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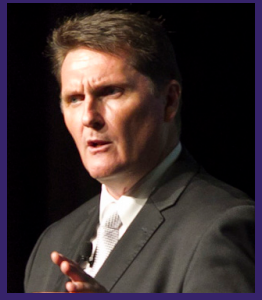
Argumentation: Understanding Effective Reasoning



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Peter Gooch from ABC-Radio best summed up Ric when he described him as: "The Contrarian Strategic Thinker for Successful Australian Executives."

Ric Willmot
Executive Wisdom

Ric Willmot, known as "The Strategist" assists organisations to improve performance, productivity and profit. He is one of those rare people who can call himself a global consultant and trusted adviser to some of the world's leading businesses, governments and institutions, and REALLY mean it!

Ric and his company, Executive Wisdom Consulting Group, help leaders make distinctive, lasting and substantial improvements to the performance of their organisations; partnering with clients to tackle their most difficult issues and serious challenges. Just a few of his active and current clients include; Australian Legal Practice Management Association, CPA Australia and Commonwealth Bank.

Ric Willmot's intent is not just to improve your business, but to build firms which create wisdom and wealth. Ric's background is accounting, financial planning, and organisational psychology. Ric's Private Clients Mentoring Program was created in 2005 and has already had over 200 executives from 12 countries graduate through the 6-month program. Late 2010, Ric's Forums was launched. An international online business forum where people from around the world can come together 24-hours-a-day, 7-days-a-week to discuss strategy, leadership, marketing, technology, best practices, ethics and anything else which presents itself. Within one month, over 100 professionals from 13 countries had bought lifetime membership.

Ric is interviewed and quoted frequently in the media; he writes regular business columns for 4 Australian magazines, 3 Asian magazines and is the feature writer for Svoy Business: Russia's leading corporate magazine with a readership in excess of 55,000.

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Argumentation: Understanding Effective Reasoning

Introduction

Argumentation is not a very well understood aspect of human communication. The word, argumentation, has connotations of being combative, contentious, unpleasant and quarrelsome. It is, however, a way for people to justify their beliefs and behaviours and to influence the thoughts and actions of others. It's about influence and persuasion, through communication that attempts to motivate others by reasoned judgment.

Arguing is reason giving by sharing information, thoughts, opinions, etc. - by making claims or statements that the giver believes and that they would like for their audience (readers and listeners) to believe as well. The reasons provided in arguing are justification or support for claims made. To understand effective reasoning we must also understand rhetoric. Rhetoric is another term that has taken on negative connotations - such as insincerity, vacuity, and ornamentation - but is no less important than logic in effective reasoning. The classical understanding of rhetoric is the study of how messages influence people: reasoning with audience predispositions in mind.

Effective reasoning implies that there is a concern and care for the audience, and that the audience will rationally consider the information provided and agree if acceptance of the reasoning has been persuasive.

Argumentation is a daily occurrence - everyone does it. It occurs everywhere, from structured debate to informal encounters, between young and old, friends and family, strangers and colleagues. But it is perhaps becoming a lost art as people increasingly interact with like-minded others who will be inclined only to agree with them. More and more, differences of opinion are seen as unbridgeable … and the advent of social media has brought a new medium of hate speech and personal attack on differing opinions.

The result of this decay in argumentation is that it weakens compromise, deliberation, and mutual understanding. Because of this, it's important not to confuse destructive quarrels with argumentation. Argumentation is both a product and a process. The messages - both explicit and implicit - are the product, and they can be cast into language, analysed and appraised. Why does this matter? The audience is the ultimate judge of success or failure in argumentation. If the audience is uninterested in being open to effective reasoning which may be contrary to their existing belief, then rationale acceptance of a disparate view is unachievable.

The process of argumentation is to serve as a means of collective judgement and decision-making. Much of what we do and what we believe is uncertain and contingent, yet decisions are still required. Argumentation justifies decisions under conditions of uncertainty. Confident argumentation is a process of analysing ideas, claims, and issues to testing by an audience that is open to differing views and has the ability to cognitively decide based upon evidence placed before them.

Presumption

The audience for argumentation consists of the people the arguer wants to influence - not necessarily those who are immediately present. Argumentation takes place under conditions of uncertainty - we do not argue about things that are certain. There can be no argument about ice being present at the North Pole, that the earth is round, or that the earth rotates around the sun. Argumentation is inextricably linked, therefore, to controversy. Controversies involve genuine differences of opinion and have multiple dimensions.

- They may be explicit (recognised by the participants) or implicit (recognised by an analyst)
- They may be unmixed (only one arguer maintains a position) or mixed (multiple arguers do so)
- They may be single (relating only to one claim) or multiple (relating to more than one claim)

Argumentation involves justification for claims. Arguers offer a rationale for accepting an uncertain claim.

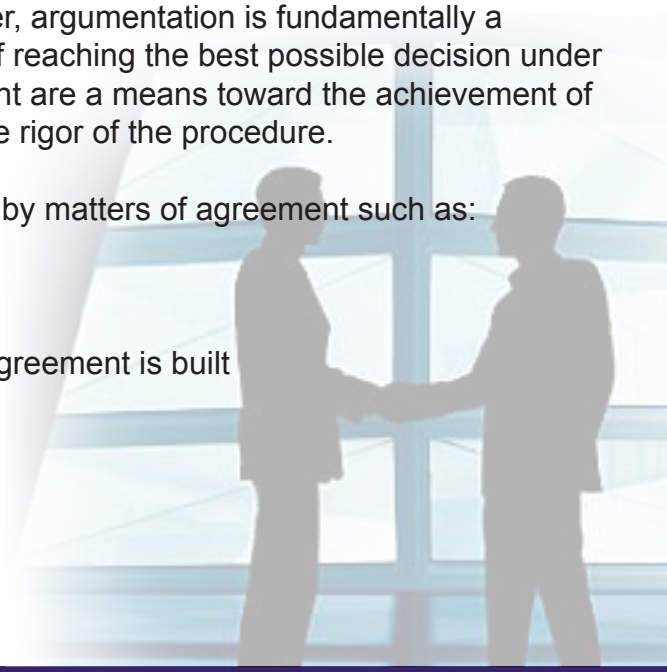
This rationale represents reasons for making the inferential leap. The reasons are acceptable if they can convince a reasonable person who is exercising critical judgement. If so, we say that the claim is justified.

Beware: Justification is different from proof; it is subjective and dependent upon a particular audience. It implies that people are willing to be convinced, yet sceptical enough not to take the statements on faith. Justification is always provisional and subject to change in light of new information or arguments. It varies in degree of strength, ranging from merely plausible to highly probable.

Even though it appears adversarial in nature or character, argumentation is fundamentally a cooperative enterprise. Arguers share a common goal of reaching the best possible decision under the circumstances. The adversarial elements of argument are a means toward the achievement of this common goal. The adversarial elements improve the rigor of the procedure.

Interestingly, the process of argumentation is supported by matters of agreement such as:

1. A frame of reference
2. Some level of agreement on which the disagreement is built
3. Common language
4. System of meanings
5. Procedural assumptions and norms



6. Assessment and verification of valid evidence
7. The importance of an outcome of agreement
8. One or more of the parties to the argument risk being shown to be wrong - hence losing the argument

Interestingly, if a person knows for certain they are correct, then that person may not engage in an argument, as there is no incentive for them. For example, historians may not engage in an argument with those who seek to deny facts, or people may not engage in argument with those who cast doubt on generally accepted scientific theories. Conversely, the choice to become involved in argumentation suggests willingness to debate claims and statements.

Inductive reasoning

Involves examination of specific cases, facts, or examples. Based on these specifics, you then draw a conclusion or make a generalisation.

- Evidence: My head is aching
- Evidence: My nose is stuffy
- Evidence: My throat is scratchy
- Conclusion: I am coming down with a cold

Most analysis of argumentation is done at the formal logic level (a set of rules for making deductions that seem self-evident) as it satisfies an intellectual's need for certainty. All would agree that a formal argument is deductive in nature. However, the limitation is that any conclusion under this premise implies there is no new information that is not already present. So, it therefore holds that deductive reasoning does not add to our body of knowledge; it merely reorganises what is already known.

Deductive reasoning

Begins with a generalisation that is then applied to a specific case. This movement from general to specific involves a three-step form of reasoning called a syllogism:

1. Major premise
2. Minor premise
3. Conclusion

The basic unit of reasoning in formal argument is syllogism, a structure consisting of two premises and a conclusion:

SYLLOGISM		
Form of syllogism	**Characteristics**	**Comments**
Categorical syllogisms	Contain statements that relate categories to other categories	Statements may be universal or partial; inclusive or exclusive; and the only terms that identify quantity are all, some, and none.
Conditional syllogisms	Begin with an "if-then" statement. The "if" clause is called the antecedent, and the "then" clause is called the consequent	The argument is sound if the antecedent is affirmed or the consequent is denied.
Disjunctive syllogisms	Begin with an "either-or" statement	The argument accepts or rejects one of the alternatives and draws a conclusion about the other. Rejecting one option always implies accepting the other. Accepting one option implies rejecting the other when ***"or"*** is used in an exclusive sense (one or the other but not both) It implies the opposite when ***"or"*** is used in a nonexclusive sense (one or the other or both). This distinction often must be determined from the context.

Most argumentation is not represented by a form in which the conclusion contains no new information. Reasoning with an audience enables its members to move from what already is known and believed to some new position. Informal reasoning, therefore, functions as the model for everyday argumentation. The conclusion contains new information not present in the premises, does not follow with certainty but relies on some degree of probability, and can be asserted with confidence if the arguer adhears to the conventions of informal reasoning, which are based on accumulated experience.

Example of syllogism

- Major premise: In an accident, large cars are safer than small cars
- Minor premise: The Hummer is a large car
- Conclusion: In an accident, the Hummer will be safer than a small car

The purpose of crafting an argument is to convince other people to accept - or at least accept the validity of - your position. To defend your position, even if others cannot be convinced to agree. And, to question or refute a position you believe to be misguided, untrue, or dangerous without necessarily offering an alternative. Representative evidence should typically represent the full range of opinions about the subject and not just one side or the other. You want a balanced and convincing discussion. In addition, the examples and expert opinions you include should be typical rather than aberrant.

SELF-ASSESSMENT 1

If argumentation involves uncertainty, how can the people involved arrive at conclusions with any degree of confidence?

How can people with strong but opposing convictions engage in argumentation and preserve a cooperative climate and character of reason?

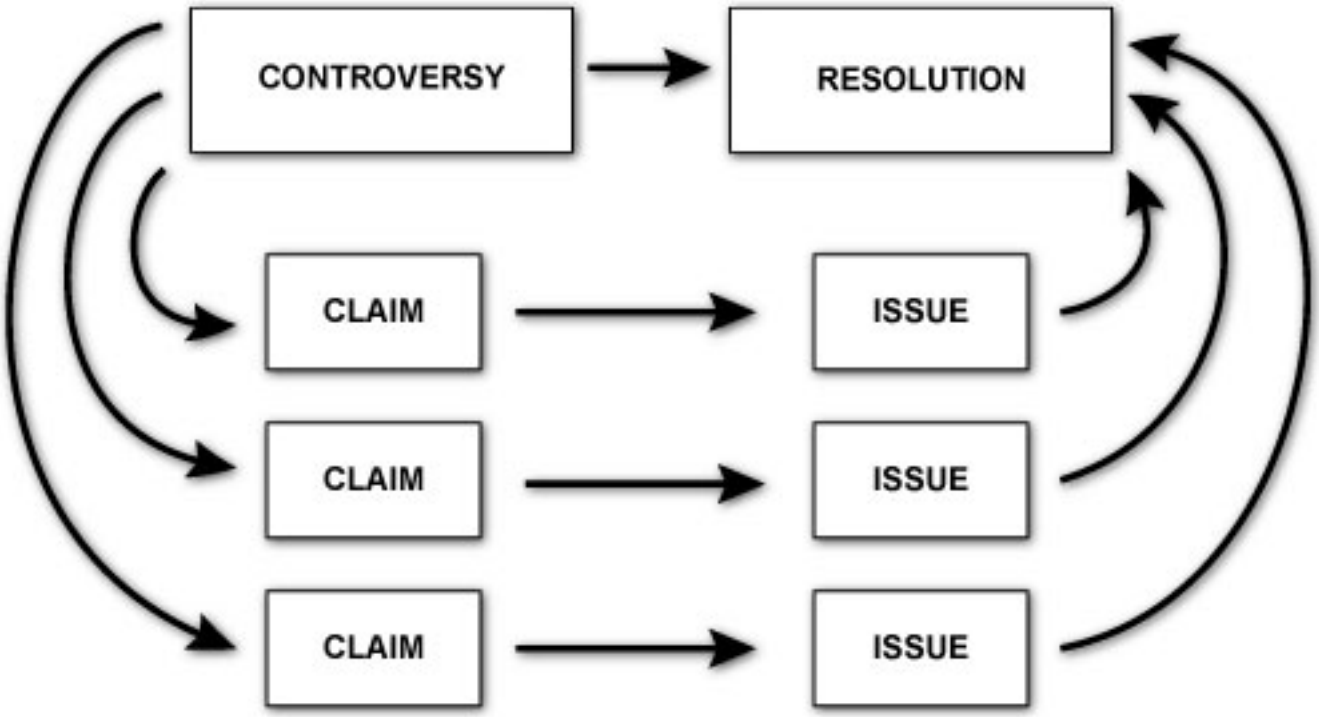
Is informal reasoning weaker than formal reasoning? Explain your answer and support your position.

If you argued against the use of animals in medical experimentation, you would not use just the information provided by animal rights activists. Why?

An Analytic Perspective

When we legitimately argue, we are engaging in giving reason, and therefore, certain conditions must be present:

1. A disagreement has to be present
2. The disagreement is not considered trivial
3. The assent of the other party must be desired by each; if this condition is met, then one arguer cannot simply abandon the situation. Let's also be clear, assent must be desired only if it is freely given. Obviously then, mutual respect is essential.



Relationships among components to create an argument

It's necessary to understand that in genuine argumentation, it's imperative that no easier means exists for resolving the controversy or disagreement. You must be unable to use empirical methods, or consult a universally recognised authority, or deduce the answer with certainty from what you already know. So to be clear, we argue about significant controversies that are inherently uncertain.

How might a controversy begin? Consider some sample comments that could be made during a conversation.

1. Mr John Howard was the Prime Minister of Australia on September 11, 2001
2. The Prime Minister of Australia, Mr John Howard, was in Washington DC on the morning of the September 11 attacks

3. Blue ties are more dignified and statesmanlike than red ones

4. Mining companies are not good corporate citizens

5. Boat people cannot be legitimate asylum seekers when they have paid money to smugglers for transport

With respect to each of the statements, how would we know which ones were true?

1. In some cases, as in statement 1, you could rely on common knowledge

2. In other cases, as in statement 2, you could rely on widely shared empirical methods

3. In a third type of case, as in statement 3, we could rely on personal judgement or taste

4. In another type of case, as in statements 4 and 5, further discussion would be required to gain assent

The knowledge, method or judgement relied on will determine what sort of response people are likely to make to each of the five statements. Responses may be non-argumentative - as in silence - or immediate agreement or denial. Statements 1 to 3 would probably trigger non-argumentative responses, and therefore the argument would conclude.

If the response received is “How do you know?” or “What do you mean?”, reasons would have to be given that could be assessed and responded to further. If the reasons are deemed sound, then the argument would conclude. If not, there would be a need to elaborate further on the reasons or introduce additional reasons to satisfy any objections. You will find this is likely to occur when previously accepted assumptions are challenged or when new situations present themselves.

Argumentation is a reasoned, logical way of asserting the soundness of a position, belief, or conclusion. It takes a stand - supported by evidence - and urges people to share the author’s (speaker’s / writer’s) perspective and insights.

When delivering a speech or writing for public consumption, rather than engaging in a conversation, you should compose your content as if such challenges have occurred, and you are defending your point of view or premise against assumed objections. I call this “Answering the Unasked Question”.

As you create the content for a speech or for a written statement you will be making claims that you want your audience to accept, and therefore, you will need to provide reasons for the reader to give their assent.

There are four basic types of claims that you will make:

- **The claim of fact**

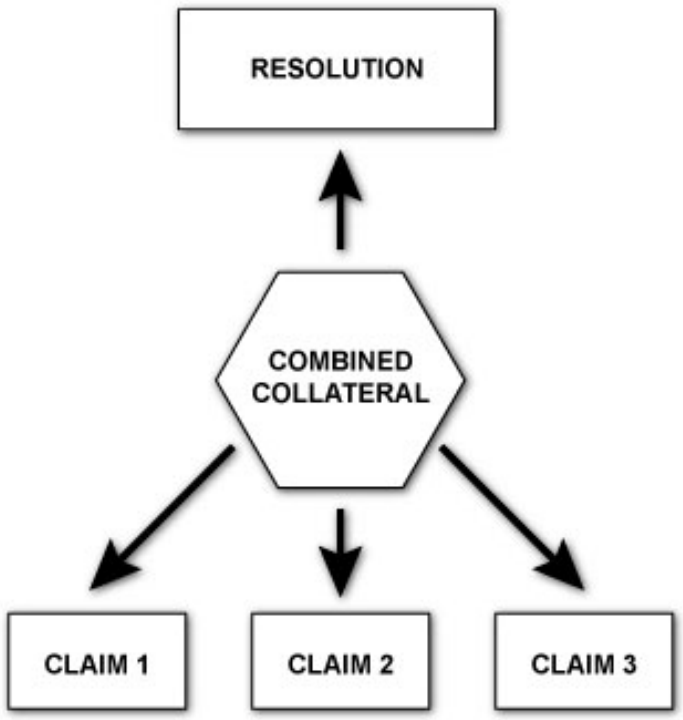
  These claims can be described and verified independently and usually involve description. They may relate to the past, present, or future.

- **The claim of definition**

  These claims place concepts in categories and provide perspective, usually involving interpretation. The interpretation is important because definitions are not neutral.

- **The claim of value**

  These claims involve judgement representing an appraisal or evaluation. The evaluation can be absolute or comparative, and it can involve instrumental or terminal values.



Convergent structure of an argument

- **The claim of policy**

  These are assertions about what could be done. They involve action. They are characteristic of deliberative bodies such as lawmaking, political bodies.

Classifying your claims is important because the proof requirements differ for different types of claims.

Persuasion

Persuasion and argument are often used interchangeably. Persuasion is a broad term, which includes many tactics designed to move people to a position, a belief, or a course of action. Argument is a specific kind of persuasion based on the principles of logic and reasoning. Why is argument and persuasion important?

- **In everyday life -** Applying for a new role, negotiating the price of a purchase, arguing in court about a traffic fine

- **In academic life -** Appealing a grade on an assignment, defending your ideas, engaging in intellectual debate

- **At work -** Asking for a raise in salary, getting people to listen to your ideas, winning buy-in, getting your boss to notice, getting cooperation, moving people to action

- **In writing -** Irrefutably making your point, writing to be read
- **In reading and listening -** Critically evaluating other's arguments, protecting yourself from unethical persuasive tactics, recognising faulty reasoning when you see it

Legal argument is an example of utilising the strategies of argumentation. Fundamentally, lawyers reason using the rules of law. When you get down to basics, legal argument begins with determining the facts and then applying the rules of law in taking advantage of only those facts which support your position, in order to achieve a result in your favour. Completion of this process is the role of the trial. A conclusion is derived from the facts presented during the trial where both deduction and objective assessment pertain.

Realistically however, legal argument is much more complex then this simplistic view. Immediately, you can challenge me on the notion of "the facts" - these may be influenced by perception and judgement by the plaintiff and defendant, the Magistrate or Judge and jury. Added to this, there can quite often be more than one relevant rule pertaining to the case. In some instances, there are multiple and disparate relevant rules, or alternatively, there may be no relevant rules whatsoever. And finally, even if a single rule applies to the facts of a case, the rule itself may be capable of multiple interpretations.

This is true for much of business - certain patterns of argument may be emphasised, and disparate conditions are typical of problem-solving and critical decision-making in organisational life. In all, clearly defined standards exist for what counts as evidence. While business is legally bound, negotiation boundaries may not be so clear. Therefore, businesspeople engage in the use of literal analogy to help establish similarities between the facts of an argument. Causation is generally used to establish responsibility for actions - one authority is used to defend corporate decisions which may not be readily altered or changed.

Understanding how to determine any relevant business rules, as well as stipulating the meaning for such general concepts will strengthen the position for argumentation in business - much like establishing the "burden of proof" in law. In business negotiations, problem-solving, and critical decision-making, it's important to appreciate how others may infer "the rules" that are accepted within the boundaries of argument.

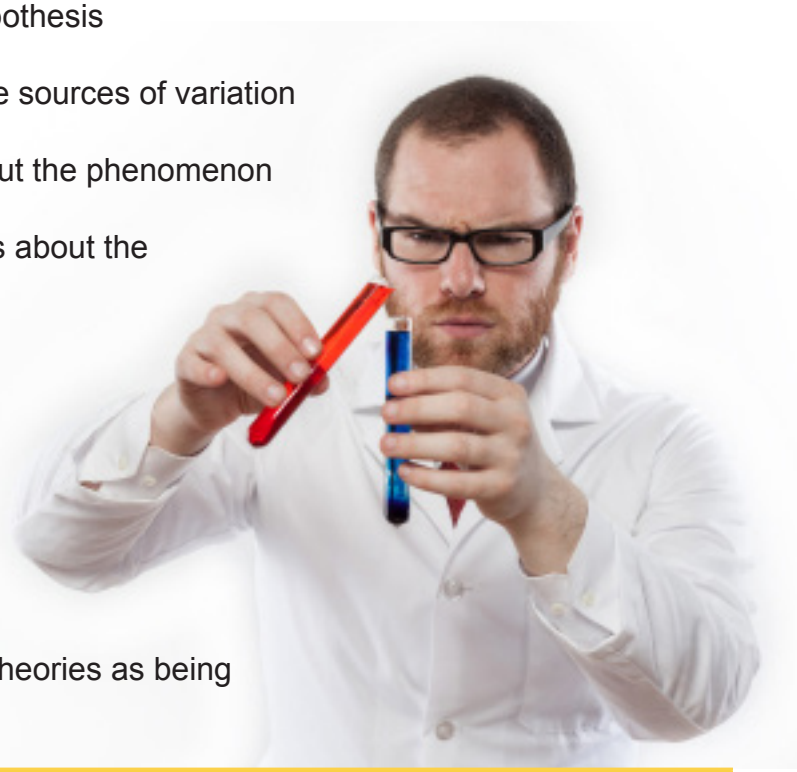
Scientific argument

Another useful approach is the process of scientific argument which can be replicated in certain circumstances into a business environment. The goal of scientific argument is to describe, predict, and explain aspects of experience in order to account for individual phenomena, predicted outcomes and develop theory.

This linear approach can be quite useful in a business context where the premise of argumentation is founded on a pragmatic matter rather than an esoteric one.

Science applies and refines existing theory by expanding the reach of that theory to exemplify how it covers new situations and explains unusual cases. Scientists call this hypothesis testing:

- Presumption is set against the hypothesis
- Controls are in place for alternative sources of variation
- Claims are factual statements about the phenomenon
- The evidence is factual statements about the theory



In business - even while using the scientific approach to argumentation - fundamental paradigms are brought into question through interpretation, bias, self-interest, and many other reasons, so now the business discussion becomes a meta-argument about theories and perceptions rather than scientific phenomena. Business evidence is used as an example to demonstrate proposed alternative theories as being better than any current one.

CHALLENGE 1

How are productive arguments different from those that are entirely or merely contentious, disputable and/or quarrelsome?

A Structural Perspective

In a complex argument there is one main claim - the one that captures the substance of the controversy or disagreement - and we call it the resolution. You can therefore look at any controversy or disagreement as posing a major question. In a simple argument there is generally a single claim. The argument develops sequentially and the resolution may be straightforward. In a complex argument, the resolution is a statement capturing the substance of the disagreement. It's the ultimate claim on which a decision has been sought. It is quite possible that this planning can be presented in a single declarative sentence.

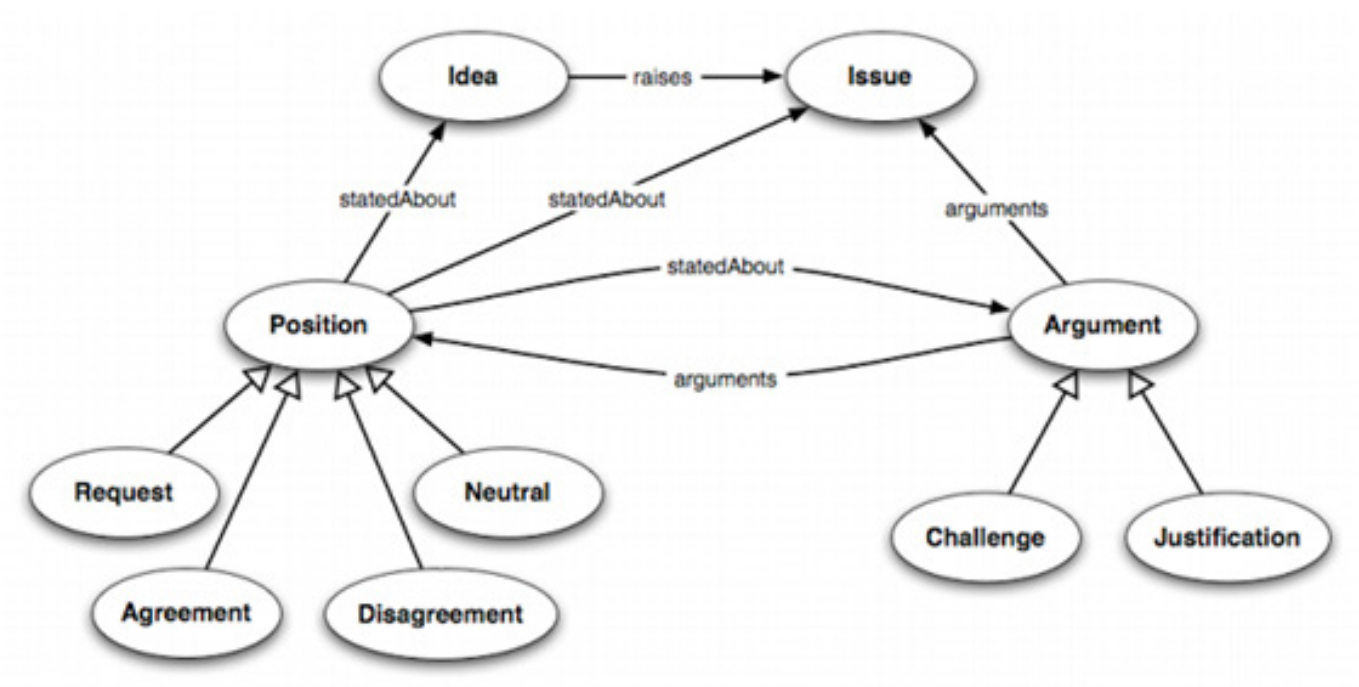
Issues are implicit in the resolution, and a precise definition for each issue is imperative. By definition, issues and questions inherent in a disagreement are vital to the success or otherwise of the resolution. Be prepared that the issues may only be found by examining the underlying context of an argument, or derived from a pattern of claims and responses.

Argument structure	Characteristics
Subordinated structure	An arrangement of issues or claims in a series, where each is dependent on the others and all must be carried in order to reach resolution
Convergent or coordinate structure	The claims or issues are independent of the others. The whole group must be carried in order to reach the resolution
Parallel or multiple structure	Each of the issues or claims is independent of the others

The structural arguments outlined above can be helpful in identifying and analysing arguments from an academic perspective, but not necessarily for constructing them. These models can be abstract and not characteristic of how real arguments develop. Be that as it may, the dynamics of these structural contexts permits us to analyse and translate arguments and disagreements into common form to allow for comparisons to be made more readily.

Know your audience

Effective argumentation depends upon having a clear sense of your audience. Who you are attempting to convince controls the types of evidence selected and the form of your argument. You must accommodate the views of your audience even if you are arguing with those views. Nobody wants to be lectured to or to be told that they are a bad person for having certain views, beliefs.



Detailed view of the argumentation model - *(Source: Toulmin)*

It is vital that when you are composing an argument to be delivered as either a speech or in written form, that you establish a pattern to your argument that is used to support your claim and develop a case which suitably addresses the issues. Addressing the issues in the same pattern will satisfy an initial burden of proof. Being cognisant of these requirements while composing the content of your argument allows you to choose how and when to use the claims and issues, and how to arrange them. Of course, it may also assist in purposely omitting points of contention or controversy for which you do not have a suitable or compelling response and/or resolution.

Given the amount of time available to deliver your speech or the amount of space available to present your written case, you need to determine the amplitude of factors and considerations - or, the number and range of arguments. Amplitude can boost your toolset - the inconclusive aspects of any of your individual arguments or to hedge against the scepticism, diversity or lack of diversity of the audience and their thinking. Increasing your amplitude, however, comes with risks:

- If you construct or present your argument poorly it will reflect badly on you, your credibility, and the substance of your argument
- Increasing the amplitude could be seen as an overly defensive mechanism of piling up issues and claims without substance, relevance, or credibility

If you decide to increase the amplitude, take great care to frame your arguments in an appropriate manner that is seen as objective and considered, with substantive evidence to support your case. In constructing your amplified argument, make choices with regards to the patterns of your issues.

Consider presenting the issues using tools of chronology, spatial order, categories, cause-affect, comparisons and contrasts or problem-solution structures. Finally, consider how you order and/or prioritise your issues and claims so that the structure of your argument maintains a dignified level of principle and/or ethics.

SELF-ASSESSMENT 2

In what ways can you enhance the creativity of your argument when faced with time constraints?

How might you know when your argument has a strong enough case to satisfy the initial burden of proof and invite constructive questioning of your issues?

Stasis

Stasis defines the focal point of a dispute or disagreement. Stasis enables us to identify precisely what is in dispute and invites responses. The concept originated in classical rhetoric and was originally designed for courts of law. Classical theory established four categories of stasis:

1. **Conjecture** - whether an act occurred
2. **Definition** - what the act should be called
3. **Quality** - whether the act is justified
4. **Place** - whether the discussion is occurring in the proper forum

It's important to realise that what determines the stasis is not the original assertion but the response to it. The specific response, together with the original claim, will identify just what is at issue and, hence, where the stasis lies.

The importance of evidence

Evidence is important in representing the claims made during an argument. As an example, there have been several controversies that have illustrated the significance of evidence in the evaluation of an argument. In 2004, CBS News was forced to retract the story about President Bush's National Guard service because of faulty evidence. In the 2000 US presidential election campaign, television networks twice called the Florida election results prematurely because of misleading evidence.

Evidence answers the question "How do you know?" or "What do you have to go on?" in making a claim. If your evidence is contested during a disagreement or argument, your claims become inadequate until legitimate evidence is established. Incorrect or inadequate evidence can require a separate discussion or argument about the original evidence and the functions that evidence has on you making your claim. Much of the time there will be technical rules to establish the worthiness of evidence. When this is not the case, you must determine what a critical audience would be willing to accept as evidence.

Judgements of quality of the evidence are affected by unfamiliarity with the source and our opinion of the person who is using the evidence. Evidence is most influential when an audience is unfamiliar with the material and when the goal is sustained attitude change over time.

Common types of evidence can be grouped as: examples, statistics, tangible objects, testimony, and social consensus. Generalisations from examples may be either stated or implied. (Although one could argue about whether the examples support the generalisation, the truth of the exemplar themselves must be accepted before the argument or disagreement can legitimately proceed).

For testimony to be accepted the source needs to be credible. Credibility is a function of competence

and expertise, trustworthiness, goodwill, and dynamism. Credibility can be established for oneself or derived from the use of other credible sources. Several factors can place credibility in doubt and may require a separate argument to establish the evidence. Is the person an authority on the subject? Is there a new basis on which the person reached the conclusion? Does the person have a bias or vested interest? Do credible sources disagree with this person and their testimony?

Social consensus

Social consensus consists of beliefs that function as if they were facts. “Common knowledge” is a type of social consensus. Other types include shared value judgements, shared historical understandings, previously established conclusions, and stipulations in a specific discussion. Differences in core values or common knowledge will need to be resolved before social consensus can be accepted as evidence.

Creating a matrix is a visual process useful for developing your argument.

	Claim	Issue	Solution	Cost/Price
Conjecture	Is establishing a market structure for carbon legitimate and worthwhile?	Will a carbon market genuinely effect global temperatures?	Can a truly global agreement be achieved with all industrialised nations?	What impact will a carbon market have on citizens and the economies of countries that are signatories?
Definition	Is temperature warming a policable issue by the United Nations?	Are the majority of scientists agreed that global warming is an issue contributed to by human activities?	Will a carbon market affect the required change in behaviour by industrialised nations and their economies?	Will a carbon market genuinely and significantly improve the lives and well-being of the people participating in the market?
Quality	Is global warming significant and irrefutable? Does this warrant the establishment of a carbon market?	Should we consider other circumstances?	Exactly how much will global temperatures be affected because of the implementation of a carbon market?	Do the perceived benefits outweigh the anticipated costs?

CHALLENGE 2

Give an example of when each of these categories would serve as the best type of evidence:

Examples	
Statistics	
Testimony	
Social consensus	

Compelling Factors

Compelling factors can work for, as well as against, the conclusion or dissolution of evidence and issues. Be mindful of the factors and patterns that you employ when providing the evidence for the issues that support the claims made in your argument.

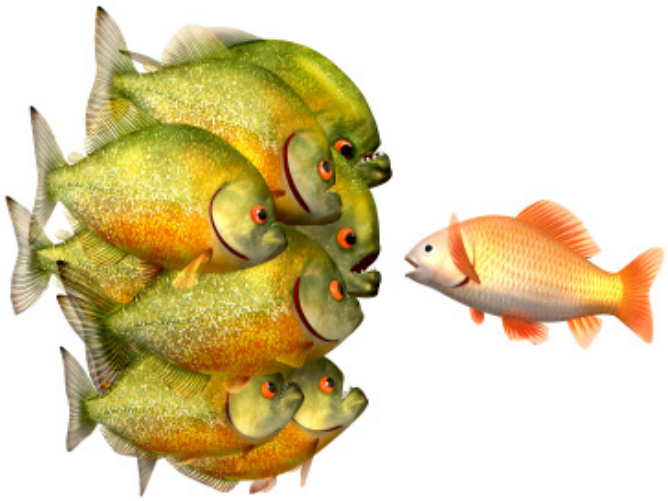
- **Don't introduce issues or evidence that have nothing to do with the relationship between the argument and the claims.** If you genuinely wish to influence an audience, it is imperative that you do not propose an attack on a person as a substitute for a reasonable response to an objection in your argument. If you allow your argument to be defined in this manner, then they may be seen as part of a contingency of fallacies that are presented with deficiencies in relevance.

- If you **present an authority in your argument and that authority is outside their area of expertise**, or there is no basis for reaching conclusions, your claims will be seen as unjust.

- **Appealing to popularity** and getting on the bandwagon during your argument as a substitute for having a lack of evidence will be perceived as a deficiency in your claims and can easily create rejection for your argument.

- By **appealing to tradition** you may be able to block consideration of change without engaging the argument. Similarly, appealing to the ignorance of the audience, while not proving your claims, can effectively dissuade the audience from accepting the other arguer's claims. This approach is observed time and again during political debate.

- **Appeals to inappropriate emotion** prevent argument through expressions of anger, fear, or other emotions impervious to intelligent debate and discussion of the issues and claims.



Logical Fallacies

These are the common logical fallacies that you must be cognisant of when developing your argument. Knowledge is power.

Not knowing about these fallacies, and then including any of them into your argument will erode your credibility and success in influencing your audience:

LOGICAL FALLACIES			
Fallacy	**Description**	**Example**	**Reality**
Hasty generalisation	Making a claim on the basis of inadequate evidence.	It's disconcerting that several of the teenagers who assaulted the adolescent were frequent players of violent video games. Clearly, violent video games promote indiscriminate violence, and they must be banned.	Most teenagers who play violent video games do not behave violently.
Sweeping generalisation	Absolute statements involving words such as: all, always, never, and no one that allow no exceptions.	• Bikies are violent drug dealers • People in IT are nerd-geeks with no personality • Women are emotional beings • Men are unable to express their feelings	These are often considered stereotypes.
Post hoc fallacy	Occurs when you conclude that a cause-effect relationship exists simply because one event preceded another.	A number of immigrants settle in a nearby township. The township suffers an economic decline. The immigrants' arrival caused the decline.	This is simply co-occurrence. There are most likely other reasons for the economic decline.
Appeals to questionable or faulty authority	Occurs when the argument fails to provide the credibility of the sourced material.	Sources show… An unidentified spokesperson states… Experts claim… Studies show…	If these people and reports are so reliable, they should be clearly identified.

Fallacy	Description	Example	Reality
Ad hominem	Attacking the qualities of the people holding an opposing view rather than the view itself. The personal attack attempts to divert attention from the facts of an argument by attacking the motives or character of the person making the argument.	A politician has a sister who believes in same-sex marriage, so their views on the abortion pill merit no attention.	Do the opinions of the politician's sister invalidate his political views?.
Begging the question	Involves failure to establish proof for a debatable point. This tactic asks the audience to agree that certain points are self-evident when they are not.	• The college library's funding should be reduced by cutting subscriptions to useless periodicals. • The unfair and shortsighted legislation of China that limits free-trade is clearly a threat to international economies.	• Are some of the library's periodicals useless? • Is all free-trade a threat?
False analogy	Implies that because two things share some characteristics, they are therefore alike in all respects. It asks the audience to assume two things are comparable when they, in fact, are not.	Nicotine and marijuana involve health risks and have addictive properties. "Driving while smoking a cigarette is legal, so driving while smoking marijuana shouldn't be illegal."	By making this argument, you have overlooked a major difference between these two substances. Marijuana impairs perception and coordination - important aspects of driving - while there's no evidence that nicotine does the same.
Either/or fallacy	Assuming that a complicated question has only two answers, one good and one bad, or both bad.	Either we permit mandatory drug testing in the workplace or productivity will continue to decline.	Productivity is not necessarily dependent on drug testing.

Fallacy	Description	Example	Reality
Red herring	Introducing an irrelevant issue intended to distract readers from the relevant issues.	A university campus speech code is essential to protect students, who already have enough problems coping with rising tuition.	Tuition costs and speech codes are different subjects. What protections do students need that a speech code will provide?
Appeal to reader's fear or pity	Substituting emotions for reasoning.	She should not have to pay taxes because she is an aged widow with no friends or relatives.	Appeals to people's pity. Should age and loneliness, rather than income, determine a person's tax obligation?
Non-sequitor	Linking two or more ideas that in fact have no logical connection.	She uses a wheelchair, so she must be unhappy.	The second clause has nothing to do with the first.

Three levels of appeal

1. **Logical -** An appeal to the reader's mind and sense of reason. This is the most heavily used appeal in argumentative essays.

   We want our audience to trust our opinions because they trust not only our evidence but our interpretations of it.

2. **Emotional -** An appeal to the emotions of our audience. Use this type of appeal most sparingly and be especially careful to avoid using an unfair appeal. When people employ inappropriate emotional appeals - prejudice or fear, for example - to influence readers, they destroy their own credibility and authority.

3. **Social / Ethical -** An appeal to the audience's sense of right and wrong. We want our audience to view us as good, trustworthy people; therefore, it is important we establish a shared sense of ethics and thereby establish and enhance our credibility.

Beware the "Inappropriate Appeal" - The emotional appeal is the most dangerous and should be used the most sparingly. Why? Because authors / speakers / writers with little concrete support for their claims often resort to manipulating their audience with fear tactics or to exploiting the audiences' insecurities. Skeptical people will always be alert to such manipulation. An inappropriate appeal always renders your argument ineffective, because it makes the audience question your credibility and your ethics.

Final Rules To Constructing An Argument

The reason you're reading this Learning Module is to evaluate the construction of arguments and how to determine what makes a good or bad argument, a strong or weak claim, a convincing or otherwise delivery of issues, supported by evidence. This is because we all want to know not only what convinces people, but what *should* convince people. Or, to put it another way, what would convince people if they were exercising their critical judgement in reasonable fashion?

Traditionally, we have considered it to be a matter of validity. But we have shown in this Learning Module that there is much more to it than this. Constructing a solid argument to support the issues and claims made by the author in an attempt to gain assent by the audience can include patterns of inference, definitions for clarity, intelligent use of language, examples, statistics, metaphors, and much more. An argument is valid if, when the evidence is true, the claims must also be true. The necessity of this relationship allows us to say that the claim follows from the evidence.

If there is no connection existing, or it is perceived by the audience that there is no connection existing between the claim and the evidence, it will be determined that the argument is invalid, which may also lead to the reasoning that it is fallacious.

To ensure that your arguments are constructed with content that is valid and substantial you should avoid these key pitfalls:

- Resist making hasty generalisations
- Avoid representative samples
- Do not be lured into the fallacy of proof through division
- Failing to identify a common cause
- Confusing temporary issues with causality
- Confusing cause with effect
- Ignoring multiple causes or multiple effects
- Ignoring intervening causes
- Ignoring counteracting causes

Be careful when using or interpreting statistics, as they can be calculated and displayed in different ways to achieve different results. You must always look for a note about the margin of error and for information about the statistical sampling:

- How many people were surveyed?
- What questions were they asked?

- Were the same questions asked in different way to negate, or at least reduce, bias?

N.B. Phraseology in questioning: The survey question, “Do you think medical malpractice insurance is too high?” coaches for a different answer than a question that asks, “Should doctors be accountable for patient injuries incurred as a result of their care”.

Also beware of the misleading statistic; a misrepresentation or distortion of statistics. For example: “Women will never be competent fire-fighters; after all, 50% of the women in the city’s training program failed the exam.”

The writer has neglected to mention that there were only two women in the program! Because the statistic is not based on a large enough sample, it is, obviously, unreliable.

Conclusion

Be aware that sometimes the controversy will continue and not all arguments may reach resolution. The same underlying dispute may be raised repeatedly by different people, with similar or disparate concerns. Your concepts, claims, issues, and evidence may be essentially contested today, tomorrow, and always. Controversy can sometimes be perpetual.

Consensus is achieved through a seemingly adversarial process, through the activity of argumentation and disagreement is fundamentally co-operative. The result is to ground decisions in good reasons - reasons that withstand the scrutiny of critical thinkers. Tests of claims are successive, not final. The outcomes of argumentation are commitments that people are willing to make and defend, but also to revise if circumstances change.

Argumentation is also a way of knowing. The pragmatist philosopher Charles Pierce identified four ways of knowing:

- Tenacity is the method of chance; one sticks to the first beliefs one gets
- Authority involves the uncritical acceptance of a prominent person's beliefs
- Verification is the method of science
- Beliefs are deduced from self evident premises

Argumentation has the purpose of allowing an audience to reach mutual agreement and of shared sincerity of reason. The goal of argumentation is to achieve reflective judgement by the arguers and their audience. The knowledge that your views may be challenged creates an incentive to search for information and evidence of high quality. Argumentation achieves the goals of the democratic society. Aristotle was one of the earliest thinkers to identify the social function of argumentation. Aristotle believed that it prevented the triumph of fraud and injustice. It is a means to instruct audiences when scientific instruction is of no avail.

A properly constructed argument is also a means of self defence. I trust that you will defend your right to argue your beliefs which reason, intelligence, and care for the facts and the evidence that you discover for both sides of the case you put forward. I trust that you will defend other's the right to do the same.

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