

# 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(xt) rnorm(n, mean=x0+xt, sd=SD*xt)))
# 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)
}
```