THE ROLE OF REASONING AND PERSUASION IN APPEALS

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Reasoning
Emotion
How Do We Think?
# Hypothesis: Two Types of Thinking

**Quick**
- Fast
- Intuitive
- Emotional
- Associative
- Pragmatic
- Unconscious
- Uncontrollable

**Deliberate**
- Slow
- Analytical
- Rational
- Sequential
- Rule-bound
- Conscious
- Controllable
Categorization is one of the most basic functions of living creatures. We live in a categorized world – table, chair, male, female, democracy, monarchy – every object and event is unique, but we act towards them as members of classes.

Eleanor Rosch
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CATEGORIES OF LAW

- Property Law
- Contract Law
- Tort Law
- Family Law
- Criminal Law
- Tax Law
- Environmental Law
- Legal Procedure
- Evidence Law
CATEGORIES

Categories work best when –

- the things inside each category are *homogeneous*

- the *boundaries* of the categories are *clear*

- the categories are *mutually exclusive*
An easy way to visualize categories was developed by Swiss mathematician Leonhard Euler in 1768 – Euler Circles
A thing is either A or it is not-A
EULER CIRCLES

There are A’s and there are B’s
No A’s are B’s
No B’s are A’s
A’s & B’s are “disjoint”
A, B

All A’s are B’s
All B’s are A’s
Some A’s are B’s
Some B’s are A’s
Some things are both A & B (+)
All A’s are B’s
Some B’s are A’s
No A’s are C’s; no B’s are C’s
LOGICAL REASONING
There are three types of logical reasoning:

**Deductive** – where two overlapping Premises lead by necessity to a Conclusion

**Inductive** – where multiple instances suggest a unifying principle which is identified and then tested to determine its validity

**Analogical** – where something unfamiliar is compared to things familiar until the greatest similarity is determined; after that, the new thing is placed in the category of the old, and is treated like the old
Deductive Reasoning

Inductive Reasoning

Analogical Reasoning

Specific

General
<table>
<thead>
<tr>
<th>TYPE</th>
<th>PREMISES</th>
<th>CONCLUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive:</td>
<td>True</td>
<td>Certain</td>
</tr>
<tr>
<td>Inductive:</td>
<td>True</td>
<td>Probable</td>
</tr>
<tr>
<td>Analogical:</td>
<td>True</td>
<td>Sufficient</td>
</tr>
</tbody>
</table>
DEDUCTIVE REASONING (AS ENVISIONED BY ARISTOTLE)

Syllogism & Implication
ARISTOTLE’S DEDUCTIVE REASONING
THE CATEGORICAL SYLLOGISM

All men are mortal. 

Socrates is a man. 

Therefore, Socrates is mortal.
ARISTOTLE’S CATEGORICAL SYLLOGISM
(showing the three propositions)

All men are mortal. (Major Premise)

Socrates is a man. (Minor Premise)

Therefore, Socrates is mortal. (Conclusion)
ARISTOTLE’S CATEGORICAL SYLLOGISM  
(showing the three Terms)

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

Categorical Syllogisms have three “Terms”: 
The Major Term, the Minor Term, the Middle Term
ARISTOTLE’S CATEGORICAL SYLLOGISM
(with Minor Term marked)

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

The Minor Term links the Minor Premise to the Conclusion
ARISTOTLE’S CATEGORICAL SYLLOGISM
(with Middle Term marked)

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

The Middle Term links the Major Premise to the Minor Premise.
ARISTOTLE’S CATEGORICAL SYLLOGISM
(with Major Term marked)

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

The Major Term links the Major Premise to the Conclusion.
ARISTOTLE’S CATEGORICAL SYLLOGISM
(all Propositions and Terms marked)

All men are mortal.  
Socrates is a man.  
Therefore, Socrates is mortal.

Major premise  
Minor premise  
Conclusion
Depicting the Categorical Syllogism using Euler Circles

- mortal
- men
- Socrates
ARISTOTLE’S CATEGORICAL SYLLOGISM

[stated abstractly]

All B’s are C’s

A is a B  (therefore)

A is a C

(Aristotle invented variables)
ARISTOTLE’S CATEGORICAL SYLLOGISM

All men are mortal.

Socrates is a man.

Therefore, Socrates is mortal.

All B’s are C’s
A is a B
A is a C
DEDUCTIVE REASONING - IMPLICATION

Rule #1

P implies Q

If P then Q

P → Q

P ⊃ Q

[the Antecedent] implies [the Consequent]

a “conditional proposition”

Modus Ponens
DEDUCTIVE REASONING - IMPLICATION
Rule #2

Not-Q implies Not-P

If Q is false, then P is false

Not Q → Not P

Denying the Consequent negates the Antecedent

Modus Tollens

Contrapositive
Deductive Reasoning - Implication

“P implies Q”
“Not-Q implies Not-P”
Modus Ponens
(The way that affirms by affirming)

(1) P implies Q.
(2) P.
(3) Q.

“P implies Q”
Modus Tollens
(The way that denies by denying)

(1) P implies Q.

(2) Not-Q.

(3) Not-P.

"Not-Q implies Not-P"
Of the four possible implications:

**Valid**
- P → Q
- Not-Q → Not-P

**Invalid**
- Q → P
- Not-P → Not-Q
Modus Ponens
(Affirming the Antecedent)

(1) If it rained last night, then the sidewalk is wet.
(2) It rained last night.
(3) The sidewalk is wet.

Valid Reasoning
Modus Tollens
(Negating the Consequent)

(1) If it rained last night, then the sidewalk is wet.
(2) The sidewalk is dry.
(3) It did not rain last night.

Valid Reasoning
NEGATING THE ANTECEDENT

(1) If it rained last night, then the sidewalk is wet.
(2) It did not rain last night.
(3) The sidewalk is dry.
NEGATING THEANTECEDENT

(1) If it rained last night, then the sidewalk is wet.
(2) It did not rain last night.
(3) The sidewalk is dry. X

INVALID REASONING – a Fallacy
Affirming the Consequent

(1) If it rained last night, then the sidewalk is wet.
(2) The sidewalk is wet.
(3) It rained last night.
Affirming the Consequent

(1) If it rained last night, then the sidewalk is wet.
(2) The sidewalk is wet.
(3) It rained last night. X

Invalid Reasoning – a Fallacy
Robinson vs. DuPont, 923 S.W.2d 549 (Tex. 1995)

(1) Benlate causes Brown Leaf Disease.

(2) After spraying trees with DuPont’s fertilizer, Defendant’s trees exhibited Brown Leaf Disease.

(3) DuPont’s fertilizer contained Benlate.

This is Modus Ponens logic.

Fallacy of Affirming the Consequent

However, Benlate is a possible cause
Swan A is white
Swan B is white
Swan C is white
All swans are white
Swan A is white
Swan B is white
Swan C is white

All swans are white

“Fallacy of Hasty Generalization”

“Fallacy of Hasty Generalization”

“A Black Swan”
(1) A representative sample is selected.

(2) Sample is 70% green

(3) Population is 70% green
(1) Surveys of sample groups

(2) Majority of samples supports Dewey

(3) Majority of Americans support Dewey

Dewey defeats Truman!
1948 Presidential Election

(1) Last survey 30 days before the election

(2) Majority supports Dewey

(3) Dewey defeats Truman
(1) Last survey 30 days before the election

(2) Majority supports Dewey

(3) Dewey defeats Truman X

Fallacy of Non-Representative Sample
REASONING BY ANALOGY

Source vs. Target

Similarities vs. Dissimilarities
REASONING BY ANALOGY

Comparing *common features vs. essential characteristics*.

- **Homology** – comparison based on common features.
- **Shared Abstraction** - comparison based on essential characteristics.

Comparing *items* is simpler than comparing *relationships*.

Example: “Hand is to palm as foot is to ____.”
(1) A belongs in Category Y
(2) B is like A
(3) B belongs in Category Y
(1) A belongs in Category Y

(2) B is like A in some respects

(3) B is unlike A in other respects

(4a) B belongs in Category Y

or

(4b) B does not belong in Category Y
Fallacy of False Analogy
(1) Innkeepers are liable for theft of property.

(2) The defendant is an innkeeper.

(3) The defendant is liable for theft of property.
(1) Ferry operators are not liable for theft.

(2) The defendant is a ferry operator.

(3) The defendant is not liable for theft.
“CLOSE CASE” DOESN’T FIT WELL INTO ESTABLISHED CATEGORIES SO USE ANALOGICAL REASONING

(1) Innkeepers are liable for theft.

(2) Ferry operators are not liable for theft.

(3) Defendant’s ferry provides overnight lodging; purse stolen from private cabin

(4a) Defendant is liable for theft.

or

(4b) Defendant is not liable for theft.
If it walks like a duck, quacks like a duck, looks like a duck, it’s probably a duck.
PERSUASION
(EFFECT OF SPEAKER ON AUDIENCE)
THE AUDIENCE IN A LAWSUIT

- Parties
- Jury
- Trial Judge
- Appellate Panel
- Supreme Court
- Public
- History
Rhetoric--

“may be defined as the faculty of observing in any given case the available means of persuasion.”
ARISTOTLE’S RHETORIC

Ethos

Logos

Pathos
ARISTOTLE’S RHETORIC

Ethos - Character

Logos - Rational

Pathos - Feelings
Ethos --

“[There is persuasion] through character whenever the speech is spoken in such a way as to make the speaker worthy of credence. . . . And this should result from the speech, not from the previous opinion that the speaker is a certain kind of person.”

Aristotle
Logos --

is an argument that persuades through reasoning, often sequential steps, and often arguing from premises to conclusions. This reasoning is usually in the form of a partial Syllogism, which Aristotle called an “Enthymeme,” that invokes themes familiar to the audience.
ARISTOTLE’S RHETORIC: PATHOS

Pathos --

is influencing the audience by emotional appeal, rather than logical argument. Emotions might include love, fear, patriotism, guilt, hate, joy, pity, attraction, etc.

Done by using words in a way that their emotive meaning affects the audience independently from their logical meaning.
• Deductive reasoning (syllogism; enthymeme; implication)
• Inductive reasoning (generalization)
• Analogical reasoning (comparison)
• Fallacious reasoning (illogical arguments)
• Indirect argument (negation leads to contradiction)
LOGOS: PERSUASION THROUGH DEDUCTIVE REASONING

- Syllogism (overlapping Premises lead with certainty to Conclusion)

- Enthymeme (Syllogistic argument, usually with an unstated Premise, using themes that will resonate with the audience; Conclusion may not be certain but must be believable)

- Implication (P → Q; not-Q → not-P)
LOGOS: PERSUADING THROUGH INDUCTIVE REASONING

- Drawing general principles from particular instances
- Statistical Generalization
Showing the problem at hand is like another, more familiar problem, and should be treated the same way.
PATHOS

- Sympathetic facts
- Antagonistic facts
- Narration (arrangement of facts)
- Emotive words
- Similes
- Evocative symbolism
PATHOS

Obama uses the flag for Pathos
Reagan used the flag for Pathos
Conservatives now use Reagan for Pathos
Five Canons of Rhetoric

• **Invention** – designing the argument
• **Arrangement** – finding an effective order
• **Style** – how things are said
• **Memory** – extemporize or memorize; don’t read
• **Delivery** – voice, posture, dress, gesture
The First Canon of Rhetoric: 
Invention

In designing an argument, you must consider:

(1) the audience’s needs, desires, thoughts, prejudices, etc.

(2) available evidence (facts, testimony, statistics, maxims, examples, laws)

(3) appeal to the audience (Ethos, Pathos, Logos)

(4) topics (commonplaces that will synch with the audience); and

(5) timing and opportunity, coupled with accurate targeting (Kairos)
Fallacies of Argumentation

- Accident
- Ambiguity
- Amphiboly
- Appeal to Authority
- Appeal to Belief
- Appeal to Emotion
- Appeal to Fear

- Appeal to Flattery
- Appeal to Novelty
- Appeal to Pity
- Appeal to Ridicule
- Appeal to Tradition
- Argumentum ad Hominem
ADDING COLOR TO ARGUMENTS
COLORING TOOLS

• *Humor*—biased vs. neutral

• *Narrative*—clock time vs. story time; Grand Narratives

• *Sequence*—climactic vs. anti-climactic

• *Comparisons*—similarities vs. contrast

• *Invocations*—quoting Jefferson, Lincoln, JFK

• *Emphasis*—voice modulation, gesturing

• *Figures of Speech*—allusion, anaphora, hyperbole, innuendo, juxtaposition, metaphor, paradox, personification, simile, repetition, rhetorical questions, understatement, etc.

• *Rhetorical Fallacies*—arguments traditionally said to be improper but that are nonetheless effective
MODERN ARGUMENT THEORY
Professor John L. Pollock championed defeasible arguments:

- In deductive logic, arguments are not defeasible (subject to defeat).
- In life, arguments are almost always defeasible.
- *Defeasible arguments* are taken as true until they are disproved.
- A defeasible argument is our best judgment based on the information we have received so far. We remain open-minded to revision.
- Pollock describes defeasible argument “defeaters,” either “undercutting defeaters” or “rebutting defeaters.”
Canadian Professor Douglas Walton has developed syllogistic patterns of common Argument Schemes (including fallacies) with matching Critical Questions.

The Argument Scheme for **Argument From Expert**

**Major Premise:** Source E is an expert in subject domain S containing proposition A.

**Minor Premise:** E asserts that proposition A in domain S is true (false).

**Conclusion:** A should be accepted as true.
ARGUMENT SCHEMES
Argument from Expert

Critical Questions

1. **Expertise Question**: How credible is E as an expert source?

2. **Field Question**: Is E an expert in the field that A is in?

3. **Opinion Question**: What did E assert that implies A?

4. **Trustworthiness Question**: Is E personally reliable as a source?

5. **Consistency Question**: Is A consistent with what other experts assert?

6. **Backup Evidence Question**: Is E's assertion based on evidence?
This is the way Carl Glover put it:

The archer must exercise 'due measure and proportion' in aiming the arrow and drawing the bow string; he must hit a 'vital part of the body' to fell his prey; he must release the arrow at the 'exact or critical time' to strike a moving target.
The End