

scholarly audiences need. That said, online news providers and journalists can boost their ethos by linking to their sources.

Guided Reading | News Article

The *New York Times*, which has been publishing since 1851, is considered highly accurate and is regarded as one of the most authoritative newspapers available. Its Web site and print circulation make it one of the most widely read newspapers in the world. It has won over one hundred Pulitzer Prizes, the most prestigious reporting award given. Nicholas Wade is a science reporter for *The New York Times*. He has written several science books, including 2009's *The Faith Instinct*, about the scientific basis of religious faith. The following article appeared in the Science section of the *Times*; the online version includes links to sources, infographics, and video that support the text.

Nicholas Wade, *For Cats, a Big Gulp with a Touch of the Tongue*

RHETORICAL SITUATION & CHOICES

PURPOSE

As a science news reporter, Wade aims to explain recent findings about how cats drink.

AUDIENCE Wade's audience includes general news readers, online readers, *Times* fans, animal lovers, and science enthusiasts. Also, as a science journalist, Wade may have his own following, so some readers may be his fans.

RHETORICAL APPEALS

Wade appeals to readers' sense of **ethos** through specific references to the work of four scientists who published an article in the journal *Science*. He appeals to **pathos** by using humor, especially at the start of the article. He begins with a tongue-in-cheek statement: "It has taken four

◀ What is the composer, Nicholas Wade, doing?

It has taken four highly qualified engineers and a bunch of integral equations to figure it out, but we now know how cats drink. The answer is: very elegantly, and not at all the way you might suppose.

Cats lap water so fast that the human eye cannot follow what is happening, which is why the trick had apparently escaped attention until now. With the use of high-speed photography, the neatness of the feline solution has been captured.

The act of drinking may seem like no big deal for anyone who can fully close his mouth to create suction, as people can. But the various species that cannot do so—and that includes most adult carnivores—must resort to some other mechanism.

Dog owners are familiar with the unseemly lapping noises that ensue when their thirsty pet meets a bowl of water. The dog is thrusting its tongue into the water, forming a crude cup with it and hauling the liquid back into the muzzle.

Cats, both big and little, are so much classier, according to new research by Pedro M. Reis and Roman Stocker of the Massachusetts Institute of Technology, joined by Sunghwan Jung of the Virginia Polytechnic Institute and Jeffrey M. Aristoff of Princeton.

Writing in the Thursday issue of *Science*, the four engineers report that the cat's lapping method depends on its

GENRE CONVENTIONS

How do I know this is a news article?

ELEMENTS OF THE GENRE

Is well researched and accurate: Wade read a research report in *Science* and talked to the scientists who wrote it. He found out how the research was inspired, funded, and conducted.

Opens with a lead paragraph: This paragraph sets up the article's subject: "[W]e now know how cats drink."

Presents information in order of importance: Wade begins with the researchers' findings: They discovered how cats drink, something previously unknown. "Cats lap water so fast that the human eye cannot follow what is happening, which is why the trick had apparently escaped attention until now." Wade ends with

highly qualified engineers and a bunch of integral equations to figure it out."

He also appeals to readers' sense of logic (logos) by beginning with general statements about cats drinking water and then continuing with more specific details.

MODES & MEDIA

Mode = written, visual, and video:

Wade shares most information in words, but photos of Cutta Cutta and a video in the piece as it was published in the *Times* illustrate his most important points (note: scroll down to the video box on the *Times* page). Some news sites, such as *The Huffington Post*, present articles as videos that are introduced by a small amount of text.

Medium = digital:

Wade's article was published at *The New York Times* online and also in print. Among the advantages of the digital version of the article are the addition of video and the links to other information, including the researched article that was Wade's source.

instinctive ability to calculate the point at which gravitational force would overcome inertia and cause the water to fall.

What happens is that the cat darts its tongue, curving the upper side downward so that the tip lightly touches the surface of the water.

The tongue is then pulled upward at high speed, drawing a column of water behind it.

Just at the moment that gravity finally overcomes the rush of the water and starts to pull the column down—snap! The cat's jaws have closed over the jet of water and swallowed it.

The cat laps four times a second—too fast for the human eye to see anything but a blur—and its tongue moves at a speed of one meter per second.

Being engineers, the cat-lapping team next tested its findings with a machine that mimicked a cat's tongue, using a glass disk at the end of a piston to serve as the tip. After calculating things like the Froude number and the aspect ratio, they were able to figure out how fast a cat should lap to get the greatest amount of water into its mouth. The cats, it turns out, were way ahead of them—they lap at just that speed.

To the scientific mind, the next obvious question is whether bigger cats should lap at different speeds.

The engineers worked out a formula: the lapping frequency should be the weight of the cat species, raised to the power of minus one-sixth and multiplied by 4.6. They then made friends with a curator at Zoo New England, the nonprofit group that operates the Franklin Park Zoo in Boston and the Stone Zoo in Stoneham, Mass., who let them videotape his big cats. Lions, leopards, jaguars and ocelots turned out to lap at the speeds predicted by the engineers.

The animal who inspired this exercise of the engineer's art is a black cat named Cutta Cutta, who belongs to Dr. Stocker and his family. Cutta Cutta's name comes from the word for "many stars" in Jawoyn, a language of the Australian aborigines.

Dr. Stocker's day job at M.I.T. is applying physics to biological problems, like how plankton move in the ocean. "Three and a half years ago, I was watching Cutta Cutta lap over breakfast," Dr. Stocker said. Naturally, he wondered what hydrodynamic problems the cat might be solving. He consulted Dr. Reis, an expert in fluid mechanics, and the study was under way.

At first, Dr. Stocker and his colleagues assumed that the raspy hairs on a cat's tongue, so useful for grooming, must also be involved in drawing water into its mouth. But the tip

information on how the research was funded, something fewer readers will be interested in.

Includes quotations to personalize the information:

The quote from Dr. Stocker shows what inspired his research: "Three and a half years ago, I was watching Cutta Cutta lap over breakfast."

Uses short paragraphs to hold readers' attention.

STYLE

Neutral perspective, no opinions: Wade doesn't indicate his personal opinion about how cats drink.

Objective, third-person voice:

Wade reports what researchers discovered, leaving himself out of the article. Though he may be a dog owner himself, instead of writing "My dog," he writes, "Dog owners are familiar. . . ."

Just enough detail for the general reader:

Wade relates relevant details precisely, such as the formula used to calculate the drinking speed of cats: "The lapping frequency should be the weight of the cat species, raised to the power of minus one-sixth and multiplied by 4.6."

(Continues on next page)

of the tongue, which is smooth, turned out to be all that was needed.

The project required no financing. The robot that mimicked the cat's tongue was built for an experiment on the International Space Station, and the engineers simply borrowed it from a neighboring lab.

Note from editors: Explore the article and multimedia in their original published form on nytimes.com

Credit: Nicolas Wade, "For Cats, a Big Gulp with a Touch of the Tongue."
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the headline, which adds to his **ethos**.

Friendly typeface: *The New York Times* online uses a clean Georgia serif font designed specifically for easy screen reading.

Columns and chunking: *The Times* divides its Web page into columns. In this case the content and images are in one area; advertising is on the right.

Images and multimedia: A photo of Cutta Cutta gives readers a visual of the cat that inspired the research, and a series of photos shows how cats drink. A video features the researchers explaining why they decided to study cats drinking.

SOURCES

Sources are acknowledged.

Wade and the *Times* use hyperlinks to acknowledge sources. The names of the four engineers who wrote the report on cats are linked so readers can learn more about them. Linking to sources further conveys Wade's reliability and objectivity.

DESIGN

Appealing headline:

The title interests readers and conveys the gist of the article in a few words. Also, the page presents the newspaper's title, the name of the section, and the date of publication.

Byline: As published in the *Times*, Wade's name (rather than "staff writer") appears under

QUESTION

RHETORICAL

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QUESTIONS | Analyzing Wade's News Article

RHETORICAL SITUATION & CHOICES

1. **Purpose.** What is Wade's main purpose in writing this article? What are some of his secondary purposes? Identify passages in the article where these purposes are apparent.
2. **Purpose.** Notice how Wade uses a slightly humorous title for his science- and research-based article. Why does he do this?
3. **Audience.** How does Wade appeal to people who are not cat lovers?
4. **Rhetorical appeals.** The online version of Wade's article includes hyperlinks that connect readers with additional information, including a researched article in *Science* and the biographical profiles of the scientists who wrote it, which contributes to the ethos of Wade and his article. How else does Wade convey a sense of ethos?
5. **Rhetorical appeals.** Cats and kittens can be extremely cute, and there are many online videos devoted to celebrating how adorable they can be. How does Wade approach the subject from a different angle? Are there any spots where Wade emphasizes their cuteness? If so, where—and to what end?

GENRE CONVENTIONS

6. **Modes & media.** Do you read news primarily online, or do you read print newspapers? Why?
7. **Elements of the genre.** How does the lead paragraph set the stage for the rest of the article?
8. **Style.** How does Wade convey scientific information in a way that a general audience can understand? If possible, watch the video embedded in the article. How does its content connect with Wade's article? What stylistic differences, if any, do you see between Wade's writing and the voice-over of the video?
9. **Design.** Notice that the images and video are neatly lined up on the left side of the article rather than interspersed within the article where they are mentioned. Why did the designers at *The New York Times* lay them out this way?
10. **Sources.** Make a list of all the sources Nicholas Wade consulted while writing this article. Are there any sources that surprise you? How can you categorize the sources? Are they primary? Secondary? Tertiary? (See Chapter 13 for support with sources.)

Guided Reading | Editorial

When she wrote this editorial, Grecia Sanchez was a student double-majoring in Philosophy and Multimedia Journalism at the University of Texas at El Paso. Her career goal was to work for a newspaper promoting ideas about social humanities. This opinion piece was published in *The Prospector*, the University of Texas at El Paso's student newspaper. Sanchez was a staff reporter for *The Prospector*. This editorial was published on September 13, 2016, and filed under the "Opinion" section of the site.

Grecia Sanchez, ¿Es que acaso soy hispana?

RHETORICAL SITUATION & CHOICES

PURPOSE

Sanchez wants to convince readers that it should be up to individuals to decide how they want to identify their race or ethnicity.

AUDIENCE

Sanchez is writing for a college newspaper, so she knows her readers are college students. Her university is a Hispanic Serving Institution, which means that at least 25 percent of its students are Hispanic, so she knows that many of the paper's readers will be interested in her topic.

RHETORICAL APPEALS

Sanchez establishes her **ethos** by sharing that she was born in Mexico and that her first language was Spanish. She appeals to **logos** by presenting facts about the history of terms like *Latino*, *Hispanic*, and *Chicano*.

MODES & MEDIA

Mode = written: Most editorials and opinion pieces are

GENRE CONVENTIONS

◀ What is the composer, Grecia Sanchez, doing?

Grecia Sanchez, Staff Reporter
September 13, 2016
Filed under Opinion

Defining identity at an adolescent age can be a challenge, especially to those who are constantly interacting with a different culture than their own.

I was born and raised in Ciudad Juárez, Mexico. My first language is Spanish and my only label in Juárez was that of a Mexican girl. I only had to deal with one nationality and one term to define myself. I didn't realize that just across the border I was defined as something more than just Mexican.

My struggle began at the time I was applying to UTEP. Among the documents I had to deliver for my admission process was a requirement for a meningitis vaccine. I remember going to the pharmacy and having to fill out this form with the question "How do you identify yourself?" It even had optional answers showing Hispanic/Latino, Latinx, Chicano, Asian American, African American, among others.

The overall experience of it was overwhelming. I had to ask the pharmacist to define these terms for me because I had literally no idea what all of these meant. At the end, I just put "Mexican" with my own handwriting in the "Other" space.

Many Mexican students can relate to my experience since we are constantly labeled as Hispanic or Latino students, and though many of us think these terms are the same thing, in reality, they have differences regarding cultural, historical, political and social contexts.

According to the Pais Latino Web site, the term "Hispano" is used for all the people who come from countries that were once conquered by Hispania, or España (using modern

How do I know this is an opinion piece?

ELEMENTS OF THE GENRE

Is clearly presented as opinion writing:

Throughout her piece, Sanchez often asserts her opinions. For example, she says, "I shouldn't be pushed to decide," "one word invented by a large group of disrespectful people," and "it is important for other people to think about who they are."

Is concisely written:

Sanchez's sentences and language clearly convey her points. She uses only enough information to support her opinions. Although she has more paragraphs than one might typically see in an opinion piece, her paragraphs are short and follow journalistic conventions.

Invites readers to respond:

In her closing statement, Sanchez asks her readers to "think about who they are and which term they identify with the most."

written or audio pieces. Words are vital to editorialists or opinion columnists if they want to make their point because the specificity and clarity of the writer's position is so important.

Medium = digital:

The column is available online, and at the bottom there's an option for a print-friendly version, which is formatted specifically to be printed on a standard 8.5" x 11" sheet of paper.

terminology). These countries include all the American countries from Mexico all the way down to South America, with the exception of Brazil, since it was conquered by Portugal.

The U.S. Census Bureau imposed the term in 1980 to define the people who would be later called Mexican Americans, unlike the term "Latino," which refers to the geography of Latin America and its inhabitants. This is used for people belonging to countries where the Romance languages are spoken (Spanish, Portuguese and French).

Both of these terms are politically and socially correct to use, as long as one has its definition and correct context in mind. However, Chicano is often used to depict Mexican Americans. It describes those who have Mexican heritage, and although it is a term that is recently accepted nowadays, there are still people who think of this term as a disrespectful one.

Alongside the LGBT movement in recent years, the term "Latinx" has been introduced into our society to refer to the gender-neutral alternative for Latino, Latina and Latin@. According to the Huffington Post's Latino Voices article, "Why People are Using the Term Latinx," it is used as an inclusive term for intersecting identities of Latin American descendants.

Now that I know the differences between these words, I honestly do not consider them as part of my identity. I know I can be considered Hispana because I speak Spanish and I come from Mexico, which was conquered by España during colonial American times. I realize I can be a Latina because I belong to a Latin American country and I speak one of the Romance languages, and I also acknowledge I can be called Chicana because I have Mexican ascendancy. But neither of these terms define me because of the simple fact that I was born and raised in Mexico.

Above all the differences, I am Mexican and I believe I shouldn't be pushed to decide whether I am Chicana, but not a Latina, or that I am Latinx, but not Hispanic; I am just a Mexican girl. I've heard that a lot of these terms were introduced by the U.S. government, which was driven by racism and disrespectful jokes toward Mexicans. This is another reason why I do not wish to recognize myself as one word invented by a large group of disrespectful people.

Although I do not identify myself with those terms, I do feel it is important for other people to think about who they are and which term they identify with the most, if they do at all. It is an imperative for young people to acknowledge themselves for who and what they are, according to their own personal opinions.

Note from editors: ¿Es que acaso soy hispana? translates to "Is it that I am Hispanic?"

STYLE

Specific facts used as support: Sanchez provides details from the U.S. Census Bureau and the Pais Latino Web site.

Personal, informal tone: Sanchez writes, "I just put 'Mexican' with my own handwriting in the 'Other' space."

DESIGN

Clear, interesting headline: The headline "¿Es que acaso soy hispana?" immediately signals that the subject of the opinion piece will relate to Hispanic identity.

Byline, date of publication, and type of article at top.

SOURCES

Sanchez refers to specific sources (Pais Latino Web site, U.S. Census Bureau, and *Huffington Post*). She also uses her own experiences throughout to help support her opinions.

Credit: From *The Prosector*, September 13, 2016. Copyright © 2016 by the University of Texas at El Paso. Used with permission.

QUESTIONS | Analyzing Sanchez's Editorial

RHETORICAL SITUATION & CHOICES

1. **Purpose.** Does Sanchez convince you that individuals should be able to make their own choices about their racial and ethnic identity? Why or why not?
2. **Audience.** How do you think a Caucasian person whose family has lived in the United States for many generations might respond to Sanchez's piece?
3. **Rhetorical appeals.** How effective do you think Sanchez's references to the origins of terms like *Hispanic*, *Latino*, and *Chicano* are?
4. **Rhetorical appeals.** How does Sanchez make her case? How does she appeal to her audience using ethos?
5. **Rhetorical appeals.** To what extent does Sanchez come across as authoritative and knowledgeable? What does she do to convince you that she is authoritative and knowledgeable, or alternatively, what does she do that makes you question her authority or knowledge?

GENRE CONVENTIONS

6. **Modes & media.** Imagine that Sanchez had included a map of Central and South America with each country labeled with the different terms the U.S. Census Bureau uses to identify people from that country. How would the addition of this image add to or detract from the effectiveness of this opinion piece?
7. **Elements of the genre.** Sanchez's piece doesn't have a clear, concise statement of her position until the very end. Where did you feel that you had a clear sense of her position? Why there? How would you characterize the tone of Sanchez's piece? How does it affect you as a reader?
8. **Style.** Would you consider Sanchez's language inflammatory? Why or why not?
9. **Style.** How does the fact that the title is in Spanish affect you? Do you think using Spanish for the title is appropriate for her subject and audience? Why or why not?
10. **Design.** If you go online to the piece, there is a button at the bottom to make the article print-friendly. How do the additional options benefit the audience?
11. **Sources.** While Sanchez does mention other sources, most of her piece relies on her own experiences as evidence. Are there areas where she might include more external sources to help convince the reader? What types of sources might help strengthen her position?

Thinking of

RHETORICAL

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CHECKLIST | Drafting an Editorial or Opinion Piece

Thinking of writing an editorial? Ask yourself the following questions.

RHETORICAL SITUATION & CHOICES

- Purpose.** What is my purpose? And what do I want to persuade others to think or do? Do I want readers to see things from a different perspective? To take action? Do I want them to completely change their minds on an issue? How feasible is it to try to change a person's mind?
- Audience.** Who am I trying to persuade? What are my audience's concerns about the issue I'm writing about? What do they fear? What is their stake in the issue (what do they personally have to risk losing if they do what I want)?
- Rhetorical appeals.** How will I establish myself as reasonable and authoritative on this issue? How can I use organization to appeal to my audience's sense of logos? Will my audience respond to emotional appeals or will I seem manipulative if I appeal to pathos?
- Modes & media.** Will I use written words or audio or video to convey my point? Based on the audience I have in mind—are they more likely to read or listen to an editorial in print, on the radio, or on the Internet?

GENRE CONVENTIONS

- Elements of the genre.** How can I make it clear that I'm writing an opinion piece? How can I get my audience's attention immediately and show them how important and relevant this issue is to their lives? Which potential objections and counterarguments should I address? How can I make the closing of my editorial memorable?
- Style.** Would it help to support my case by bringing in quotations from experts? Are there analogies that I could use that would appeal to my readers? What types of rhetorical questions would be most compelling for my editorial? How will I keep my language persuasive yet friendly?
- Design.** Do I want to design a heading or logo for my column to identify myself as the author? How can I use a heading, logo, or other design element to develop my ethos?
- Sources.** What kinds of sources will be most useful and most interesting and persuasive to my audience? How might I bring in sources to address potential objections and opposing arguments?

PRACTICE

Writing to Persuade Fellow Citizens

Think about your position on an issue related to an aspect of identity, such as religion, sexual orientation, class, or ethnicity. Brainstorm a list of reasons you hold the position you do, and then consider the reasons someone might take a position different from yours. You might want to do additional research so that you can bring in and respond to the perspectives of others. Then combine your research and ideas into an editorial or opinion piece that convinces your audience that your position is a valid one.