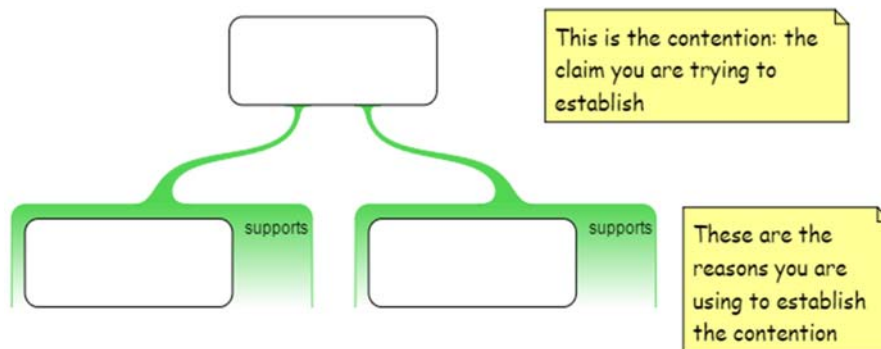


# Argument Maps

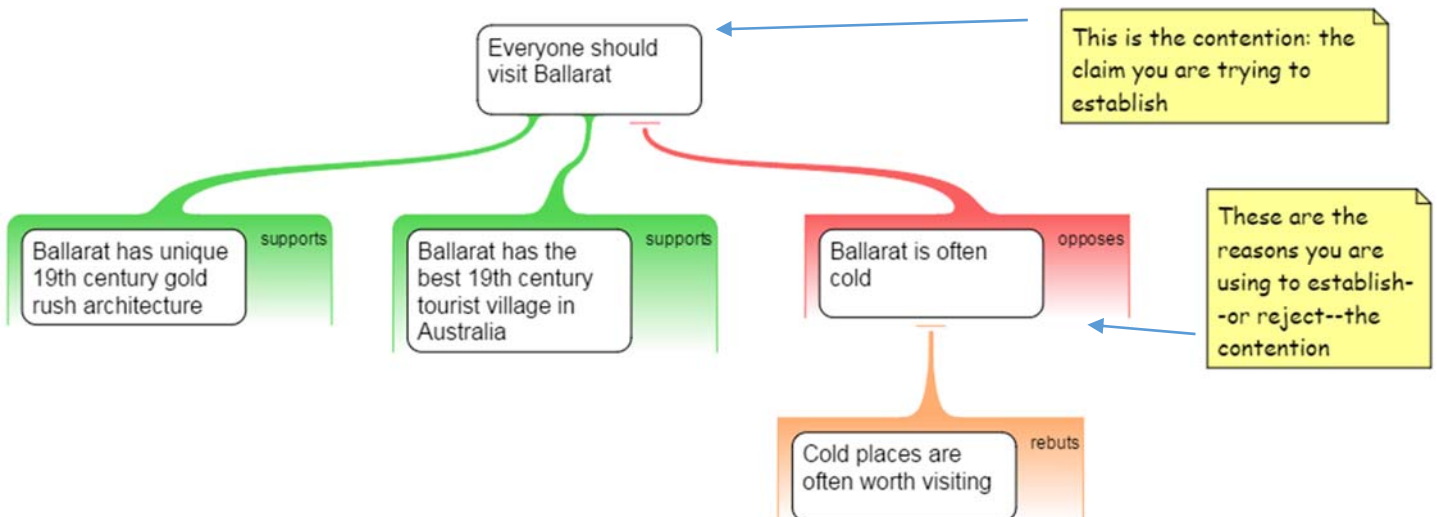
The word “argument” can be loosely defined in two ways: 1) as a verbal fight; and 2) as a connected series of statements intended to establish a conclusion. It is the second definition that is relevant to university studies.

Arguments are made clearer by drawing them; it helps to map them out. An argument map always shows the conclusion at the top of the map and the reasons used to establish the conclusion at the bottom. Conclusions are sometimes called **contentions**, and reasons are sometimes called **premises**.

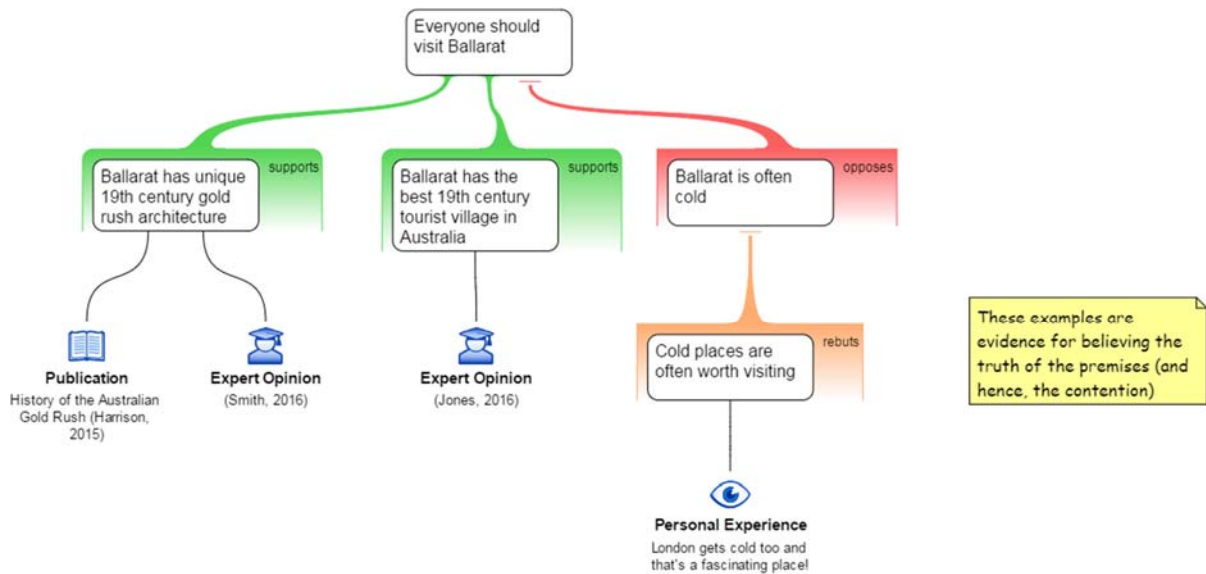


Note: reasons don't always have to support a contention: they can be reasons *against* the contention. These reasons are called **objections**, and reasons against objections are called **rebuttals**.

Here is a simple example with an objection and rebuttal added (the sidebar descriptions are changed slightly).



Here we have two reasons supporting a contention, and one reason objecting to a contention. A rebuttal point is objecting to the objection. What's missing here? **Evidence**, for one thing. Evidence supporting the reasons and objections will help us to believe the points being made. If we don't believe them, we need not believe the contention. So let's add some terminal evidence for the reasons (these are sometimes called **basis boxes**, i.e., they give us a basis for believing the truth of something).



## Evidence

The map above now includes some **expert opinion** supporting the reasons, and a **publication** too. We could add more evidence, but it may make our argument map too complicated. We have to be able to justify our evidence if we had to, which might involve expanding on it, e.g., outlining the data.

Here are some types of evidence that can be used to form arguments (NB: some may have multiple sources of evidence):

- Documentary/archival: evidence from the historical records (e.g., Cromwell fell in 1640)
- Scientific/Empirical: evidence from experimental data (e.g., water boils at 100 degrees C)
- Testimonial: evidence from stories and anecdotes that confirm something (e.g., Saddam Hussain's regime used torture)
- Demonstrable: evidence from being shown something (e.g., that this is the best way to hold a guitar)
- Personal: having personal experience of some claim being true (e.g., Bali is a nice place to visit)
- Circumstantial: evidence that might collectively support some claim (e.g., Kennedy was assassinated in a conspiracy)
- Psychological: evidence from the effects on a person's mental state (e.g., he is suffering from hypothermia)
- "Expert": evidence drawn from experts in the literature or from experts' views in common lore (e.g., Everest is the tallest mountain in the world)
- Observational: visual, auditory or tactile evidence (e.g., the room is too hot)
- Legal: evidence from legal judgement or precedent (e.g., detainees in off-shore detention camps should be treated humanely).

These are key things important to constructing arguments at university. In mapping out your argument, ask yourself the following questions:

- What is my contention?
- What are my reasons or objections to the contention?
- What are the objections to the objections (rebuttals)?
- What is the evidence for the reasons/objections?

### Other helpsheets available

- Concept Maps
- Mind Maps