

ARGUMENT MAPPING – THE BASICS

These sheets are based on the heuristics and Rationale software developed by Austhink (www.austhink.com).

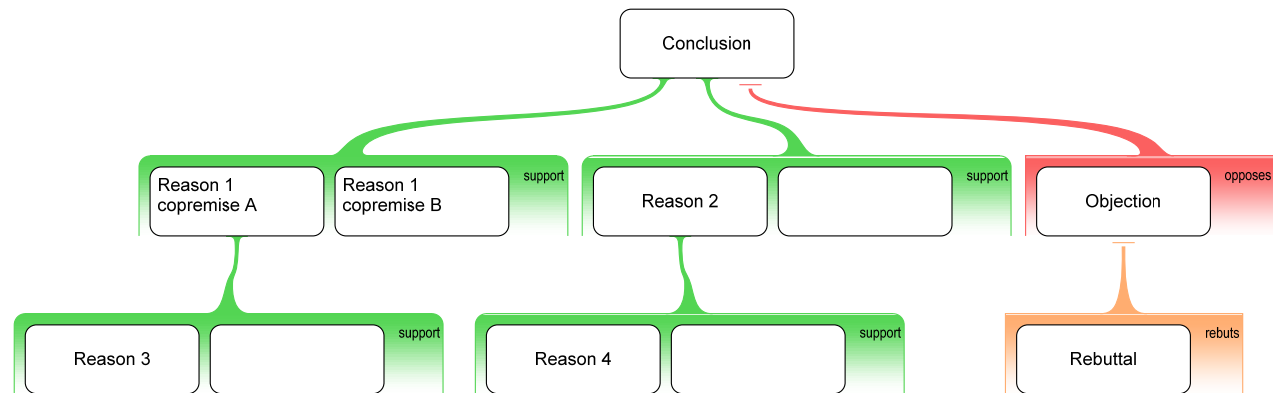
Introduction

Argument mapping is a way to visually show the logical structure of arguments. You break up an argument into its constituent claims, and use lines, boxes, colors and location to indicate the relationships between the various parts. The resulting map allows us to see exactly how each part of an argument is related to every other part.

Definitions

- **Argument:** a claim and reason(s) to believe that that claim is true.
- **Conclusion:** the main point an argument is trying to prove, usually a belief. Also called the position, the main claim, the issue at hand.
- **Reason:** evidence given to support the conclusion.
- **Co-premise:** the subset of a reason. Every reason has at least two co-premises, and each of these co-premises must be true for the reason to support the claim.
- **Objection:** a ‘reason’ that a claim is *false*; evidence against a claim
- **Rebuttal:** an objection to an objection.

The Syntax of an Argument Map



Things To Note

- Arguments can have many claims, many reasons, many objections and rebuttals, but only **one** conclusion.
- Distinguish a claim with a single reason (made up of two co-premises) from a claim with two independent reasons.
- Every argument is made up of one or more simple arguments. A **simple argument** is the building block of all arguments, consisting of one claim and one reason (with two or more co-premises). A **complex argument**, like the one above, has several simple arguments linked together. In the example above, there are four simple arguments, one objection, and one rebuttal. Together, they form a **debate**.
- The exact structure of an argument is very important. For example, if side A has two good reasons to conclude something, and their opponent (side B) thinks one of those reasons is bad, then A’s conclusion may still be true/warranted *if* the remaining, unobjected-to reason is convincing.
- An argument map can represent a debate by showing exactly where two sides disagree on the issue. In the above example, side B disagrees with side A’s conclusion, even though it accepts the reasons (1 and 2) that A gives. It disagrees with A’s conclusion because of a separate objection to the conclusion. Side A rebuts the objection of side B, thus (it hopes) invalidating the objection and saving its conclusion.
- Remember that an argument map shows the structure of the argument/debate – every box is not necessarily true, but the first step is to understand the structure of the argument. Only then can you critique it.

THE RULES OF ARGUMENT MAPPING

You already know the basic rules of logic, and use argumentation in your daily life all the time.
The following rules are intended only to assist you in applying them consistently so you can clearly distinguish the parts of an argument.

Within each box		Within each simple argument	
<p><u>Declarative Sentence:</u> Each box should have a full sentence (not a phrase) and should be declaring something, taking a position (whether it is true or false). You need to be clear as to what exactly you mean: <i>was</i> Brady a good quarterback or is he <i>still</i> a good quarterback?</p>	<div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">Tom Brady good quarterback</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Tom Brady is a good quarterback.</div> </div>	<p><u>Assertibility Question:</u> All reasons for claims must answer the question: “How do we know that [insert specific claim here] is true/warranted?” You are asking what evidence allows one to assert that the claim is true. Every claim box should have a reason box below it that answers this question.</p>	<pre> graph BT R1[Fred eats fish all the time] -- Reason --> C1[Fred is always praising fish] R2[People who eat fish all the time like fish] -- Reason --> C1 C1 -- Reason --> C2[Fred likes fish] </pre>
<p><u>No Reasoning:</u> No box should have reasoning going on <i>inside</i> it, only single claims. The reasoning is represented by the arrows and locations in the map. Look for words that indicate reasoning (e.g. <i>because</i>) and translate the reasoning into the map.</p>	<div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">Michael Vick should be banned from the NFL because he tortured dogs</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">Michael Vick should be banned from the NFL</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">because</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Michael Vick tortured dogs</div> </div>	<p><u>Holding Hands:</u> Applied horizontally within each simple argument. Within each reason, a term stated in one co-premise must be mentioned in one of the other co-premises <i>in that same reason</i> (if it is not in the claim above it – see the Rabbit Rule below). The terms must ‘hold hands’ within a single reason if they are not already accounted for by the Rabbit Rule.</p>	<pre> graph BT R[Reason] --> C[Fred likes fish] R --- P1[Fred eats fish all the time] R --- P2[People who eat fish all the time like fish] P1 -.-> P2 </pre>
<p><u>Two Terms:</u> Each box can only have two main terms, so that each box is either true or false, not both. If you have more than two terms in a single box, separate them into multiple boxes.</p>	<div style="text-align: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">John is hungry and Tom is sad</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; margin-bottom: 20px;">John is hungry</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Tom is sad</div> </div>	<p><u>Rabbit Rule:</u> Applied vertically, between a claim and each of its reasons, and is combined with the Holding Hands rule. “You can’t pull a rabbit out of a hat.” Using these two rules for each simple argument, you make sure that every term mentioned in each box is found in one of the others.</p>	<pre> graph BT R[Reason] --> C[Fred likes fish] R --- P1[Fred eats fish all the time] R --- P2[People who eat fish all the time like fish] P1 -.-> C P2 -.-> C </pre>