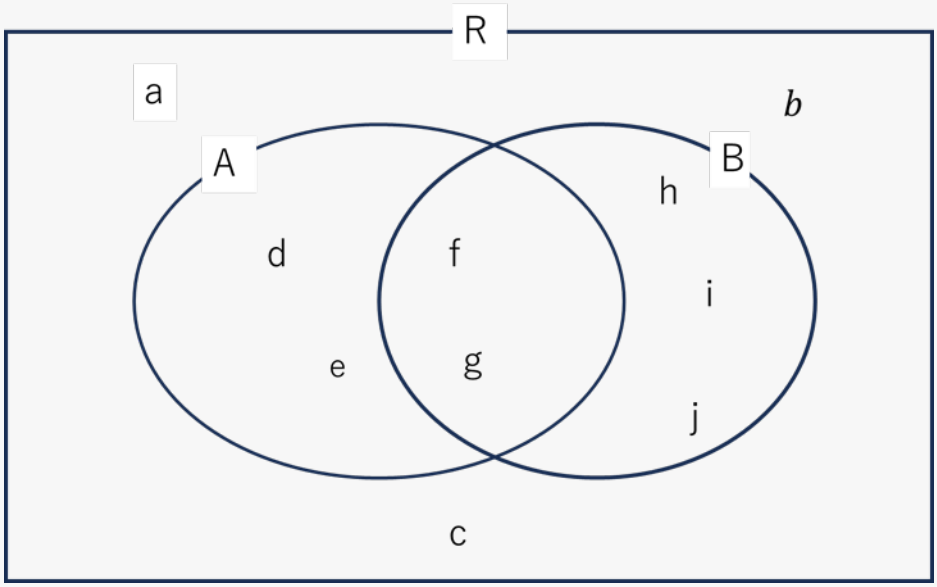
Coverage

Coverage refers to the proportion of members belonging to set A within set B when set A is included in set B (A is a subset of B, A is a sufficient condition for B). In QCA, the proportion of cases belonging to the outcome R that also belong to the sufficient condition C is called solution coverage. The proportion of cases belonging to each item analyzed as a condition that also belong to the outcome R is called raw coverage. Often, the sets created by individual items form intersections with other sets. The proportion of cases that belong to the outcome R and are explained solely by the conditions of individual sets, excluding overlapping parts with other sets, is called unique coverage.



Venn diagram of Solution $A \vee B \Rightarrow R$

The diagram shows the solution ($A \vee B \Rightarrow R$): the logical OR of A and B is a sufficient condition for R (if A or B, then the result is R) using a Venn diagram. Assume the members of each set are as follows:

$$U = \{a, b, c, d, e, f, g, h, i. j\}$$

$$A = \{d, e, f, g\}$$

$$B = \{f, g, h, i, j\}$$

$$A \cap B = \{f, g\}$$

$$A \cup B = \{d, e, f, g, h, i, j\}$$

$$A \cap \tilde{B} = \{d, e, \}\quad unique\ members\ in\ A$$

$$\tilde{A} \cup B = \{h, i, j\}\quad unique\ members\ i\ B$$

From this, we get:

$$raw\ coverage\ of\ A = \frac{number\ of\ members\ in\ A}{number\ of\ members\ in\ U} = \frac{4}{10} = 0.40$$

$$raw\ coverage\ of\ B = \frac{number\ of\ members\ in\ B}{number\ of\ members\ in\ U} = \frac{5}{10} = 0.50$$

$$solution\ coverage\ of (A \vee B \Rightarrow R)\ = \frac{number\ of\ members\ in\ A \cup B}{number\ of\ members\ in\ U} = \frac{7}{10} = 0.70$$

$$unique\ coverage\ of A = \frac{number\ of\ members\ in A \cap \tilde{B}}{number\ of\ members\ in\ U} = \frac{2}{10} = 0.20$$

$$nique\ coverage\ of B = \frac{number\ of\ members\ in\ \tilde{A} \cup B}{number\ of\ members\ in\ U} = \frac{3}{10} = 0.30$$