

## Practice Exercise #4

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### Practice Problem

Let  $kids$  denote the number of children ever born to a woman, and let  $educ$  denote years of education for the woman. A simple model relating fertility to years of education is:

$$kids = \beta_0 + \beta_1 educ + u$$

where  $u$  is the unobserved error.

1. What kind of factors are contained in  $u$ ?
2. Give an example of one factor that is positively correlated with  $educ$ , one that is negatively correlated with  $educ$ , and one that is not correlated with  $educ$ .