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Asteroid or Aliens? How the Media Spun the ‘Oumuamua Story at Astronomy’s Expense

On October 26, 2017, NASA issued a press release stating that a University of Hawaii research team had detected a small asteroid or comet visiting our solar system from elsewhere in the galaxy. The object was dubbed ‘Oumuamua—a Hawaiian name for a first messenger arriving from afar—and, as the first interstellar object ever identified, represented a historic breakthrough in the field of astronomy (Agle et al.). Yet the mainstream media told an entirely different story, suggesting that this might actually be our first visit from an alien spaceship. The headlines rolled in during the months following ‘Oumuamua’s discovery, from *NBC News MACH*’s “Is this mysterious space rock actually an alien spaceship?” (Shostak), to *HuffPost*’s shameless “Some Think An Alien Space Probe Just Passed Earth And Deliberately Ignored Us” (Mazza). Reality had been eclipsed by an utter fabrication.

The alien hysteria came just one year after Merrimack College’s Melissa Zimdars published her analysis of fake online news. Zimdars explains that many sources, including respected mainstream news outlets, often publish content that occupies a gray area with respect to accuracy and credibility, using shocking yet misleading headlines in order to secure “clicks, shares and an ever-dwindling piece of the advertising-revenue pie.” A striking example of how this type of deception was used to spin the ‘Oumuamua story is Amanda Barnett’s October article from *CNN*: “This mystery object may be our first visitor from another solar system.” The

headline, a classic example of clickbait, preys on the public's imagination as well as its ignorance, while the body of the article cleverly supports multiple interpretations of the story in order to protect CNN's credibility. The report firmly occupies the gray area of “Truthiness” identified by Zimdars and has, unfortunately, damaged the public's ability to truly appreciate the significance of ‘Oumuamua's discovery.

Barnett carefully words her headline in order to create the unmistakable implication that a spaceship has entered our solar system. When Barnett’s headline is contrasted with that of the original NASA press release from Agle et al.—“Small Asteroid or Comet 'Visits' from Beyond the Solar System”—its deliberately misleading nature becomes even more apparent. While Agle et al. refer to ‘Oumuamua as an “Asteroid or Comet”, Barnett calls it a “mystery object”, leaving open the possibility that it is something else entirely and calling to mind the cultural icon of UFOs: Unidentified Flying Objects. Barnett goes so far as to call the object “our first visitor”, plainly implying that it has arrived with the intention of making contact with us. And while Agle et al.’s headline merely describes ‘Oumuamua as “from Beyond the Solar System”, Barnett’s describes it as “from *another* solar system” (emphasis added), allowing readers to infer that the object has departed from a specific solar system, somewhere it calls home. Barnett endows ‘Oumuamua with agency and intelligence, qualities that Agle et al.’s headline does nothing to imply.

Barnett’s headline also takes advantage of weaknesses in the general public’s understanding of astronomy. Many people reading the headline are probably unaware that we have never previously detected an interstellar comet or asteroid and may assume that we have already identified many such objects entering our solar system. By referring to ‘Oumuamua as “our *first* visitor from another solar system” (emphasis added), Barnett forces these unsuspecting

readers to infer that the object is something other than a space rock. And, as previously stated, Barnett conveniently omits from her headline the phrase “Asteroid or Comet” (Agle et al.) that would prevent the misunderstanding. In turn, it is through such misleading reporting that news outlets such as CNN continue to foster widespread scientific illiteracy, maintaining their ability to exploit common areas of ignorance such as this one.

Yet most importantly, Barnett’s headline appeals to our collective fascination with aliens. We *want* to believe ‘Oumuamua is a spaceship. Aliens are a cultural icon; while some people marvel at the sheer novelty that making first contact would bring, others yearn on a much deeper level for some physical confirmation that we are not alone in the universe. Barnett is careful to state in her headline that the object “may be” our first interstellar visitor; by avoiding committing too strongly to her suggestion that we’re being visited by aliens, she protects our suspension of disbelief. Too forceful a headline might trigger skeptical reactions and shatter her carefully crafted illusion. Instead, Barnett allows us to believe what we want to believe. She successfully subverts our rational capacities and speaks instead to our captivation with the possibility of extraterrestrial life—a captivation exemplified by the well-known catchphrase associated with *The X-Files*’ alien-hunting Fox Mulder: “I want to believe.”

Finally, Barnett uses the body of her article to leave the story open for interpretation. She introduces our visitor as a “small, fast-moving object”, and while this is indeed an accurate description according to NASA’s press release (Agle et al.), emphasizing these qualities also strengthens the association between ‘Oumuamua and our traditional conception of a UFO darting across the sky. And while Agle et al. describe the object as an “asteroid -- or perhaps a comet”, Barnett implies other possibilities, questioning: “Is [it] a comet? An asteroid? NASA's not sure.” Barnett repeatedly emphasizes that the object is the “first of its kind” and fails to explain clearly

that this is not because ‘Oumuamua is fundamentally unlike an asteroid or comet, but because its trajectory marks it as foreign to our solar system (Agle et al.). Barnett is careful to remain logically consistent with the real story as well as the false one, providing her with an alibi should she be accused of deception and preserving CNN’s reputation as a generally honest and trustworthy source of news—a reputation that allows the network to continue peddling clickbait and dubious reports. This established credibility further strengthens the emotional appeal of Barnett’s narrative: not only are we willing to entertain the possibility of alien visitors because we want to, but also because the story originates from a supposedly reliable source. We can suspend our disbelief much more readily than we could if the story had come from an obscure news outlet or from a known source of fake news.

As a result of Barnett’s deceptive report and others like it, we were robbed of the ability to fully benefit from ‘Oumuamua’s discovery. According to Matija Cuk, an astronomer at the SETI Institute, ‘Oumuamua’s elongated proportions and tumbling motion defied our expectations of interstellar objects, providing valuable insight into the nature of other solar systems. University of Hertfordshire researcher Fabo Feng argues that ‘Oumuamua’s characteristics shed light on the formation of stars and planets and the amount of mass their debris contributes to our galaxy. Studying ‘Oumuamua may even help us prepare for possible collisions with other interstellar objects and potentially avoid “catastrophic events such as mass extinctions” (Feng). Had it been accurately reported, the story of ‘Oumuamua would have allowed a much greater segment of the population to learn about these discoveries and gain a deeper appreciation for our galaxy, while scientists studying ‘Oumuamua could have enjoyed increased support for public funding as well as the opportunity to attract new students to astronomy and related fields. Instead, many people were left speculating about aliens and

debating the veracity of the recent reports, as demonstrated by the reactions to CNN's *Facebook* post on the "mysterious object" (CNN). Furthermore, those who wished to report on the real story were first tasked with debunking the false narrative, as evidenced by headlines such as *Wired UK*'s "It isn't an alien spacecraft, but we should still study 'Oumuamua" (Beall). Real science journalists were forced to treat 'Oumuamua as something of a disappointment and defend its actual significance from comparison with an outlandish alternative for which there was never any evidence in the first place.

The mainstream media's reaction to the discovery of 'Oumuamua illustrates Zimdars' warnings about the prevalence of fake online news. We have begun to expect fantasy and wish fulfillment over substantive insights into the nature of our own universe. The public understanding of science is at risk of becoming little more than a modern secular mythology masquerading as the result of empirical investigation. In response, Zimdars and others strive to educate Internet users on separating fact from fiction. Certainly, skepticism plays a critical role in combating fake news—yet the situation calls for systemic changes. Clickbait in particular is the natural consequence of an online ecosystem dominated by advertising, not to mention social media's exploitation of the human desire for attention and approval, resulting in a widespread addiction to likes, shares, and followers. We need to fundamentally reevaluate our financial and technological models if we want to put an end to the spread of fake news. In doing so, we will liberate our time and attention from lies and misdirection and strengthen legitimate relationships between the scientific community and the general population, allowing us to better cooperate in order to support real discoveries and innovations.

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EXCELLENT!!!! Best of the batch. ☺

Fake News Essay Rubric:

1. Article Selection - fails CRAAP test and exemplifies Zimdars' Classification - 10/10
2. Article Contextualization: Why important? Originated? - 10/10
3. Thesis: conclusion, premise, significance. - 20/20
4. Analysis of Rhetoric - 20/20
5. Two secondary sources - 10/10
6. Strong Conclusion - 10/10
7. Formatting and MLA - 10/10
8. Editing/Grammar: - 10/10

Total Grade: 100/100