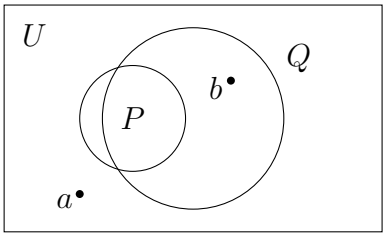
Using Euler Diagrams to Understand a Vacuously True Implication

Consider the Euler diagram shown on the right. Can the point $a \in U$ be used to show that $P \to Q$ is false? What about $b \in U$?



How would you describe the set of all counterexamples to the claim $P \to Q$?

Suppose that some open statement $P(x)$ is false for every $x \in U$. How might we depict its Euler diagram?