A correction of EWD 1112

The final observation of EWD 1112 for fresh variables x', y' from a nontrivial type (i.e. with at least 2 distinct values, so that $[x'=y']_{x'y'} \equiv \text{false}$) should have been as follows:

$$
\begin{aligned}
& [R \wedge \sim R \Rightarrow J]_{xx'yy'} \\
= \quad & \{\text{def. of } J \text{ in extended context}\} \\
& [R \wedge \sim R \Rightarrow x=y \wedge x'=y']_{xx'yy'} \\
= \quad & \{x'y' \text{ fresh}\} \\
& [R \wedge \sim R \Rightarrow [x=y \wedge x'=y']_{x'y'}]_{xy} \\
= \quad & \{\text{type of } x'y' \text{ nonempty}\} \\
& [R \wedge \sim R \Rightarrow x=y \wedge [x'=y']_{x'y'}]_{xy} \\
= \quad & \{\text{type of } x'y' \text{ nontrivial}\} \\
& [R \wedge \sim R \Rightarrow \text{false}]
\end{aligned}
$$

and as a constraint on R the last line is more stringent than $[R \wedge \sim R \Rightarrow J]$, i.e. Cartesian extension destroys antisymmetry and turns partial orders into preorders.

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