List of comments and errors for *First-Order Logic and Automated Theorem Proving*, Second Edition Melvin Fitting. December 22, 2003

Page 294 Comment from Claus-Peter Wirth, 8/29/97. "You introduce the notion of a simple formula for the alternate equality handling in tableaux. You say a formula is simple if it is an atom or a negative equality literal. You can do your whole treatment without relevant changes when you restrict the notion to include only the non-equality atoms and the negative equality literals. A third way to proceed is to restrict rewriting to the negative literals, which requires a simple change in the proof of satisfiability of Hintikka Sets (include into H^* those non-equality atoms A for which $\neg A$ is not included in H."

Page 66 Comment from Steffen Hoelldobler, 1/19/99. "I have encountered a problem in the proof of Lemma 3.7.6. Consider the case where the n-th line of the derivation from S_1 is obtained by resolution from the disjunctions $[A_1, A_2]$ and $[\neg A_1, A_3]$, i.e. the n-th line is of the form $[A_2, A_3]$. Now consider the X-enlargements $[A_1, A_2, X]$ and $[\neg A_2, A_3, X]$ of $[A_1, A_2]$ and $[\neg A_1, A_3]$ respectively. Their resolvent is $[A_2, A_3, X, X]$, which is not an X-enlargement of $[A_2, A_3]$."

My response. Redefine X-enlargements to allow for multiple additions of X. The only use made of the Lemma is in proving Lemma 3.7.8, and it occurs near the end of the proof, on page 67. At that point, we would wind up with a derivation of either [ ] or $[\beta_2, \ldots, \beta_2]$ (in the third line of the last paragraph of the proof). But there, multiple occurrences shouldn't matter, because I defined the propositional resolution rule so that it incorporates factoring (3.3.2), which is trivial at the propositional level.