

Since hypothesis testing involves either rejecting or failing to reject the Null Hypothesis, there are two possible errors that can be made. First, it is possible that we will not obtain a statistically significant result and fail to reject the Null Hypothesis when it really is false and should be rejected. This is a Type II error. Alternatively, we may obtain statistically significant results and reject the Null Hypothesis when it should not be rejected. This is a Type I error. Table 6.1 categorizes these errors.

		<i>Actual State of the Null</i>	
		<i>Null True</i>	<i>Null False</i>
<i>Research Decision</i>	<i>Reject the Null</i>	Type I Error	Correct Choice
	<i>Fail to reject the Null</i>	Correct Choice	Type II Error

Table 6.1: Type I and Type II Errors

Because scientists are conservative (i.e., cautious), a Type I error is generally considered the more dangerous error to make, because in this case rejecting the Null Hypothesis leads to an incorrect acceptance of a research finding. This incorrect finding could lead decision-makers to adopt a *new* bridge construction material, medication, or public policy that is incorrectly believed to be superior. In sum, you should remember that we intentionally set relatively high minimum standards of statistical confidence (generally 95%) to avoid Type I errors.