

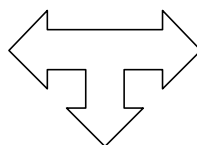
Thinking About Relational Causality

Some outcomes are caused by a relationship between two things. Here is a social example to help you understand what relational causality is. Two girls can be sisters, but neither girl alone is the “cause” of being sisters. It is the relationship between the two that “causes” them to be sisters. Comparisons can be made about the relationship. For example, you can say that one sister is older and one is younger, but it only makes sense in terms of the relationship, in comparing them to each other.

Relational Causality

One variable, process,
thing or event.

(For example:
Number of protons)



Another variable, process,
thing or event.

(For example:
Number of electrons)

Effect or Outcome

(For example: balance or charge)

In a relational causal story:

- Events can be caused by balance or unbalance (or a “state of flux”).
- What happens (the effect) is caused by the relationship between the things/parts.
- No single variable, process, or event is the cause by itself.
- If you focus on only one of the things that contributes to what happens, you lose important parts of what is going on.

The concept of electrical potential explains what is going on in the circuit by looking at the relationship between the numbers of protons and electrons along the circuit. The cause of what happens is a relationship between two things that are balanced or imbalanced.

When there are more electrons than protons (or vice versa), there is net electrical charge. The battery creates electrical charge at each pole by separating electrons and protons. There are protons without electron partners at the positive terminal, so it is positively charged. There are electrons without proton partners at the negative terminal, so it is negatively charged. Because the electrons can move, they move along the circuit wire to get away from the excess of electrons. They seek out proton partners (and therefore, balance). As long as the battery keeps separating protons and electrons, there will be imbalance or a differential between the numbers of electrons and protons along the circuit. This imbalance causes the charge to move along the circuit, seeking balance but not achieving it because the battery maintains imbalance (until the chemical in the battery loses the ability to do the work of separating protons and electrons).