Exercise 4.2. If *M* and *L* are Hermitian, then *i* [*M*, *L*] is Hermitian but not necessarily [*M*, *L*].

Proof. Given , we wish to show that . Let . Then  and

.

So



 ✔

However,

,

not equal to  unless *M* and *L* commute; i.e., unless . ■