Jack is looking at Anne. Anne is looking at George. Jack is married. George is single.
Is a married person looking at a single person? (yes) (no) (cannot be determined)

§

yes. If Anne is single, then married Jack is looking at single Anne. If Anne is married, then married Anne is looking at single George. Either way, a married person is looking at a single person, although we don't know which married person is looking at which single person.

Although the question does not ask for it, we can formalize the problem as follows. Let \( j \) be a binary variable meaning “Jack is married”, let \( a \) be a binary variable meaning “Anne is married”, and let \( g \) be a binary variable meaning “George is married”. We are given \( j \) and \( \neg g \). We are asked \( j \land \neg a \lor a \land \neg g \). We calculate:

\[
\begin{align*}
&j \land \neg a \lor a \land \neg g \\
\equiv &\quad T \land \neg a \lor a \land T \\
\equiv &\quad T \land \neg a \lor T \land a \\
\equiv &\quad \neg a \lor a \\
\equiv &\quad a \lor \neg a \\
\equiv &\quad T
\end{align*}
\]

There are logicians who use “constructive logic”, which does not include the Completion Rule. As a result, they do not have the law of excluded middle. So they cannot make the above calculation. So those logicians would answer “cannot be determined”.
