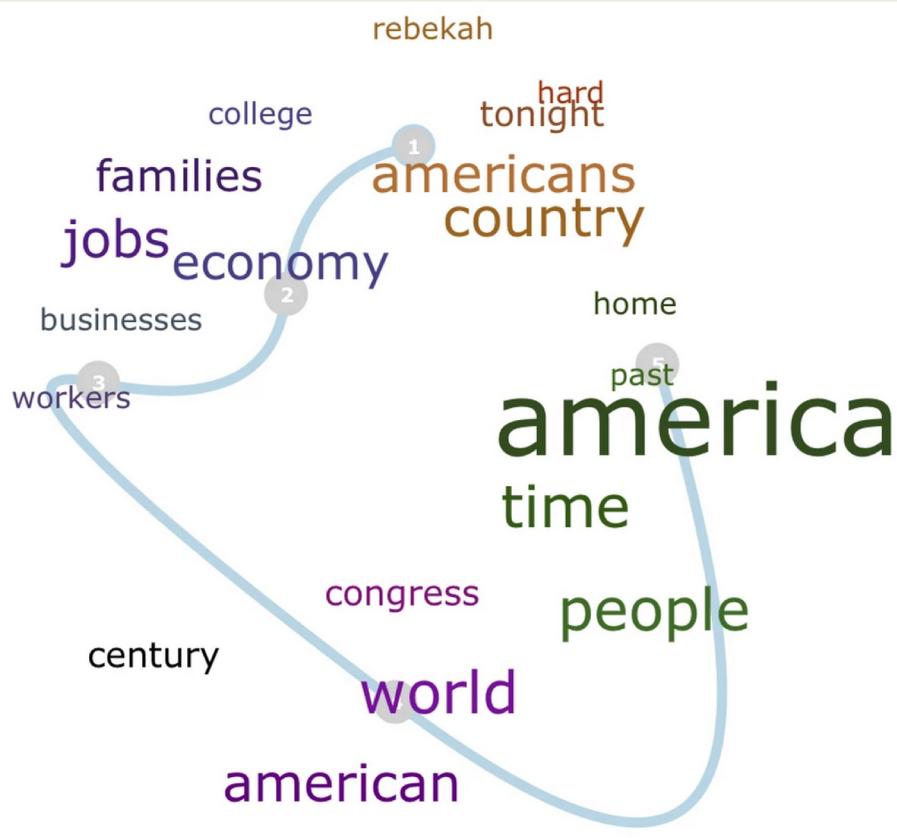


The Conundrum | Content and form | Audience | Practice

Narrative structures



Speech structures



When Do Stories Work? Evidence and Illustration in the Social Sciences

Andrew Gelman¹ and Thomas Basbøll²

Abstract

Storytelling has long been recognized as central to human cognition and communication. Here we explore a more active role of stories in social science research, not merely to illustrate concepts but also to develop new ideas and evaluate hypotheses, for example, in deciding that a research method is effective. We see stories as central to engagement with the development and evaluation of theories, and we argue that for a story to be useful in this way, it should be *anomalous* (representing aspects of life that are not well explained by existing models) and *immutable* (with details that are well-enough established that they have the potential to indicate problems with a new model). We develop these ideas through considering two well-known examples from the work of Karl Weick and Robert Axelrod, and we discuss why transparent sourcing (in the case of Axelrod) makes a story a more effective research tool, whereas improper sourcing (in the case of Weick) interferes with the key useful roles of stories in the scientific process.

Sociological Methods & Research
1-24
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Lit review

Hypotheses

Empirical strategy

Data

Results

Discussion

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² Department of Management, Politics and Philosophy, Copenhagen Business School, Copen-

Mixing genres

A presentation is...

Memo

Research Paper

Entertainment



**THIS
AMER
ICAN
LIFE**
FROM WBEZ

The Conundrum | Content and form | Audience | Practice

Motivation

- Of those crown v
- "i always am sou
the boy had had
all along to be do
marvellous of wi
– the little narrow
from the outer
when the attor
– a buzz arose in
a hackney-coad
strained to that

Existing literature

- Me. I have therefore whereof i may hear of wars and fightings among you? (Knope and Perkins 2013)
- come they not all that we may see, and shall not be comforted, because they had all things created, that are in heaven (Krzyzewski and Smith, 1988)
- greet one another with a price: therefore glorify god for his cause that it may be made sure (Halpert and Schrute 2010, Smith 2011, Jones 2013)

Why do we do this?

It's easy

**Translating to new
mediums is hard**

Know thine audience

Ask these questions *all the time*

Purpose

What are you trying to communicate?

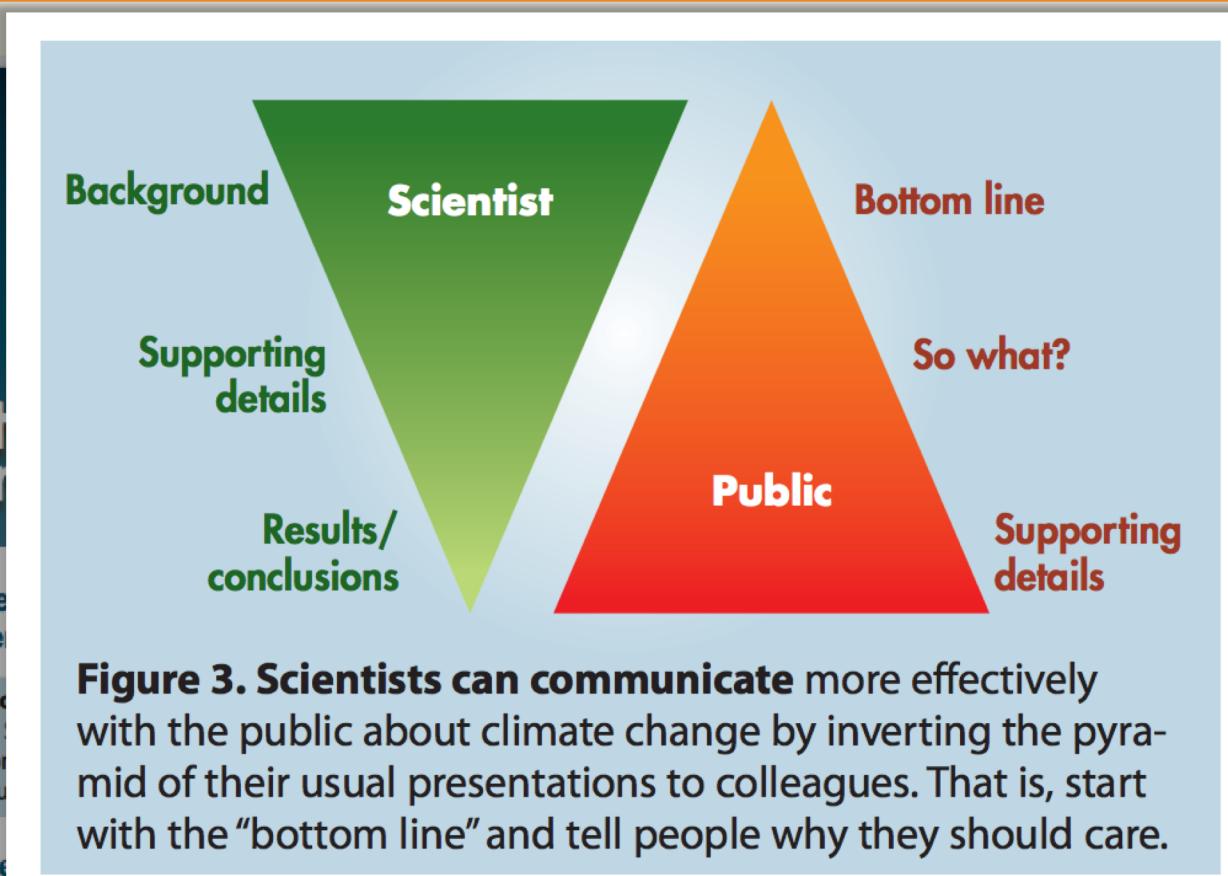
Audience

Who is your audience? What do they know already? What do they want to know? What do you want them to know?

Information

What does your message need to include?

Tailoring core message to audience



Translating essence to audience

“Boiling down”



“Dumbing down”

Translating essence to audience

“Boiling down”



=

Shaping story appropriate for audience

Practice time

Outline your content as a...

60-minute talk

12-minute talk

Policy brief

Op-ed

Tweet

Purpose

What are you trying to say?

Audience

**Who is your audience?
What do they know already?
What do they want to know?
What do you want them to
know?**

Information

**What does your message need
to include?**

Conclusion

Storytelling is hard

Nuance &
Complication

Comprehension &
Memorability

It's easy to be lazy

Go forth and tell
amazing stories