

# NARRATIVE TOOLS FOR SCIENCE COMMUNICATION

WITH MARY ROBINETTE KOWAL







# HUMANS ARE MADE OF NARRATIVE

- The stories we tell ourselves
- The stories we tell each other

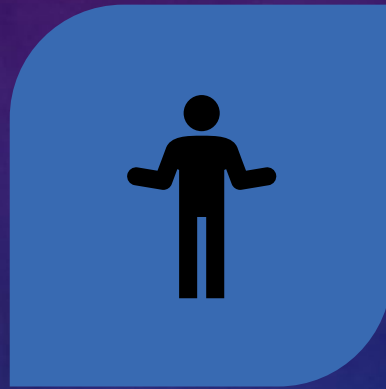
WRITING IS  
A DRUG  
MADE OF  
WORDS.

WE USE IT TO CHANGE  
THE HUMAN BRAIN

# WHO IS YOUR AUDIENCE?



WHO ARE YOU  
TALKING TO?



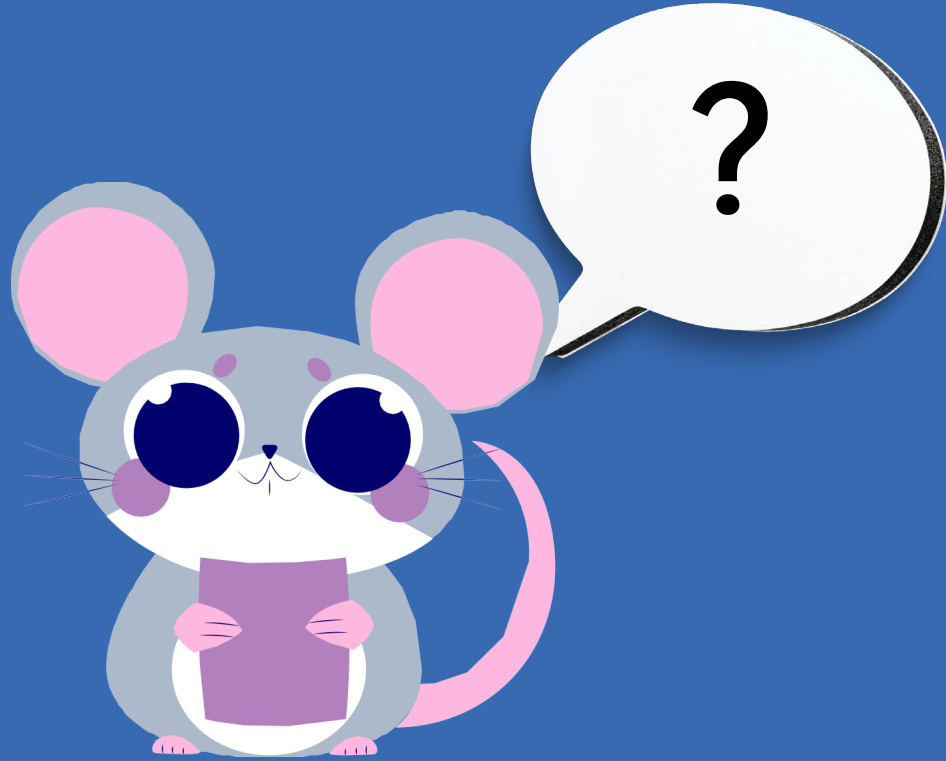
WHY DO THEY NEED  
TO KNOW THIS?



WHAT EFFECT ARE  
YOU TRYING TO  
ACHIEVE?

# FAILURE MODES





# NARRATIVE STRUCTURE AND THE MICE QUOTIENT

# 4 ELEMENTS

MILIEU

INQUIRY

CHARACTER

EVENT







# MILIEU



Your character enters  
a new space.

Your character exits  
the space.





CONFLICTS STOP YOUR CHARACTER FROM  
REACHING THEIR GOAL



# MILIEU CONFLICTS



Hello!



"There must be some  
kind of way outta here..."



Goodbye!



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# INQUIRY

? →

Aroo?!

→ !

Aha!



# INQUIRY CONFLICTS



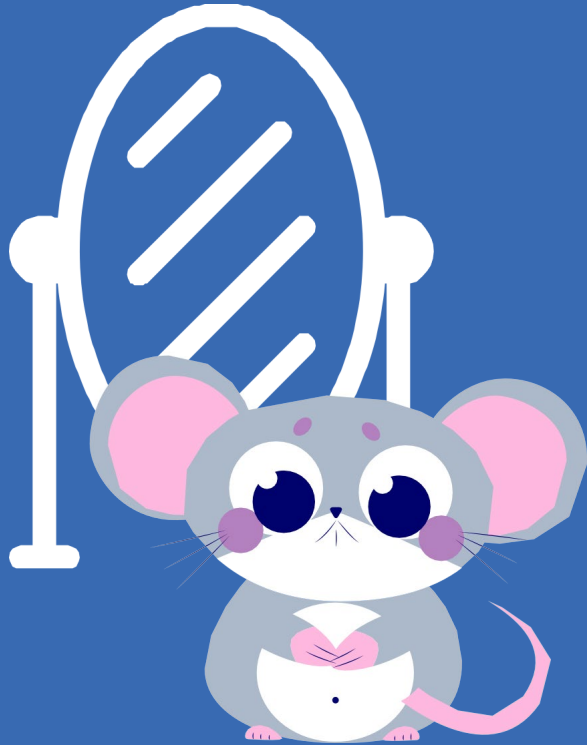
Aroo?!

No answers for you!

Aha!







# CHARACTER



ANGST!!!!

Ahhhhh...



# CHARACTER CONFLICTS

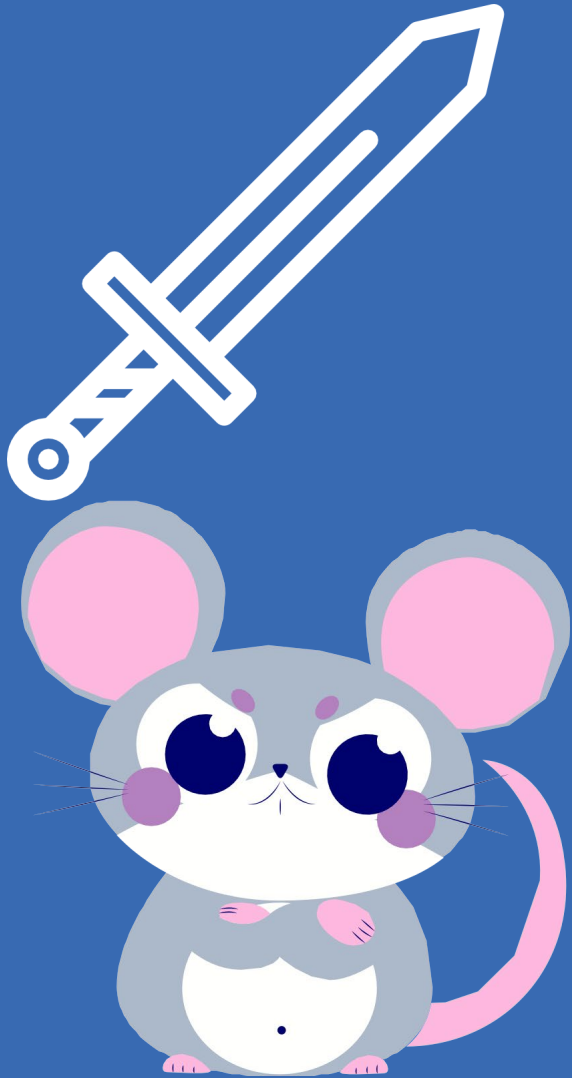


ANGST!!!!

"Woe is me!"

Ahhhhh...





# EVENT



Oh noes!



Ta-da!



# EVENT CONFLICTS



Oh noes!



"I am not left-handed...."



Ta-da!





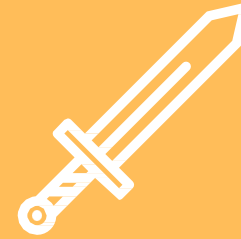
# CHARACTER



## Interior

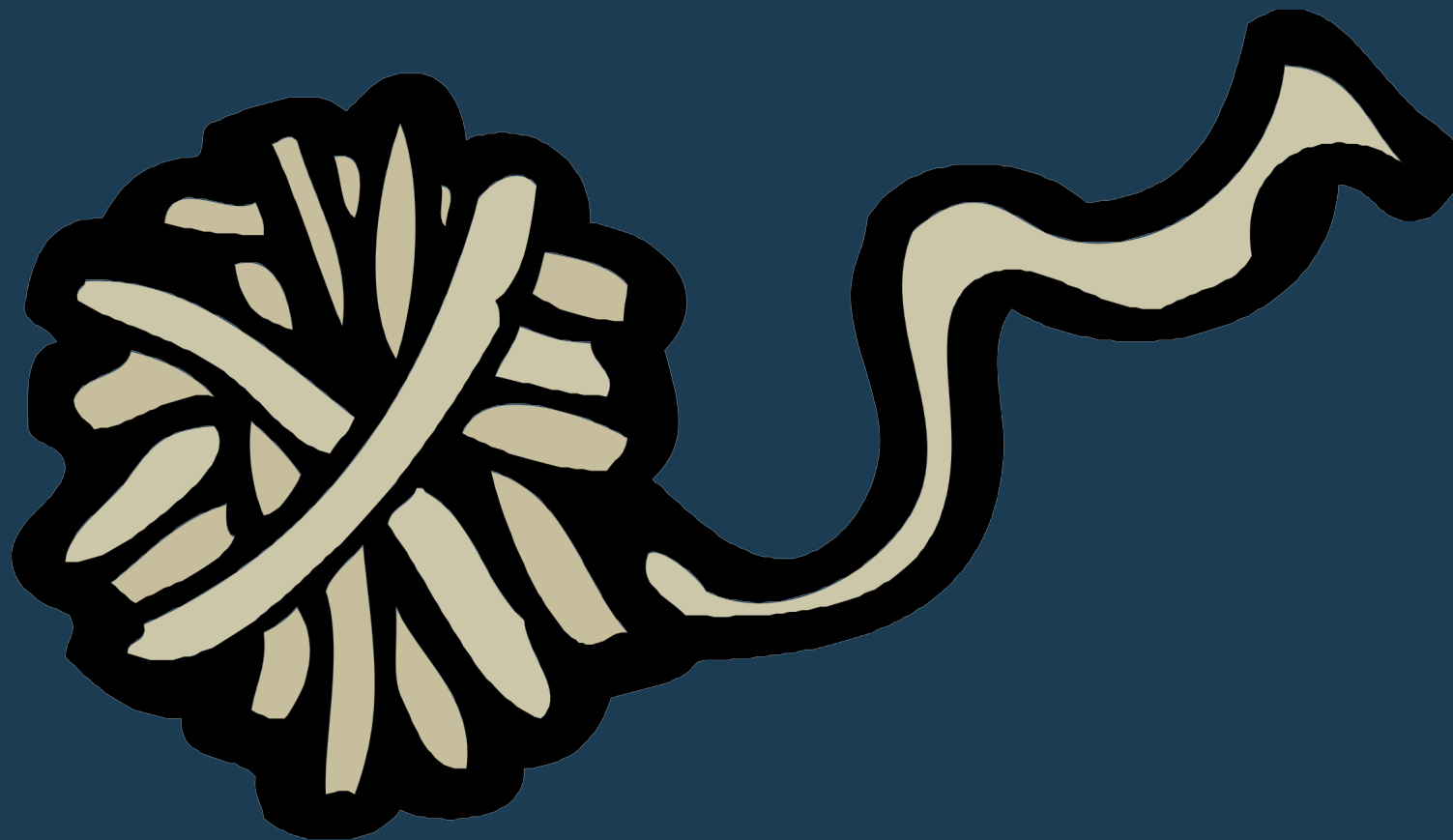
vs.

# EVENT



## Exterior

*zzzzzz...*



<M> <I> </I> </M>

# Wizard Of Oz

< C >

< E >

< M >

< I >

< / I >

< / M >

< / E >

< / C >





# Opening tags

<C>



# Opening tags

<C>

<E>



# Opening tags

<C>

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<M>



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# Closing tags

<C>

<E>

<M>

<I>

</I>

</M>

</E>

</C>





# Must you?

< C >

< E >

< M >

< I >

< / E >

< / C >

< / M >

< / E >





# Wizard of Oz sans angst

- `< E >`
- `< M >`
- `< I >`
- `< / I >`
- `< / M >`
- `< / E >`



# Wizard of Oz sans tornado

- `< C >`
- `< /C >`

# NON-FICTION

M = ENVIRONMENT


I = QUESTIONS

C = PEOPLE

E = STATUS QUO



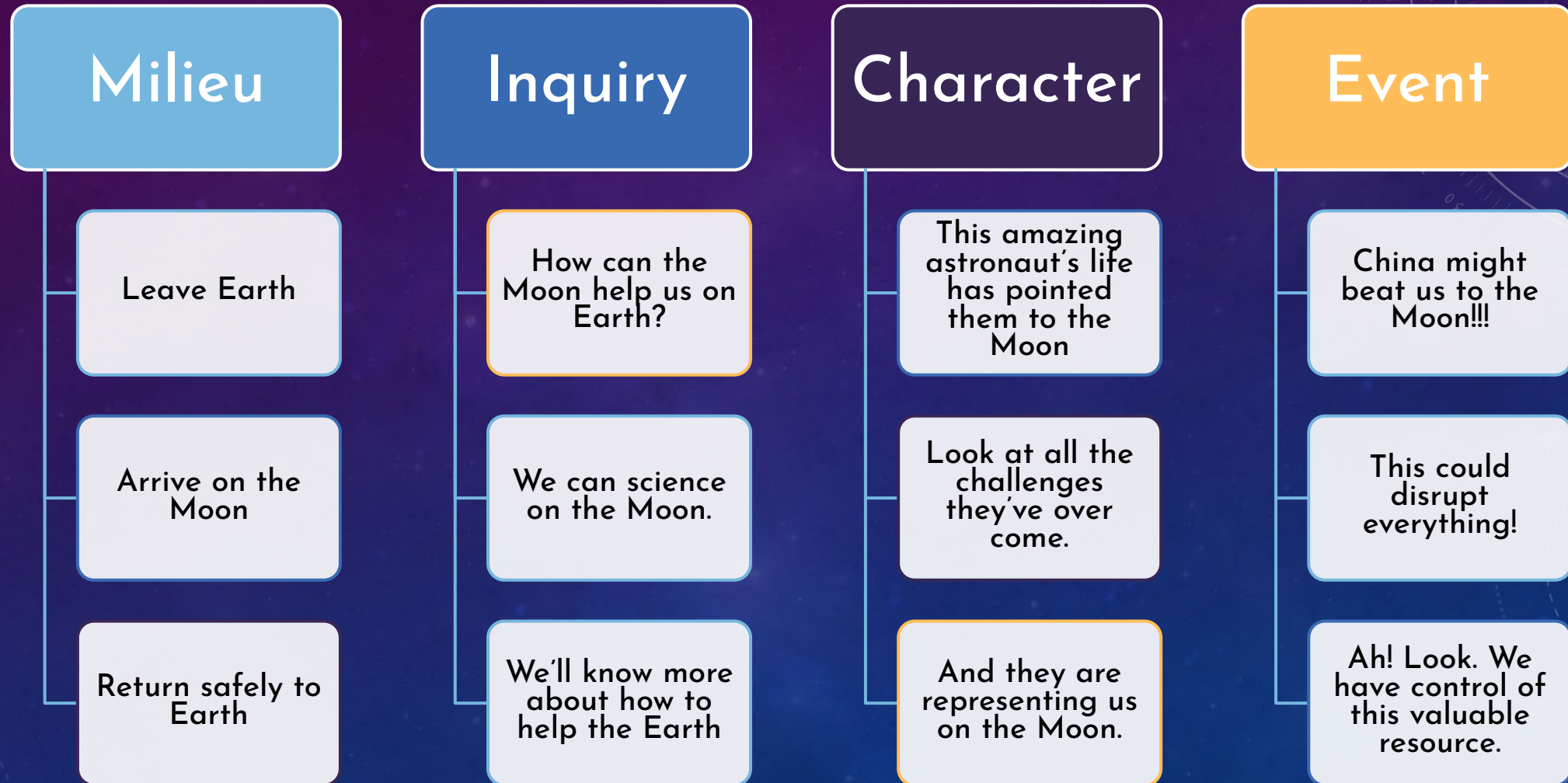




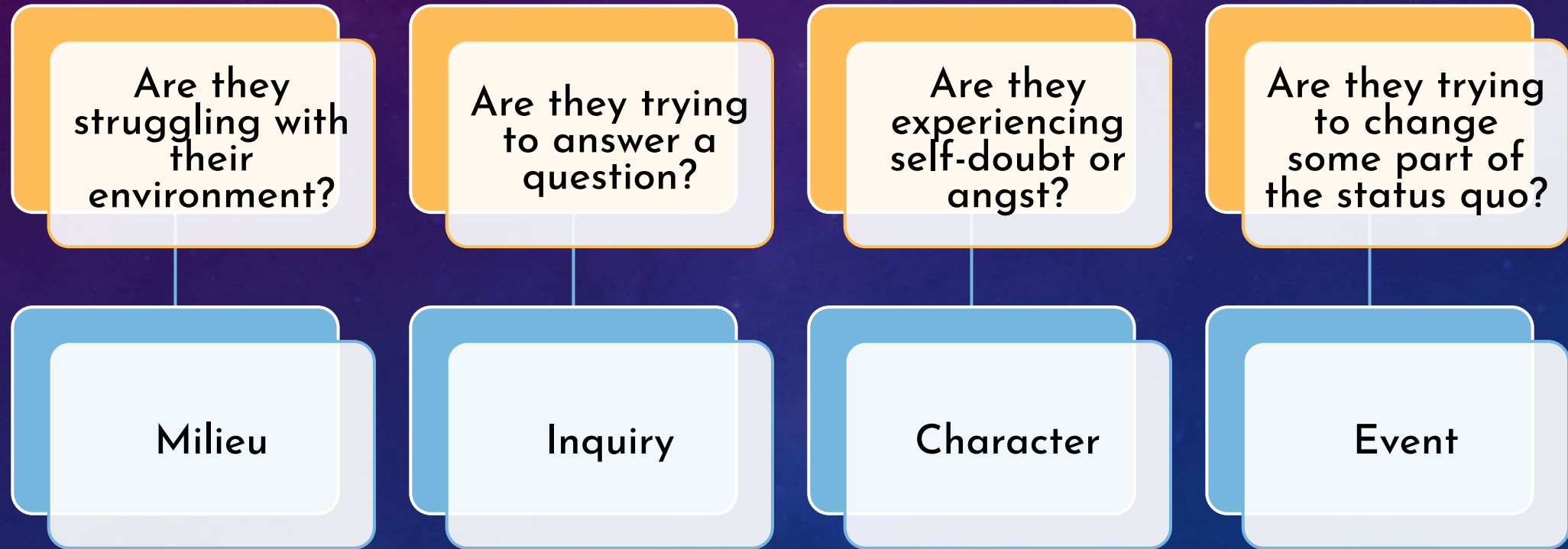
# THE MICE QUOTIENT HELPS YOU DECIDE WHERE TO START.

BUT MORE IMPORTANTLY, IT HELPS YOU DECIDE WHAT TO  
LEAVE OUT.

# GOING TO THE MOON



# IDENTIFY THE MICE QUOTIENT:



# ADD A SECONDARY PLOT

What problems  
could exist in  
their  
environment?

Milieu

What questions  
could your MC  
have?

Inquiry

What could your  
MC want to  
change about  
themselves?

Character

What outside  
force is messing  
up your MC's  
world?

Event



# OPENINGS

Orient and ground your reader



Where  
Who  
Goal  
Urgency

# ENDINGS

WRAPPING THINGS UP



What did a happy ending even mean in real life, anyway? In stories you simply said, 'they lived happily ever after,' and that was it. But in real life people had to keep on living, day after day, year after year.

*ỎẢẾ ØØU DỎØDÒÈDÎ Ç*





# WORKING BACKWARDS

...

*U GAØÉŁ DỎỖ Ỗ ỖGD Ỗ DỖỖ  
Ỗ AỖỖ Ỗ DỖỖ*



# THE RECENCY/PRIMACY EFFECT

- Things presented at the end (Recency) and beginning (Primacy) stick in memory more than the middle.



# THE LAST SENTENCE SHAPES THE LINGERING EMOTION

“And so, as Tiny Tim observed, God bless Us, Every One!”  
-CHRISTMAS CAROL

“So we beat on, boats against the current, borne back ceaselessly into the past.”  
-THE GREAT GATSBY

“Max stepped into his private boat and waved goodbye and sailed back over a year and in and out of weeks and through a day and into the night of his very own room where he found his supper waiting for him—and it was still hot.” -WHERE THE WILD THINGS ARE

# LAST PARAGRAPH

WHO

- Who is the character NOW?

WHERE

- Practical or a metaphoric where

MOOD

- What feeling lingers?

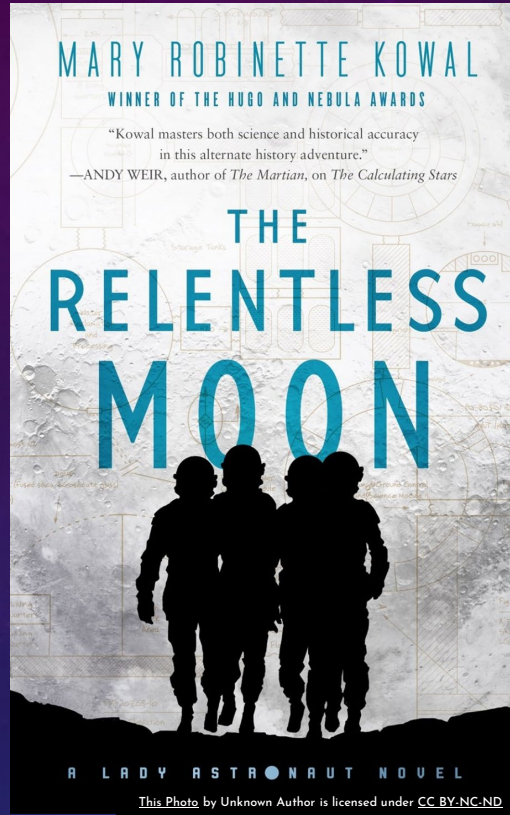


# SYMMETRY

If you can echo the beginning in the ending, you've completed the circuit and you can trigger both recency and primacy effects.







# EXAMPLE: THE RELENTLESS MOON

## Opening

- How many places do you call home?

## Closing

- "Hey, sweet boy. I'm home."



# THE LAST PAGE

SHOWS US WHAT THE  
EFFORTS HAVE EARNED.

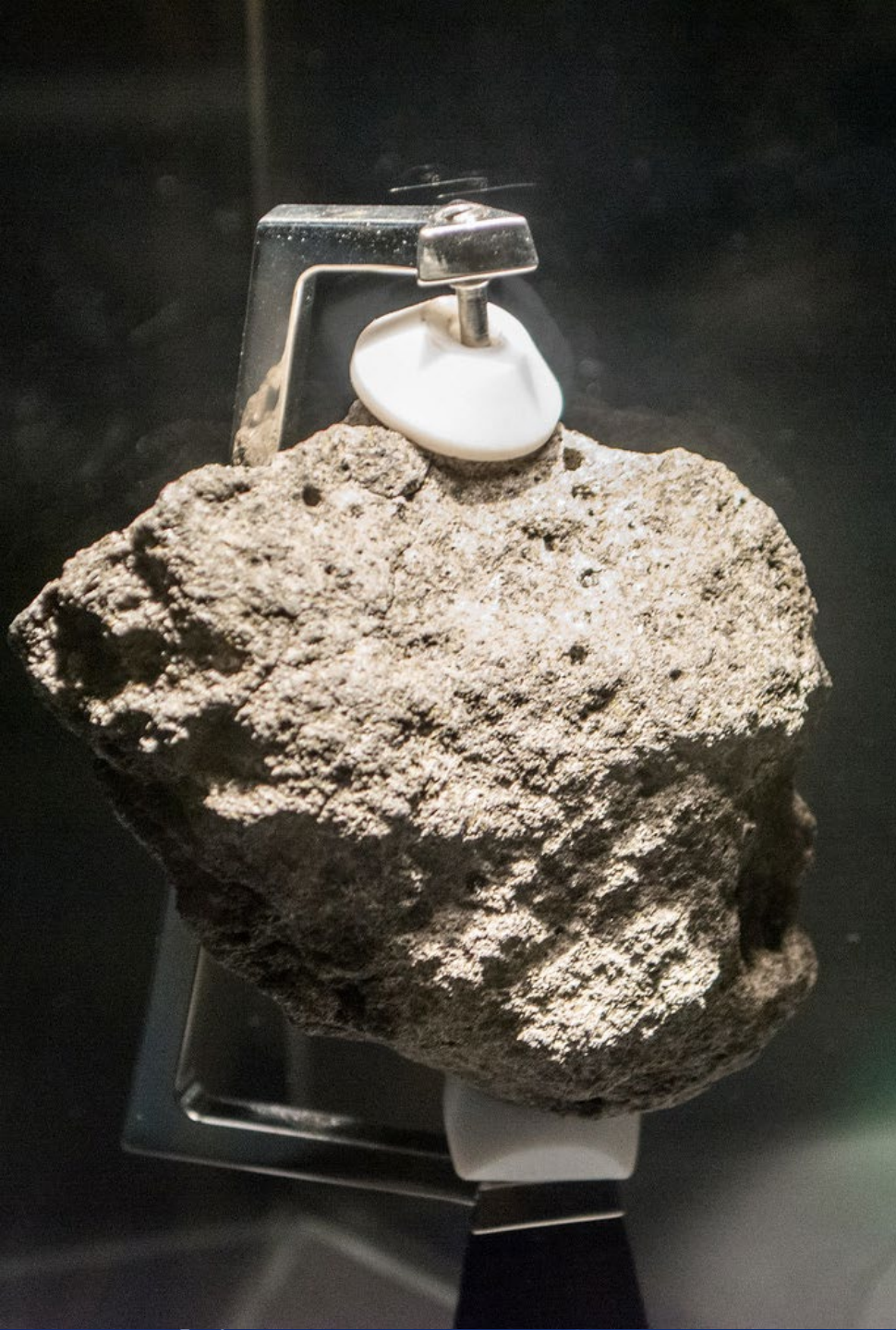




# AVATAR

An emotional resonance item that is the physical manifestation of the ending your character has earned.





- You can make a conflict concrete by creating a physical symbol of your character's goal.





# JUST WHAT IS A MACGUFFIN?

- A MacGuffin is an object that is the catalyst for putting the plot into motion but isn't necessarily significant, important, or relevant.





# JUST WHAT IS AN AVATAR?

- An avatar is an incarnation, embodiment, or manifestation of a person or idea.
- It represents what the hero overcomes.

# Using MacGuffins

---

Does the MC have the MacGuffin?

- Anytime it is in their possession, that represents progress toward ending of the story.

If “yes” thwart with a “but.”

- Think of all the things you've seen or read where the hero has the goober and then it slips out of her grasp.

If “no” what's their next step?

- Use proximity to the MacGuffin as a success meter.



# USING AVATARS

Instead of having the MC wrestle with something in their own head, they can argue or literally wrestle with a manifestation of the problem.

**FIGHT!  
FIGHT!  
FIGHT!**





# MAKE SUCCESS CONCRETE

We can use both MacGuffins and Avatars to create satisfying resolutions.



```
graph TD; A[We can use both MacGuffins and Avatars to create satisfying resolutions.] --> B[MacGuffin: Your hero retrieves the MacGuffin and restores it to its proper place.]; B --> C[Avatar: By the end of the story, your MC will defeat or reconcile with an avatar.];
```

MacGuffin: Your hero retrieves the MacGuffin and restores it to its proper place.

Avatar: By the end of the story, your MC will defeat or reconcile with an avatar.

# THE LAST $\frac{2}{3}$ TO $\frac{3}{4}$

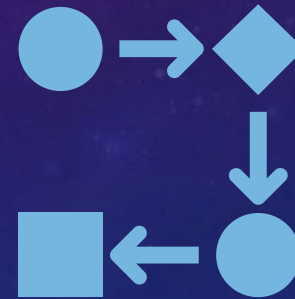
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# SHIFTING MODES



You are moving from asking questions to answering them



**WORK SEQUENTIALLY**  
Put the smaller toys away first.

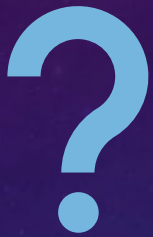
# BEGINNINGS AND ENDINGS

- Don't match = answer the questions you raised.
- Dull = You didn't remind us why it's important





# THE REACTION SHOT:



Did I leave the  
stove on?



I DID leave the  
stove on.



No. I turned the  
stove off.

# THE REACTION SHOT:



I HAVE QUESTIONS



THIS IS BAD



WHEW. EVERYTHING IS  
GOING TO BE OKAY.



# HUMANS ARE MADE OF NARRATIVE

- What stories will you tell?



The background is a dark blue gradient with a complex, abstract design. It features several interlocking gears of different sizes, some of which are semi-transparent. A large, 3D-style question mark is positioned in the center-right. To the left, there is a circular scale or compass-like element with numerical markings ranging from 140 to 260. Various circular lines, arcs, and small arrows are scattered throughout the composition, creating a sense of mechanical complexity and inquiry.

QUESTIONS?