

PART I: BACKGROUND

Title: Unconventional lessons in logic.

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Discipline or Field: Public Speaking, Persuasion.

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Course Name: Fundamentals of Speech.

Course Description: The course examines the theory and practice of communicating in interpersonal and public speaking settings. It is a required course for all students graduating from the University Of Wisconsin-Oshkosh. It is a 100 level class with an average enrollment of twenty-seven students. Students are primarily freshmen with a small number of sophomores, juniors and seniors completing the mix. The first research lesson was conducted with 28 students during the first half of a weekly 3-hour evening class. The second research lesson was conducted with twenty-seven students during a mid-morning 90 minute class. In both cases, students sat in a medium size classroom with tables and comfortable chairs. Equipment available in the classroom included an overhead projector, whiteboard as well as a computer and the corresponding equipment necessary to project PowerPoint slides.

Executive Summary: Three colleagues who teach the basic speech course at the same university found themselves at the same Lesson Study seminar in the spring of 2006 asking the question: Why aren't my students' persuasive speeches very persuasive? The answer was the students did not understand the importance of reasoning, or logos, in a persuasive argument. This report explores the systematic process taken to achieve the following short-term lesson study goal: to develop students' abilities to effectively construct a convincing and ethical argument for a persuasive speech that contains a well-articulated claim/problem and valid and reliable evidence. The specific learning goals for the lesson include the following: 1) Define and identify the categories of reasoning as they pertain to persuasion. 2) Name and identify the different types of fallacies associated with the categories of reasoning. 3) Integrate this knowledge in order to critically assess persuasive messages in printed media and to make a choice based on reasoned argument, on the validity and reliability of the evidence. 4) Apply this knowledge to effectively construct a convincing persuasive speech. After developing new lecture material and an article analysis activity to allow students to reflect on how persuasion works, an improvement was witnessed in the persuasiveness of their students' speeches. An unforeseen benefit of the Lesson study was that these colleagues gained a better understanding of not only the subject matter and how their students learn, but of the importance of collegiality and lesson sharing.

PART II: THE LESSON

How to Teach the Lesson

Aristotle believed there were three elements necessary for persuasion: ethos, pathos and logos. Discuss ethos and pathos prior to this lesson or after the completion of the lesson. Also prior to this lesson, discuss supporting materials/evidence.

Pre-lesson:

For our first research lesson, we agreed upon a topic we felt would be suitable for the lesson study. We decided on the health care issue in the United States. In particular, the pros and cons of universal health care. After looking at many different articles, we selected four articles – two pro and two con – for our pre-test and post-test assignment. Students were required to analyze and complete worksheets for one set of pro and con articles prior to the research lesson. After the lesson, they analyzed and completed worksheets for the remaining set of pro and con articles. We chose to have this be a graded assignment. After reviewing the results, we decided, for the second research lesson, to use the same set of articles for the pre and post test assignments. We believed we would get a better gauge of their learning if we compared the same articles.

For our second research lesson, we solicited input from students as to a topic they might be interested in reading or researching. We did this because we felt students, given we believed many were still covered under their parents health insurance plans, had little experience with health care issues. By seeking their input on topics, we believed the lesson would be more effective. Surprisingly enough, universal health care received the majority of the votes. As other instructors give the lesson, they may chose to use the articles we did or find articles of interest given their own interests or those of their students. The articles (see Appendix for full-text) we used were

- *A “right” to health care?* by Michael F. Canon, National Review, June 29, 2007
- *Compared to other nations, our system falls short* by David Hoyde, Appleton Post-Crescent (a local newspaper), September 27, 2007, p. C1, C3

Therefore, the first step in the lesson is to find two articles that contain a persuasive message. After selecting the articles, complete the worksheets to use as a tool for grading students’ worksheets and for discussion. Secondly, articles need to be distributed to students. For our lesson study, we posted them on our D2L course website. However, posting through a library’s electronic reserve, via a link directly to the article or copied and given to students in class are also options. We also used the course website to post the worksheets they would use to analyze the articles.

The lesson prior to the Logos lesson, assign students the textbook chapters pertinent to the lesson, the articles to read and the worksheets to complete (as homework). A total of 30 points (15 per article) was available for this pre-test assignment. Completed worksheets are due the day of the Logos lesson.

- For the first research lesson (Spring 2007), we used Chapter 16 in Stephen Lucas’ book, *The art of public speaking* (8th ed.).
- In the Fall of 2007, the department changed the textbook used in the Fundamentals of Speech course. Therefore, for the second research lesson, we used Chapter 15 in David Zarefsky’s book, *Public speaking strategies for success* (5th ed.). However, we continued to use the Lucas chapter as well as assigning Chapter 5 from *Ancient rhetorics for contemporary students* (3rd ed.) by Sharon Crowley and Debra Hawhee. Both of these chapters were made available through the library’s eReserve site.
 - We added the additional readings because the first research lesson revealed there was still confusion about the concept. The additional readings, we believed, would provide another perspective and hopefully aid students’ understanding of logos.

Finally, a copy of the PowerPoint slides to be used in the lesson were also posted on D2L. The intent was that students could print it off and then add notes as the lecture progressed. In hindsight, they may have had too many *handouts*, which could have been confusing or distracting.

The Lesson: (see Appendix for detailed lecture notes)

After a brief introduction, which can include regular start of class activities such as attendance, handing in assignments, etc, the lesson begins with a discussion of the use of evidence in persuasion. This is followed by a discussion of the categories of reasoning. Students are given a handout with examples of the categories, which they can refer to and add additional notes from the lecture. Once this discussion is completed, students are given a short quiz to test their understanding of the different categories. Four statements that illustrate the categories of reasoning are provided and students identify each one.

The lesson then moves to a discussion of fallacies. The more common fallacies associated with the categories of reasoning are discussed and illustrated via the handout. Again, once this is completed, students are asked to identify the different fallacies based on the examples provided by the instructor. **Side note:** both the *Name the* activities can be quick in-class quizzes, graded or ungraded, but submitted to the instructor, after the correct answers have been identified, for review. Review may reveal common misconceptions that can be addressed in the next class.

It may be helpful to reassure students that confusion will lessen the more they study and use reasoning. Apart from that, having many different examples that illustrate the types of reasoning will be helpful. It is suggested examples be drawn from everyday examples such as TV commercials, magazine ads, articles (newspapers, magazines), and speech debates.

Post-lesson:

Collect the new worksheets. Discuss answers as a class once graded worksheets returned

Student Learning Goals

The short-term goal of the lesson was to develop students' abilities to effectively construct a convincing and ethical argument for a persuasive speech that had a well articulated claim/problem and valid and reliable evidence.

One of the goals of Fundamentals of Speech 96-111 is to introduce students to the concept of persuasive speaking. Persuasion can be a difficult concept to learn and sometimes teach in a short period of time. Although students may comprehend the concepts of persuasive discourse, there appears to be difficulty in applying that knowledge in order to analyze an argument, synthesize the outcome to formulate new information and then evaluate these new ideas making choices based on reasoned argument. Developing the lesson study would help students learn and instructors teach an introductory lesson on persuasion that addresses one of the three elements of persuasion: logos (logic or reasoning and evidence). The other two elements are pathos and ethos.

The goal of the Department of Communication is "to educate students to become reflective, adaptable, competent and ethical communicators ready to contribute to and transform..." Long-term, this lesson study meets that goal by promoting critical thinking and the ability to be competent communicators thus providing students with the ability to contribute to and transform their academic, professional and personal lives.

There were four lesson specific learning goals.

- 1) Define and identify the categories of reasoning as they pertain to persuasion.
- 2) Name and identify the different types of fallacies associated with the categories of reasoning.
- 3) Integrate this knowledge in order to critically assess persuasive messages in printed media and to make a choice based on reasoned argument, on the validity and reliability of the evidence.
- 4) Apply this knowledge to effectively construct a convincing persuasive speech.

How the Lesson is Intended to Work

Students first read chapters about logic from two or three texts. Then working alone, prior to the lesson, they analyze the two assigned articles to identify and give examples of the categories of reasoning used. In addition, they identify and name any fallacies found in the articles. An examination of the evidence (examples, testimony, and statistics) used to support the claim made in each article, combined with the aforementioned identifications, is used by the students to assess the persuasiveness of the article. The intent behind reading two or three explanations of argument before they read the articles is to improve students' understanding better than reading just one theory. Subsequently, the students hear a lecture and discussion on Aristotelian logic; then they reconsider the analyses questions in light of the new lecture information.

Hearing and seeing a lecture, and participating in discussions and activities allows the students to more easily grasp the information than by just reading it. Communicating through a variety of sensory channels should increase the number of students who can digest the content. Later, in class, the pair-share provides students with a way to share not only answers, but to explain the critical thinking processes used to reach them. Reaching a consensus on the answers increases students' understanding of reasoning while they actually practice arguing to persuade one another. The desired outcome is that students improve understanding and application of reason after they hear the lecture, test their knowledge with the in-class quiz activity and share information face-to-face. The post analysis takes into consideration how the students learned the material during the lecture. The intent of the post analysis is to have them re-analyze the articles given the added knowledge from the lesson. The knowledge and insight gained from the overall lesson is then applied to the development of their persuasive speeches. And, with any luck, the seed is planted for future analyses of persuasive messages.

PART III: THE STUDY

Approach

We collected evidence using the following methods:

1. Hard evidence, specific to this lesson study, collected before the lesson was nil. As stated earlier, the idea for the lesson study was a result of listening to poor student persuasive speeches by each of the members of the lesson study group.
2. *Filmed observation of students*: Before the research lesson was presented, students were briefed on what would transpire and asked to sign a form giving consent to be filmed. A videographer from the Media department at UWO was present for each lesson, and filmed during the entire presentation of the lesson. During the first research lesson, small group work was also tape-recorded and the department Coordinator transcribed these tapes. As small group work was not done in the second research lesson, there was no need for it to be taped-recorded. Additionally, the tapes did not prove to be helpful. The lesson study team was provided with a VHS tape and a DVD of the lesson.
3. *Written observations of students*: Two members of the lesson study team as well as two instructors from the Communication department were present to observe students during the second lesson. The observers used an observation guideline form, developed by the lesson study team, to record their responses. The observers were, primarily, situated at the back of the classroom, sitting next to students. This did not seem to be uncomfortable for students. After the lesson was completed, the observers meet to discuss the results.
4. *Pre- and post-lesson worksheets completed by students*: As previously explained, students analyzed two articles and completed worksheets prior to and after the lesson. To avoid the same confusion that occurred during the first research lesson, both articles were posted, via links, in the Links section of the course website on D2L (Desire2Learn).
5. *Student evaluations (One Minute paper)*: At the conclusion of the lesson, students wrote a One-Minute paper that answered two questions: Given the lesson, what was now more clear and what was still muddy?

Findings and Discussion

The short term goal of the lesson was to develop students' abilities to effectively construct a convincing and ethical argument for a persuasive speech that had a well articulated claim/problem and valid and reliable evidence. We see improvement in our students' abilities to apply reasoning in their persuasive speeches; therefore, we conclude our lesson is helpful in reaching this short-term goal.

Goal 1: Define and identify the categories of reasoning as they pertain to persuasion.

Students' abilities to identify and discuss the four categories of reasoning we presented improved somewhat, but not uniformly, after the lesson. Most all of them accurately applied persuasive terminology, and students' analyses of articles showed growth in critical thinking among some student groups.

Goal 2: Name and identify the different types of fallacies associated with the categories of reasoning.

The fallacy quiz showed that about 85% of students could accurately identify fallacies in logic after the lecture; most students recognized errors in reasoning, or fallacies, after the lesson

Goal 3: Integrate this knowledge in order to critically assess persuasive messages in printed media and to make a choice, based on reasoned argument, on the validity and reliability of the evidence.

The general results showed that most students accurately and consistently judged the quality of arguments and the validity of the evidence after they heard the lesson, but not before.

Goal 4: Apply this knowledge to effectively construct a convincing persuasive speech.

Students' abilities to construct logical arguments for persuasive speeches in subsequent class assignments improved generally, as well.

Overall, the lesson seemed to partially fulfill the goals we intended. Based on the *One-Minute Paper* that students wrote at the end of the lesson, some still have difficulty distinguishing between the types of reasoning, in particular inductive and deductive reasoning or between the different fallacies. However, there were no students who commented that neither reasoning nor fallacies were still unclear. The following are a sampling of comments from the *One-Minute Papers*:

"I understand the differences between each reasoning type better. When I did the article assignment, I was a little confused because some of the reasoning seemed very similar so it seemed like it could have been all of them. I also learned a lot about fallacies because I really had no idea what these were. I knew they were false notions, but I didn't know they had to do with the reasoning types. I still am a bit confused about the difference between inductive and deductive reasoning. Sometimes the way they are worded is confusing." [Comment: it is understandable that students find this confusing because if the wording in an argument that uses inductive reasoning is changed slightly, it can become deductive reasoning.]

"Most types of reasoning are a lot easier to understand. It makes the articles easier to understand (in the homework) and decide what the author used. I don't really understand reasoning by analogy. It's still confusing to me."

"I was a bit confused when trying to do the homework assignment. Today's lesson helped me to distinguish the different types of reasoning and fallacies. I'm still a little shaky with the 4 types of reasoning, but with a little practice, I'm sure I will be ok."

"I think I got a better understanding of most of the material that the teacher talked about. I now know what a fallacy actually is. I still have a doubt in my mind what reasoning is and a little more information would help for a better understanding."

"Before this class today, I wasn't aware of the several different types of reasoning and fallacies. I've used fallacies before when I never knew that I was using them. I still am not clear about all of the types of reasoning. Some seem like they can be used in more than one category."

The fact that, for many students, this is the first time hearing about reasoning and fallacies, it is understandable that they may still be confused. One 90-minute lesson cannot adequately address all the nuances of reasoning. The best that can be done is to 'plant a seed' that gets students thinking about the different types of reasoning and how, as individuals, we use these types in everyday life.

Most communication educators agree that persuasive argument remains the most difficult concept for students of the basic course to learn and apply. We agree that one lesson is unlikely to create a solid understanding of logic among most students. And one lesson cannot insure that the majority of students will apply logical analysis in judging persuasive statements or in the writing of persuasion. Our lesson only provided an overview, an introduction to the terminology and basic construction of logical arguments, a frame to support greater comprehension of persuasive techniques and their use in various circumstances.

At this point, we are recommending the following revisions to the lesson:

1. Ask students to write a One Minute paper at the start of the lesson in addition to the One minute paper at the end of the lesson. By doing this, students can make a cognitive connection between what they knew at the start of the lesson as compared to what they know at the end of the lesson.
2. Teach reasoning during one class period and fallacies during another class period. This allows for more discussion of reasoning, which seems to be the stumbling block for students.
3. Start with the Toulmin theory of argument and then discuss the four categories of reasoning. This will lay a basis for the subsequent discussion on reasoning.
4. Talk or incorporate reasoning and fallacies earlier in the semester. In this way, it is clear to students that fallacies are not just found in persuasion because in some respects, all information holds an element of persuasion.

References

- Crowley, Sharon & Hawhee, Debra. (2004). *Ancient Rhetorics for contemporary students*. (3rd ed.). Boston: Pearson Education, Inc.
- Jaffe, Ciella. (2004). *Public Speaking: Concepts and Skills for a Diverse Society*. Belmont, CA: Wadsworth.
- Lucas, S.E. (2004). *The art of public speaking*. (8th ed.). Boston: McGraw Hill.
- Zarefsky, David. (2007). *Public speaking strategies for success*. (5th ed.). Boston: Pearson Education, Inc.

Appendix

1. Lecture notes used for second research lesson. Notes may be adapted to suit another instructor.
2. Articles used for pre and post analysis.
3. Article analysis worksheet that was used by students for the pre and post article assignment with answers determined by lesson study group. If the worksheet is used, be sure to delete the answers before distributing to students.
4. Rubric developed and used to grade article analyses.
5. Observation evaluation form developed and used by peer evaluators.
6. Reasoning statements and fallacies used during *Name that* activity.

1. Lecture notes used

(Can include regular start of class activities such as attendance, handing in assignments, taking care of any housekeeping items.)

The final element that Aristotle believed was critical for persuasion was logos or logical proofs, which uses logic and reasoning as well as evidence.

- I. Human beings take pride in being rational individuals.
 - A. We seldom do anything without some real or imagined reason.
 1. A young boy, say a 7th or 8th grader, needs a new pair of running shoes. So, he and dad hop into the car and head to the mall. Being rational or logical individuals, they need reasons and evidence to decide which shoes to buy.
 - a. From dad's point of view, this means he needs to know how much they cost, how long will they last, is there a store nearby and will the store take a personal check?
 - b. The young boy is thinking does Michael Jordan approve of them, do all the other guys wear them and would that cute girl in Math class go out with me if I had 'em?
 2. So the evidence and logic you use in persuasive speaking depends upon your listeners.
 - a. If you can think the way they do, will have a stronger persuasive message – another reason why it is important to know your audience.
 - b. Ethos and pathos can persuade on their own but your message will be much stronger if you use logical proofs.
 - B. Aristotle called logical arguments logos, which translated from Greek, means *the word*.
 1. Using words effectively to communicate your arguments to your listeners is vital to persuading
 2. One way of doing this is to provide evidence and reasoning in support of your specific purpose or thesis statement or in other words rhetorical proof.
 3. By the end of today's lecture, you will be able to identify the categories of reasoning and the different types of fallacies associated with these categories. Taking this knowledge and adding it to what you learned in the assigned readings, you will be able to analyze persuasive messages, such as the articles you were assigned to analyze, to determine whether it is a sound and convincing argument. Only sound and convincing arguments should be used in your persuasive speeches.
- II. Evidence cannot be refuted or disproved.
 - A. Earlier in the semester we talked about 3 different kinds of evidence or supporting materials: statistics, testimony and examples.
 - B. In addition to these, text also discussed personal experience, common knowledge, observation and documents as others types of supporting material.
 - C. Statistics and examples are based on facts and the best support for any reason are facts.
 1. Metal is heavier than air, World War II ended in 1945, Doyle was re-elected, a picture of the Twin Towers being hit are facts – they can be verified.
 2. Persuasiveness can be maximized when both statistics and examples are used in combination.
 - D. Testimony is based on opinion.
 1. We often dismiss an argument with *"it's just your opinion"* but if a significant number of people share that opinion, it becomes difficult to dismiss as unimportant no matter how much we like or detest it.
 2. Opinions can be changed and people will generally adopt opinions of those they know and respect.
 3. We also change our opinions when we lose respect for those who hold them.
 4. If statistics and examples are not available or they are inconclusive, you can further support your conclusions with testimony.
 - E. As you research material for your speeches, keep these guidelines in mind.
 1. Use specific evidence by saying more than 10,000 students attend UWO instead of

- lots of people attend.
- 2. Use novel evidence because if the same old stuff isn't persuading me, then you need to present me with new information.
- 3. Use evidence from a credible source, which goes back to our discussion on research and websites.
- 4. And finally, make clear the point of your evidence.
 - a. Remember, the only message that counts is the one received.
 - b. If I can't figure out the point of your evidence and what it has to do with what you are claiming, then I'm not going to be persuaded.
- F. Evidence, of any kind, demonstrates some level of research and thought devoted to the topic. An audience always wants to know the basis of the opinion you are offering.

III. Reasoning is the process of drawing conclusions from your evidence. You want to make sure your reasoning is sound. In other words, it is reliable and convincing.

- A. Categories of reasoning: inductive, analogical, deductive and causal. Refer to handout as I discuss each category.
 - 1. Inductive reasoning or reasoning from specific instances, arrives at a general conclusion from specific instances or examples.
 - a. You are claiming that a conclusion is probably true based on a convincing number of examples.
 - i. Fred, the Australian stole my wallet. Thus, all Australians are thieves.
 - ii. Or, let's say I am trying to convince you that Hondas are reliable cars. I might try to do so by telling you that I have a 1994 Honda Civic with 140,000 miles on it. I also tell you that it has required very few trips to the repair shop other than routine maintenance. My brother has a Honda Accord and has driven it twice as long as any other car he has owned. My mom just returned from a 3000 mile road trip in her Honda Odyssey minivan which performed beautifully.
 - iii. Based on these specific examples, and reinforced by statistics from many other Honda owners, I ask you to agree that my general conclusion is probable: Hondas are reliable cars.
 - b. To ensure that you are using inductive reasoning soundly and convincingly, you might want to ask yourself these questions:
 - i. Are enough cases represented to justify the conclusion?
 - ii. Are the cases typical? Do they represent the average members of the population to which the generalizations are applied? Or, are they extreme cases that may show what could happen, but not what usually happens?
 - iii. Are the examples from the time under discussion, or are they out of date?
 - c. Using the examples on the previous slide, can we conclude that we have a logical argument?
 - i. In the Fred the Australian example, not really. Why not?
 - ii. For the second example, Hondas are reliable, perhaps. It is certainly stronger than the first example.
 - 2. A 2nd category of reasoning is analogical.
 - a. Here I would show how an unfamiliar idea, thing or situation is similar to something you already understand.
 - i. Example: New mandatory seatbelt laws that were enacted in Missouri saved lives; Kansas should also develop mandatory seatbelt laws.
 - ii. There may be an error in the reasoning or a fallacy by using this kind of reasoning – what is good for the Missouri may not be good Kansas.
 - b. Again, test your argument by asking yourself these questions – is Kansas really like Missouri?
 - 3. Reasoning from a general statement or principle to reach a specific conclusion is called deductive reasoning.
 - a. It can be constructed as a 3-part argument that consists of a major

premise, a minor premise and a conclusion

- i. It is also known as a syllogism.
 - ii. The major premise is typically based on a rule, a law, principle or generalization and in order for the argument to be sound, each premise must be true and valid.
 - iii. Example:
 - Major: To be elected President of the United States a person must be at least 35 years of age.
 - Minor: George W Bush was elected President of the United States.
 - Conclusion: Therefore, George W Bush is at least 35 years of age.
 - iv. Next example:
 - Major: Everyone in class today received instructions for writing the essay.
 - Minor: Mandy was in class today.
 - Conclusion: Therefore, Mandy received instructions for writing the essay.
 - v. In the first example, the premise was based on a rule while in the 2nd example, it was based on a generalization.
- b. When you reason deductively, you rarely provide the entire syllogism in your argument. Instead you leave the listener to fill in the unstated premises. Aristotle called this an enthymeme.
- i. Married? He's a Catholic bishop! Here the major premise is *All Catholic bishops are unmarried*. The minor premise is *He is a Catholic bishop*.
Therefore, we can conclude that he is not married.
 - ii. Just Do It was an example used by Crowley & Hawhee. What might be the major and minor premises if the conclusion is Just do it? (In their ads, Nike usually has a picture of a successful athlete wearing their clothing. Tiger Woods, for example, wears Nike brand clothing. Tiger Woods is a successful golfer. So, if I want to be or feel successful, then I should go out and buy Nike clothing.
 - iii. We often say things like *Wow, that's great* or *Right, he's a guy, what do you expect*. We are using deductive reasoning but state only the conclusion. In the third example, we might make this statement after learning Marty is participating in a study abroad program in Africa. Based on some generalized information we have about study abroad programs, we say *What a great opportunity – she'll never be the same again!*
- c. To test for soundness, each premise must be true and valid and the conclusion follows the premise.
- i. In the previous examples: it is true that you need to be at least 35 years old to be elected president and it is true George W Bush was elected president. Thus, the conclusion that Mr. Bush is at least 35 years of age is sound.
 - ii. However, the example about Timothy McVeigh is not sound because even though McVeigh is a terrorist is true and valid, all terrorists are not Arab.
Therefore, the conclusion is not sound – there is a error in the reasoning.
4. You use causal reasoning when you relate two or more events in such a way as to conclude that one or more of the events probably caused the others.
- a. As with the other forms of reasoning, you need to test the soundness of your argument by asking yourself these questions.
 - i. Is there a real connection? Does one follow as a result of the first, or do the two events simply exist together in time?
 - ii. Is this the only cause? The most important cause? Or are there other

- factors?
iii. Is the cause strong enough for the effect?

NAME THAT REASONING: (Test students understanding of the 4 categories of reasoning. Have them work individually or in pairs and identify the reasoning used given the examples. See Appendix.)

1. Answers: inductive, analogical, deductive (enthymeme), causal
 2. As students answer, ask why he/she identified it as such.
- IV. Not all speakers trying to persuade you will use sound evidence and reasoning. They will try to develop arguments in ways that are irrelevant or inappropriate. In other words, there will be an error in the reasoning. We will take a look at some common fallacies associated with the different types of reasoning.
- A. hasty generalization - can occur when a speaker draws a conclusion based on too little evidence, or because of a bias or prejudice.
Examples: *While he was jogging, Jim suffered a heart attack and died. Jogging causes heart attacks.*
Microsoft is a sexist company. My friend Jane applied and she didn't get the job.
1. Think back to the test for inductive reasoning – are there enough examples or instances here to justify the conclusion? Are the cases typical or represent average members of the population? Or are these extreme or oddball cases?
 2. In each example, there is not enough evidence to make this a sound and convincing argument.
 3. We make hasty generalizations on a regular basis. Listen to your conversations with your friends and see if you can catch yourself doing this. Supporting statements may not always be there; you may only use the conclusion.
- B. Faulty analogy – is a comparison of two concepts that appear to be alike but in reality are different.
Example: *We license drivers; why shouldn't we license parents? You can't take to the road until you learn how to drive and pass a test. Aren't children more important than cars? How are cars like children? We are not comparing two like concepts.*
- C. The fallacy of false cause or Post hoc ergo propter hoc – which means *after this therefore because of this* – says that because one event follows another the two are related. This is not always true.
Example: *World War II was caused by the bombing of Pearl Harbor.* Ask if this is true. [many other events besides Pearl Harbor that lead up to WWII]
- D. Slippery slope fallacy assumes that taking a first step will lead inevitably to a second step and so on down the slope to disaster.
Example: *If we legalize marijuana, then more people would start to take crack and heroin, and we'd have to legalize those too. Before long, we'd have a nation full of drug addicts on welfare. Therefore, we can't legalize marijuana.*
1. In this example, we are suggesting that by doing one thing, it will lead to something else until we end up with a disaster.
 2. If I let my daughter have her ears pierced, then she will want to wear makeup and short skirts and before you know it, she's pregnant. A slippery slope. But just because I allow her to have her ears pierced doesn't necessarily mean the other things will happen. It is an error in reasoning.
- E. My kids used to say to me, *But mom, all the other kids moms are letting them go – why can't I?* And I replied that a) I was their mom and b) I couldn't imagine that absolutely everyone was going. My kids were using an error in reasoning or a bandwagon fallacy. This is an expression for thinking or doing something just because everybody else is. Speakers who use this fallacy often use the word everybody.

Example: *Come on, everybody's going out tonight.
Even though we can't afford to buy Abercrombie and Fitch, we'll buy it
because it's popular.*

- F. The either-or fallacy, sometimes referred to as a false dilemma, forces listeners to choose between two alternatives when more than two alternatives exist – ignores compromises or additional alternatives.
Examples; *America: love it or leave it.
Either you're pro choice or pro life.*
- G. When someone attacks a person rather than an argument, he or she is resorting to a fallacy called an ad hominem – also referred to as name-calling.
Example: *We can't possibly vote for Harry Smith because he cheated when he was in law school.
We can't trust the theories of Freud – he used cocaine.*
1. Don't dismiss an idea solely because you are against the person who presents it.
- H. The appeal to tradition defends the status quo and opposes change by arguing that old ways are superior to new ways – just because people practice a tradition says nothing about whether it is true.
Example: *We've always done it that way.
We always celebrate Christmas at Uncle Charlie's house.*
- I. A red herring fallacy occurs when someone attacks an issue by bringing up irrelevant facts or arguments. Speakers use a red herring when they want to distract an audience from certain issues.
Example: *How can we worry about the few cases of AIDS in Oshkosh when thousands of children are dying of starvation in Africa?*
- J. And finally, the appeal to misplaced authority uses well known people or celebrities to discuss issues not in their realm of expertise.
Example: *Since Tiger Woods endorses Buicks, they must be reliable cars.*

NAME THAT FALLACY: (Test students understanding of the different types of fallacies. Have them work individually or in pairs and identify the fallacy in the examples. See Appendix.)

Answers:

1. I don't see any reason ... bandwagon
2. It's ridiculous to worry ... red herring – terrorism is irrelevant to the question of protecting parks against pollution and overuse
3. If you let students – slippery slope
4. You're either with us – either-or
5. Don't buy a flat screen – hasty generalization
6. We don't need another – ad hominem
7. I'm not getting another flu shot – false cause or post hoc ergo propter hoc

- V. Persuasive speakers who provide logical proof (evidence and reasoning) for their arguments and who avoid logical fallacies heighten their chances for success with their listeners.
- A. You might use a single form of reasoning or a combination of types of reasoning.
1. In your speeches, your overall form of reasoning might be inductive reasoning given your 3 main points, but within those main points, you might use any of the other categories of reasoning.
2. The same is true of the articles you are analyzing.
- B. Whatever your choice of reasoning, you must remember that your argument is only as good as the evidence you use to support it.
- C. Fallacies are errors in reasoning.
1. They can be used to purposefully manipulate information.
2. They can be used without thinking, perhaps more out of habit.
3. But, they make an argument invalid.

- VI. For next class, re-read your articles given your understanding of reasoning and fallacies now. Complete a new worksheet for each article and submit at the start of the next class.
- VII. Before you leave, complete a *One Minute Paper* and hand it in on your way out. The objective is to monitor each student's understanding of the lesson on logos. Anything that is unclear can be addressed in the next class and/or can be used to revise the lesson.
- A. Answer these two questions – make sure your name is included:
Given this lesson,
1. What about reasoning and fallacies (logos) is now more clear for you?
 2. What is still confusing and unclear?

2. ARTICLES USED

A “Right” to Health Care?
Moore assumptions.

By Michael F. Cannon

Michael Moore, whose film *SiCKO* premieres this week, criticizes America’s health-care sector: “We’re the only country in the Western world that doesn’t believe it is a human right to provide free universal health coverage for every one of its citizens.”

Medical care can be as essential to survival as food. But does it follow that people have a right to medical care? Would creating a legally enforceable “right” to health care solve America’s health-care difficulties, as Moore supposes? Or would it add to them?

Suppose Congress created a legally enforceable right to health care. Even if such a measure could win approval, the debate would not and could not end there.

The first difficulty would be to define the scope of that right.

Do we have a right to preventive care? If so, health care spending (and taxes) would explode. Researcher J. D. Kleinke notes that if everyone followed government recommendations, the number of people taking preventive medications for hypertension, asthma, obesity, and high cholesterol would increase anywhere from 2- to 10- fold.

Should mammograms be available to women regardless of their likelihood of developing breast cancer? What about experimental treatments?

With the wide variety of tests and treatments, someone must decide where the right to health care ends, lest the nation be bankrupted. Whoever makes those decisions will wield enormous power over people’s health. Who should have that power? Most nations hand that power to unelected bureaucrats, who ration medical care — often by making even seriously ill patients wait for care.

A second and related difficulty is the question of who pays. By definition, a right to health care could not be conditioned on ability to pay. Delivering on that right would require additional taxes proportionate to the scope of that right.

A third difficulty is the incentives created by a right to health care. Patients would demand far more medical care because additional consumption would cost them little. Higher tax rates would discourage work and productivity, yielding less economic growth and wealth.

Pushing down the compensation of medical professionals would discourage many — and many of the brightest — from entering the field of medicine. Divorcing their compensation from the satisfaction of their patients would reduce the quality of care.

As in other nations, policymakers would discourage medical innovation because every new discovery puts them in the uncomfortable position of either increasing taxes or saying “no” to patients.

The paradox of a right to health care is that it discourages the very activities that help deliver on that right.

A fourth difficulty is how to deliver all this medical care. Declaring health care to be a right does nothing to solve the problem of getting the right resources to the right place at the right time.

Where are doctors most needed? Where will we place hospitals? Who will produce surgical tools? How much should they be paid? These decisions must be made through the political process.

Yet the political process does a poor job of keeping up with shifting needs. Worse, experience in other countries shows that those with political power would enjoy a greater right to health care by virtue of their ability to affect the allocation of medical resources.

Finally, if health care really were a fundamental human right, Americans presumably would have no greater a right to medical care than Indians or Haitians. If we truly believe that everyone has an equal right to health care, we would have to tax Americans to provide medical care to nearly every nation in the world.

The fundamental problem with the idea of a right to health care is that it turns the idea of individual rights on its head. Individual rights don't infringe on the rights of others. Smith's right to free speech takes nothing away from Jones. The only obligation Jones owes to Smith is not to interfere with Smith's exercise of her rights.

A right to health care, however, says that Smith has a right to Jones' labor. That turns the concept of individual rights from a shield into a sword.

The underlying goal of a legally enforceable right to health care is to provide quality medical care to the greatest number possible. Perversely, making health care a "right" would make that goal harder to attain.

Michael Moore might want to rework his script.

— *Michael F. Cannon is director of health policy studies at the libertarian Cato Institute (www.cato.org). This piece is adapted from the book Healthy Competition: What's Holding Back Health Care and How to Free It, which he co-authored.*

Our nation needs universal care

Compared to other nations, our system falls short

This year, more than 16 percent of the United States' gross national product will be spent on health care — more than in any other country. Health care costs are increasing by 6-8 percent annually, more than double the rate of inflation. And the number of uninsured still keeps climbing, approaching nearly 49 million people — including more than 8 million children.

The only way that the substantive benefits of modern medicine are available to any but the most wealthy among us is through insurance. And there is simply no denying that the U.S. health care insurance system is one that divides the country into "haves" and have nots."

Those of us fortunate enough to have good insurance (for about two-thirds of the 84 percent of us who have insurance, it's through an employer) can get just about anything that the current state of the medical arts has to offer, almost no matter the cost.

Of course, it's a different story for those with lesser plans, with pre-existing or chronic conditions, or without any insurance at all. The annual cost of an average plan for a family of four is around \$12,000; compare that with what a typical minimum wage employee working full-time earns in a year.

Even though the U.S. spends far more on health care than any other nation, several recent studies (including one by The Commonwealth Fund, and two published in Health Affairs), found that, when compared to Australia, Canada, Germany, New Zealand and the United Kingdom, the U.S. system was last or next-to-last on five key performance categories: access, efficiency, equity, healthy lives, and quality.

Of course, in addition to the better health care system performance their citizens enjoy, the systems in these and virtually all other developed nations also offer another clear and important advantage over the United States: universal health care.

In general, universal health care can be thought of as a system that provides for health insurance and access to most types of health care services for everyone in a particular geographic area, typically a state or nation.

It's clear that universal health care offers numerous benefits and advantages when compared to the current state of things in this country.

But fearful and selfish critics of universal health care declare that the sky will fall if we join most of the rest of the world and adopt a universal health care system.

It's hard to imagine how universal health care will be more expensive than the system that exists in the U.S. today, when it's already so bloated, expensive and highly fragmented.

Many parts of the system add cost without adding any real value, and estimates of the administrative costs of the current system range from 15-30 percent of the total cost.

There is no meaningful way to align the economic interests of the delivery system with those of consumers when the system is financially rewarded for treating patients, but not for enabling them to recover more quickly or for staying healthy. In fact, it can be argued that there's actually a disincentive to do these things!

Critics also are concerned that people might have to wait longer to see a doctor if there were universal health care. In fact, there are rather long wait lists for elective surgery in some other countries, but not in all.

Furthermore, according to Health Affairs, the procedures for which these waits do exist account for only 3 percent of U.S. health care spending.

In any case, implementing "open access" or same-day scheduling could lessen or do away with much of the waiting in any system. This type of process is already being used with much success by many Kaiser-Permanente, Mayo and Veterans Administration facilities.

Finally, I'd like to offer an example of successful universal health care that's already available in the United States. It's the VA system.

A 2003 study by the New England Journal of Medicine and another published in 2005 in the Annals of Internal Medicine found that the VA was by all measures superior in its delivery of care and services when compared to, respectively, private hospitals and managed-care hospitals.

In both cases, the researchers concluded that the superior performance of the VA was due largely to a number of factors, including a fully integrated system, a long-term relationship with its patients, an active embrace of new and advanced technology, quality incentives and salaried doctors.

As economist Robert Shapiro has observed, incomes rise over time, so people expect more medical care. Society ages, so people need more care. New technologies emerge, so people want more care. The current system is simply not sustainable.

The best way — in fact, perhaps the only way — to provide the care that people expect, need and want, and to provide with fairness and compassion, is through an integrated universal health care system.

If we expect nothing else from our government, shouldn't we expect that, at the very least, it takes an interest and an active role in the health and well-being of its citizens?

David Hovde: pcletters@postcrescent.com

About this column

We recently ran a package of columns by readers who are opposed to universal health care. Along with that, we asked readers who were in favor of universal health care to write in response. This package represents those responses, with a column by David Hovde of Appleton and excerpts of columns by other readers.

3. Article analysis worksheet to be completed by students and answers

Lesson Study Worksheet
Analysis of Articles

Name _____

Article Title: *Compared to other nations, our system falls short.*

Author: David Hoyde

Source/date: Appleton Post-Crescent, Sep 27, 07, p. C1, C3

Read the chapters assigned. Read the two articles assigned. Using the knowledge gained from the readings, complete a worksheet for each article. Use a separate sheet of paper, if needed, to answer thoroughly.

1. Briefly explain the goal or purpose of each article.
 - Purpose is to provide a rationale for why Americans should have access to universal health care (UHC).
 - o U.S. spends more tax dollars than any other nation on health care, but ranks 5th in performance compared to other industrialized nations. The economic interests of providers cannot supersede the welfare of the citizens.
2. LOGOS: Does the author rely **primarily** on 1. deductive reasoning from general principle to specific conclusion (major premise, minor premise, conclusion) 2. causal reasoning (if, then,) 3. inductive reasoning from examples to a general conclusion, or 4. analogical reasoning (reasoning by comparison?) Explain your choice. Then find and cite any additional examples of inductive, analogical, deductive and/or causal reasoning you find in the article. Explain how each example fits the type you named.
 - a. Relies primarily on inductive reasoning
 - i. Many examples of failure of private insurance to meet health care needs for all but the wealthy; the cost of health insurance remains prohibitive; many working Americans lack insurance; the poor lack insurance; cost of universal care will not be more expensive than current costs
 - ii. In end, author concludes, “The best way - in fact, perhaps the only way – to provide the care that people expect, need and want, and to provide with fairness and compassion, is through an integrated [UHC] system.”
 - b. Analogical – comparison to other countries
 - c. Deductive: syllogism
 - i. Major premise: Governments, at the very least, should take an active role in the health of citizens.
 - ii. Minor premise: Many citizens of the U.S. have no access to health care.
 - iii. Conclusion: The U.S. health care system should be run by the Government.
3. Can you find examples of fallacies? List and identify them.
 - a. Ad hominem: “Fearful and selfish critics of universal health care declare that the sky will fall”
 - b. Bandwagon: ... and “if we join most of the rest of the world and adopt ...”

- c. Hasty generalization: “It’s hard to imagine how UHC will be more expensive than the system that exists in the U.S. today, when it’s already so bloated, expensive and highly fragmented.”
 - d. Invalid analogy: comparing VA system to our private system as it serves fewer people
4. Support: List two or three examples of support in the article and identify the type of support (statistics, examples, testimony, explanation, anecdote.) Comment on the validity of each argument and indicate why you do or do not accept the sources as valid. Then consider whether or not the article is balanced and objective. If not, what bias do you see?
- Statistics:
 - Health care costs are increasing by 6-8 percent annually. (no source)
 - Although 84% of Americans have health insurance, not all plans cover enough services, and 16% of us remain without coverage at all. (no source)
 - Insurance for a family of four costs about \$12,000 per year, an unrealistic amount for minimum-wage workers. (no source)
 - Estimates of the administrative costs of the current system range from 15-30 percent of the total cost. (no source)
 - Statistics in article are thrown around with no sources so forced to accept at face value
 - Examples:
 - Recent studies ... “the commonwealth Fund and two published in Health Affairs”
 - “used with much success by many Kaiser-Permanente, Mayo and Veterans Administration facilities.”
 - VA system is offered as an example of a UHC system, in place, that works
 - Testimony:
 - according to Health Affairs
 - economist Robert Shapiro
 - “fearful and selfish critics of UHC declare ...” and “critics are also concerned ...” critics not identified
 - study by New England Journal of Medicine and another published in 2005 in the Annals of Internal Medicine found ...
 - liberal bias evident in article, but not balanced or objective
5. Finally decide if the arguments and evidence are or are not adequate to convince the critical reader.
- Not entirely – lack of support for statements breeds doubt; however, may prompt further exploration by a critical reader.

Article Title: *A “right” to health care?*

Author: Michael F. Cannon

Source/date: National Review, June 29, 2007

Read the chapters assigned. Read the two articles assigned. Using the knowledge gained from the readings, complete a worksheet for each article. Use a separate sheet of paper, if needed, to answer thoroughly.

6. Briefly explain the goal or purpose of each article.
 - To convince readers that Americans don't have a fundamental right to health care. If government were to become involved in providing health care, the cost would bankrupt our nation.

7. LOGOS: Does the author rely **primarily** on 1. deductive reasoning from general principle to specific conclusion (major premise, minor premise, conclusion) 2. causal reasoning (if, then,) 3. inductive reasoning from examples to a general conclusion, or 4. analogical reasoning (reasoning by comparison?) Explain your choice. Then find and cite any additional examples of inductive, analogical, deductive and/or causal reasoning you find in the article. Explain how each example fits the type you named.
 - a. Inductive reasoning is primarily used. He raises a question at the beginning of the article [... people have a right to medical care? Would creating a legally enforceable “right” to health care solve American’s health-care difficulties ... Or would it add to them?] and then uses 5 examples of problems that may come about to arrive at the conclusion.
 - i. Define the scope of “right” to health care – could result in taxes exploding, increase in number of people taking medications and mammograms being available to those with no risk of breast cancer leading to a nation going bankrupt
 - ii. Who pays for health care which could result in additional taxes
 - iii. Incentives created by a “right” to health care – higher taxes = less work and productivity = less economic growth. Medical professions entering the field would decrease; quality of care will fall with compensation; medical innovation will decrease.
 - iv. Just because we have a “right” to health care does not mean we will have the doctors, hospitals, surgical tools. If left up to “political process,” then may not be able to keep up with the ability to deliver.
 - v. Given the “right,” then Americans would be need to be taxed in order to care for the world.
 - Causal reasoning used with Cannon’s “if then” construction. Para. 5 provides an example: “Do we have a right to preventative care? If so, health care spending (and taxes) would explode.” Para. 8, 9, 10 and 12 are also examples of causal reasoning.

8. Can you find examples of fallacies? List and identify them.
 - False cause – see examples of causal reasoning

- Hasty generalizations throughout
 - o Para 5 is an example of a hasty generalization, as well as false cause
 - o The evidence saying that people taking preventative medications for various diseases falls short
 - Slippery slope throughout
 - o Implementing will lead to disaster
 - o Evident on p. 2 where Cannon states, “Finally, if health care really were a fundamental human right, Americans presumably would have no greater a right to medical care than Indians or Haitians. If we truly believe that everyone has an equal right to health care, we would have to tax Americans to provide medical care to nearly every nation in the world.”
 - Either/or (p.1) – If we increase taxes for UHC, we cannot support innovative research.
 - Faulty analogy (p.2) – comparing free speech to right to health care – shield (protection) vs sword (harm)
9. Support: List two or three examples of support in the article and identify the type of support (statistics, examples, testimony, explanation, anecdote.) Comment on the validity of each argument and indicate why you do or do not accept the sources as valid. Then consider whether or not the article is balanced and objective. If not, what bias do you see?
- Most of article is based on author’s own opinion
 - Notes works of J.D. Kleinke, but no indication as to who this person is and why s/he is qualified
 - Figurative analogy used when comparing right to health care and individual rights as going from protection (shield) to a harm (sword).
 - Quotes Michael Moore, a film maker, although not necessarily an expert on health care.
 - Article is an opinion piece, but none of the author’s opinions are substantiated via any type of credible evidence. Cannon has the bias of somebody with a libertarian perspective – government shouldn’t meddle in the private lives of U.S. citizens.
10. Finally decide if the arguments and evidence are or are not adequate to convince the critical reader.
- Not adequate to convince the critical reader

4. Rubric used to grade article analysis worksheets

**Pre/Post Worksheets
General Rubric**

Student _____ Grade: _____

Pre Lesson – Pro _____

Post Lesson – Pro _____

Pre Lesson – Con _____

Post Lesson – Con _____

Content/-13 point

Subject Matter:

- Key elements, as outlined on the worksheet are addressed:
 1. Goal of article explained. (1)
 2. Identified type of reasoning used and explained rationale for answer, providing examples to illustrate. (5)
 3. Identified any fallacies found in article. (2)
 4. Identify types of support used. Are the sources of the support valid? Is the article biased? (3)
 5. Is the article convincing? Why or why not? (2)

Mechanics 2 pt

Mechanics

- Rules of grammar, usage, punctuation are followed (1)
- Spelling is correct (1)

Comments / Grade

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5. Used by those observing both teachings of the lesson study

Observation Guidelines

The purpose of having several instructors observe the class is to gather as much information about the process of the lesson as possible. Your primary task is to observe how the students respond to the lesson and make some conclusions about how well the LESSON worked. *Please note behaviors of the students and the benefits/difficulties of the lesson.*

	Totally Disagree					Totally Agree	
1. Based on the students' non-verbal behaviors, students seemed to be engaged in the lecture.	1	2	3	4	5	6	7

Examples of non-verbal behaviors I observed include:

2. Based on verbal and non-verbal behaviors, the students seemed to understand the different types of reasoning.	1	2	3	4	5	6	7
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Examples of behaviors I observed include:

3. Based on verbal and non-verbal behaviors, the students seemed to understand the concept of fallacy and the types of fallacies.	1	2	3	4	5	6	7
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Examples of behaviors I observed include:

4. Given your observations, what aspects of the lesson need to be changed? How could the lesson be improved?

5. What aspects of the lesson should remain the same? What worked well?

6. Quizzes (Reasoning and Fallacy identification)

Name that Reasoning

1. The U. of C. business school is consistently ranked within the top ten business schools in the country. Its MBA program was listed among the elite master's programs in a recent issue of *The Wall Street Journal*, partly because its graduates are the CEO's of 57 fortune 500 companies. More than 200 corporations interview U. of C. graduates each year. You can't find a better program.
2. Thousands of Enron employees invested all of their 401K funds in Enron stock, much like you are doing with Zerconn. When Enron failed, its employee-investors lost all of their retirement savings. Don't get caught like these people.
3. Everyone who wants to be promoted to positions with decision-making authority in this company must have a MBA, so you need to start pursuing a degree within the next few years.
4. If you invest \$40,000 in earning a MBA from a top business school, this degree will give you many times that amount within 20 years from higher salaries and bonuses. It's an investment that pays big dividends.

Name that Fallacy

1. "I don't see any reason to wear a helmet when I ride a bike. Everyone bikes without helmets."
2. "It's ridiculous to worry about protecting America's national parks against pollution and overuse when innocent people are being endangered by terrorists."
3. If you let students decide on which topics to cover, they will want to determine lecture material, then the reading assignments, then the nature of your exams, and finally their grades.
4. You're either with us or against us on this proposal.
5. Don't buy a flat screen TV. I had one a few years ago and it gave me nothing but trouble.
6. We don't need another bleeding heart liberal on this human rights commission.
7. I'm not getting another flu shot. The last time I got a flu shot, I got the flu the very next day.
8. The cars driving in the opposite direction have their lights on; they must be part of a funeral procession.