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# USE OF NARRATIVE IN SCIENCE COMMUNICATION

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# BACKGROUND & RESEARCH QUESTION

The main goal of science communication is educating people with different backgrounds about the scientific achievements in a compelling manner. It has an important role in the public education, but science communication has been subjected to criticism in last years. In the most classes, writers struggle to strike a balance between being simplistic and heavily jargoned.

A possible solution to the problem can be an integration of fictional elements to the texts. Narrative frameworks provenly help increase readership, recall, and understanding of the information. It means storytelling can help present scientific data without a need of oversimplification or complication.

Understanding how the best publications have reached that balanced in the field and how other communicators can apply the achievement was the purpose of the research project. The guiding question was:

**How writers use storytelling elements in narrative science stories?**

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# METHODOLOGY

The research project was an in-depth content analysis of 40 storytelling articles selected from five science magazines, and consisted of these three consecutive steps:

## 1. Selecting journals and articles

- Top storytelling science journals: Nautilus, Scientific American, Nature, Science, National Geographic
- Articles with narrative elements: 8 articles from each journal

## 2. Defining narrative frameworks

Three-act narrative structure:

**HERO    CONFLICT    RESOLUTION**

## 3. Analysing the selected articles

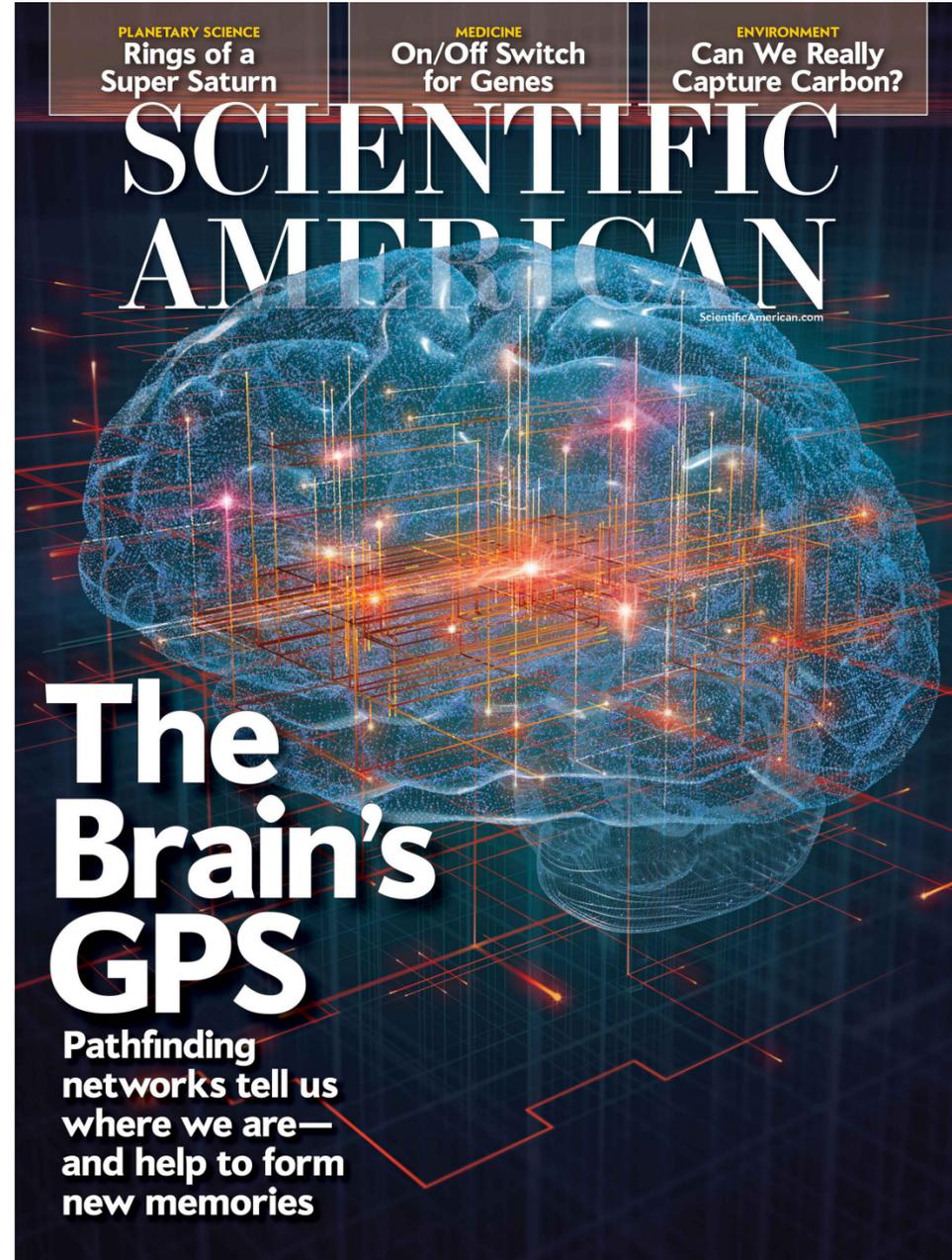
- Who/What is the main character? What is the conflict? How is the conflict resolved?
- What concepts/scientific ideas the articles describes? What discipline the does article belong to?
- What literary devices the article uses in its storytelling? How can I the main storyline of the article in a sentence? How easy was it to read and understand the article?



# ANALYSIS OF NAUTILUS

**Nautilus** is a science magazine that aims to connect sciences with humanitarian subjects. It explores scientific ideas from perspectives of culture, history, and philosophy using storytelling.

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- Storytelling was a favored way of narration
  - Stories revolved mainly around ideas or people
  - Scientific ideas were integrated into narratives



# ANALYSIS OF SCIENTIFIC AMERICAN

**Scientific American** is the world's leading magazine about scientific discoveries and technological innovations. It mainly specializes in science news reporting.

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- Simple narrative frameworks
  - Predictable hero-conflict-resolution storylines
  - World news stories were connected to sciences
  - Stories revolved around news or research process



# ANALYSIS OF SCIENCE

**Science** is a peer-reviewed academic that publishes scientific studies and research papers, and those original research papers and research reviews are its main goal. The main audience of the journal is scientists and researchers.

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- Storytelling format was commonly used
  - Stories revolved around research process or researchers
  - Many stories did not have clear-cut resolutions
  - The concepts involved were more specific

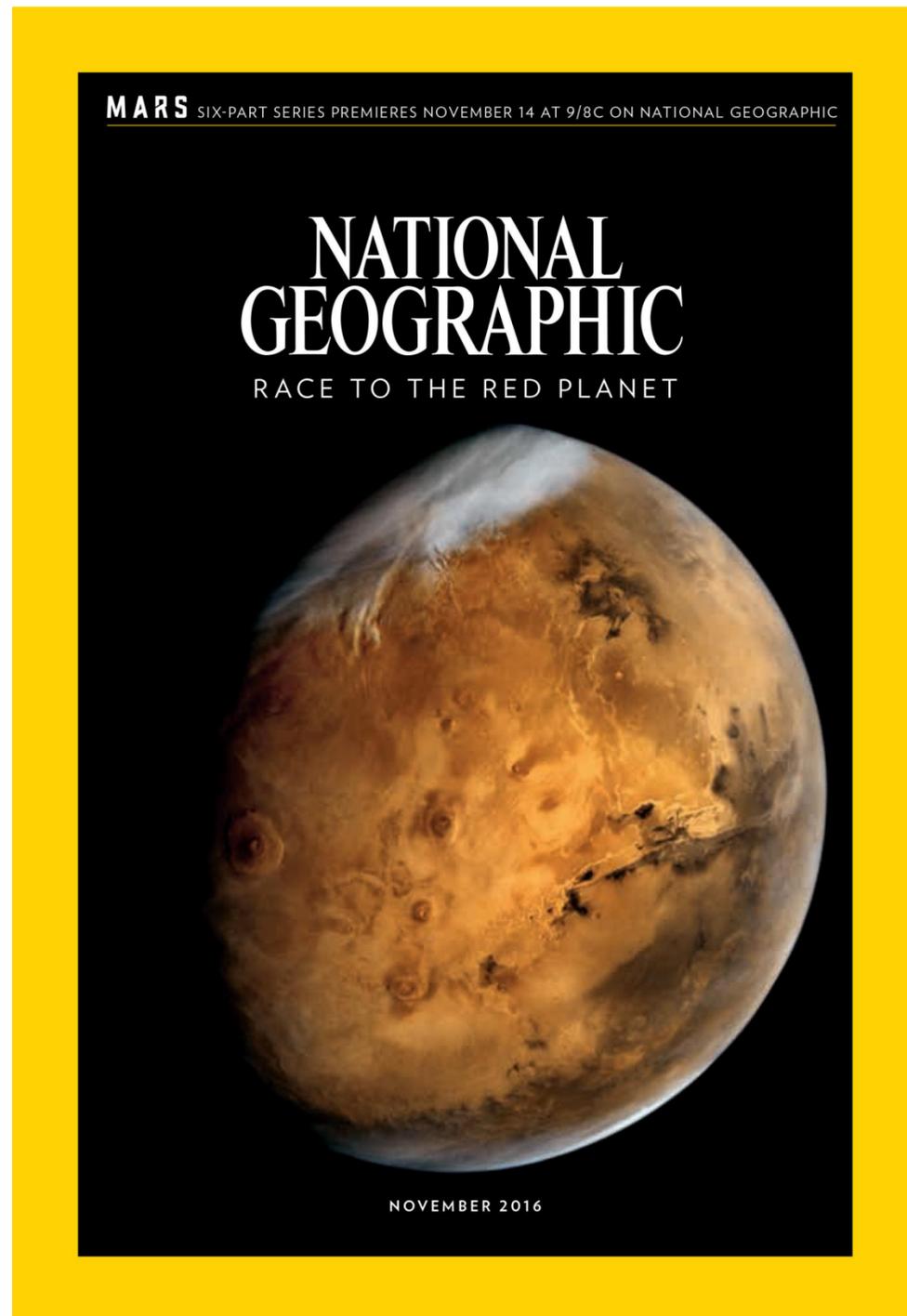


# ANALYSIS OF NATURE

**Nature** is the leading academic journal that publishes original scientific research papers. The journal's main audience are researchers, but the magazines also publish many articles that summarise findings using accessible language.

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- Humanisation of the research process and researchers
  - Use of more direct language
  - Stories revolved around people or research groups

content analysis



# ANALYSIS OF NATIONAL GEOGRAPHIC

**National Geographic** writes on a wide range of topics including geography, history, and world cultures as well sciences. It is one of the largest popular educational journals in the world, with the readership that exceeds 6 million.

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- Favored stories over scientific concepts
  - Stories presented multiple perspectives
  - Stories made stronger arguments

# LITERARY DEVICES

Science stories also used similar fictional literary devices in its storytelling. Those tools had an added value in science communication. They were used to better, connect, compare, and explore different ideas.

## Most commonly used literary devices:

Metaphors/Similes (17 out of 40)

Humor/Anecdote (8 out of 40)

Popular culture (14 out of 40)

Opening/closing with a story (6 out of 40)

Anthropomorphism (13 out of 40)

Emotional language and drama (12 out of 40)

Historical context (15 out of 40)

Amplification (13 out of 40)

Foreshadowing (5 out of 40)

Juxtaposition (4 out of 40)



# CONCLUSIONS & LIMITATIONS

Nautilus, Science, Nature, Scientific American, and National Geographic all used three-act structure and different literary tools in its communication. That supports the idea that storytelling helps to communicate scientific ideas better. It is difficult to define a single format of the communication that can be used by all the media, but the tools mentioned in the research can increase the effectivity of any scientific text. Overall, science journals should be encouraged to employ and develop narrative tools in their reporting to reach a broader audience and convey science concepts properly.



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THANK YOU!