

Newspaper Example

BIOE 498/598 PJ

Spring 2021

Parameter definitions and online learning

```
set.seed(498)
N <- 1000
D <- 50 + sample.int(50, N, replace=TRUE)
p <- 1
c <- 0.25
theta <- numeric(N+1)
theta[1] <- 25
alpha <- 0.5
reward <- numeric(N)

for (i in 1:N) {
  reward[i] <- p*min(theta[i], D[i]) - c*theta[i]
  drdt <- ifelse(theta[i] < D[i], p-c, -c)
  theta[i+1] <- theta[i] + alpha*drdt
}
```

Results

