Inference at * 1 1
 of proof for Lemma connex_iff_trichot:

1. T : Type
2. R : $T \to T \to \mathbb{P}$
3. $\forall a, b{:}T.\ \mathrm{Dec}(R(a,b))$
4. $\forall x, y{:}T.\ R(x,y) \vee R(y,x)$
5. a : T
6. b : T

$\vdash (R(a,b)\ \&\ (\neg R(b,a))) \vee (R(a,b)\ \&\ R(b,a)) \vee (R(b,a)\ \&\ (\neg R(a,b)))$

 by ((((InstHyp [a;b] 4)
 CollapseTHENM (GenExRepD))·)
 CollapseTHENA (
  (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 4:n)) (first_tok :t) inil_term)))·

  1:

   7. $R(a,b)$

   $\vdash (R(a,b)\ \&\ (\neg R(b,a))) \vee (R(a,b)\ \&\ R(b,a)) \vee (R(b,a)\ \&\ (\neg R(a,b)))$

  2:

   7. $R(b,a)$

   $\vdash (R(a,b)\ \&\ (\neg R(b,a))) \vee (R(a,b)\ \&\ R(b,a)) \vee (R(b,a)\ \&\ (\neg R(a,b)))$

  .