

# Figures for Chapter 8

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```
fig8.1 <- function(plotit=TRUE){
  tau <- (0:5)/2.5; m <- length(tau); n <- 200; SD <- 2
  x0 <- rnorm(n, mean=12.5, sd=SD) # Generate x-values
  df <- data.frame(sapply(tau, function(xtau)x0+rnorm(n, sd=SD*xtau)))
  # Columns after the first are x-values with added error
  df$y = 15+2.5*x0
  names(df) <- c(paste("X", tau, sep=""), "y")
  lab <- c(list("0"),
            lapply(tau[-1], function(x)substitute(A*s[z], list(A=x))))
  form <- formula(paste("y ~ ", paste(paste("X", tau, sep=""),
                                         collapse="+")))

  library(latticeExtra)
  xlabel <- expression(italic(x)*' ('*italic(z)*' with error)')
  striplabel <- strip.custom(strip.names=TRUE,
                             var.name="SD(added err)",
                             sep=expression(" = "),
                             factor.levels=as.expression(lab))

  gph <- xyplot(form, data=df, outer=TRUE, xlab=xlabel, strip=striplabel,
                type=c("p", "r"))
  gph+layer(panel.abline(15, 2.5, lty=2))
}

if(exists("OpenSesame")){
  library(DAAG)
  library(latticeExtra)
  gph <- fig8.1()
  print(gph)
}
```