Persuasion

What is it?

How does it differ from argumentation?

How do you achieve it?

Persuasion

Beware: that the techniques of persuasion can be dangerous in unethical hands.

Ethical point

Aristotle said it was necessary to be aware of the misuse of rhetoric, *not to misuse it oneself*, but to be on guard against it.

What is persuasion?

Crudely, convincing someone to give you what you want.

_What might those things be?_

Things engineers might ask for
Things engineers might ask for

- Actions
- Permission
- Money
- Belief

*Any others?*

What do you first consider in deciding how to persuade?

You consider audience.

*I always talk a lot about audience.*

Understanding your audience helps you with

- Organization
- Level
- Tone
- Appeal

What things are useful to know about your audience?

- How much they know about the issue.
- What predispositions they may have on it.
- What their opinion is on the matter.
- What kind of personality they have.

*What else?*

Should we consider their emotional state?
Three recognized appeals

To Reason       To Emotion

To Ethics

_They are used in different situations._

The appeal to reason is simply an appeal to rational argument.

_It supposes, of course, that your audience is rational._

The appeal to emotion tries to whip up feelings in favor of something, but without much rationality.

The ethical appeal involves moral arguments.

So, there are three different appeals.

_Where do you see them?_
In engineering, two appeals predominate

- Appeal to reason
- Appeal to ethics

Three recognized appeals

- To reason
- To emotion
- To ethics

They are used in different situations.

Persuasion in action

The vacuum cleaner salesman

The salesman’s three goals

Establishing goodwill (or trust)

Showing a problem

Suggesting a solution

Argumentation

Not the same as persuasion.

Term used to describe the reasoned setting out of a position.

Therefore, what appeals should be used?

The bases of an argument

Claim       Support
Different ways to look at arguments

Classical Approach
  Deductive argument
  Inductive argument

Toulmin Model

Who was the greatest athlete of the 20th century?

Babe Didriksen Zaharias


Babe Didriksen was the greatest athlete of the 20th century, she

- won two gold medals and one silver for track and field events in the 1932 Olympics
- was an excellent baseball player
- was an excellent tennis player
- was an all-American basketball player
- was the leading female professional golfer in the 1940s and 1950s

The Didriksen argument: convincing or not?

The Earth is a sphere

- Ships disappear over the horizon from the hull upward.
- The shadow of the Earth on the moon is circular.
- Ships sailing in one direction over the surface of the earth will, in time, return to their home ports.

What is missing?

How about this argument?

- On 1 September 2007 the Appalachian State University football team defeated the University of Michigan’s football team.
- The final score in that game was Appalachian State 34, U of M 32.

What is missing?
The Toulmin model: a new way of looking at arguments

How are these arguments different?

What is missing?

Toulmin Model:
The Toulmin approach sees an argument as a progression from accepted facts or evidence (data) to a conclusion (claim) by way of a statement (warrant), which establishes a reasonable relationship between them.


Example of argument as Toulmin Model

Data
Seabiscuit is a horse

Claim (therefore)
Seabiscuit has four legs

Warrant (because)
All horses have four legs

Example of argument as Toulmin Model

Data
Last night Jones drove through the city at 145 mph

Claim (therefore)
Jones drove recklessly last night

Warrant
Driving at an extremely high rate of speed is a form of reckless driving.

Warrants
Generally accepted views or opinions
Justify the conclusion drawn from the data

Are often assumed or left unexpressed.
Warrants

Generally accepted views or opinions

Justify the conclusion drawn from the data

*Are often assumed or left unexpressed.*

But this can be very dangerous if the warrant is not obvious to your audience.

Find a warrant

- **Claim:** The iPad 2 computer is portable.
- **Data:** The iPad 2 weighs 1.33 lbs (601g)
- **Warrant?**

http://commons.wikimedia.org/wiki/File%3AIPad2.jpeg

Find a warrant

- **Claim:** The Generac GP 3250 electric generator is portable.
- **Data:** The Generac GP 3250 weighs 115 lbs (52.16 kilos).
- **Warrant?**


Warrants may be thought of as belonging to three classes

- **Authoritative**
- **Motivational**
- **Substantive**

After W. Brockriede and D. Ehninger (1960); C. Kock (2006).

Authoritative warrants

Depend on the general assertion that a qualified authority would support the conclusion based upon the evidence.

Motivational warrants

Depend on an appeal to the audience’s values.
Substantive warrants

Resemble more conventional forms of argumentation

Fall into one of six categories
- Cause and effect
- Sign
- Parallel case
- Analogy
- Generalization
- Classification

What warrant would work here?

Claim: Rodrigo is cold

Data: Rodrigo is shivering

Which type of warrant is this?

Claim: Rodrigo is cold

Data: Rodrigo is shivering

Warrant: shivering often indicates that a person is cold.

Which type of warrant is this?

Claim: Roderick is sick.

Data: Roderick is shivering.

Warrant: shivering often indicates that a person is suffering from a fever.

What warrant would work here?

Claim: Janet will live to be at least 90 years old.

Data: All of Janet’s parents and grandparents lived to be over 90 years old.

Which type of warrant is this?

Claim: Janet will live to be at least 90 years old.

Data: All of Janet’s parents and grandparents lived to be over 90 years old.

Warrant: People can expect to live as long as their immediate ancestors.

Substantive. Which?
Perhaps generalization, perhaps analogy.
### Which type of warrant is this?

Claim: Eating oranges will help prevent colds

Data: Oranges are a good source of vitamin C

Warrant: Linus Pauling states that vitamin C is effective in preventing colds

Authoritative

### Which warrant?

Claim: Graduate engineering student Robert Smith plagiarized his doctoral thesis at State University.

Data: Over the last two years, the engineering college of State University has found nine of its graduate students guilty of plagiarism on their doctoral theses.

Warrant: **Substantive: generalization**

### Arguments are of two kinds

- **Arguments of fact**
  - This is about what is or is not.

- **Arguments of policy**
  - This is about what should or should not be.

### Arguments are of two kinds

- **Argument of fact**
  - This is about what is or is not.

- **Argument of policy**
  - This is about what should or should not be.

### Relationship between arguments of fact and arguments of policy

Facts often need to be established before you discuss policy.

Arguments of fact must often precede arguments of policy.

### What argument of fact might precede this argument of policy?

“The Federal Government should impose a rule that any automobile manufactured in the United States after 1 January 2015 must have a combined city-highway rating of 52 miles per gallon of gas.”
Proposals

Covered in pages 27 to 35 of your text

Persuasive documents

About the proposal assignment

We will use an informational abstract as an overview

*We will not use a cover page*

*We will not use a table of contents*

A persuasive document

Makes a claim

and

Furnishes support for a claim

A proposal does two things

It makes a claim:

*"You need job X done"*

*"I can do job X"*

It furnishes support for a claim:

*"Here is the proof that I can do job X"*

Is a proposal purely persuasive?

What might your claims be in this situation?
I propose microprocessor-based toy that

- Can be built by a team of four
- Can be built by our team of four
- Can be completed in six weeks
- Will be educational
- Can be economically produced
- Is marketable

Anything else?

What would constitute proofs that you can do the job you propose?

- Knowledge
- Experience
- Sufficient time
- Sufficient personnel

So, you are basically saying

Here is work you need done

- I can do the work

Here’s why my team can do the work

All of which tends to breakdown into these sections

- Background
- Details of proposed work
- Explanation of evaluation of proposed work
- Material, personnel and equipment requirements
- Explanation of expertise
- Budget (not applicable in this case)

Background

Information needed by the audience to understand the details of the proposal

What might this be in this case?

Perhaps a detailed description of the game?

A detailed description of a microprocessor-based educational toy is not

“It will work just like Angry Birds, but it involves quantum mechanics.”

Erwin Schrödinger
1887 to 1961

Arguments that your product fulfills LTB’s requirements

Educational  Marketable  Novel

And anything else you think matters.

And don’t forget any necessary warrants.

Details of proposed work: specific tasks

Explanation of how the work meets the proposed objectives

How work will be completed

When work will be completed

What might this be in this case?

Explanation of evaluation

Telling the reader how to judge whether the work has been successful

What might this be in this case?

Material, personnel and equipment requirements

Examples in this case might be the hardware and software required

Explanation of expertise

Here you tell the reader why you (or your team) can do the work

Don’t forget your warrant!

Simplified proposal structure

• Overview: informational abstract
• Simple introduction including scope of proposed work
• Background: information needed by the reader to understand the proposal
• Details of proposed work: clear description of the tasks needed to accomplish the proposed work and a statement of how long it will take to accomplish them.
• Explanation of how the work will be judged to be successfully completed.
Simplified proposal structure, cont’d

- Material, personnel and equipment requirements for proposed work
- Explanation of the proposer's expertise
- Statement of the qualifications of those who propose to do the work
- Conclusion: statement of the main recommendations of the proposed work and statement of how it meets the requirements established by the proposer or the client

Abstracts: brief summaries of reports

Two types

- Informational
- Descriptive

Purpose of an abstract:

“The abstract enables prospective readers to determine whether the report will be useful and whether they need to read all of it or only parts of it.”


Informative abstracts

- Are "the report in miniature"
- State all the essential points
- Give the reader all essential information
- Are generally longer than descriptive abstracts

Descriptive abstracts

- Describe what the report is about
- Are often like a table of contents in paragraph form

Descriptive abstracts

- Tell what the topic of the report is
- Do not summarize a report’s content
Informational abstracts

“. . . Gives the gist, or essence, of a piece of writing; it includes the most significant material in the writing. It is the report in miniature.”


Abstract

We propose to create a device that distorts the human voice when users speak on the telephone. The device would allow users to sound like one of six celebrities (Adele, Mickey Mouse, Darth Vader, Jim Carrey, Katherine Hepburn and Sandra Bullock) whose vocal characteristics will be programmed into the device. We believe the device would be a popular novelty item, and our team could produce a prototype of this device in six weeks at a cost of $5,200.

(Informational)

Abstract

This is a proposal for a novelty item, a vocal distortion device for use with telephones. It gives background explaining what it is and how it would work, how it could be marketed, a schedule for its development, an explanation of the expertise of the team proposing to develop the device, a detailed budget for its development, and an explanation of how the prototype may be judged a success.

(Descriptive)

Summation

• Persuasion and argumentation are different
• Toulmin model explains arguments as claims supported by data by means of a warrant
• Toulmin warrants are of three sorts: authoritative, motivational and substantive
• Arguments of fact precede arguments of policy

Summation, cont’d

• Proposals are persuasive documents
• The sections work together to support the claim that the proposer can do work that the client needs
• Abstracts are of two kinds:
  - Descriptive
  - Informational