

**fit tempo di attivazione al variare della memoria.**

**parametri da fissare:n utenti, frazione di attivazione (30%??)**

**acquisizione csv con i valori di attivazione e memoria (simulazioni a memoria fissa)**

**valore medio ed errore del tempo di attivazione per ogni memoria**

**fit con barre di errore**

```
In [1]: library(data.table)
library(foreach)
library(doMC)

library(plotrix)
```

Loading required package: iterators  
Loading required package: parallel

```
In [2]: files = c(
  "....../log/memoryLog2018_08_03_18_18_47.csv",
  "....../log/memoryLog2018_08_03_18_19_18.csv",
  "....../log/memoryLog2018_08_03_18_19_38.csv",
  "....../log/memoryLog2018_08_03_18_19_58.csv",
  "....../log/memoryLog2018_08_03_18_20_17.csv",

  "....../log/memoryLog2018_08_03_18_20_35.csv",
  "....../log/memoryLog2018_08_03_18_20_50.csv",
  "....../log/memoryLog2018_08_03_18_21_08.csv",
  "....../log/memoryLog2018_08_03_18_30_45.csv",
  "....../log/memoryLog2018_08_03_18_30_58.csv",

  "....../log/memoryLog2018_08_03_18_31_12.csv",
  "....../log/memoryLog2018_08_03_18_31_41.csv",
  "....../log/memoryLog2018_08_03_18_31_53.csv",
  "....../log/memoryLog2018_08_03_18_32_05.csv",
  "....../log/memoryLog2018_08_03_18_32_19.csv",

  "....../log/memoryLog2018_08_03_18_32_35.csv",
  "....../log/memoryLog2018_08_03_18_44_12.csv",
  "....../log/memoryLog2018_08_03_18_44_28.csv",
  "....../log/memoryLog2018_08_03_18_44_41.csv",
  "....../log/memoryLog2018_08_03_18_44_56.csv")
files[3]
```

'....../log/memoryLog2018\_08\_03\_18\_19\_38.csv'

```
In [3]: int <- read.csv(file="../../log/memoryLog2018_08_03_18_19_18.csv", nrows=11, sep=",", as.is=T)
maxtime     <- 1000
num_news    <- int$X..memorylog[6]
num_users   <- 1000
num_sources<- 20
memory      <- 20
#int
```

```
In [4]: cores=detectCores()
#cluster <- makeCluster(cores[1] - 1)
registerDoMC(cores -1)
```

```
In [5]: maxtime
```

```
1000
```

```
In [8]: HBp <- matrix(nrow=memory*num_sources, ncol=maxtime)
for(k in 1:memory){
  DTp <- fread(files[k])
  print(files[k])
  newsvec <- DTp[1:num_news,'news0']
  newsvec <- as.vector(t(newsvec))
  nn <- vector(mode="integer",length=num_news)
  TBp <- foreach (i=1:maxtime, .combine=rbind) %dopar% {
    for(j in 1:num_news){
      nn[j] =sum(apply(subset(DTp, time == i),1,function(x) length(which(x==newsvec[j]))))

    }
    c(nn)
  }
  for(m in 1:num_sources){
    #print(num_sources * ( k - 1 ) + m)
    HBp[num_sources * ( k - 1 ) + m,] = as.vector(TBp[,m])
  }
  #gc()
}
```

```
[1] "../../../log/memoryLog2018_08_03_18_18_47.csv"
[1] "../../../log/memoryLog2018_08_03_18_19_18.csv"
[1] "../../../log/memoryLog2018_08_03_18_19_38.csv"
[1] "../../../log/memoryLog2018_08_03_18_19_58.csv"
[1] "../../../log/memoryLog2018_08_03_18_20_17.csv"
[1] "../../../log/memoryLog2018_08_03_18_20_35.csv"
[1] "../../../log/memoryLog2018_08_03_18_20_50.csv"
[1] "../../../log/memoryLog2018_08_03_18_21_08.csv"
[1] "../../../log/memoryLog2018_08_03_18_30_45.csv"
[1] "../../../log/memoryLog2018_08_03_18_30_58.csv"

Warning message in fread(files[k]):
"Bumped column 13 to type character on data row 662243, field contains 'eda728be8f192031'. Coercing previously read values in this column from logical, integer or numeric back to character which may not be lossless; e.g., if '00' and '000' occurred before they will now be just '0', and there may be inconsistencies with treatment of ',', and ',NA,' too (if they occurred in this column before the bump). If this matters please rerun and set 'colClasses' to 'character' for this column. Please note that column type detection uses a sample of 1,000 rows (100 rows at 10 points) so hopefully this message should be very rare. If reporting to datatable-help, please rerun and include the output from verbose=TRUE."
```

```
[1] "../../../log/memoryLog2018_08_03_18_31_12.csv"
[1] "../../../log/memoryLog2018_08_03_18_31_41.csv"
[1] "../../../log/memoryLog2018_08_03_18_31_53.csv"

Warning message in fread(files[k]):
"Bumped column 12 to type character on data row 15842, field contains 'adf947c84edff299'. Coercing previously read values in this column from logical, integer or numeric back to character which may not be lossless; e.g., if '00' and '000' occurred before they will now be just '0', and there may be inconsistencies with treatment of ',', and ',NA,' too (if they occurred in this column before the bump). If this matters please rerun and set 'colClasses' to 'character' for this column. Please note that column type detection uses a sample of 1,000 rows (100 rows at 10 points) so hopefully this message should be very rare. If reporting to datatable-help, please rerun and include the output from verbose=TRUE."
```

```
[1] "../../../log/memoryLog2018_08_03_18_32_05.csv"
[1] "../../../log/memoryLog2018_08_03_18_32_19.csv"

Warning message in fread(files[k]):
"Bumped column 13 to type character on data row 343257, field contains '9df352d02b688280'. Coercing previously read values in this column from logical, integer or numeric back to character which may not be lossless; e.g., if '00' and '000' occurred before they will now be just '0', and there may be inconsistencies with treatment of ',', and ',NA,' too (if they occurred in this column before the bump). If this matters please rerun and set 'colClasses' to 'character' for this column. Please note that column type detection uses a sample of 1,000 rows (100 rows at 10 points) so hopefully this message should be very rare. If reporting to datatable-help, please rerun and include the output from verbose=TRUE."
```

```
[1] "../../../log/memoryLog2018_08_03_18_32_35.csv"

Warning message in fread(files[k]):
"Bumped column 14 to type character on data row 608348, field contains '53d2356ee72493be'. Coercing previously read values in this column from logical, integer or numeric back to character which may not be lossless; e.g., if '00' and '000' occurred before they will now be just '0', and there may be inconsistencies with treatment of ',', and ',NA,' too (if they occurred in this column before the bump). If this matters please rerun and set 'colClasses' to 'character' for this column. Please note that column type detection uses a sample of 1,000 rows (100 rows at 10 points) so hopefully this message should be very rare. If reporting to datatable-help, please rerun and include the output from verbose=TRUE."
```

```
[1] "../../../log/memoryLog2018_08_03_18_44_12.csv"
[1] "../../../log/memoryLog2018_08_03_18_44_28.csv"
```

```
Warning message in fread(files[k]):  
"Bumped column 12 to type character on data row 587706, field contains '073313aa2ffe6105'. Coe  
rcing previously read values in this column from logical, integer or numeric back to character  
which may not be lossless; e.g., if '00' and '000' occurred before they will now be just '0',  
and there may be inconsistencies with treatment of ',', and ',NA,' too (if they occurred in th  
is column before the bump). If this matters please rerun and set 'colClasses' to 'character' f  
or this column. Please note that column type detection uses a sample of 1,000 rows (100 rows a  
t 10 points) so hopefully this message should be very rare. If reporting to datatable-help, pl  
ease rerun and include the output from verbose=TRUE."
```

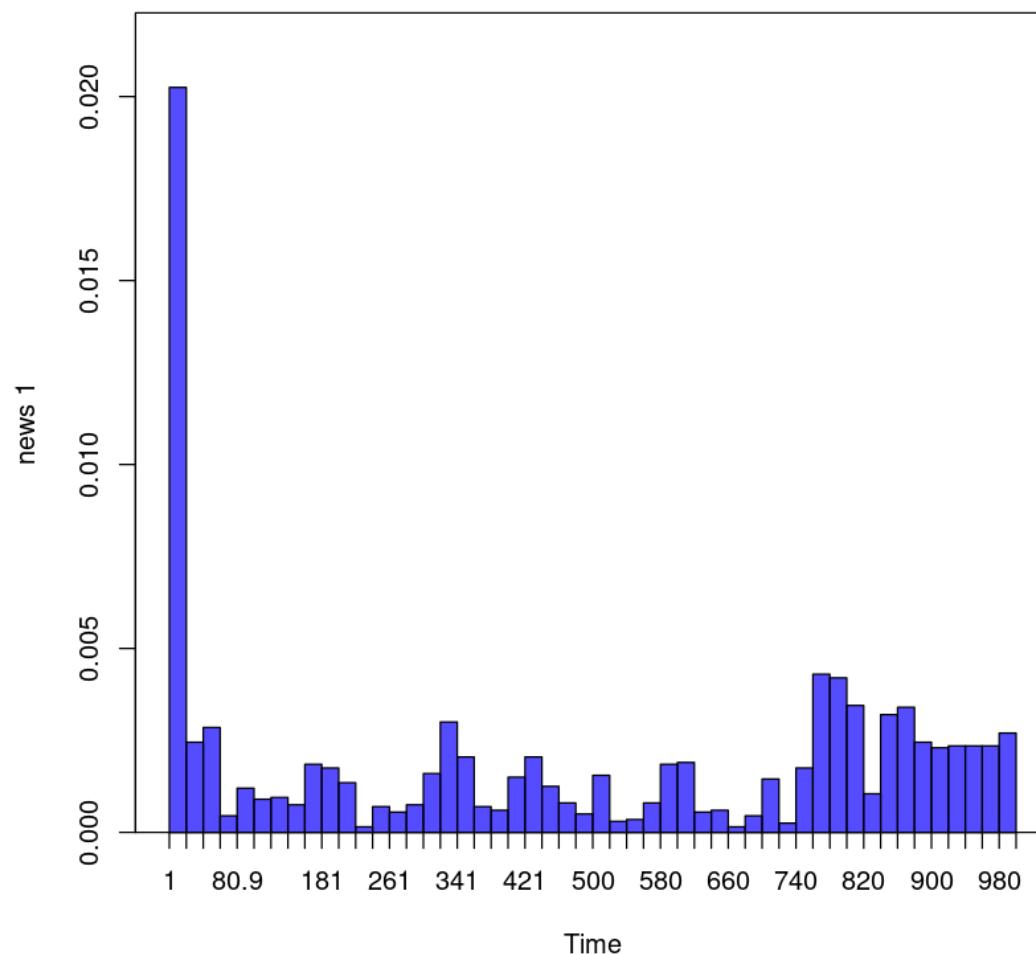
```
[1] ".../log/memoryLog2018_08_03_18_44_41.csv"  
[1] ".../log/memoryLog2018_08_03_18_44_56.csv"
```

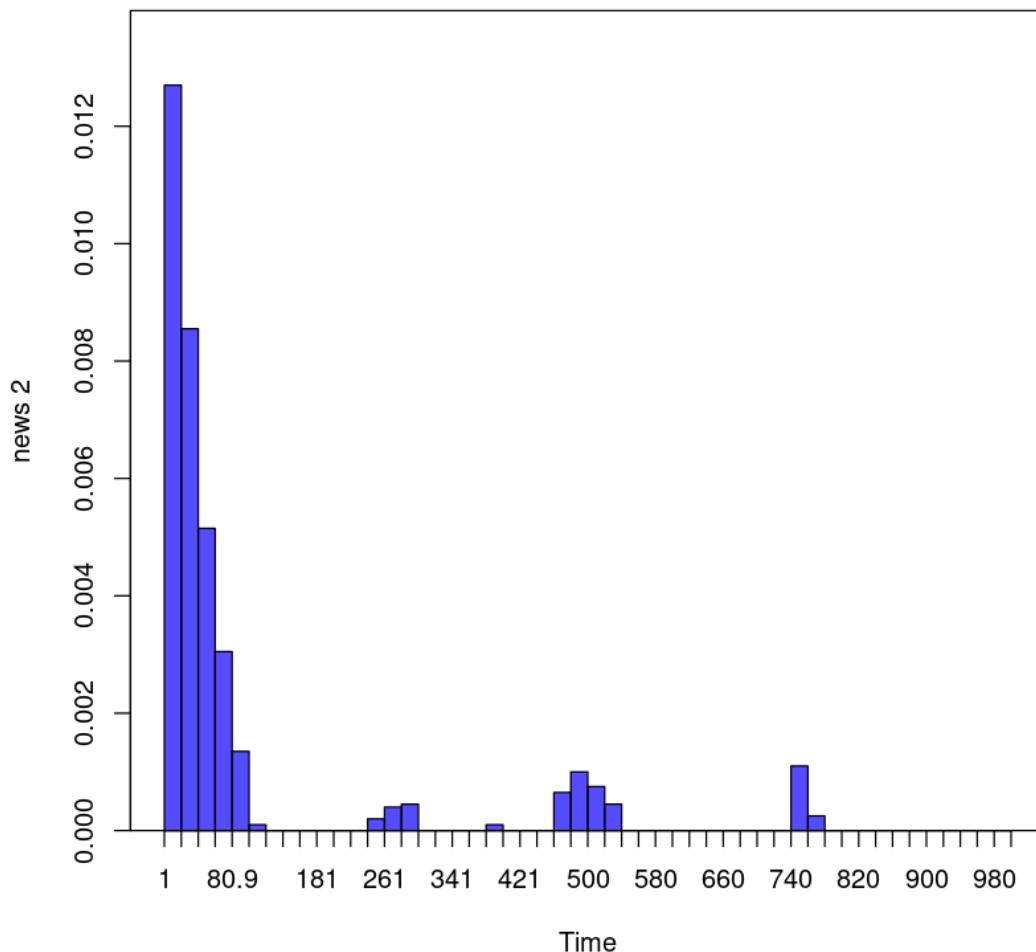
In [24]: `paste('a',' b')`

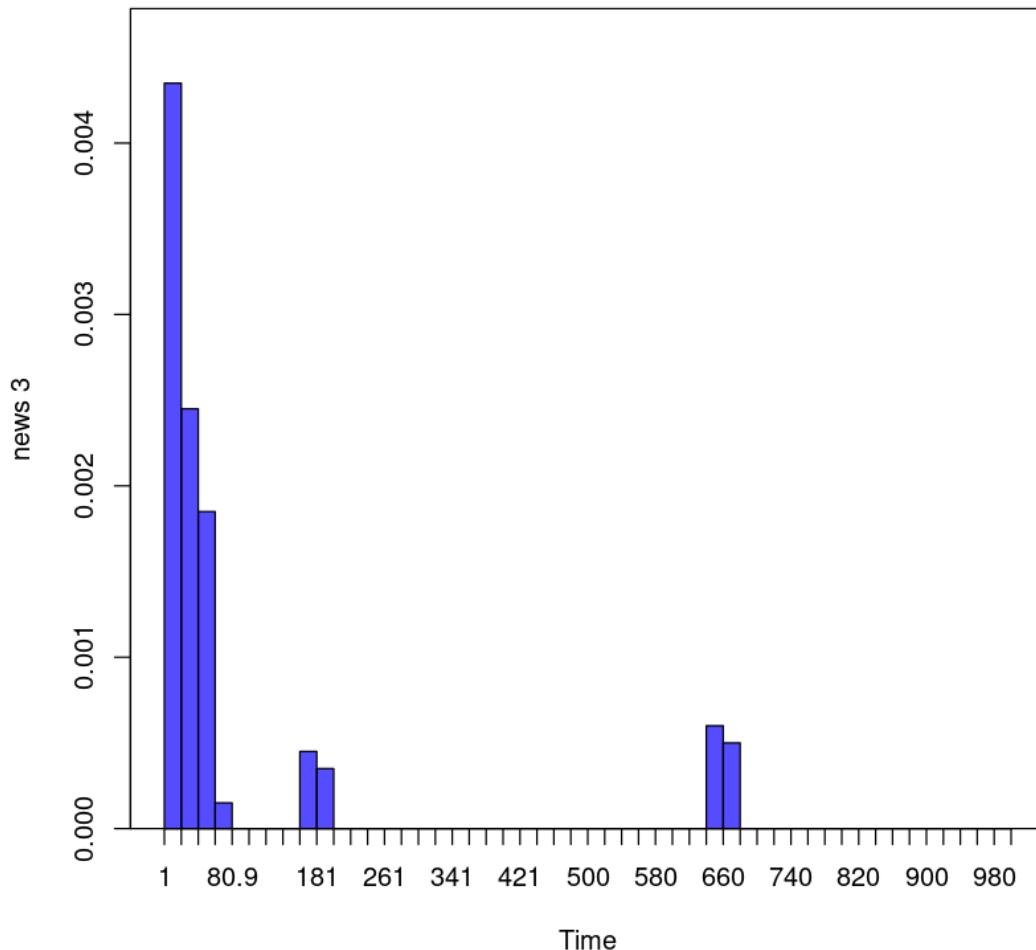
```
'a b'
```

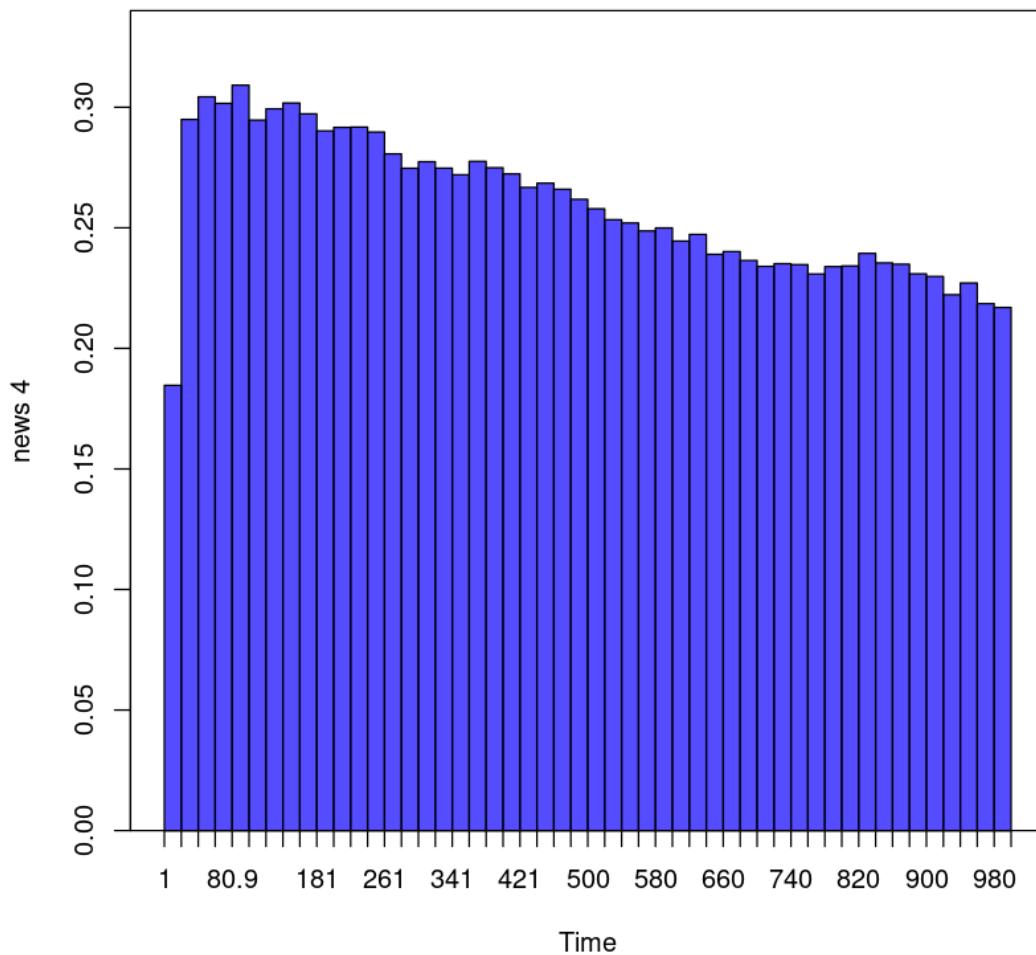
```
In [28]: bb <- 50
norm <- num_users/bb
num_sources*memory
for(i in 1:memory ){
  for(j in 1:num_sources){
    weighted.hist(
      1:maxtime ,as.vector(HBp[(i - 1)*num_sources + j,] - 1)/(num_users*norm),
      col=rgb(0.05*i,0,1 - 0.05*(i-1),0.7),
      main=paste("Memory", as.character(i), "news", as.character(j)),
      xlab="Time", ylab=paste("news", as.character(j)), breaks=bb)
    #hist(TB1$n5, col=rgb(1,0,0,0.5), add=T, breaks=50)
    #hist(TB1$n6, col=rgb(0,1,0,0.5), add=T, breaks=50)
    box()
  }
}
```

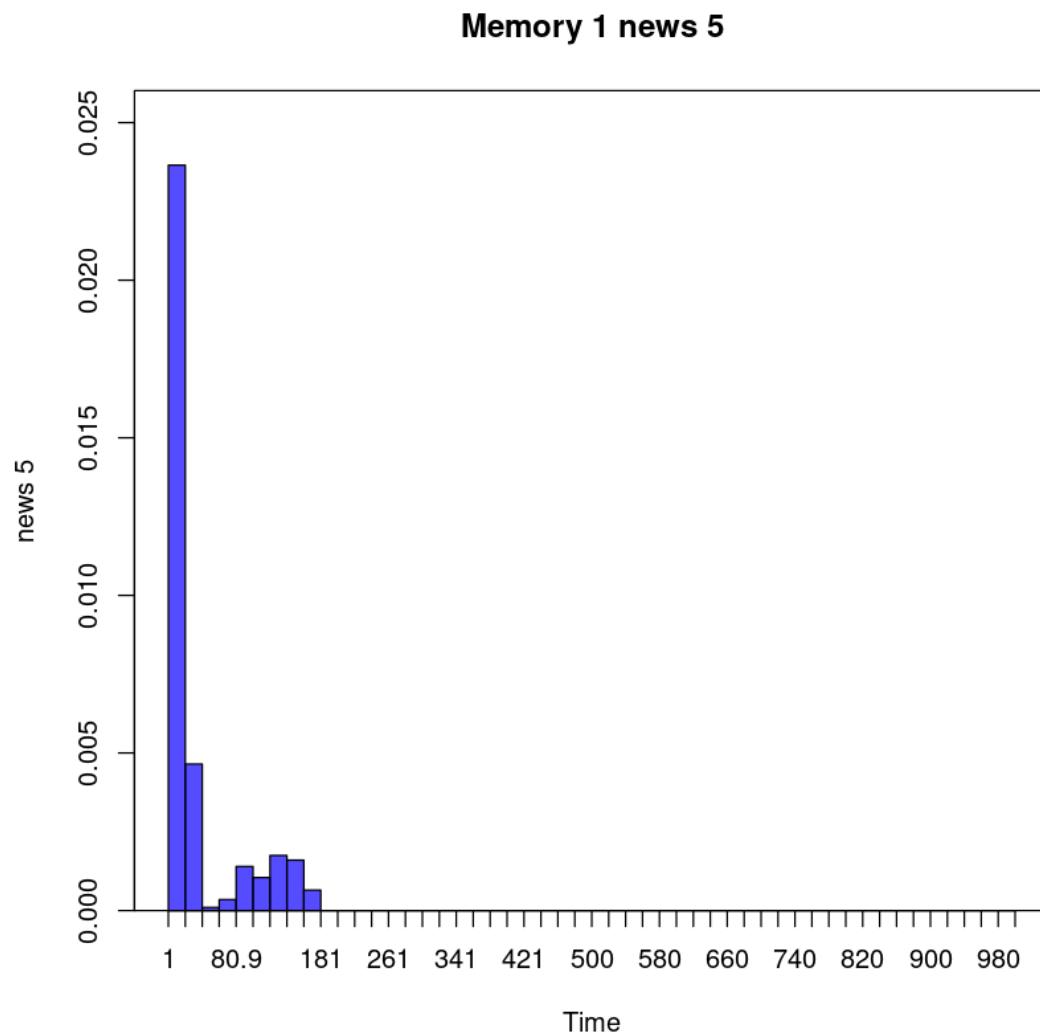
400

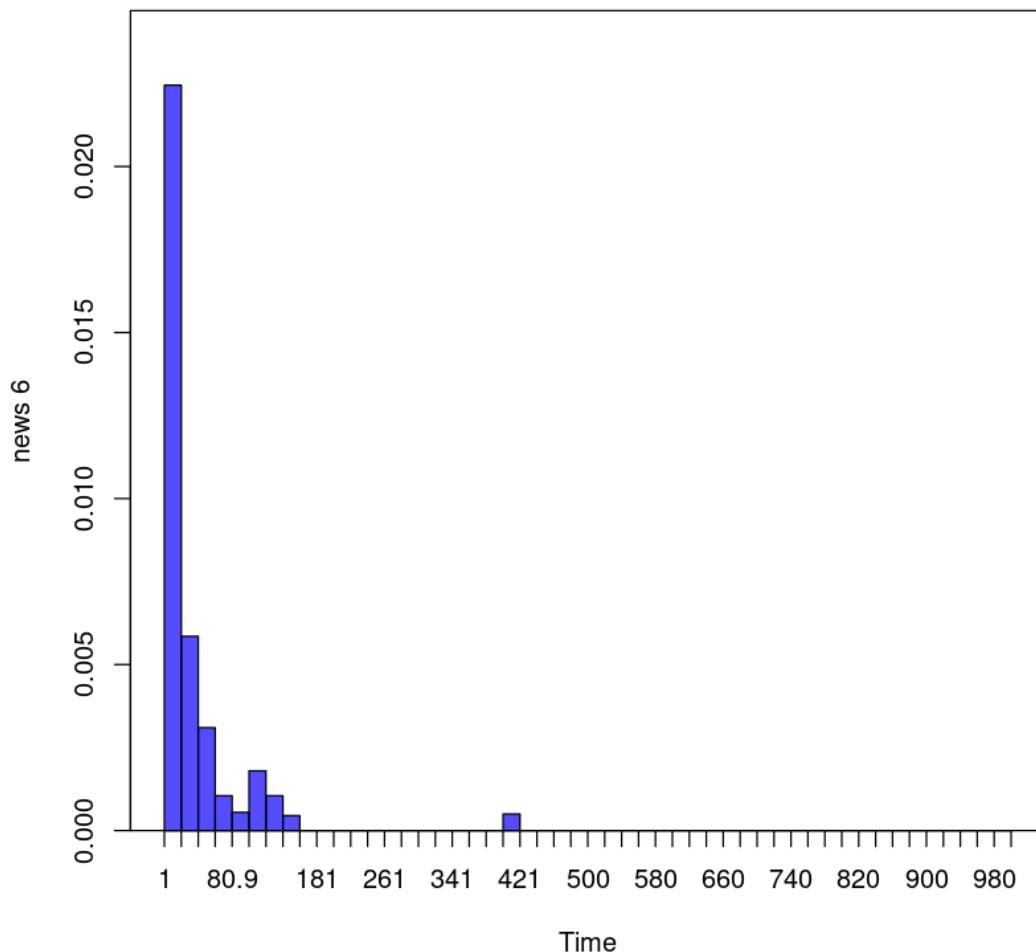
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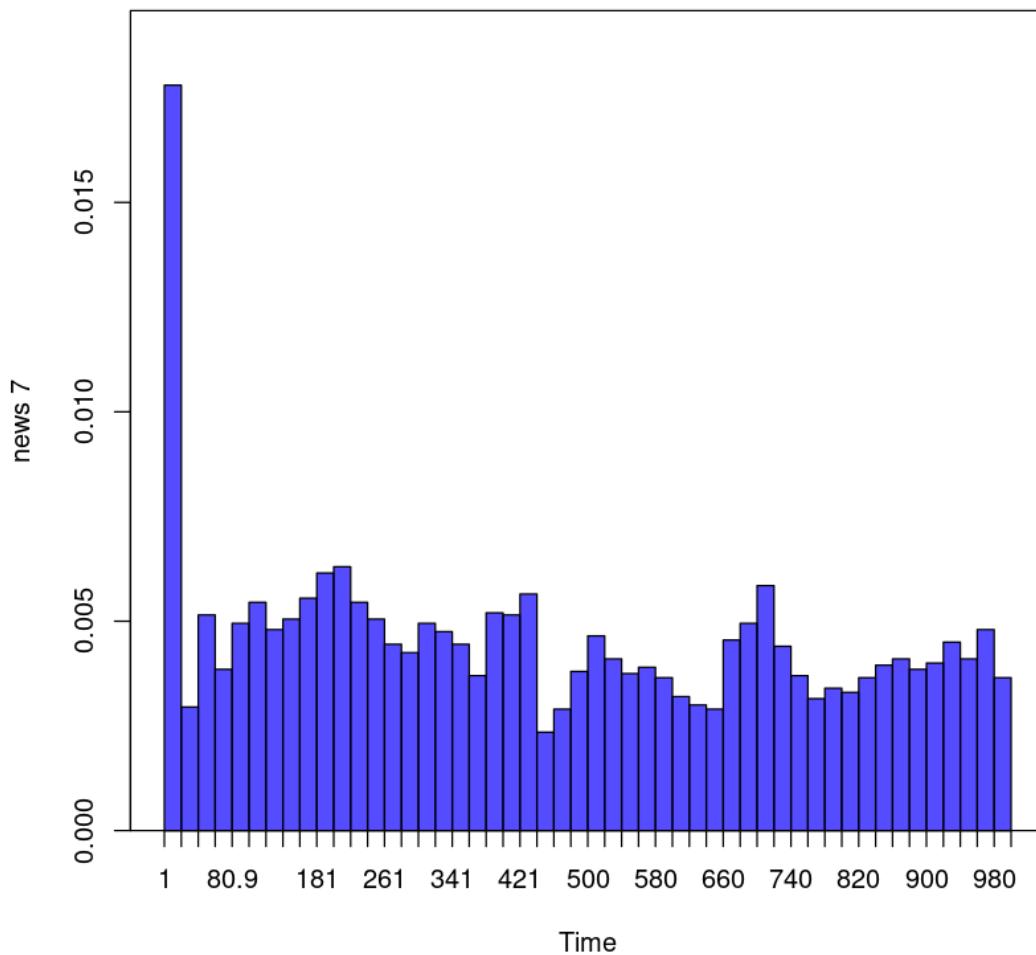
**Memory 1 news 2**

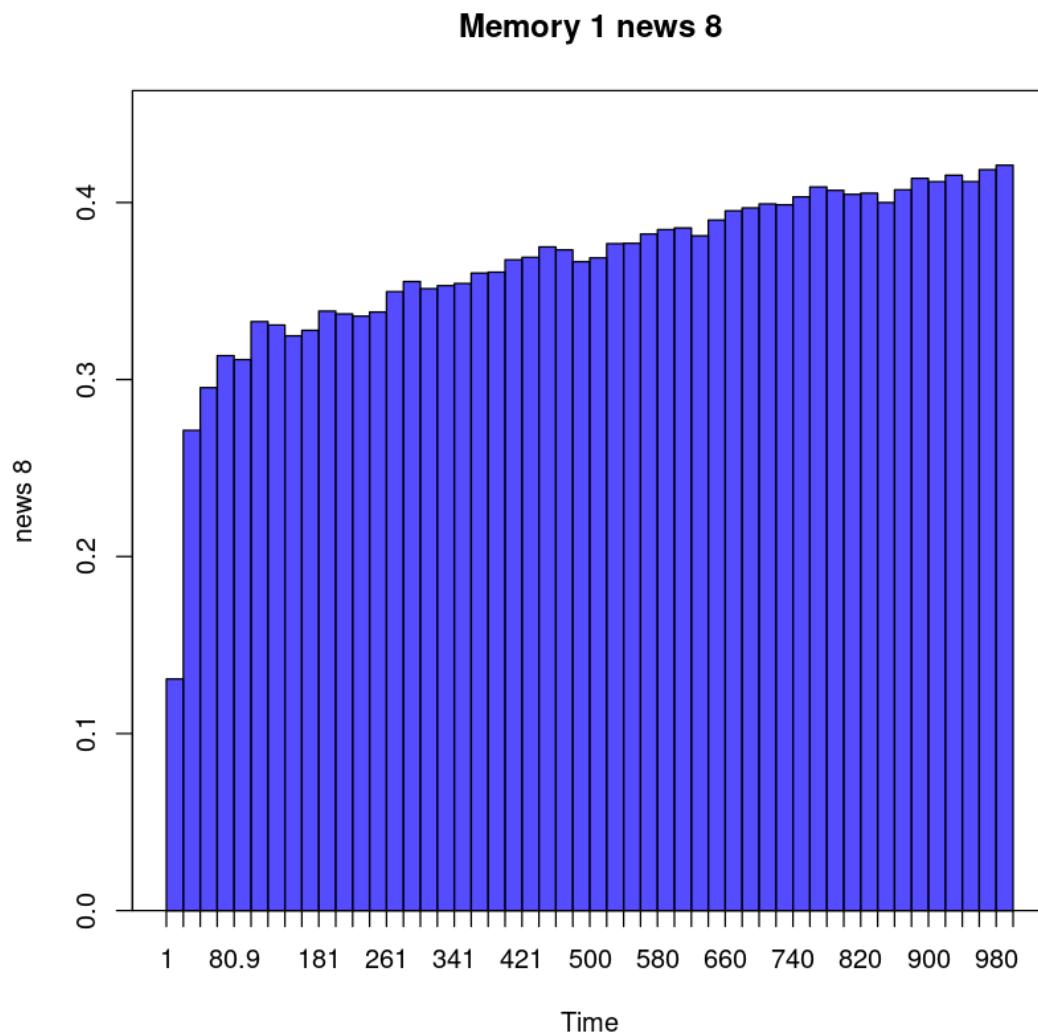
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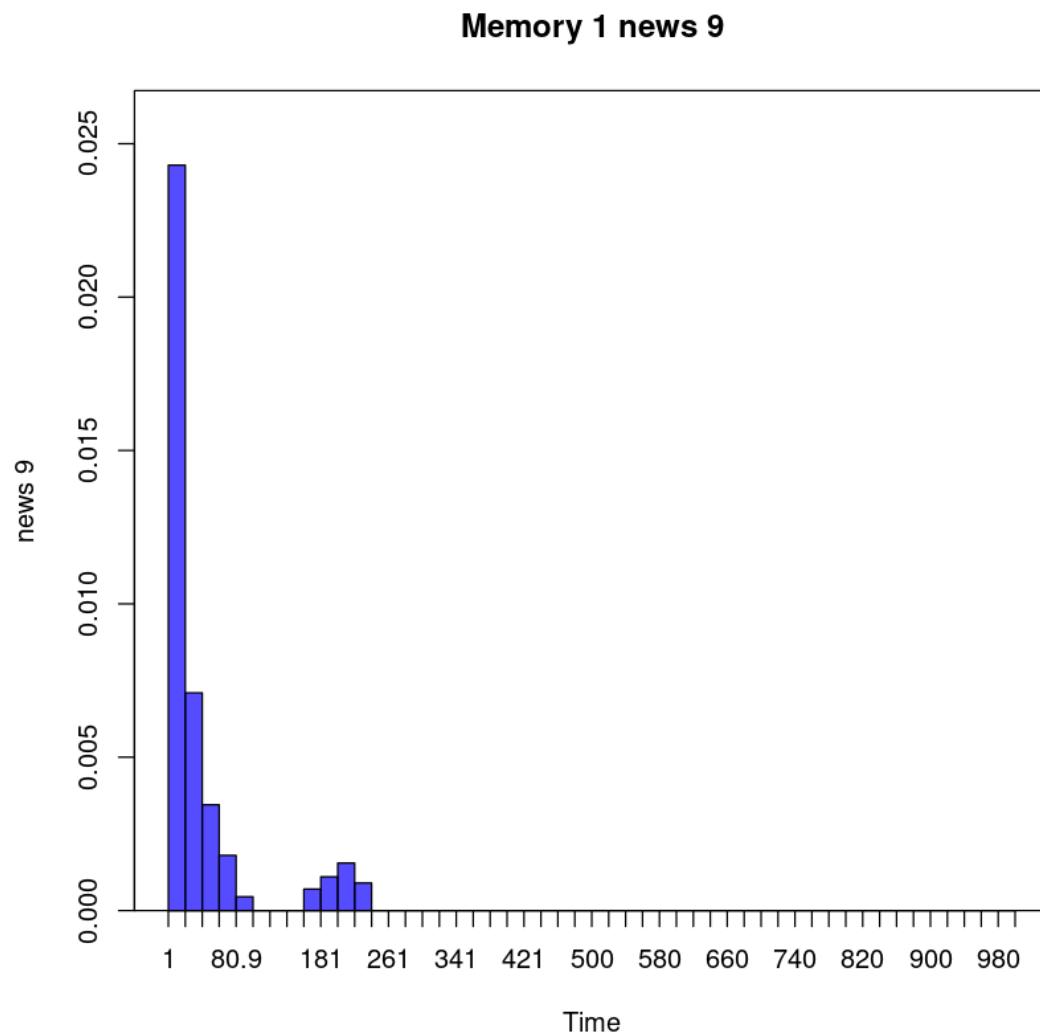
**Memory 1 news 4**

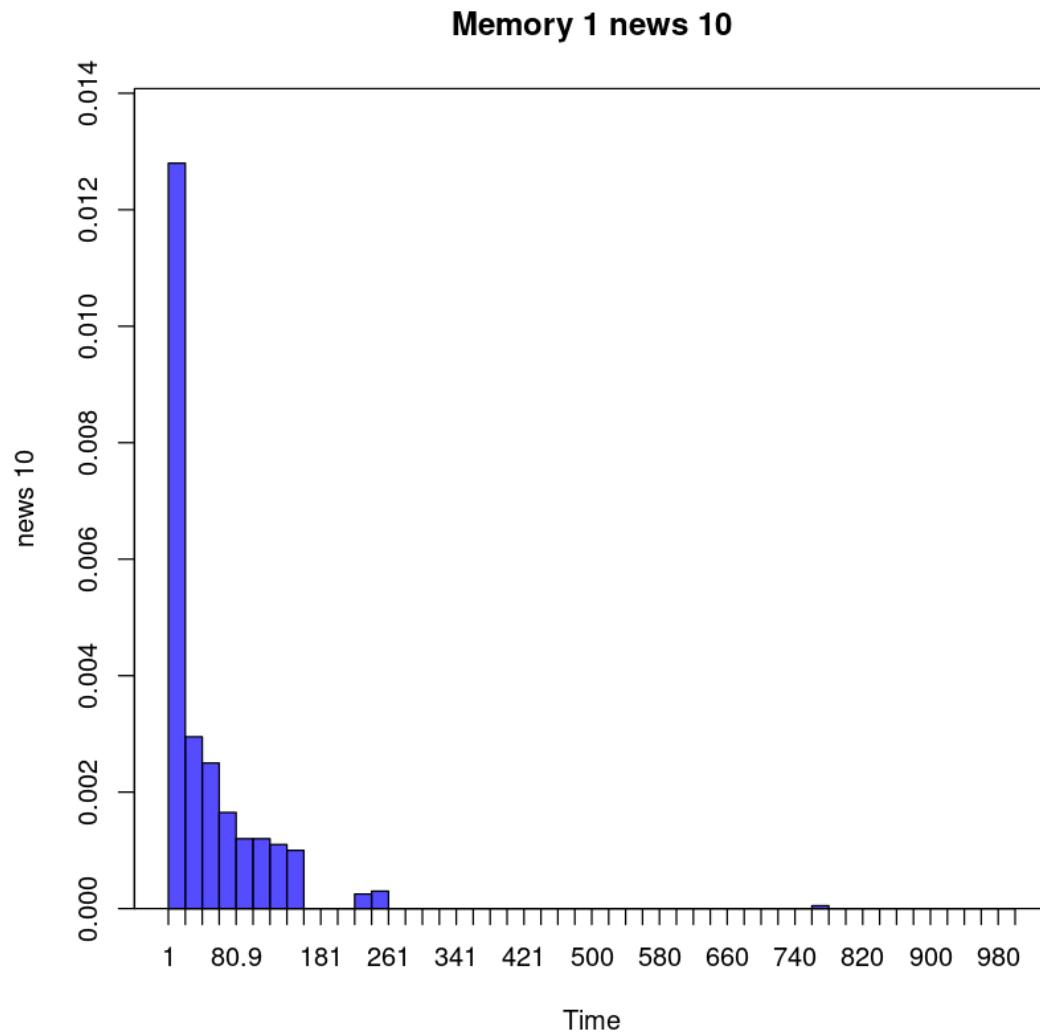


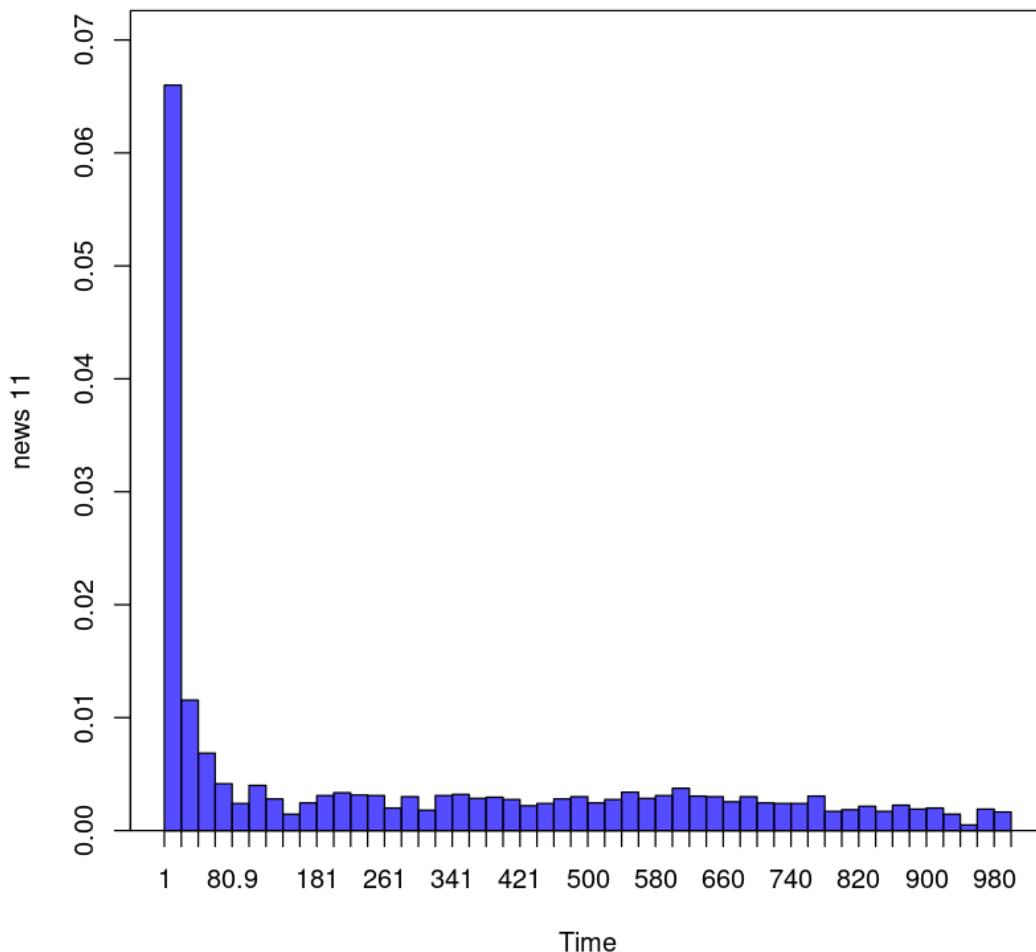
**Memory 1 news 6**

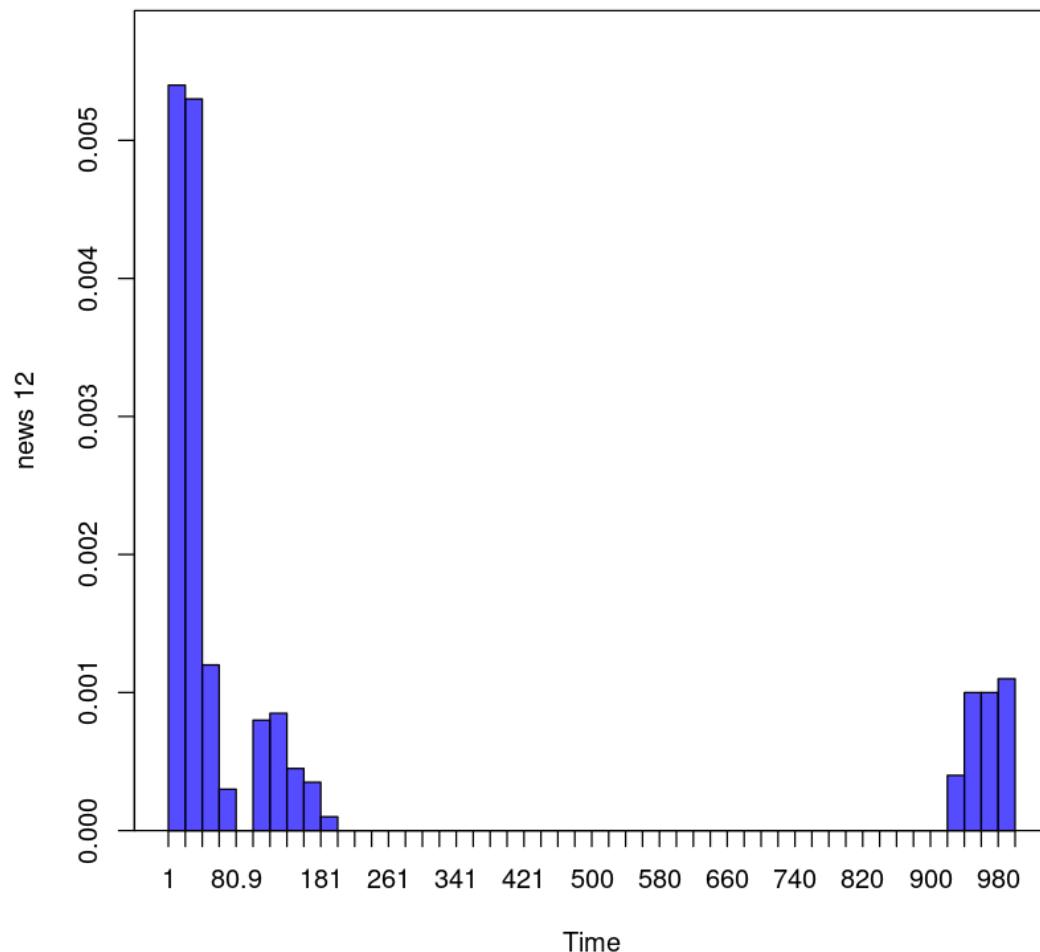
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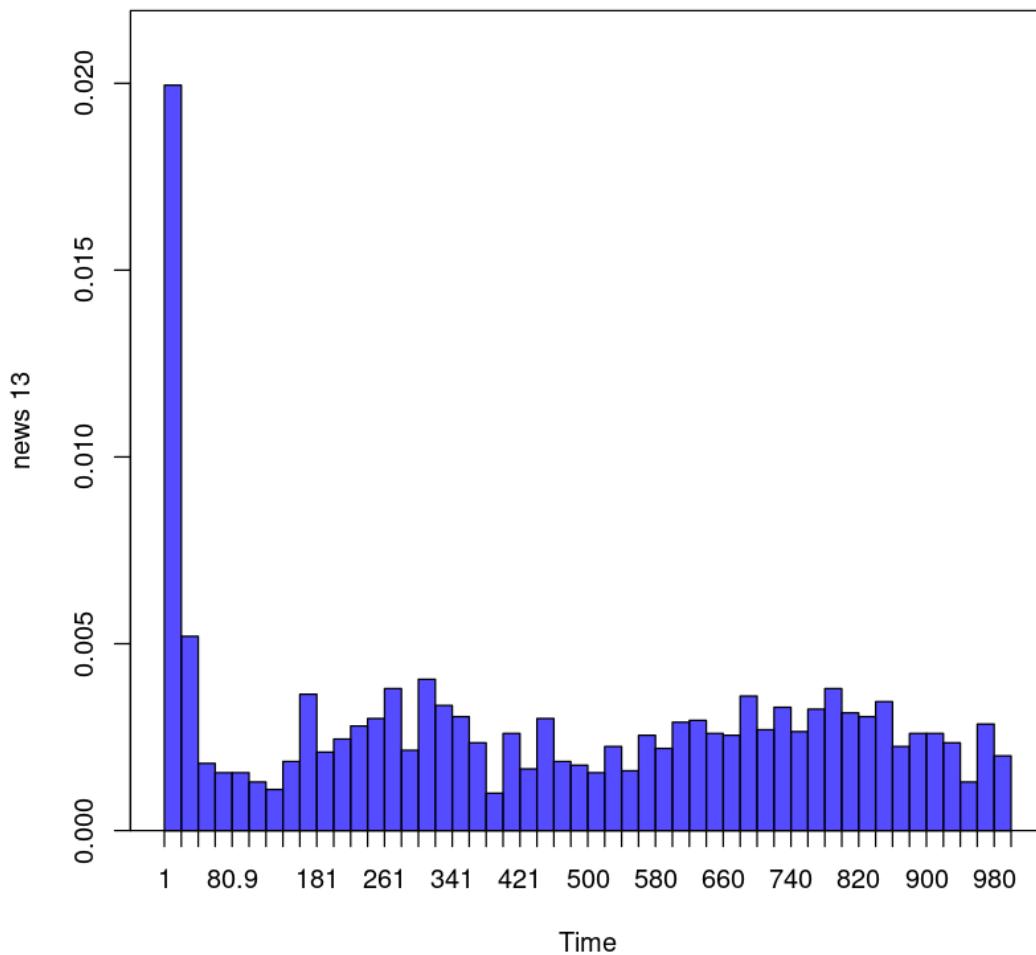


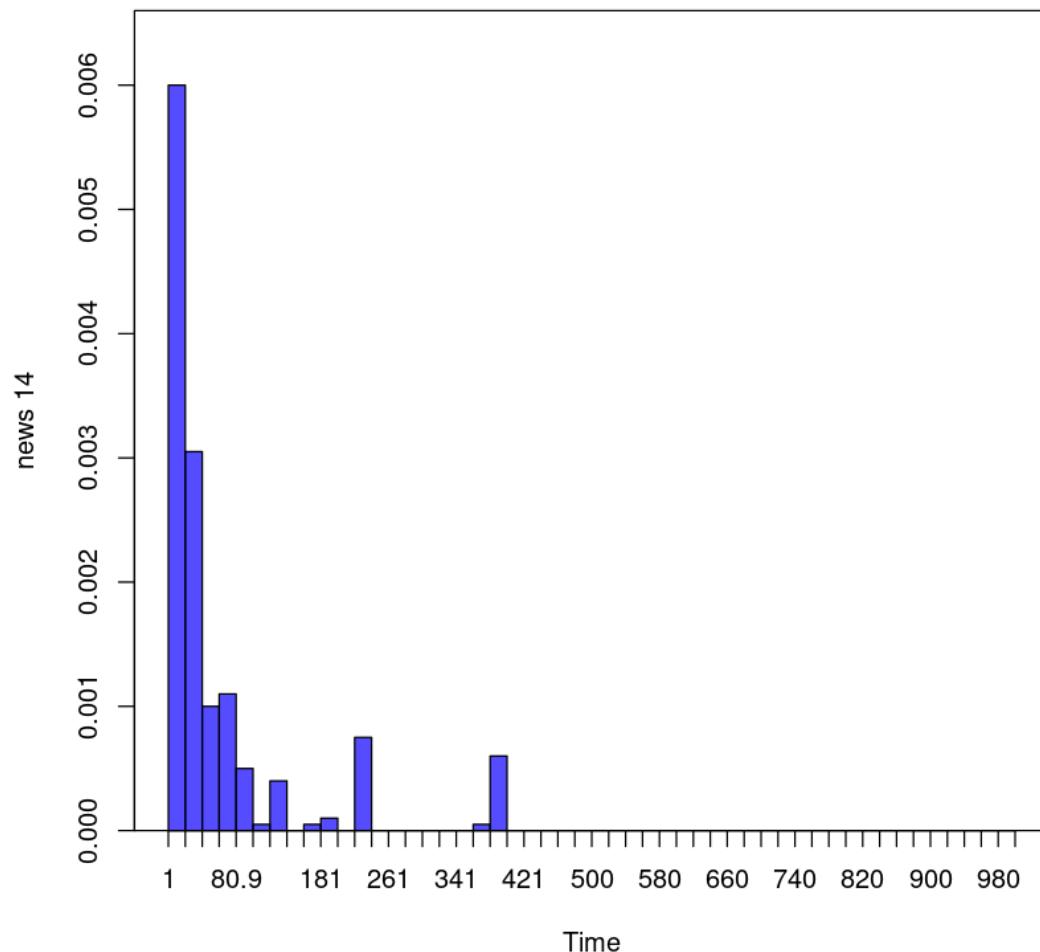


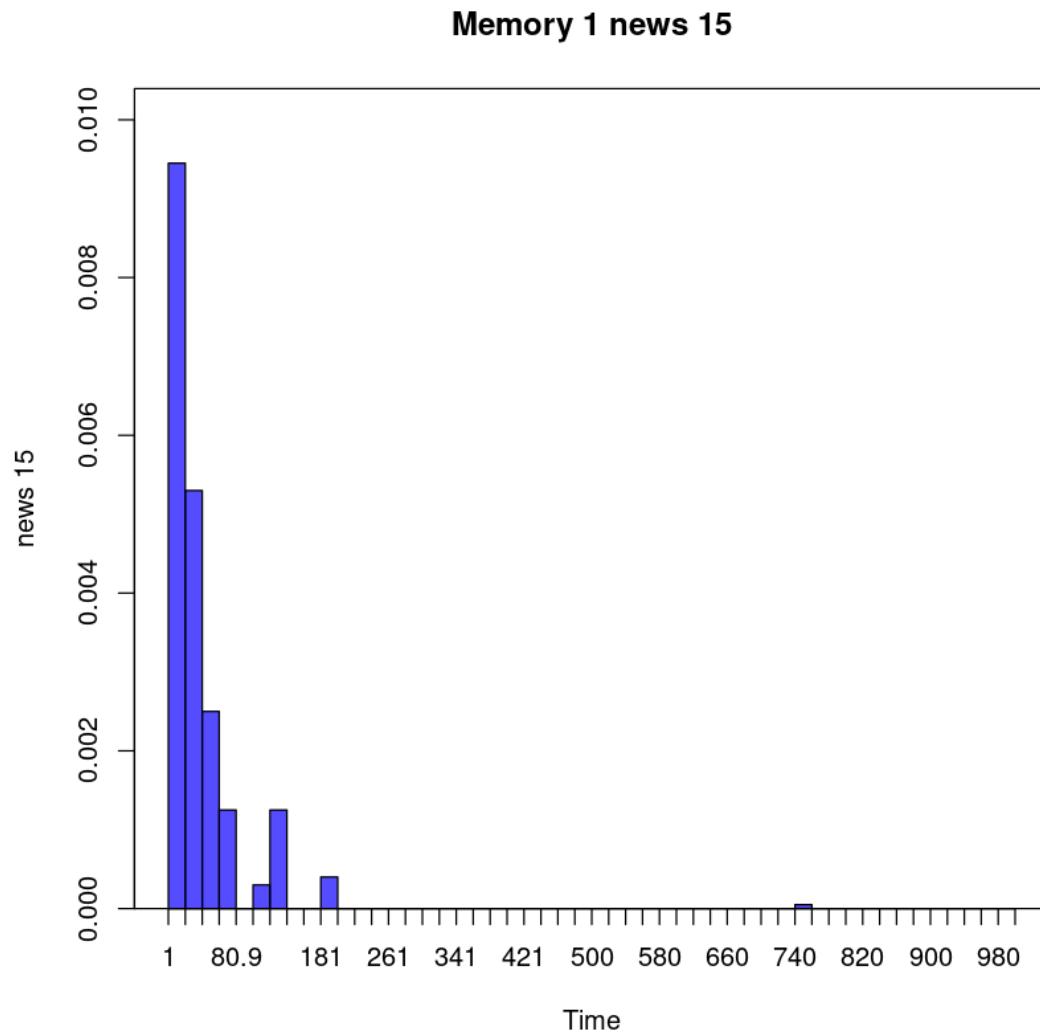


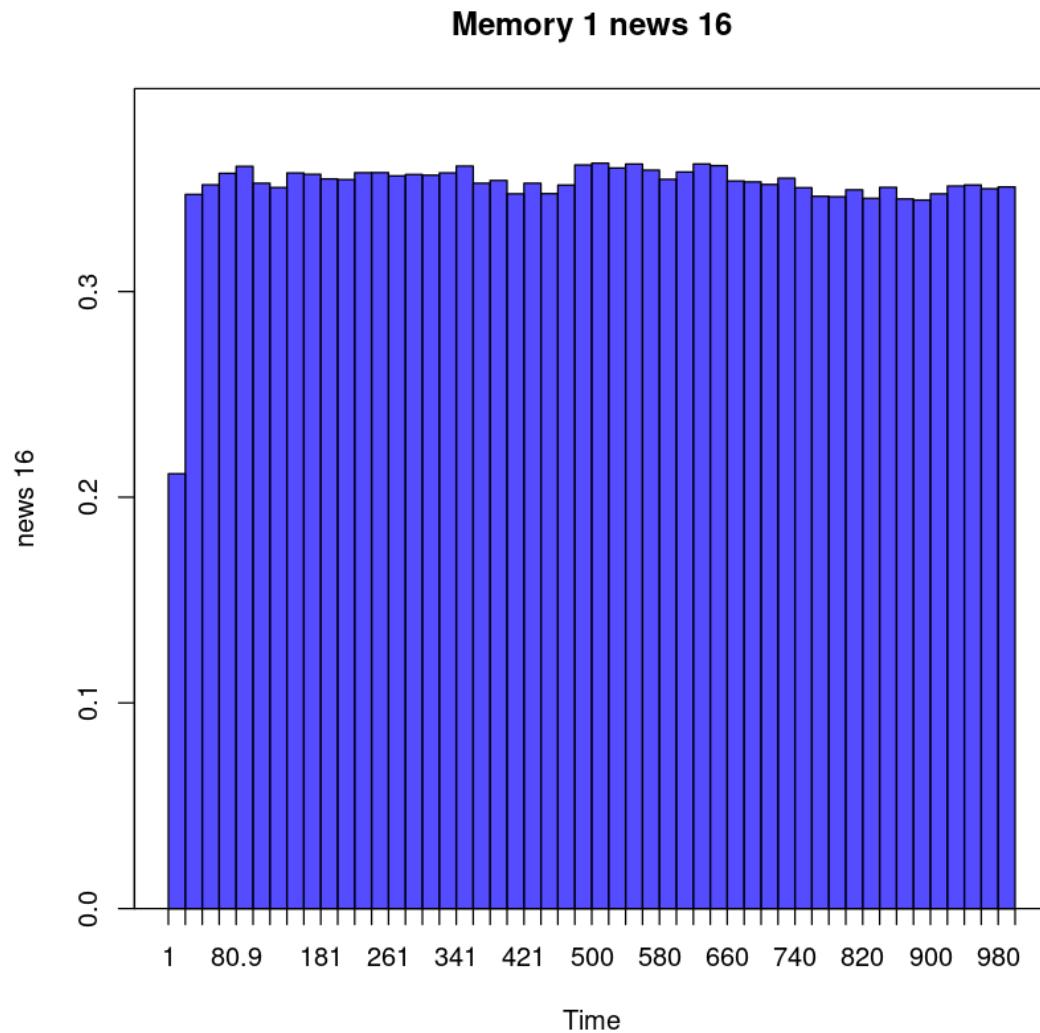
**Memory 1 news 11**

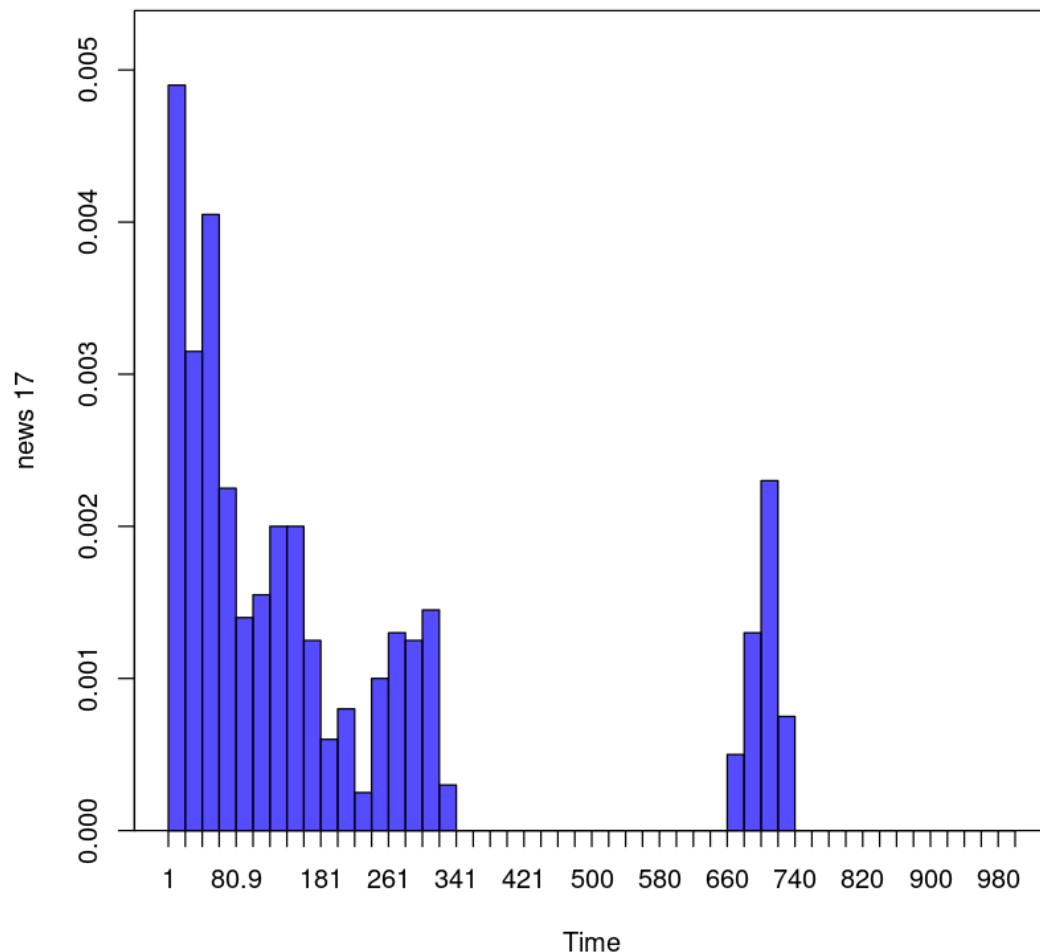
**Memory 1 news 12**

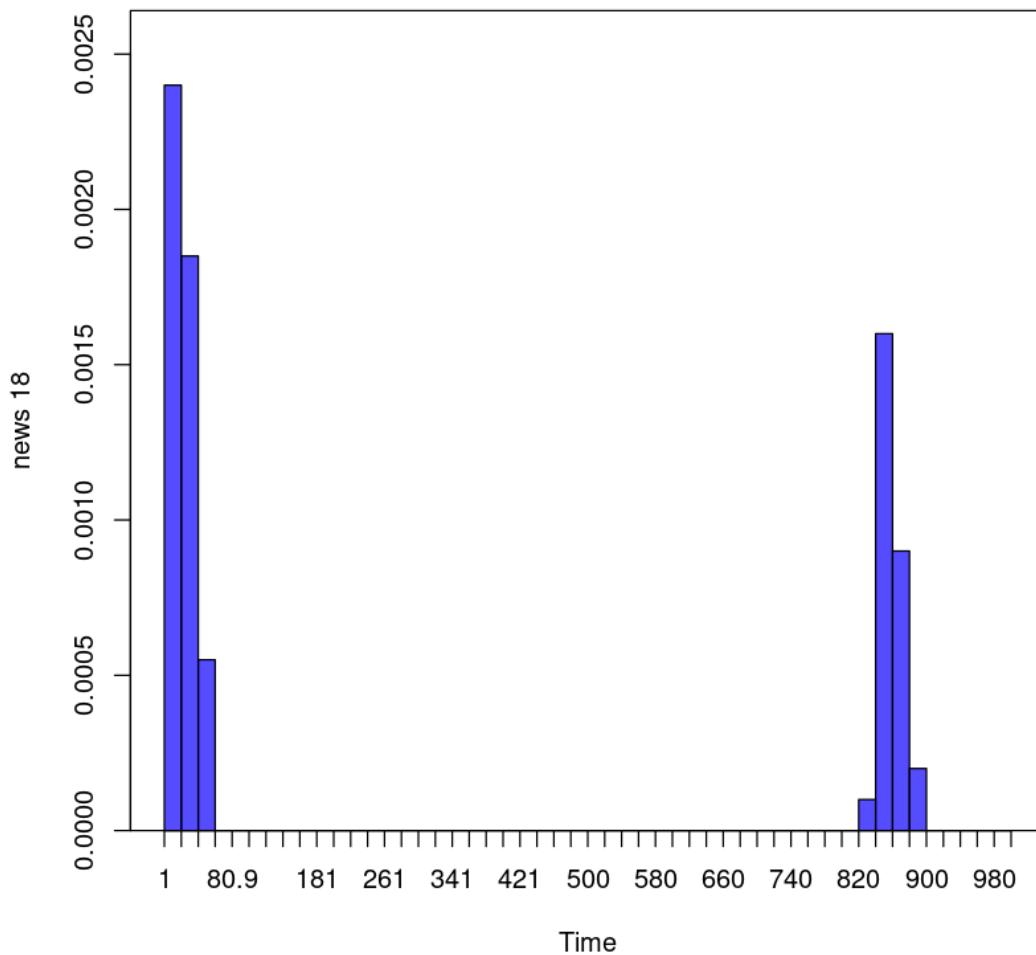
**Memory 1 news 13**

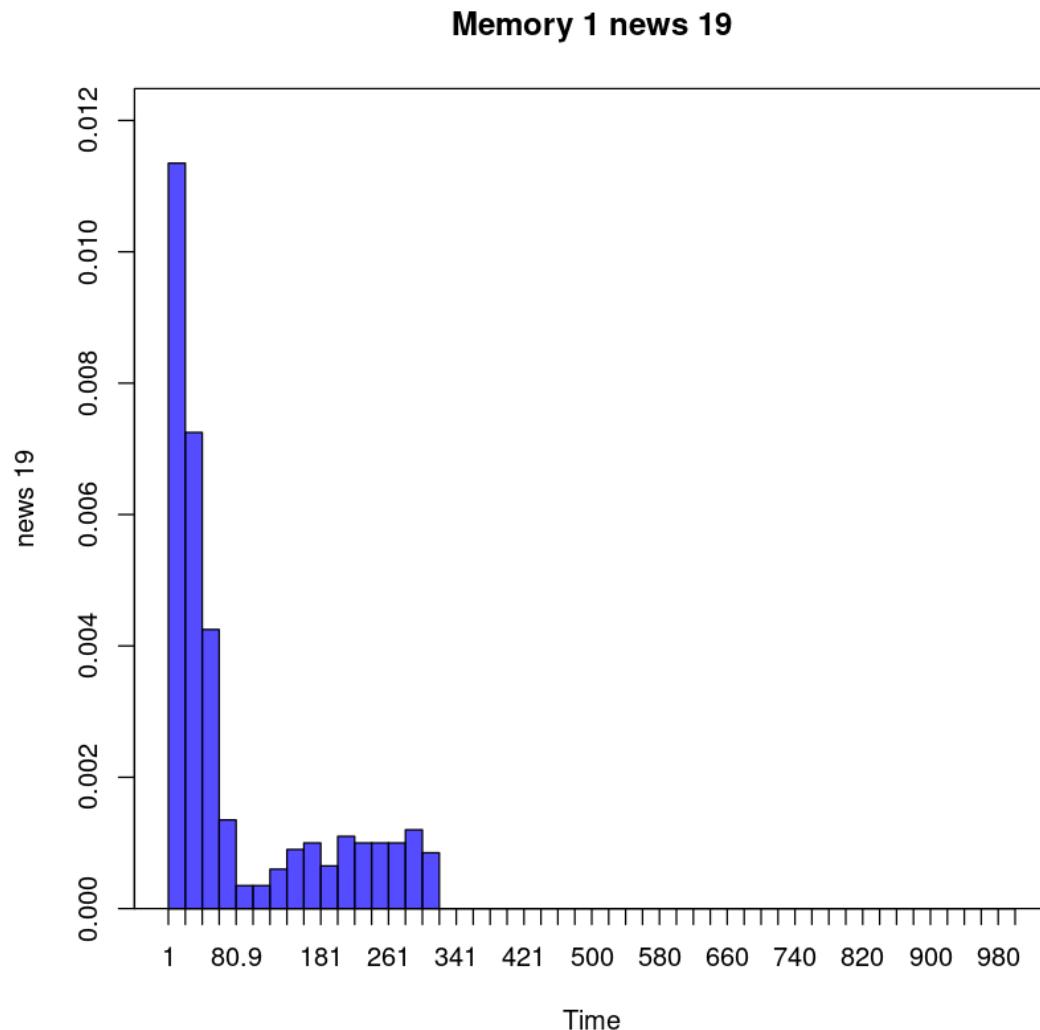
**Memory 1 news 14**

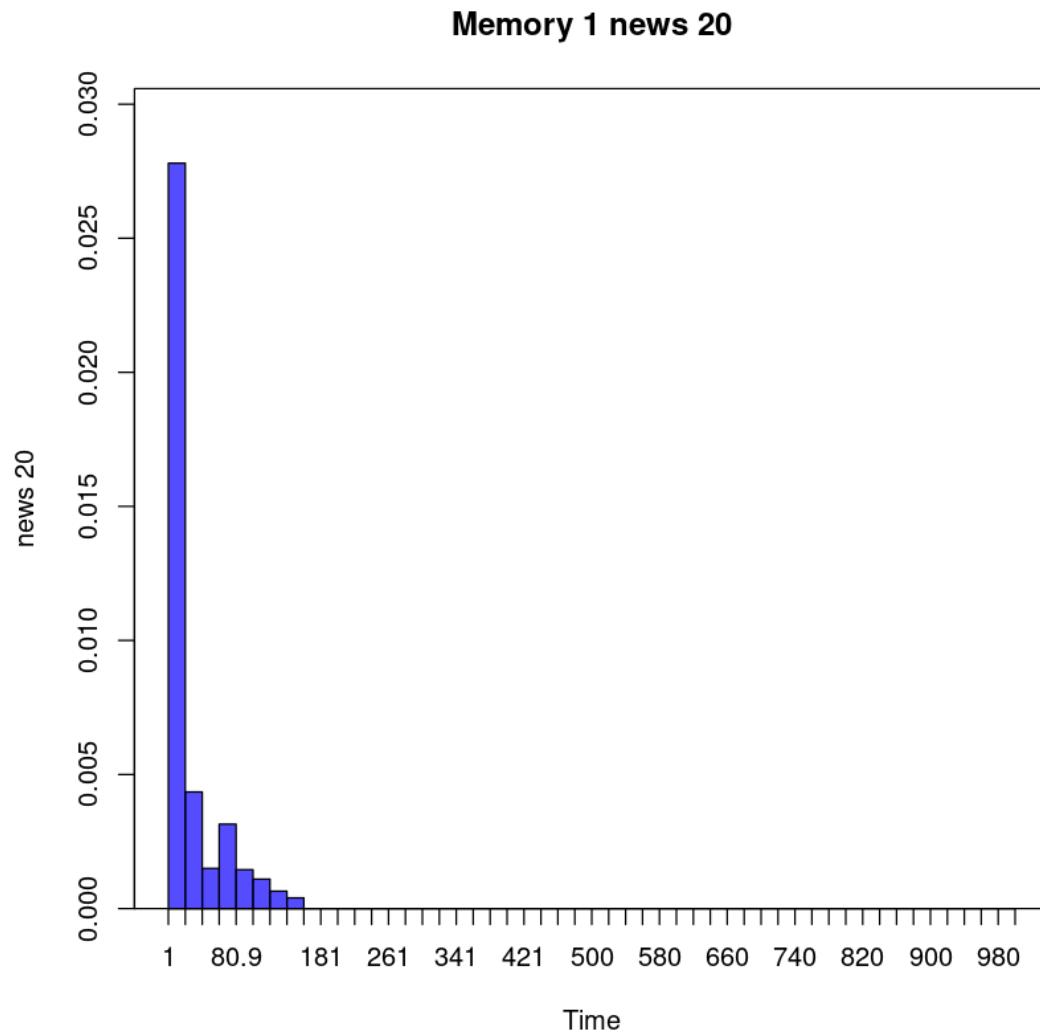


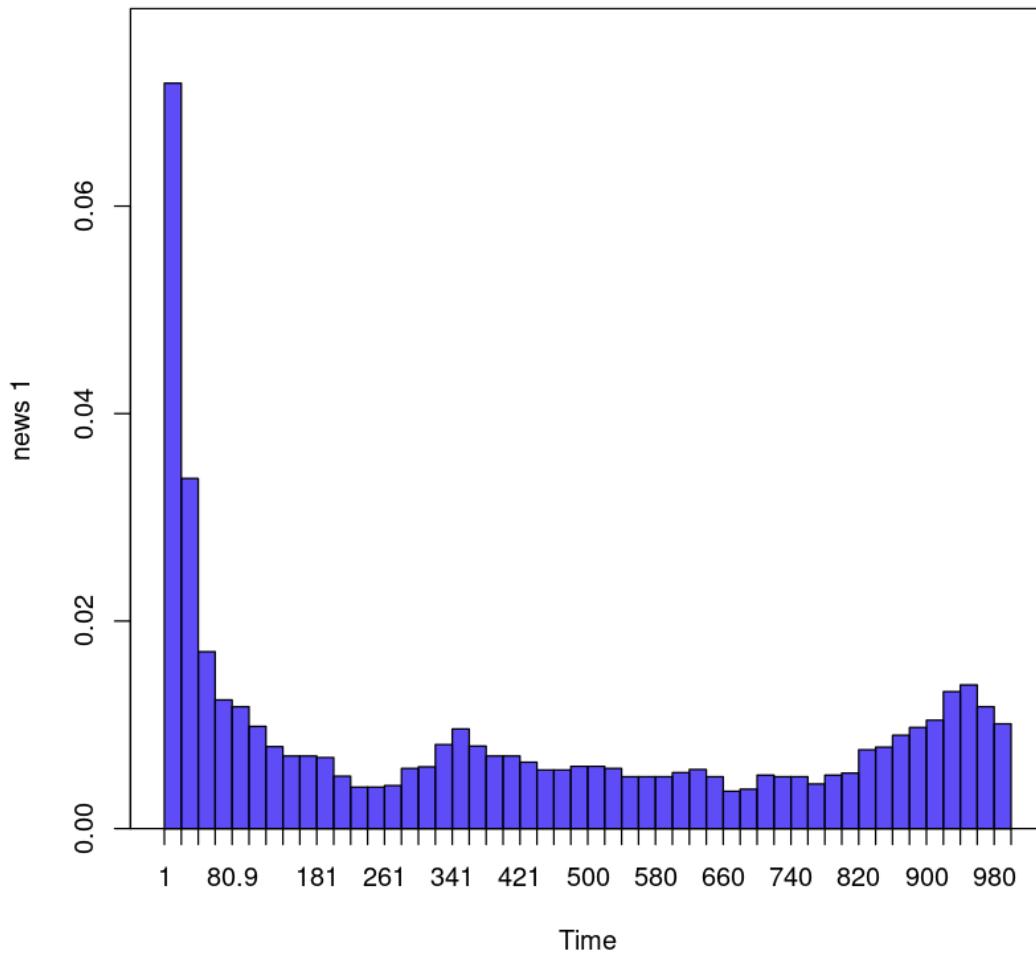


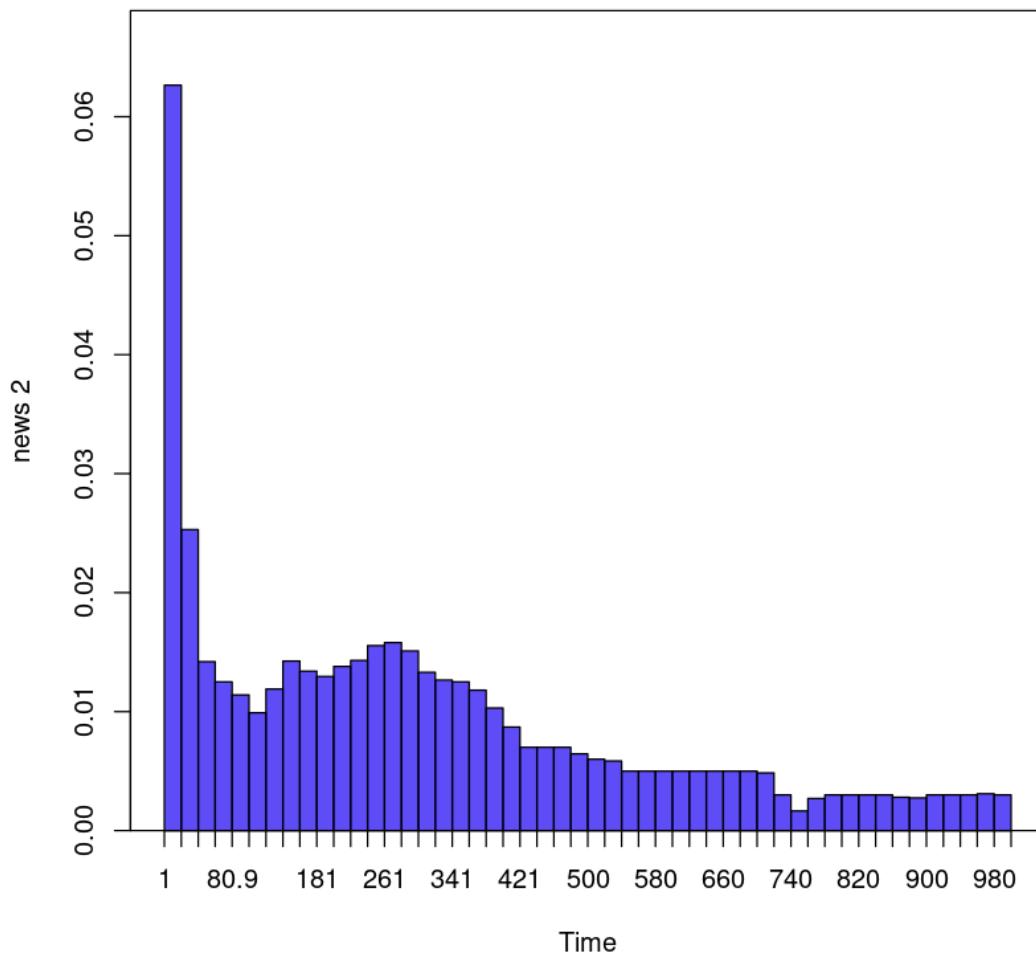
**Memory 1 news 17**

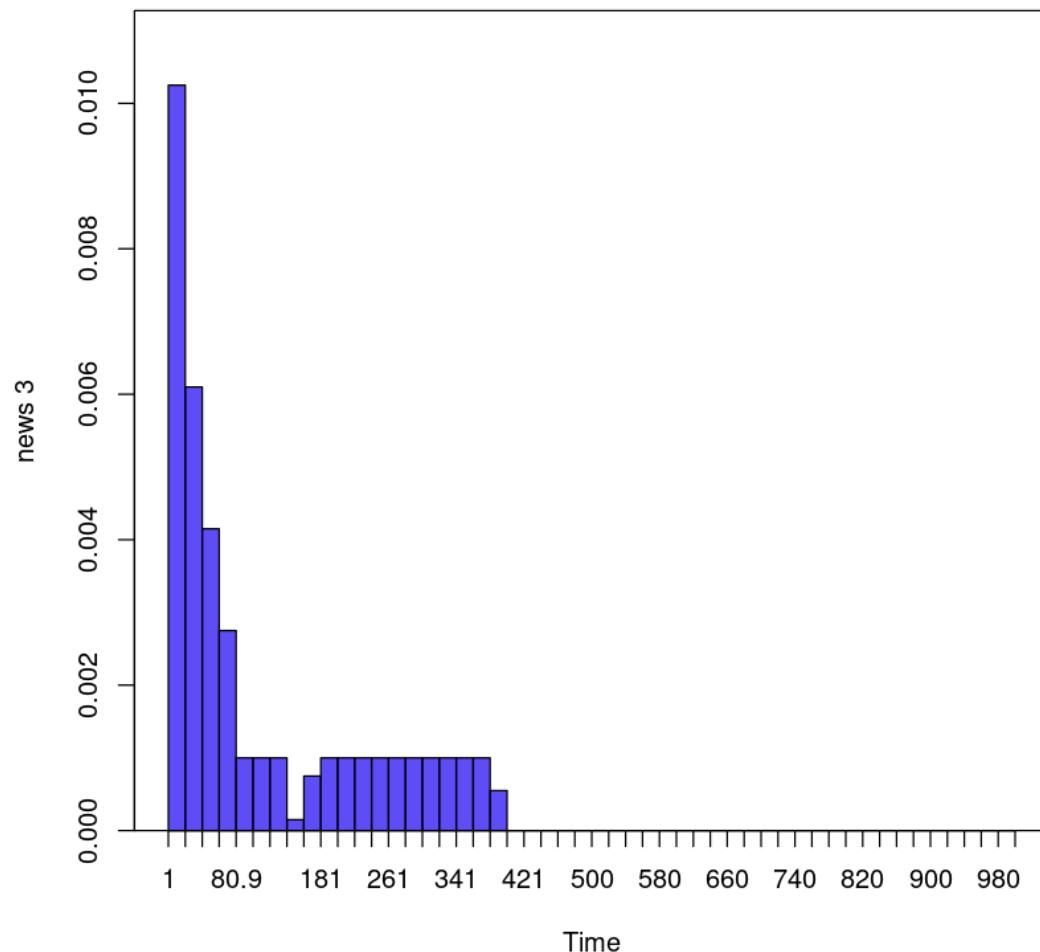
**Memory 1 news 18**

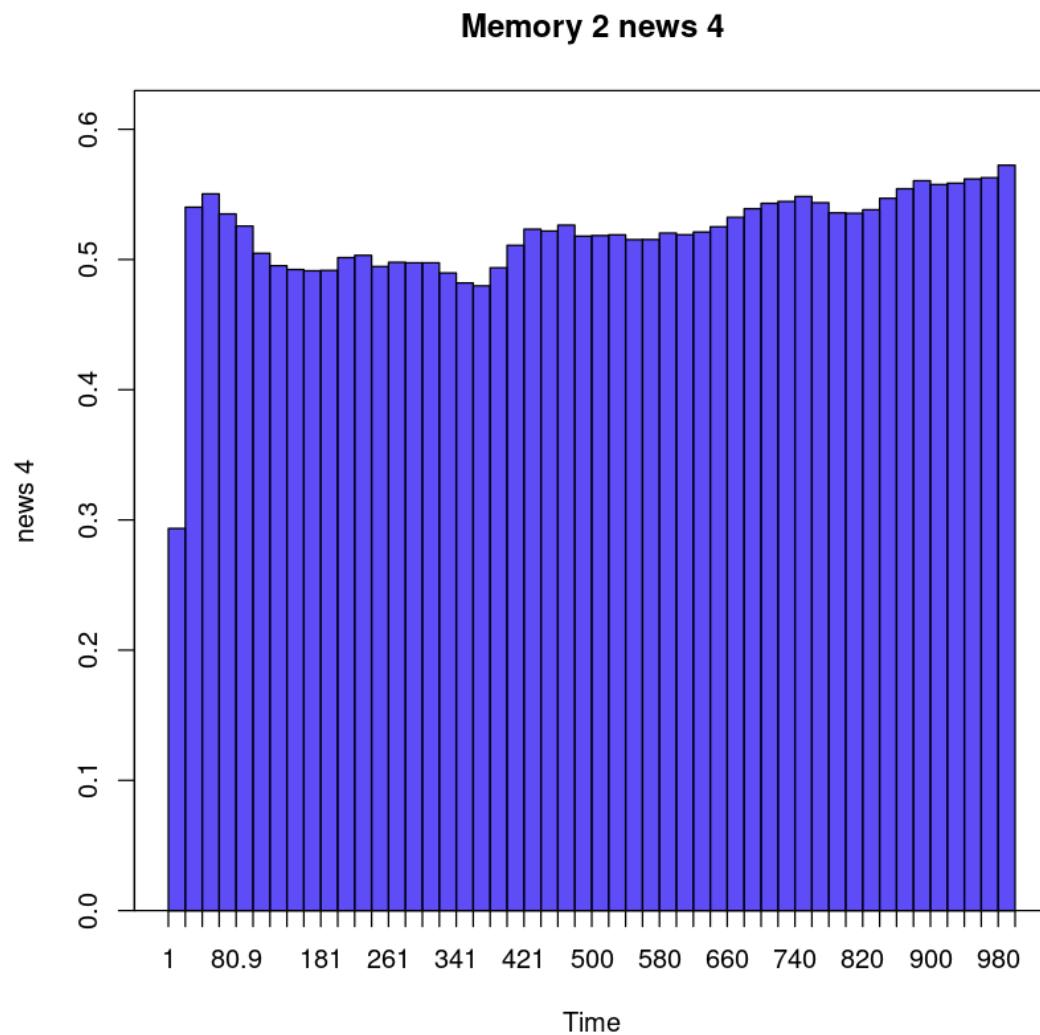


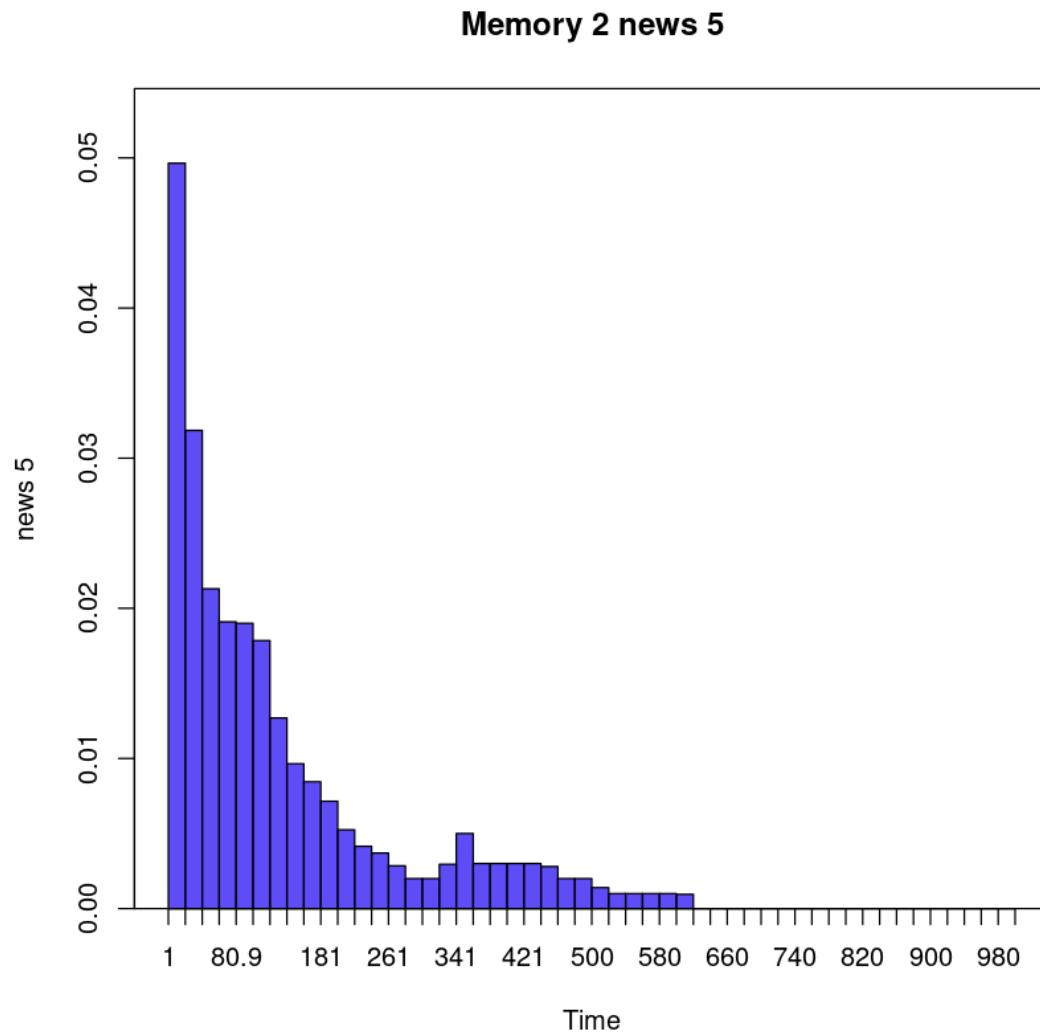


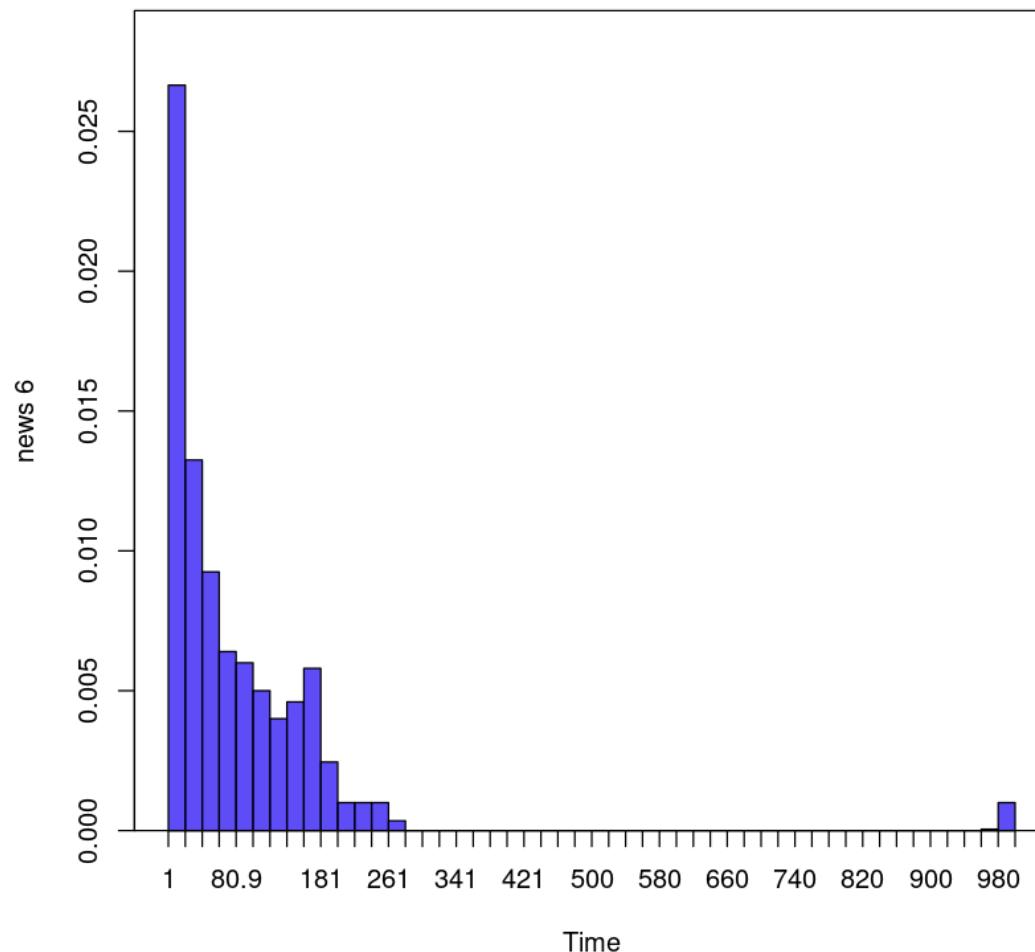
**Memory 2 news 1**

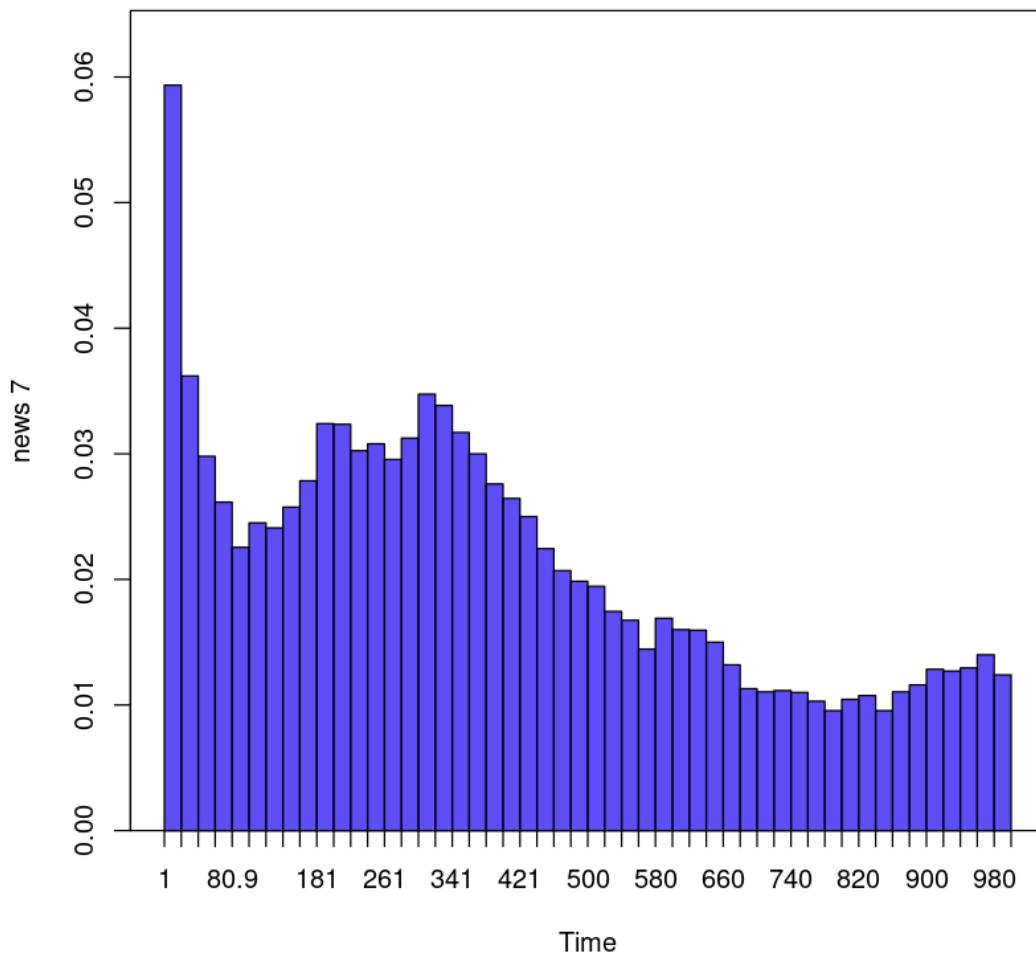
**Memory 2 news 2**

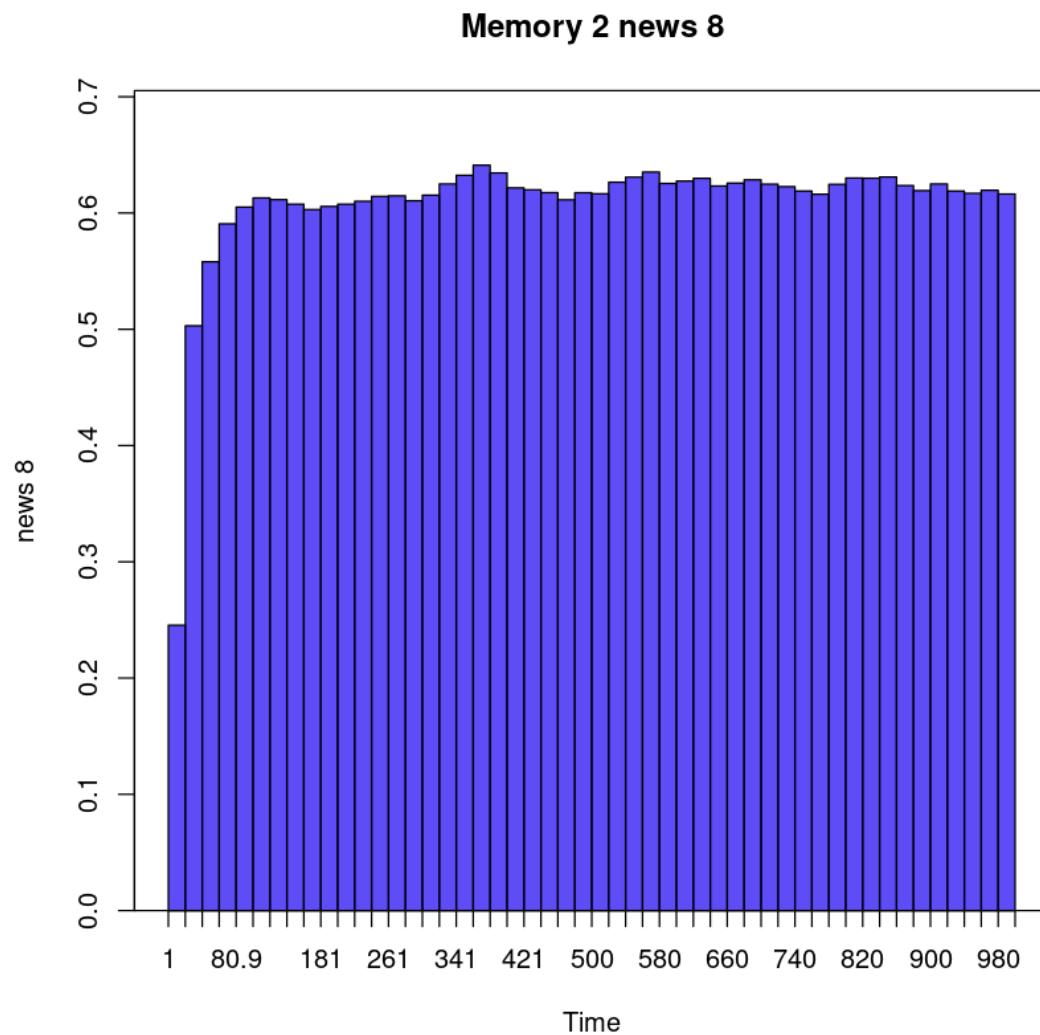
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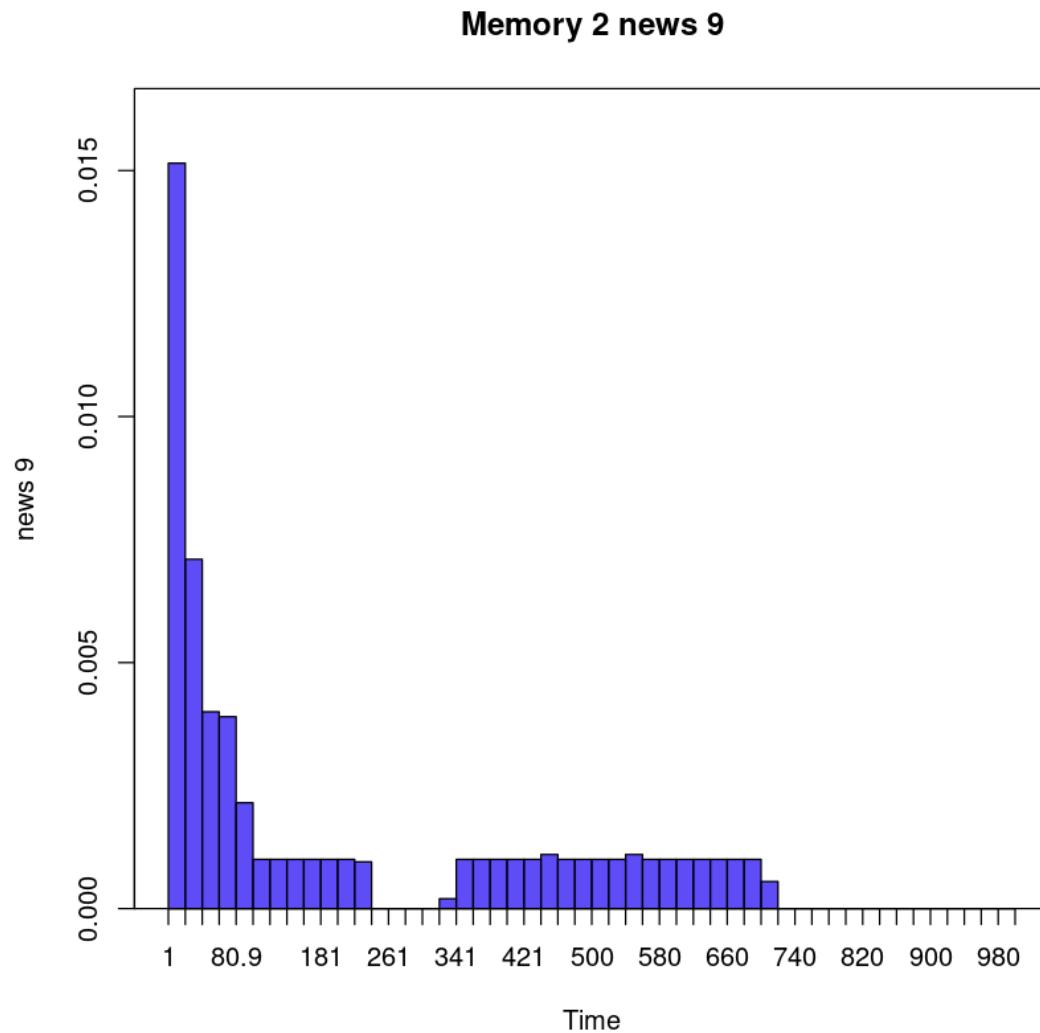


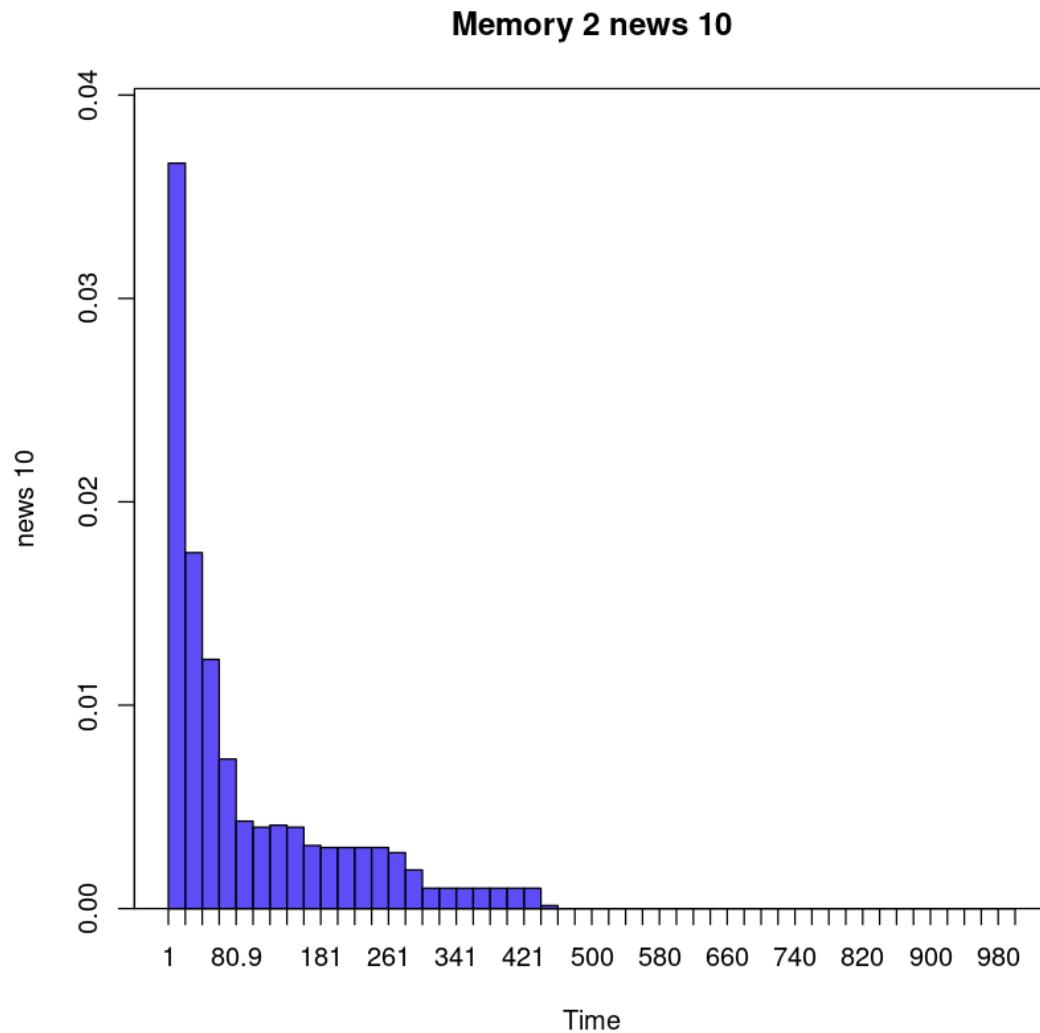


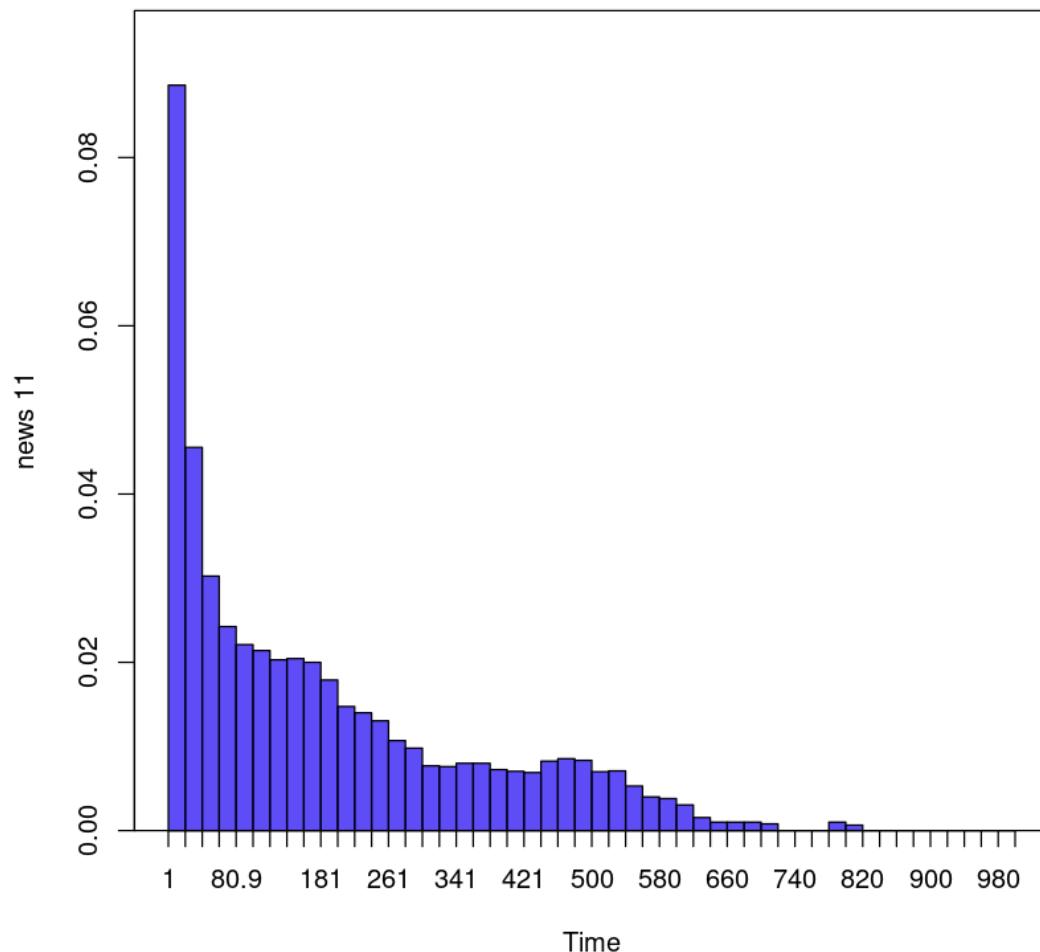
**Memory 2 news 6**

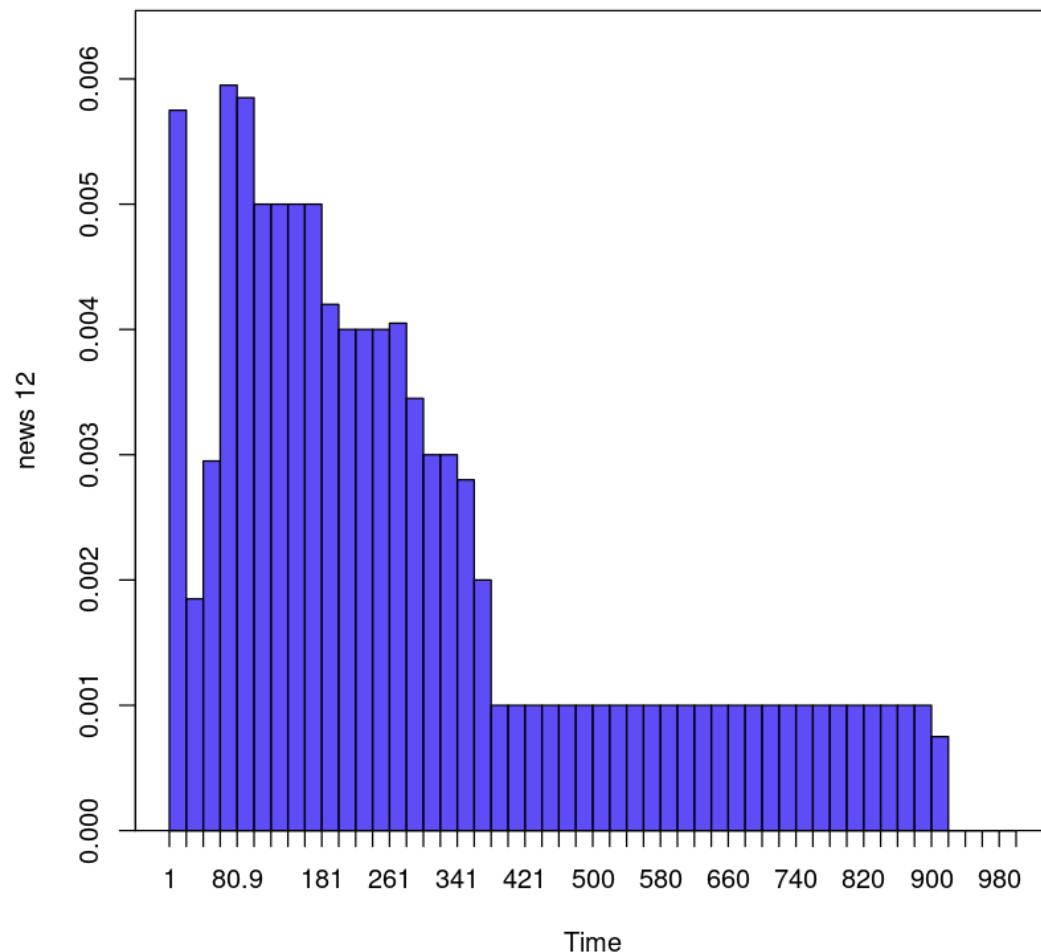
**Memory 2 news 7**

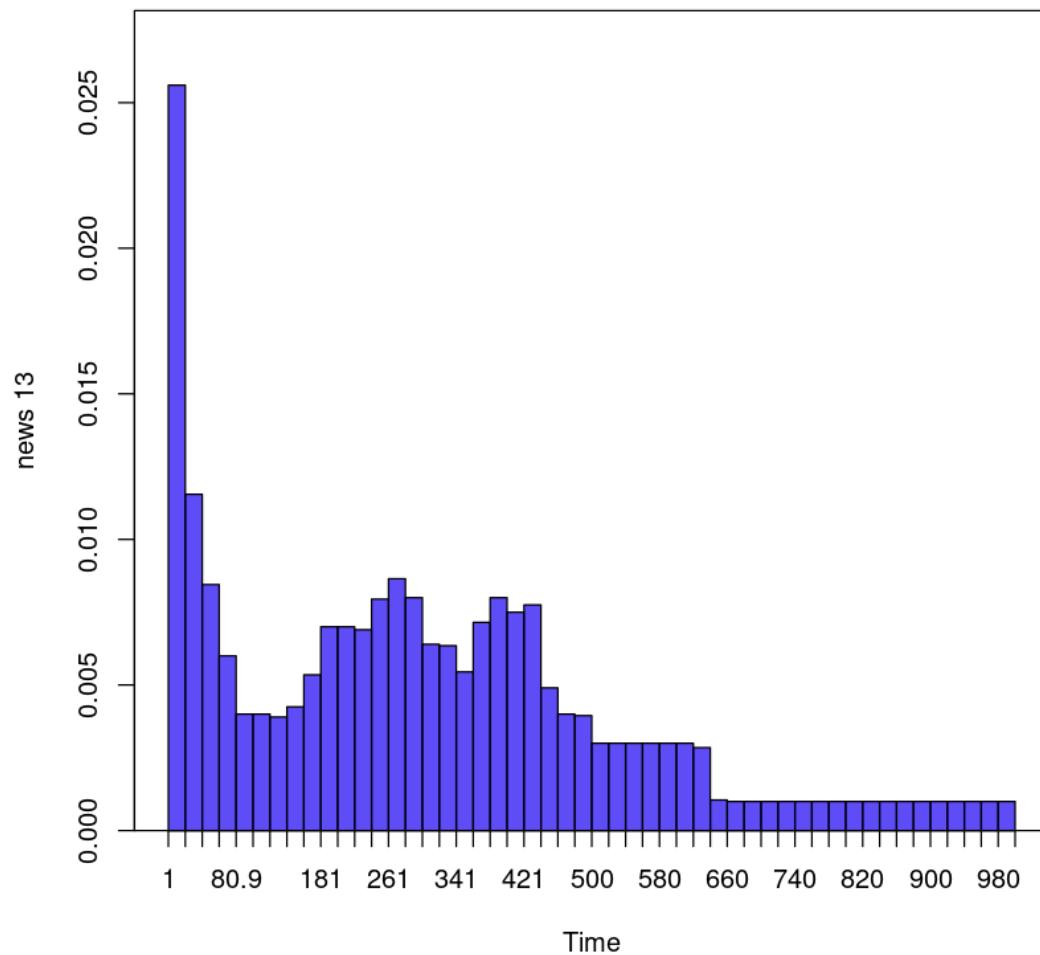


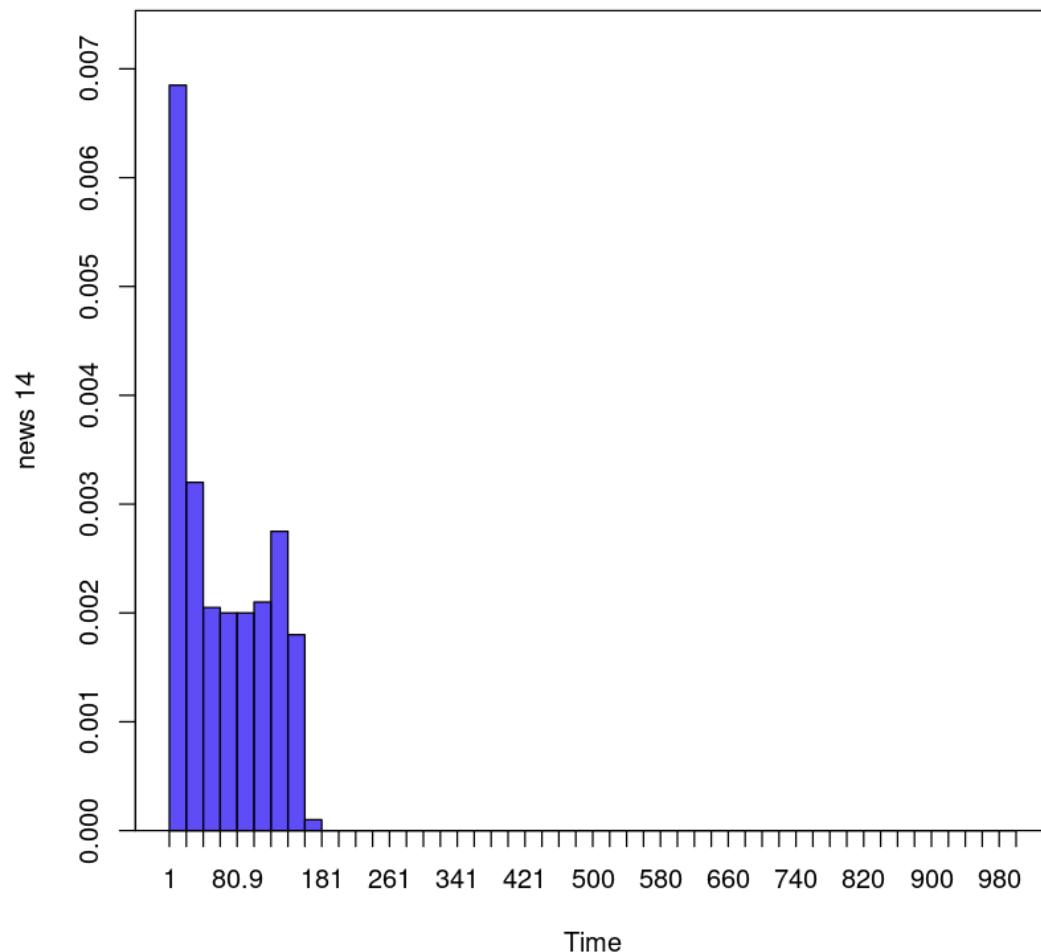


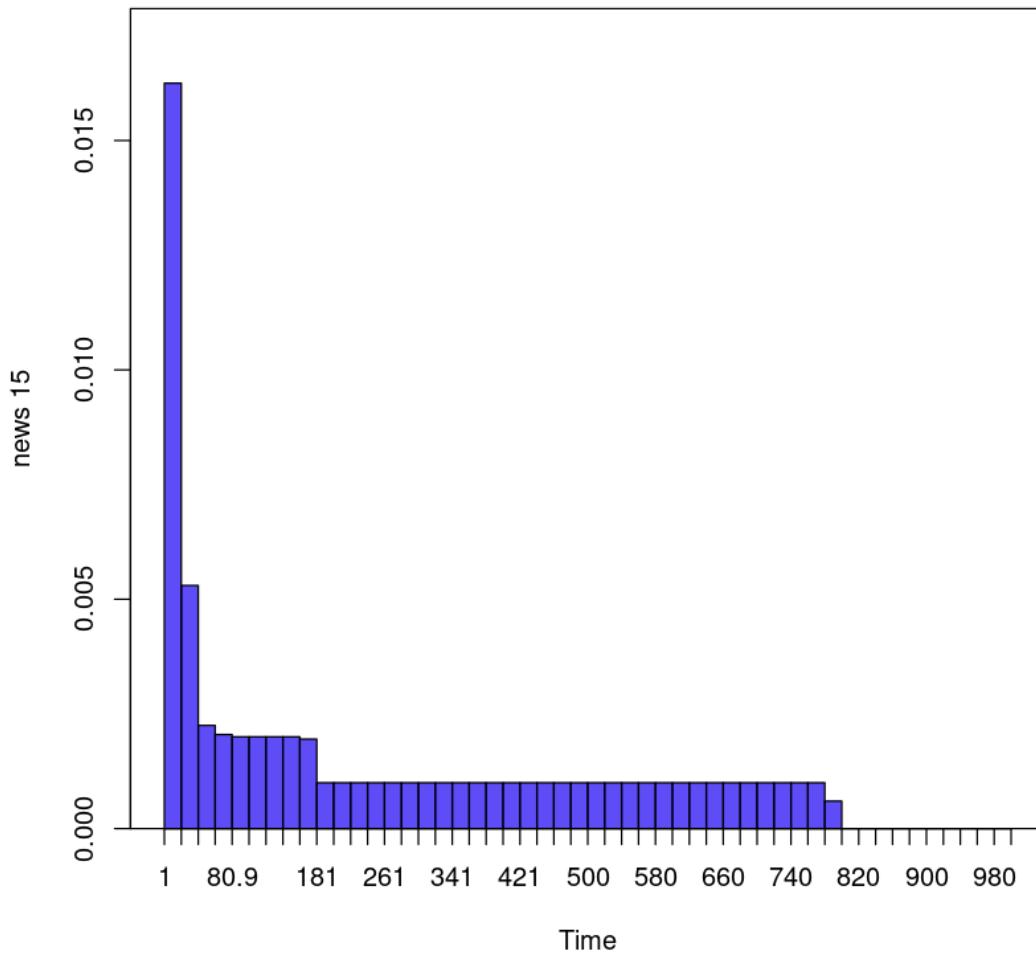


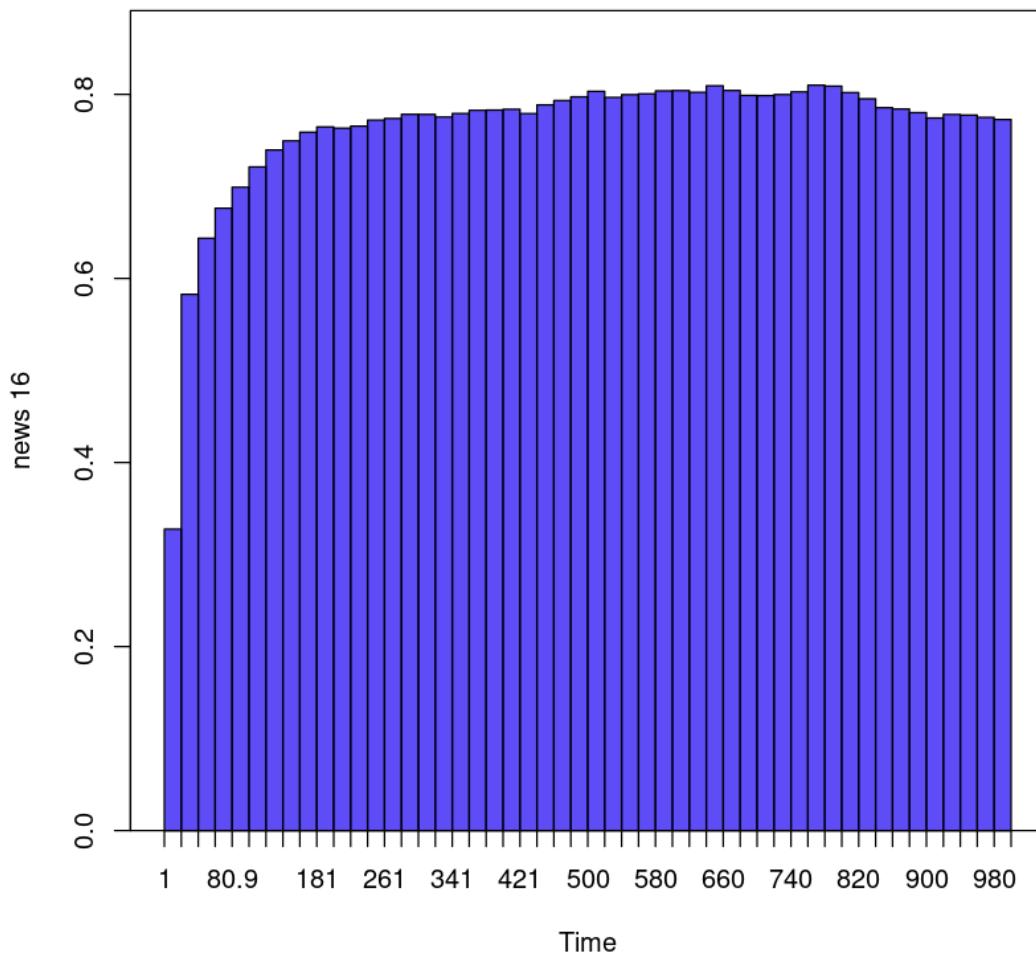
**Memory 2 news 11**

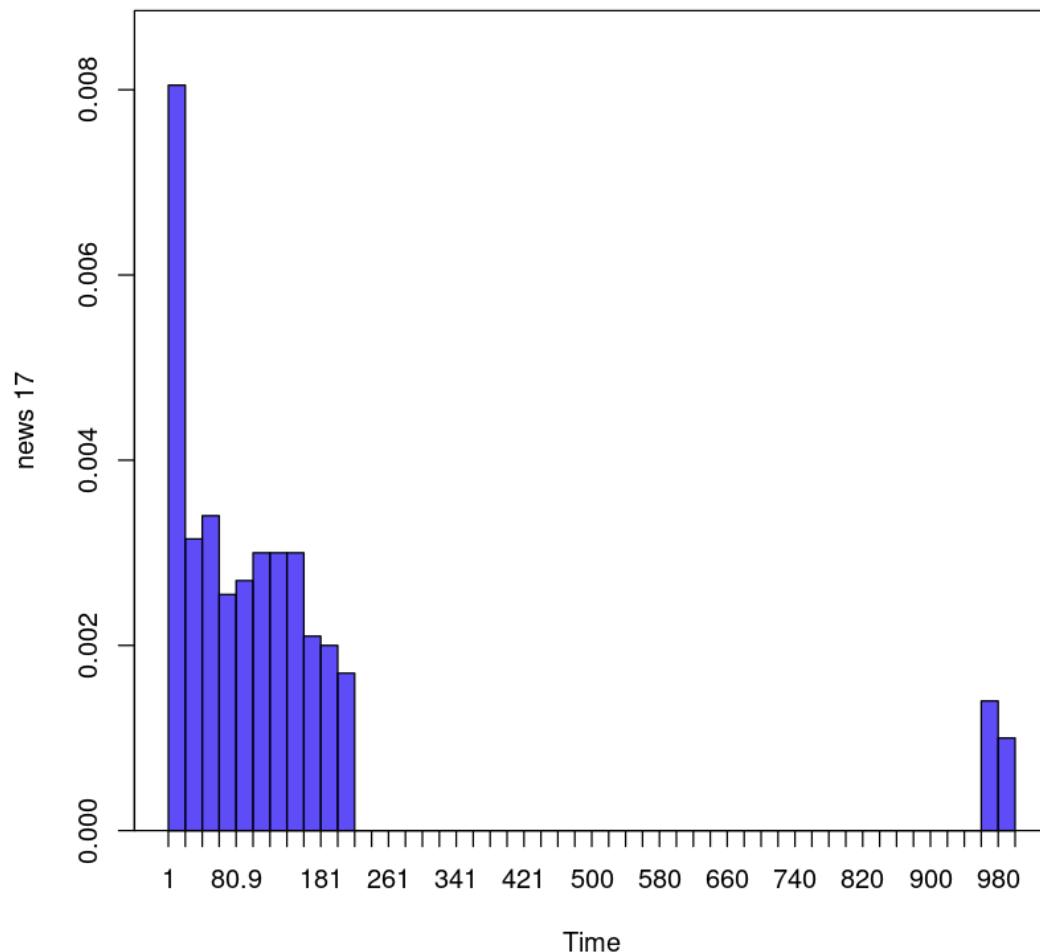
**Memory 2 news 12**

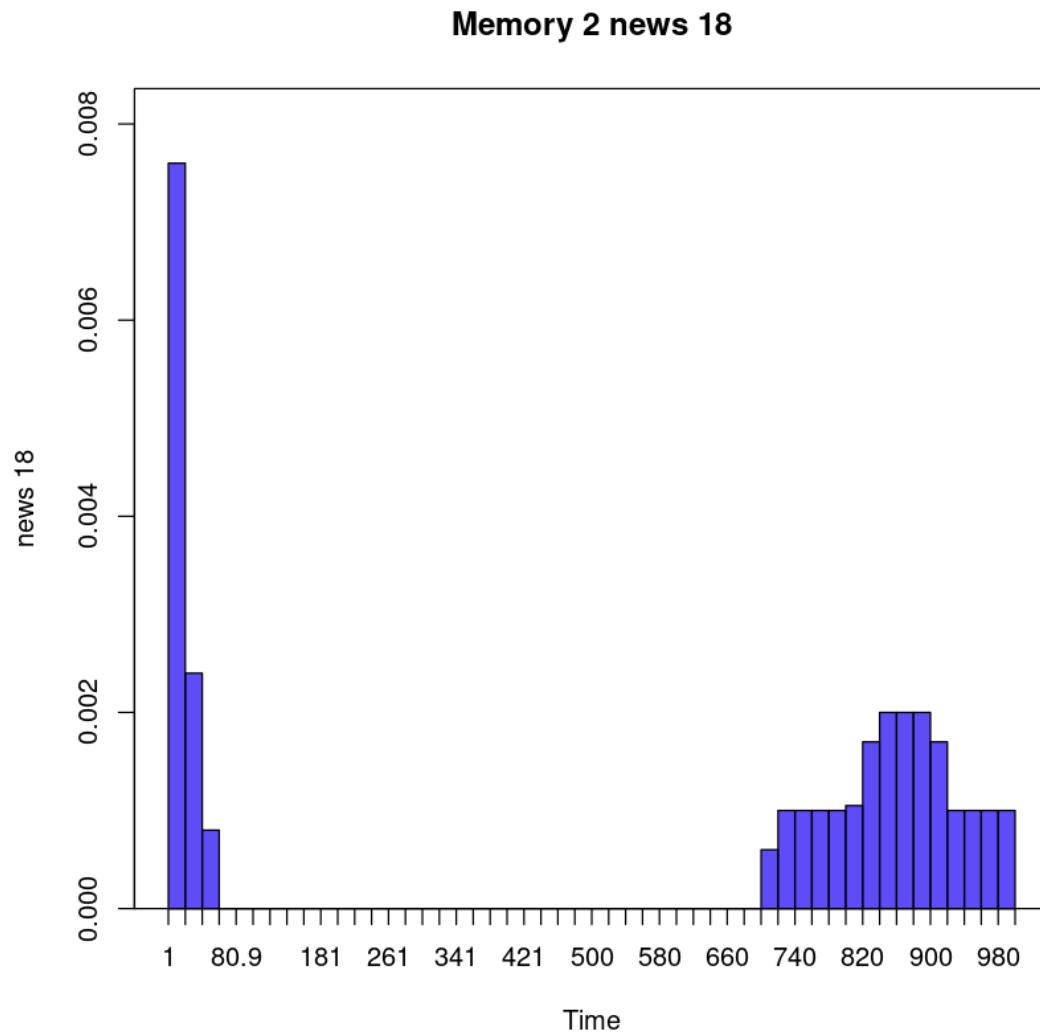
**Memory 2 news 13**

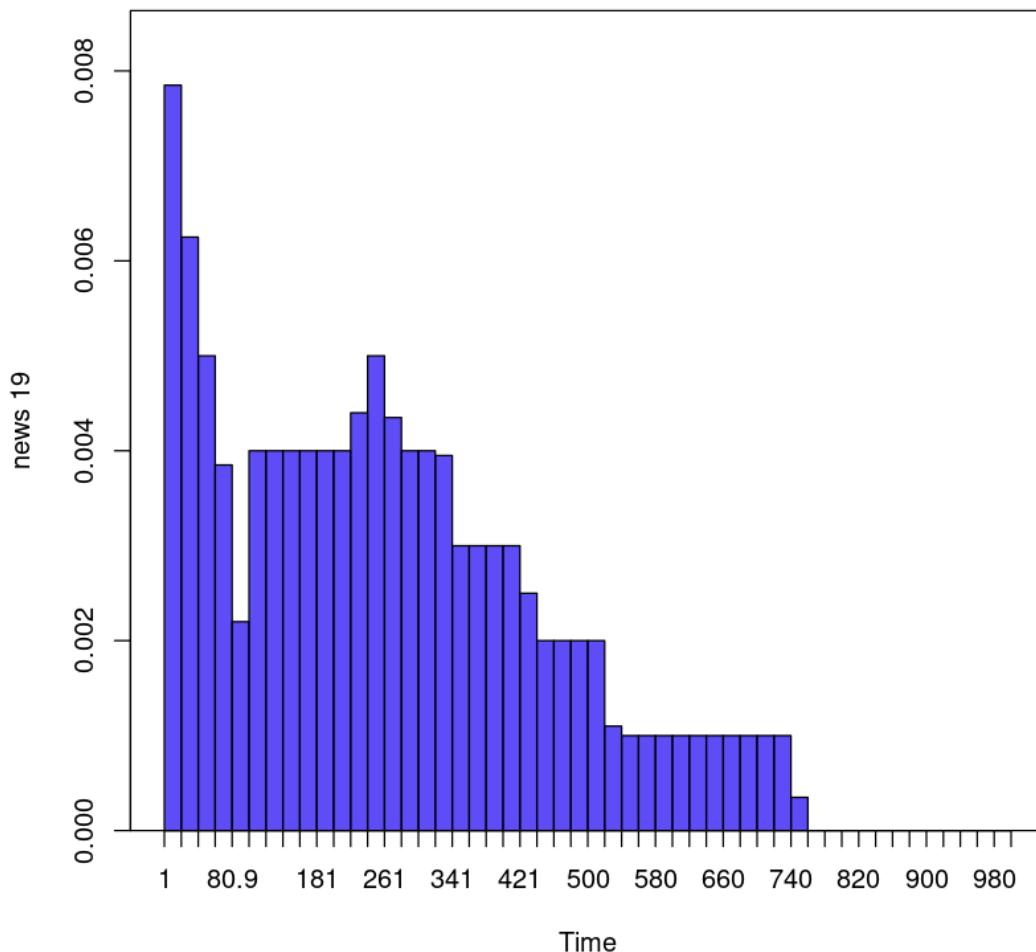
**Memory 2 news 14**

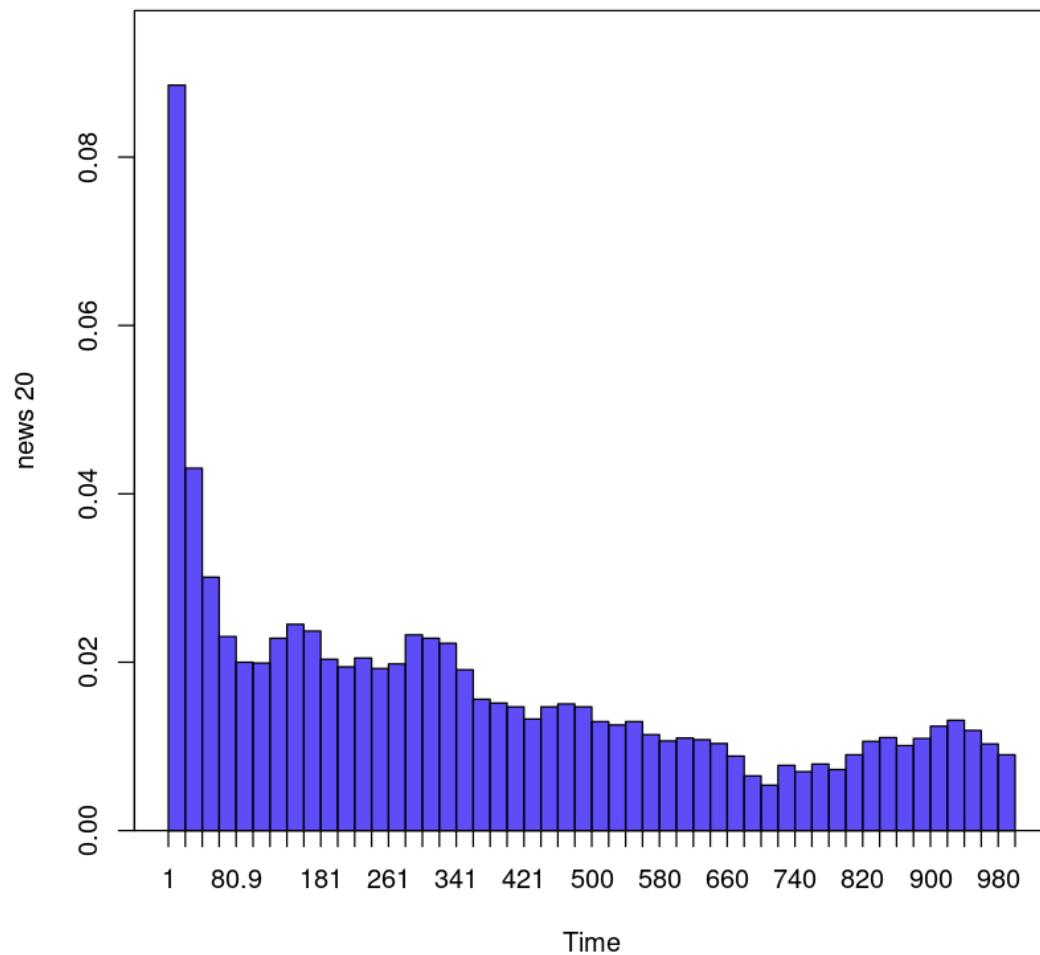
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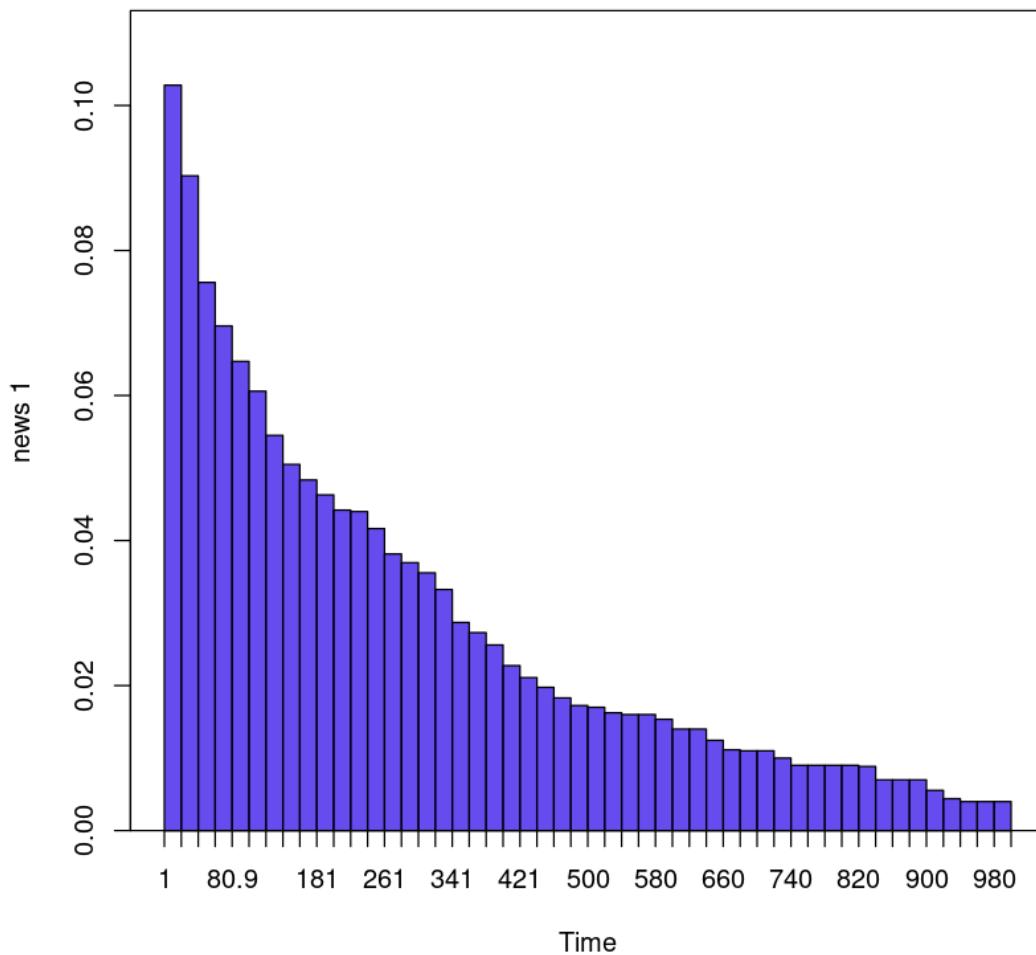
**Memory 2 news 16**

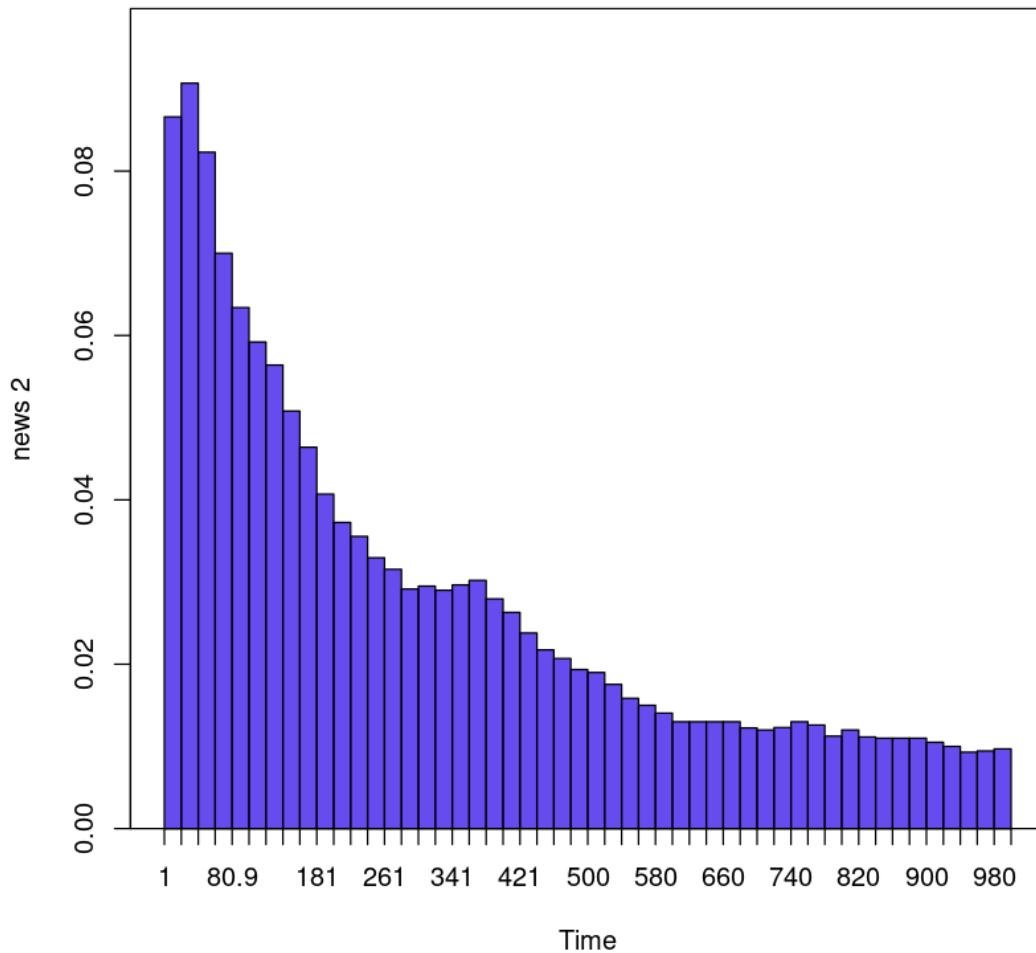
**Memory 2 news 17**

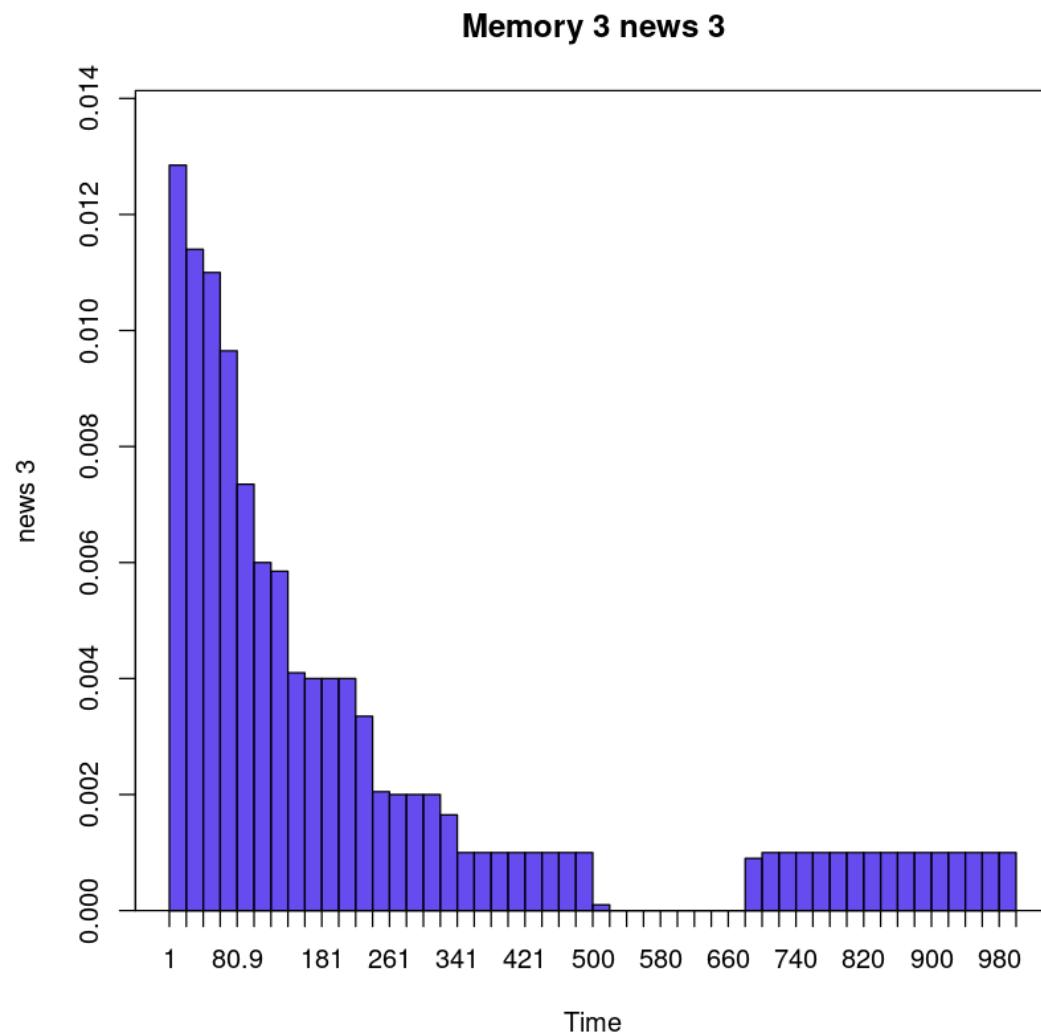


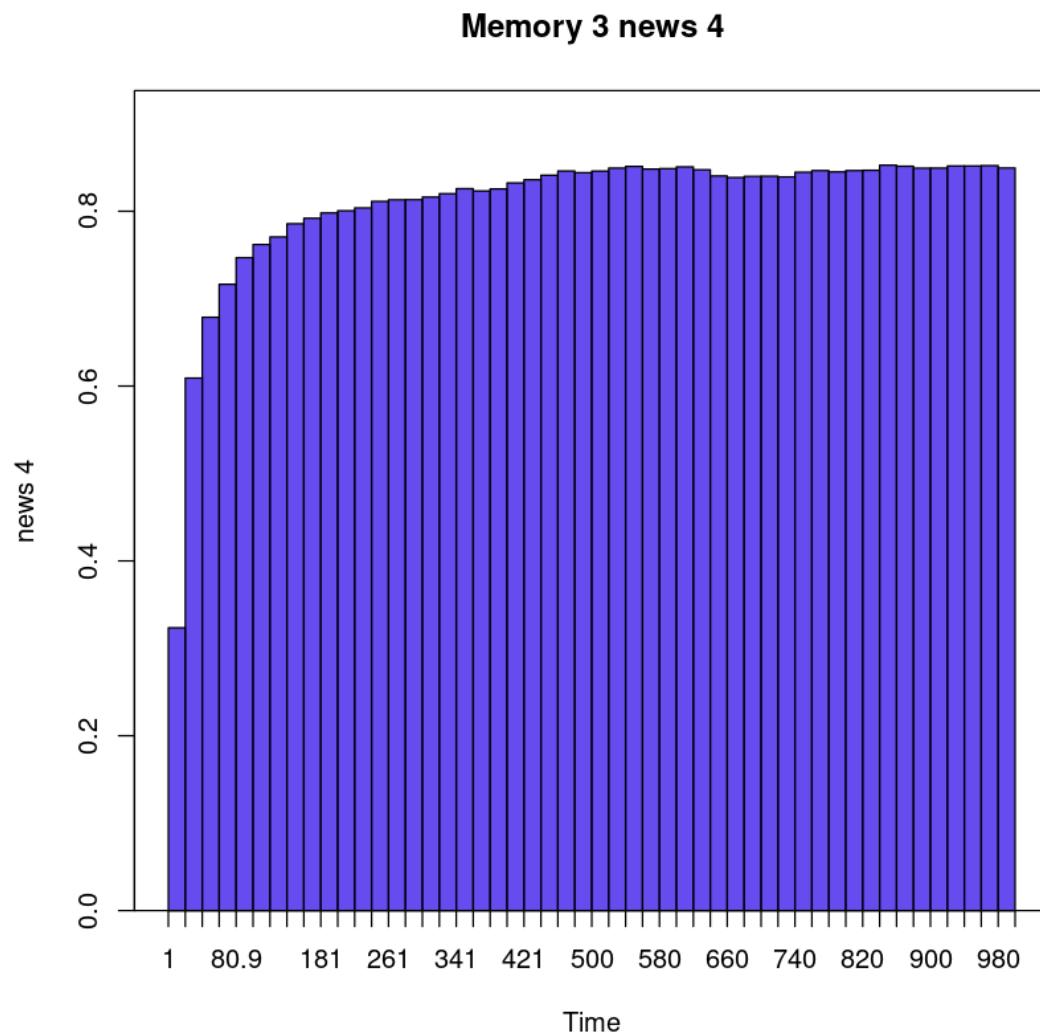
**Memory 2 news 19**

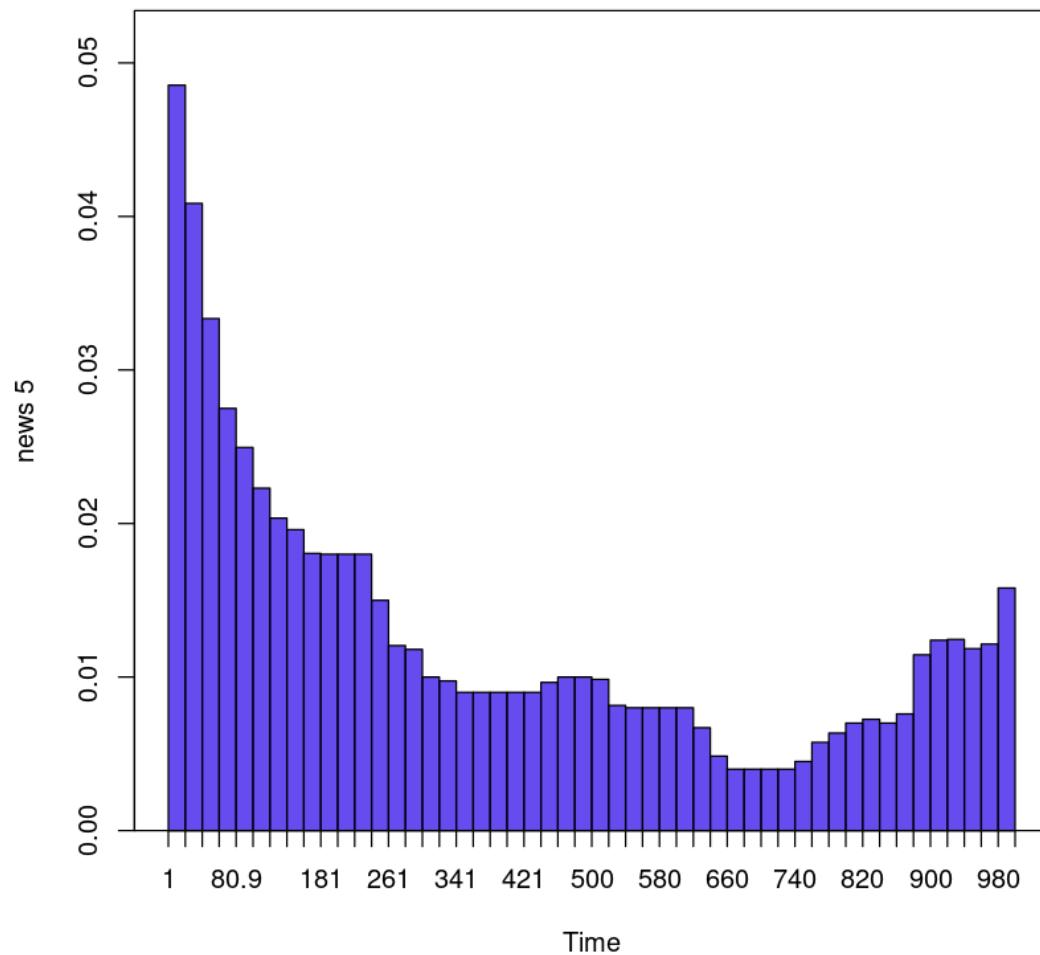
**Memory 2 news 20**

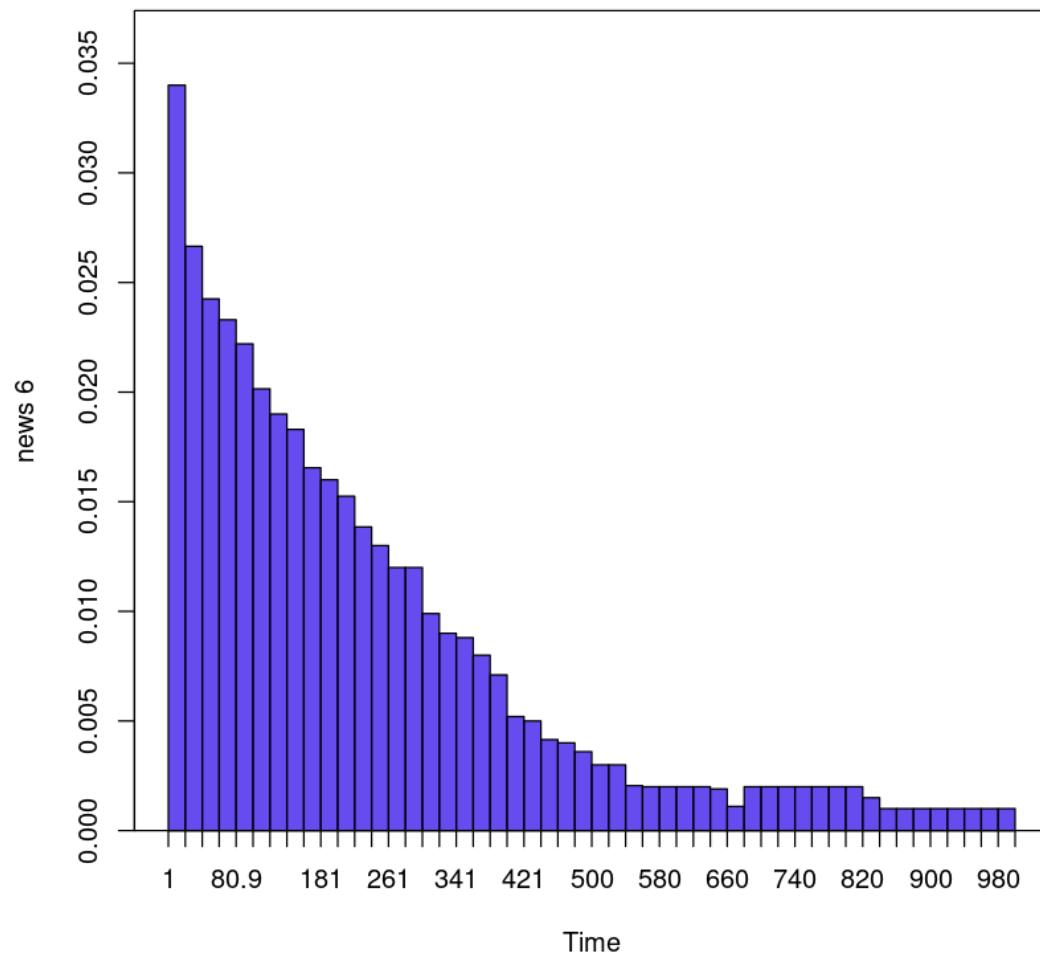
**Memory 3 news 1**

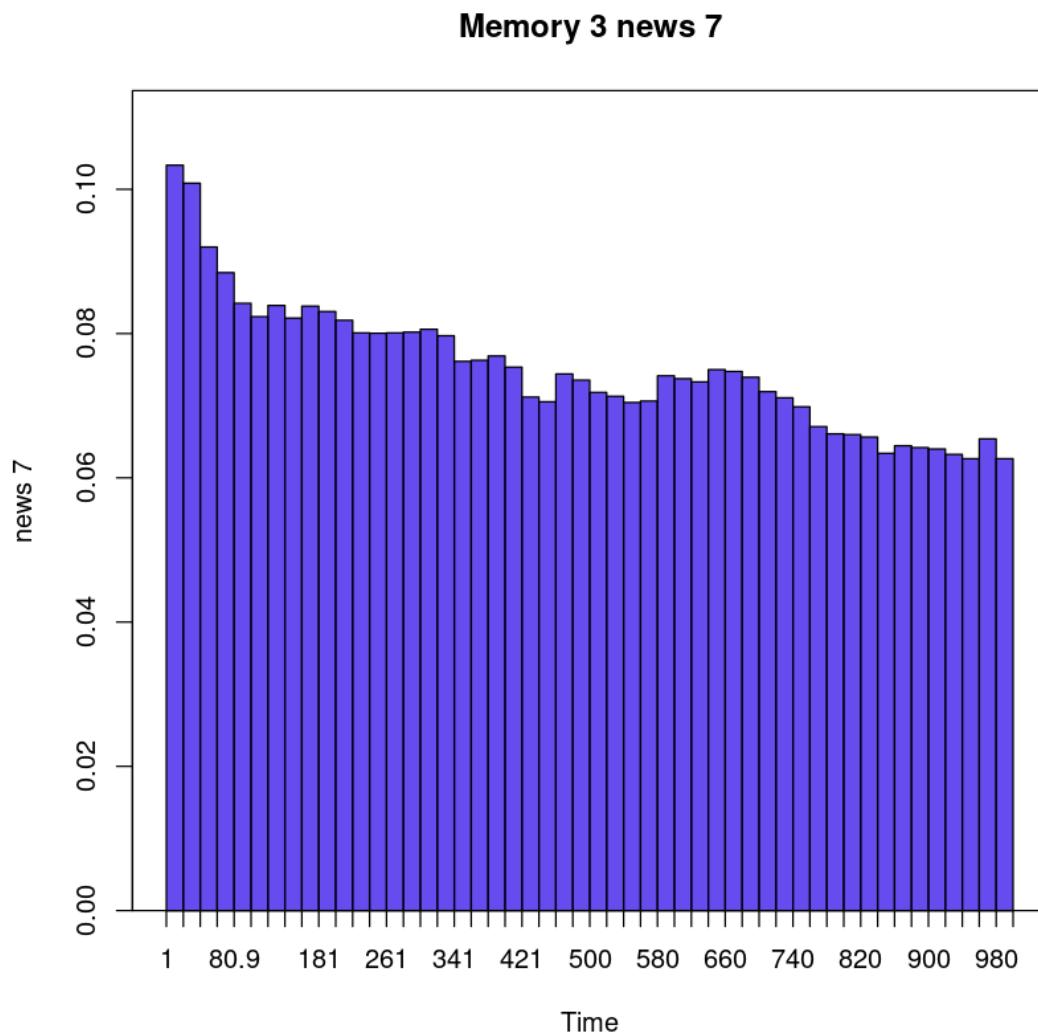
**Memory 3 news 2**

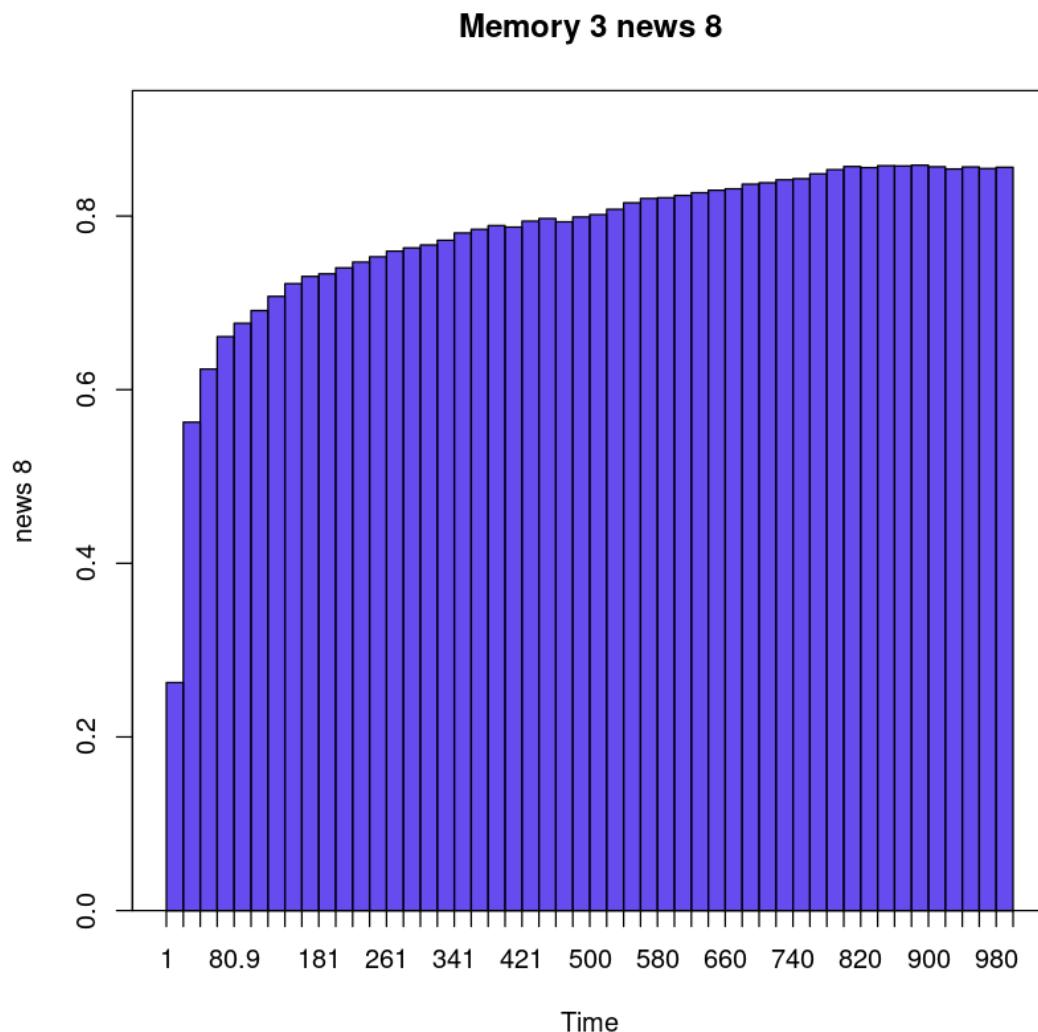


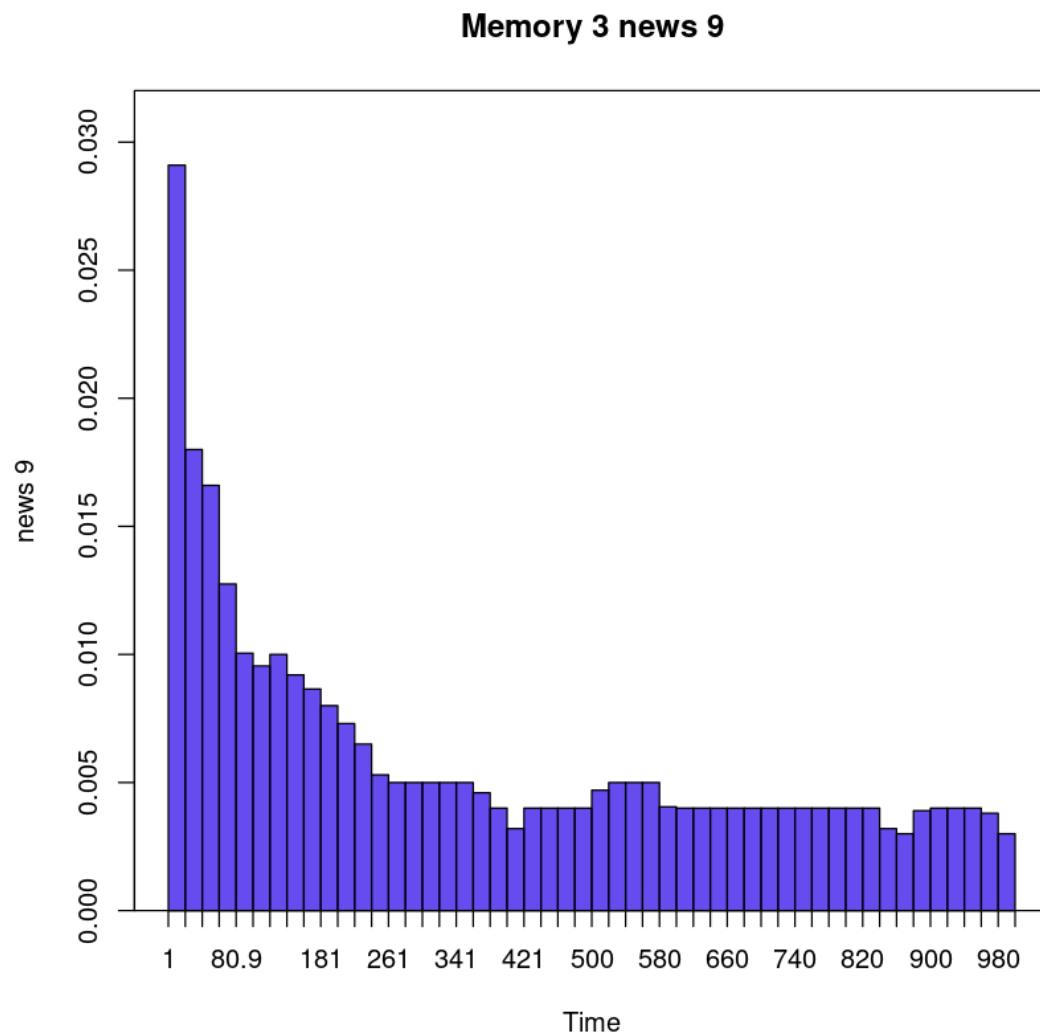


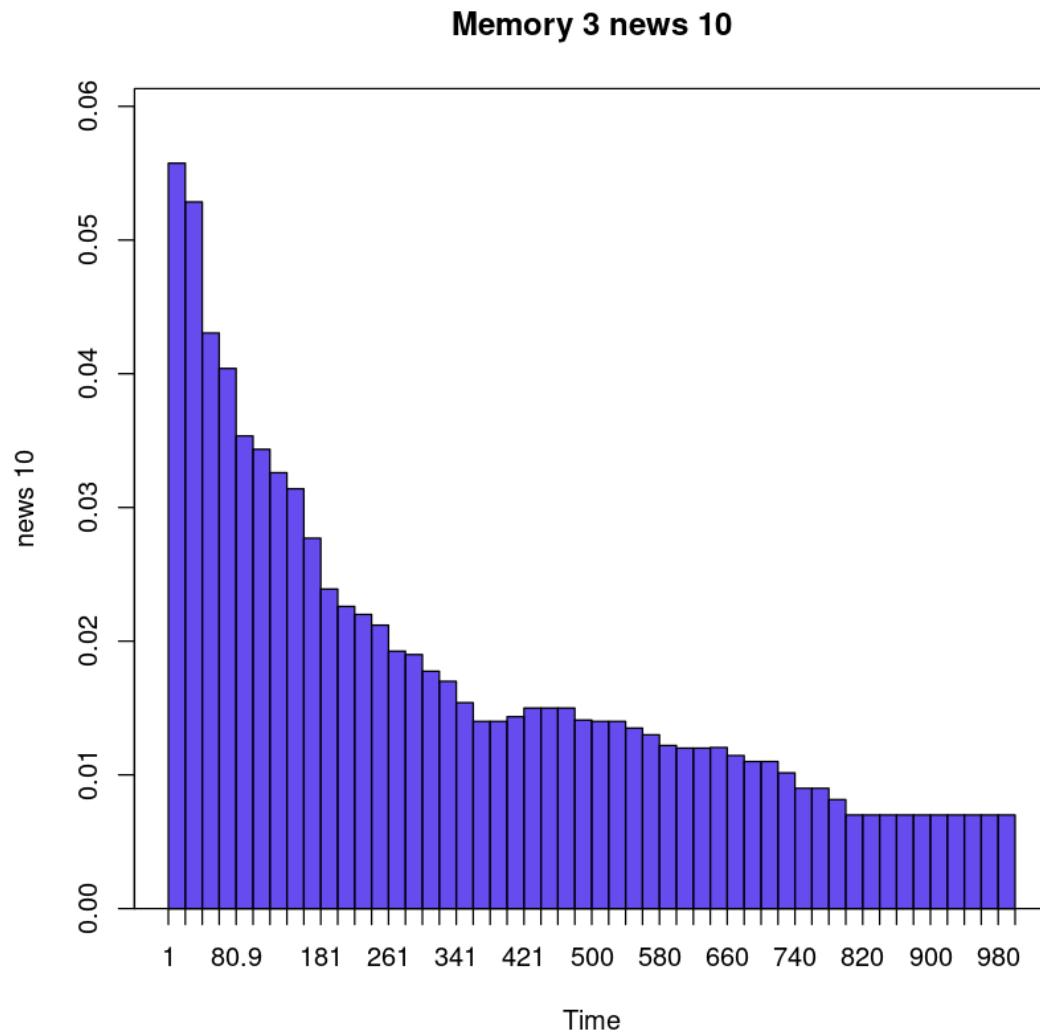
**Memory 3 news 5**

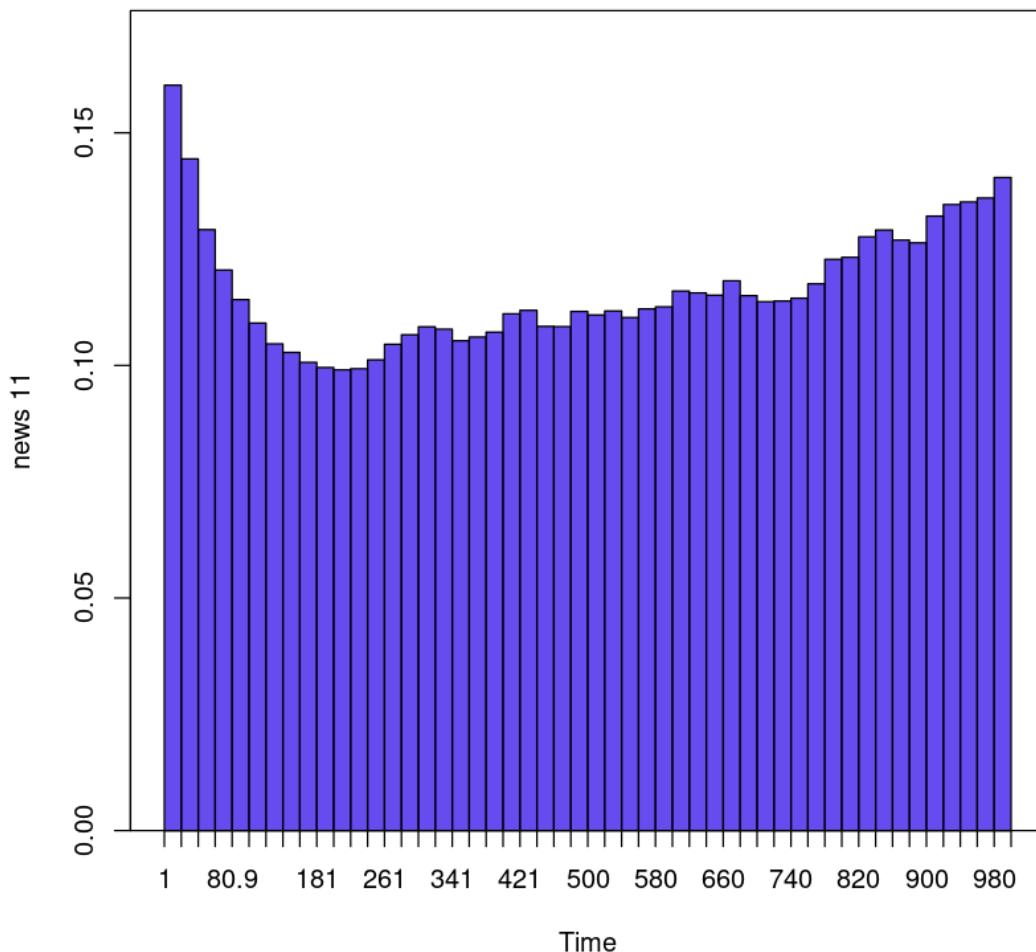
**Memory 3 news 6**

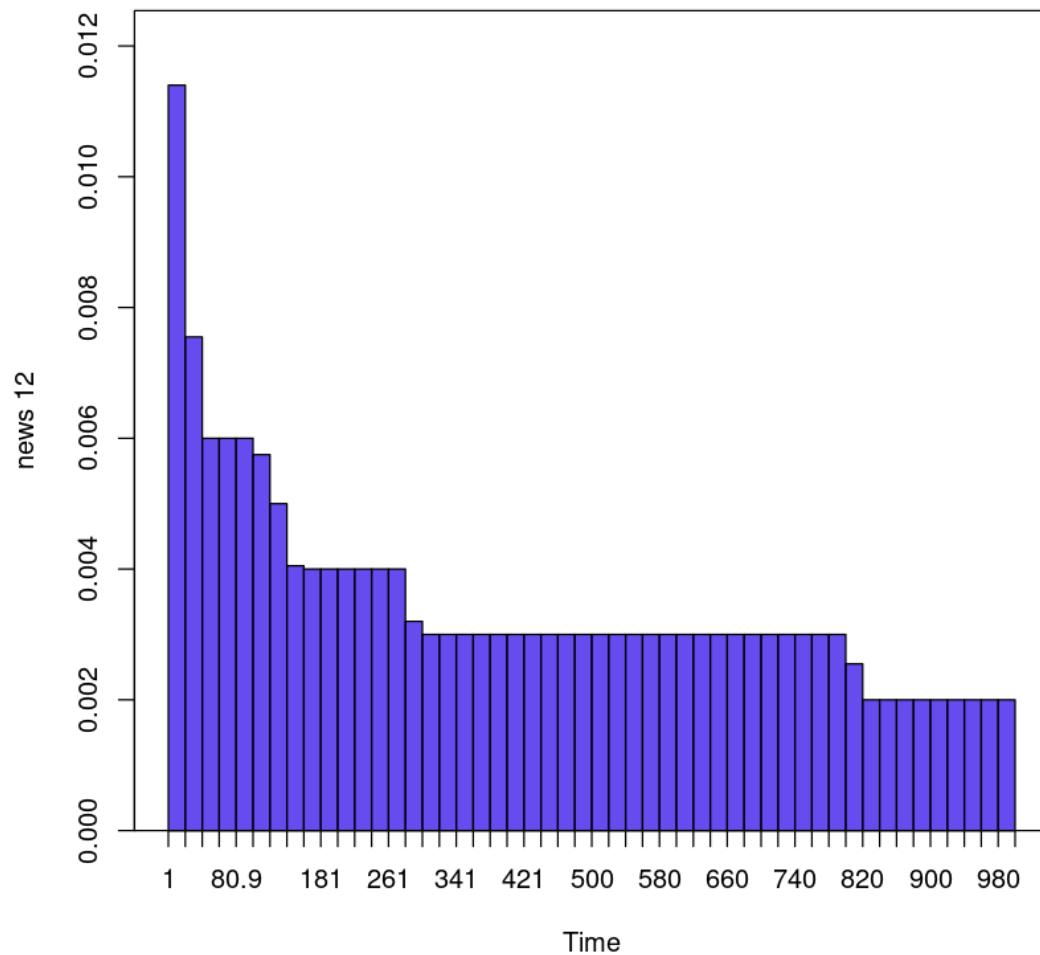


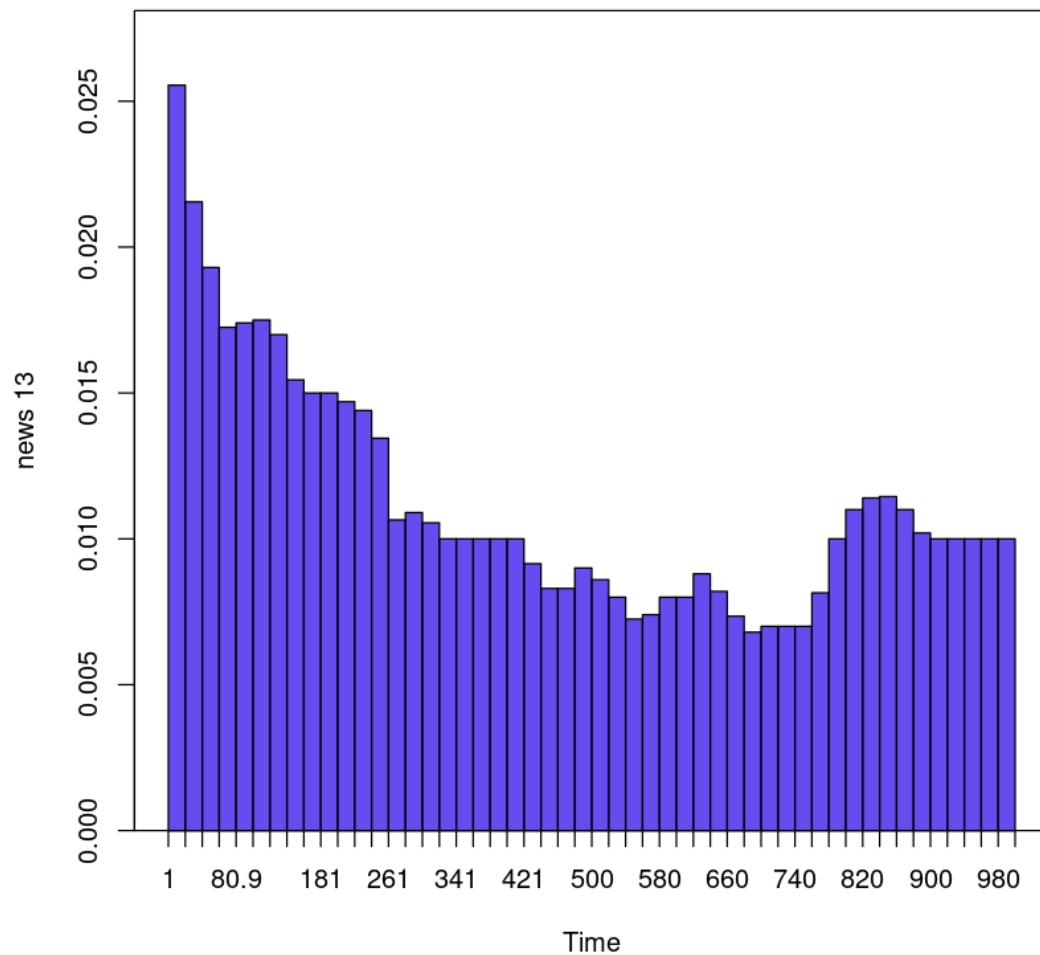


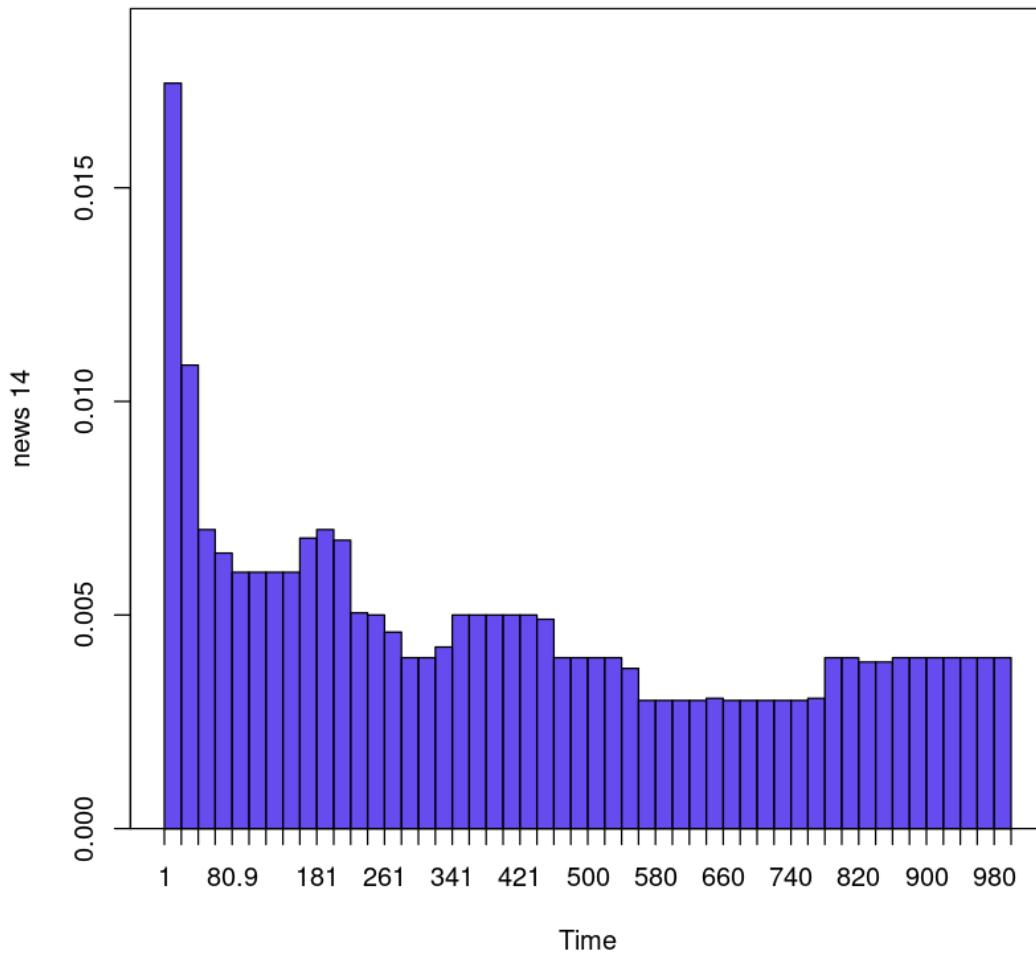


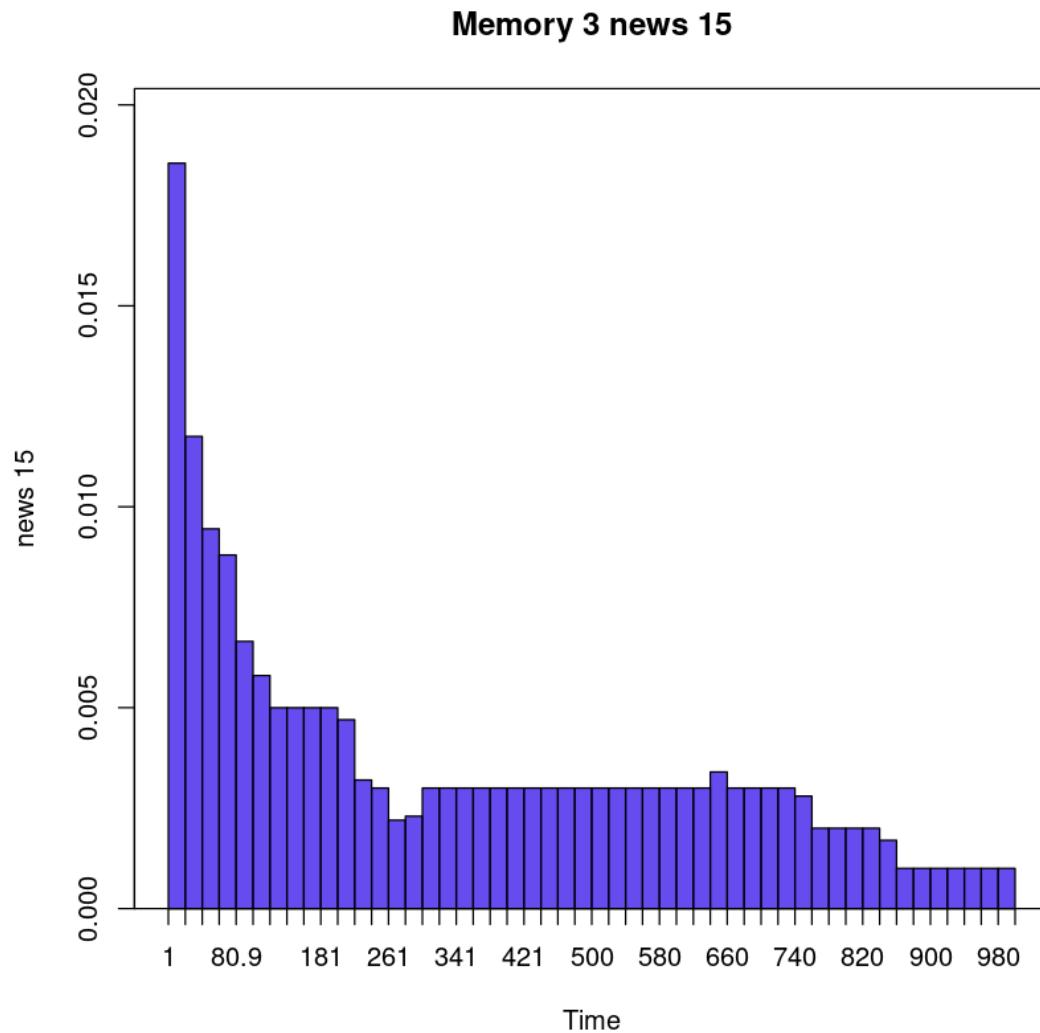


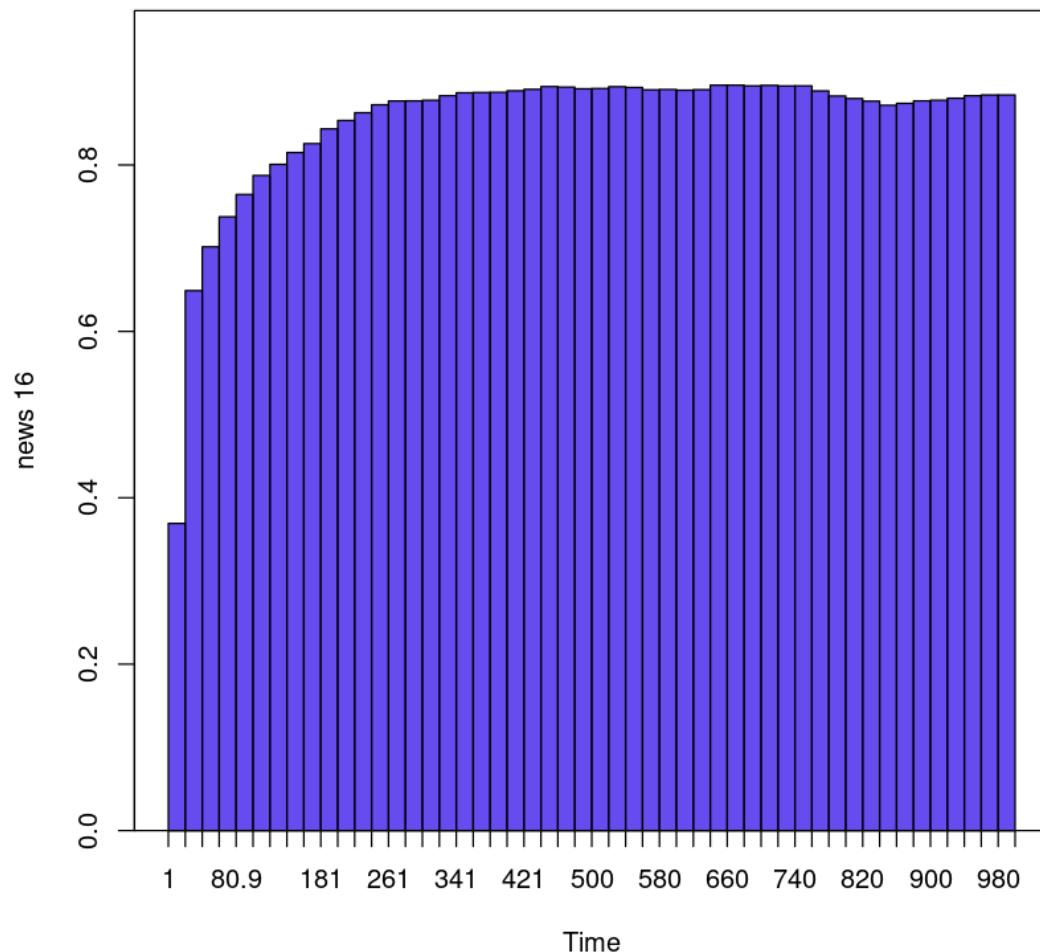
**Memory 3 news 11**

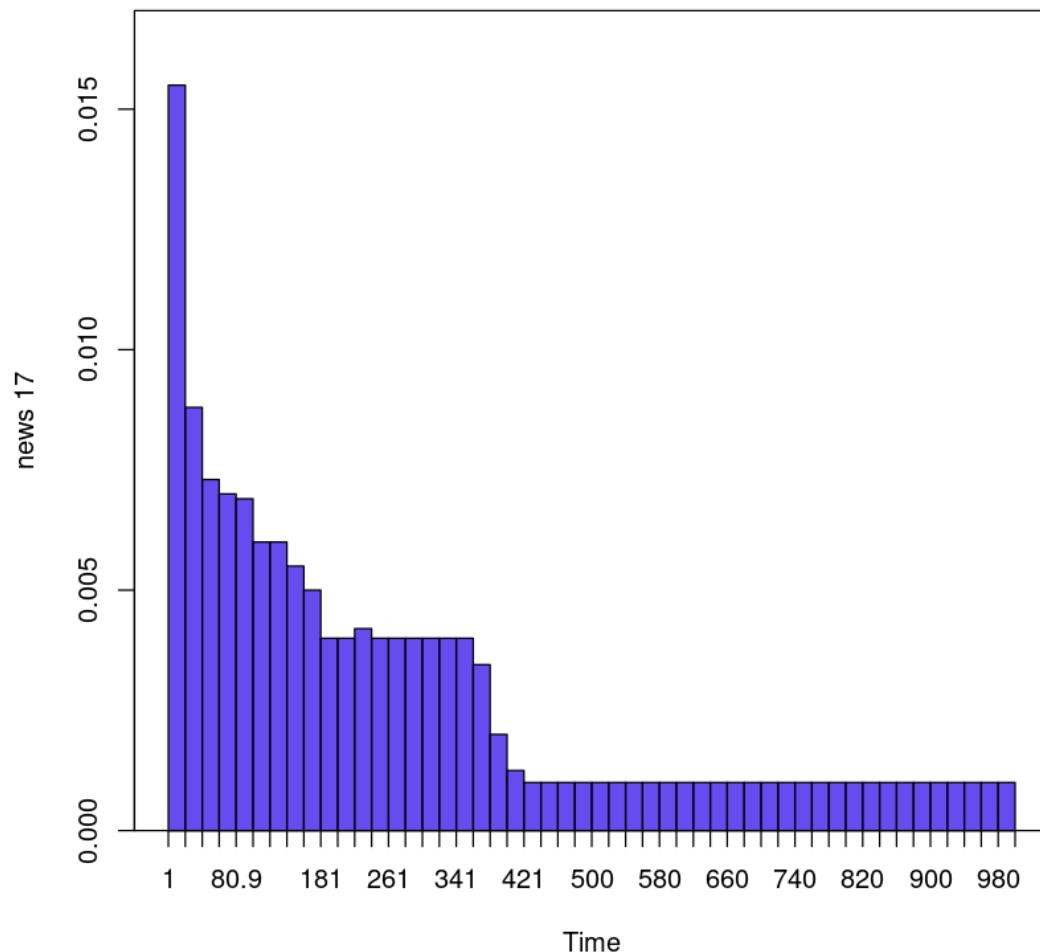
**Memory 3 news 12**

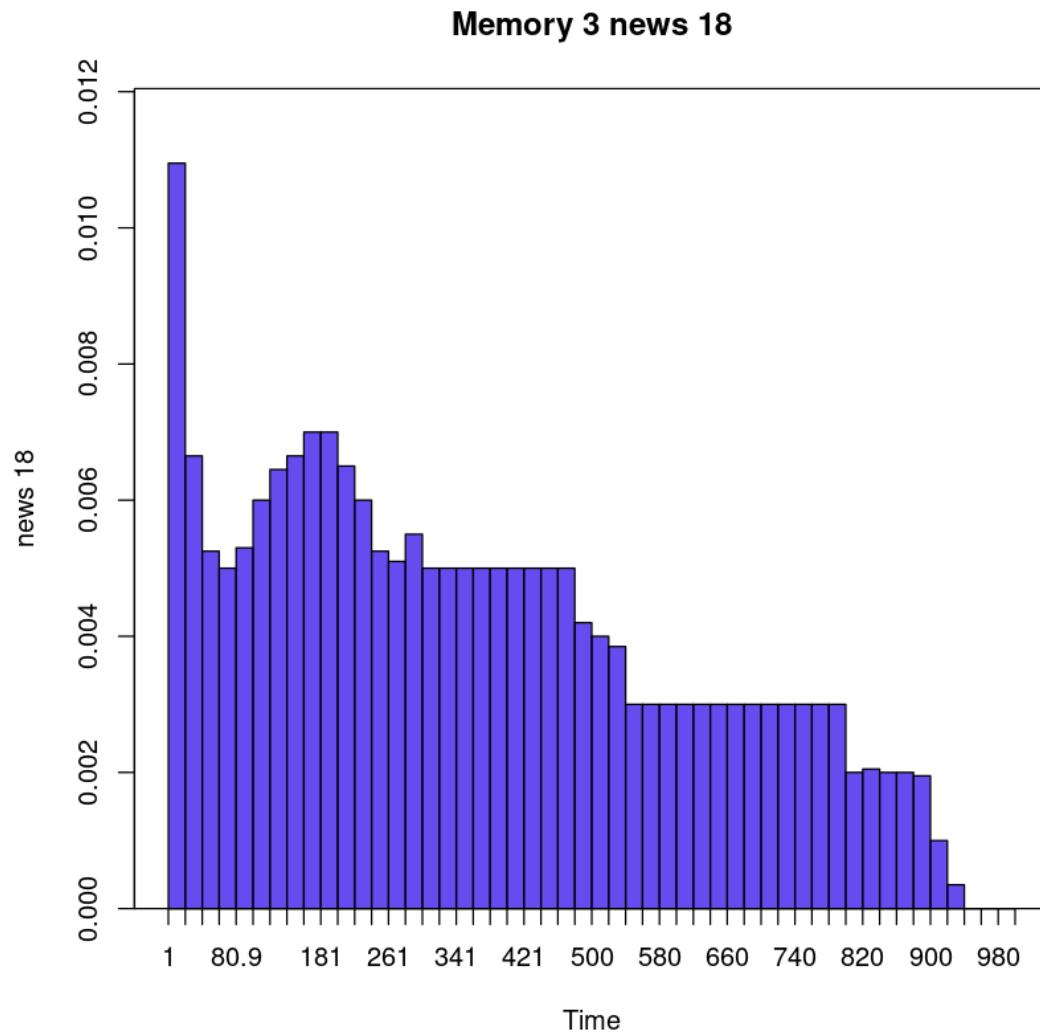
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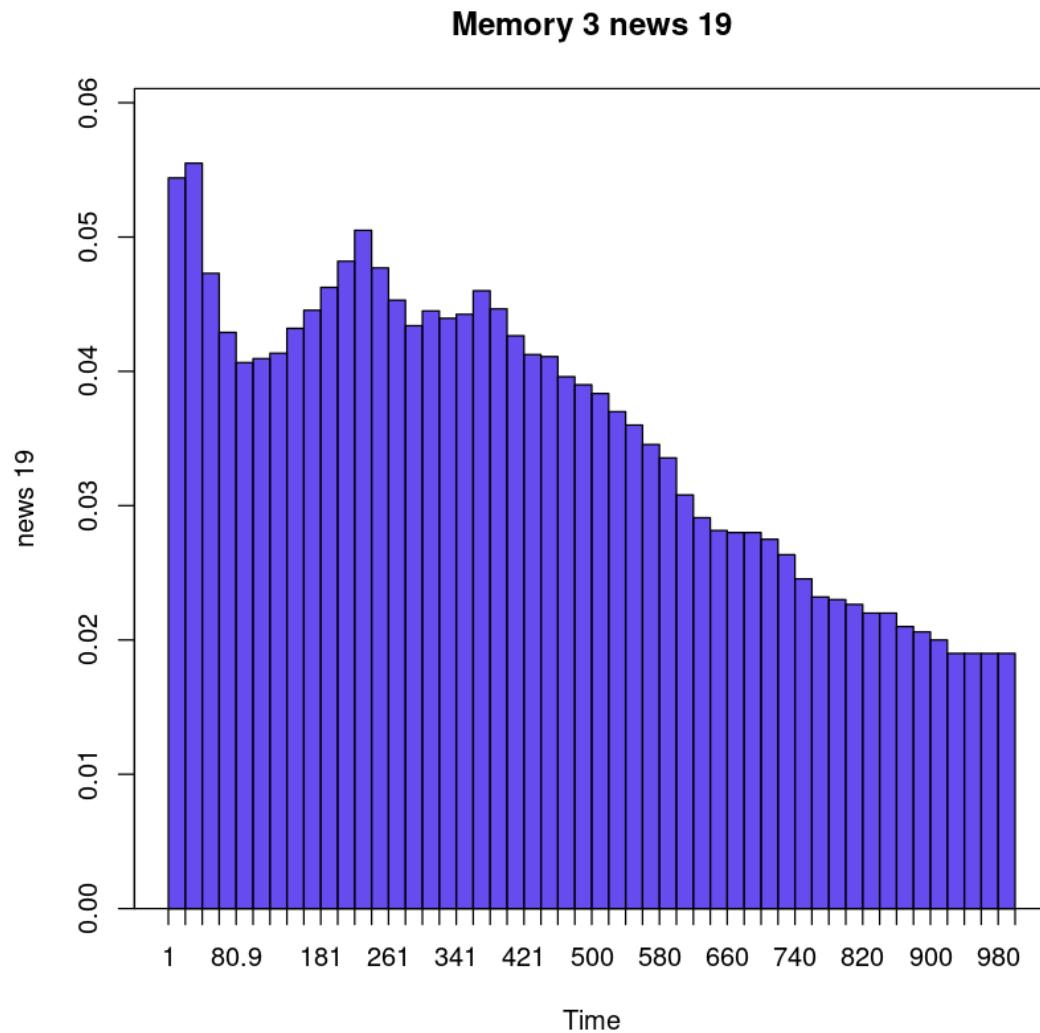
**Memory 3 news 14**

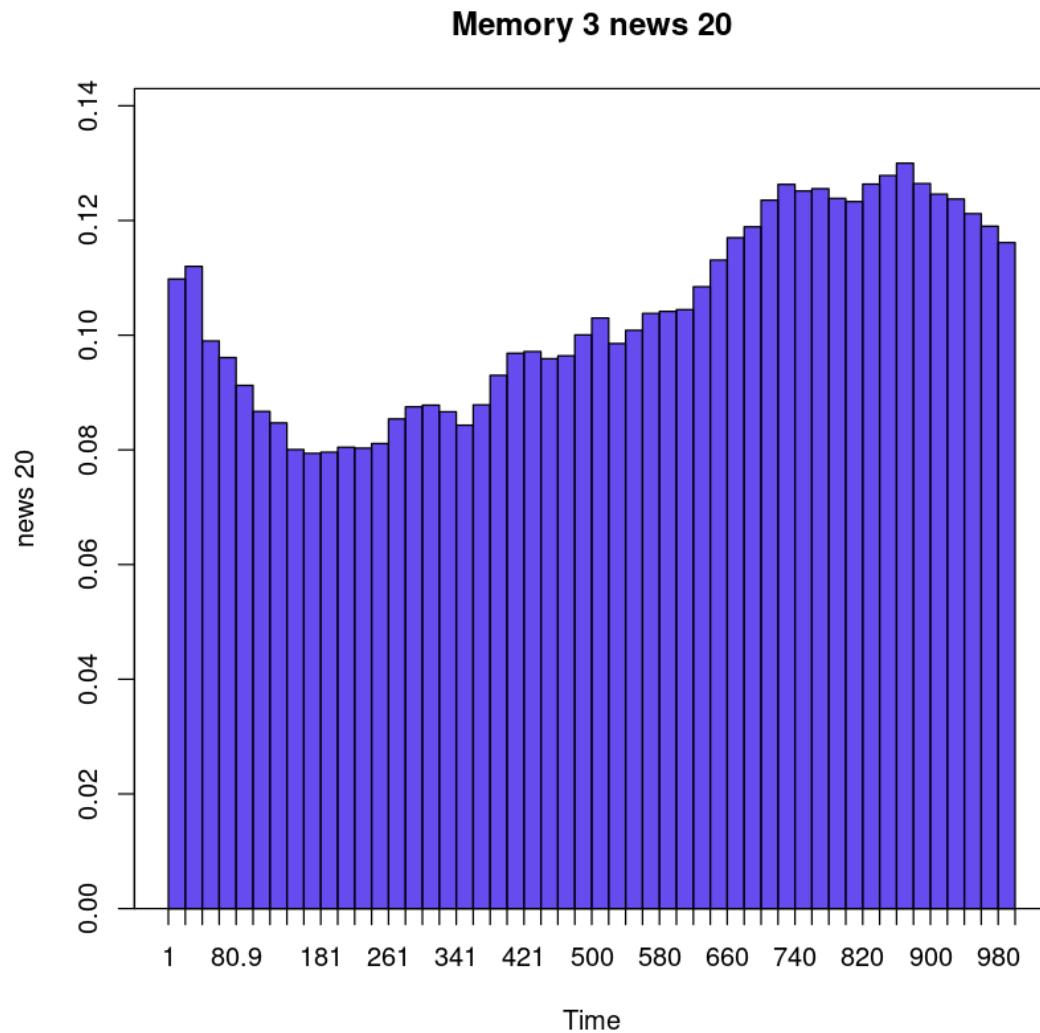


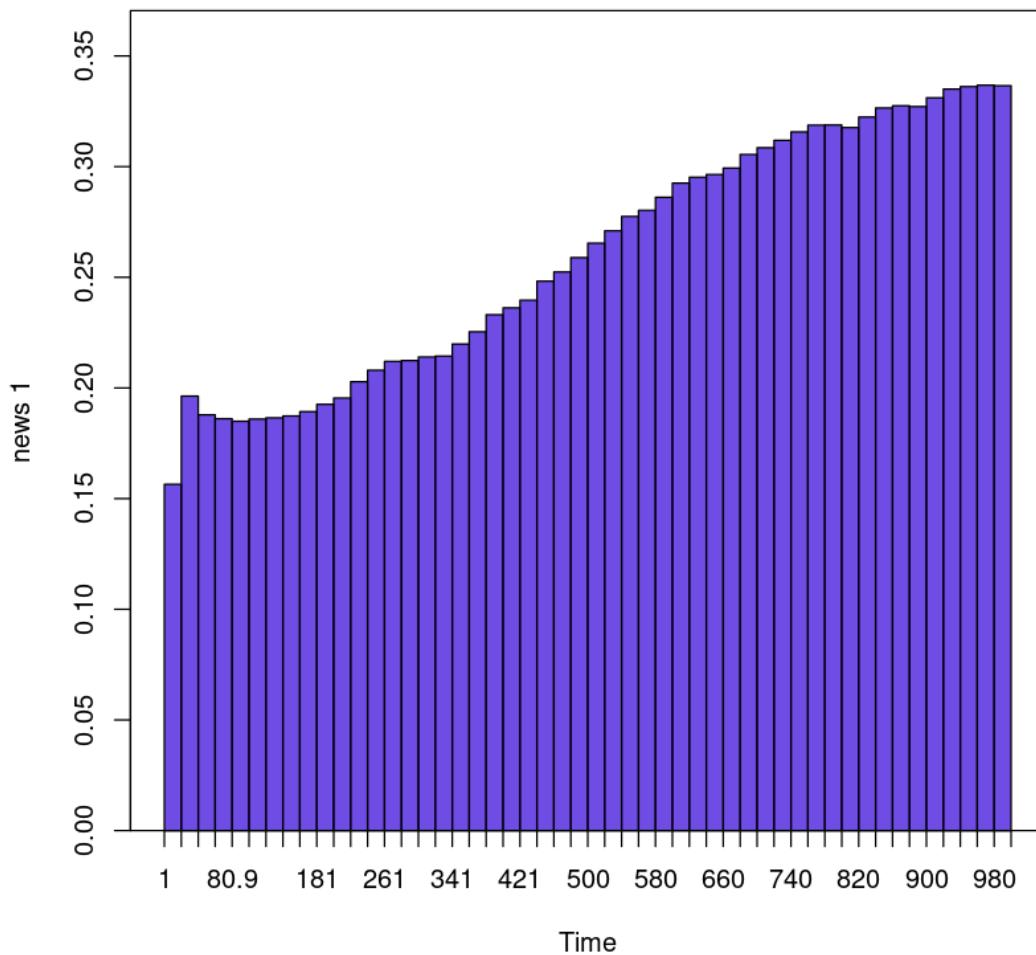
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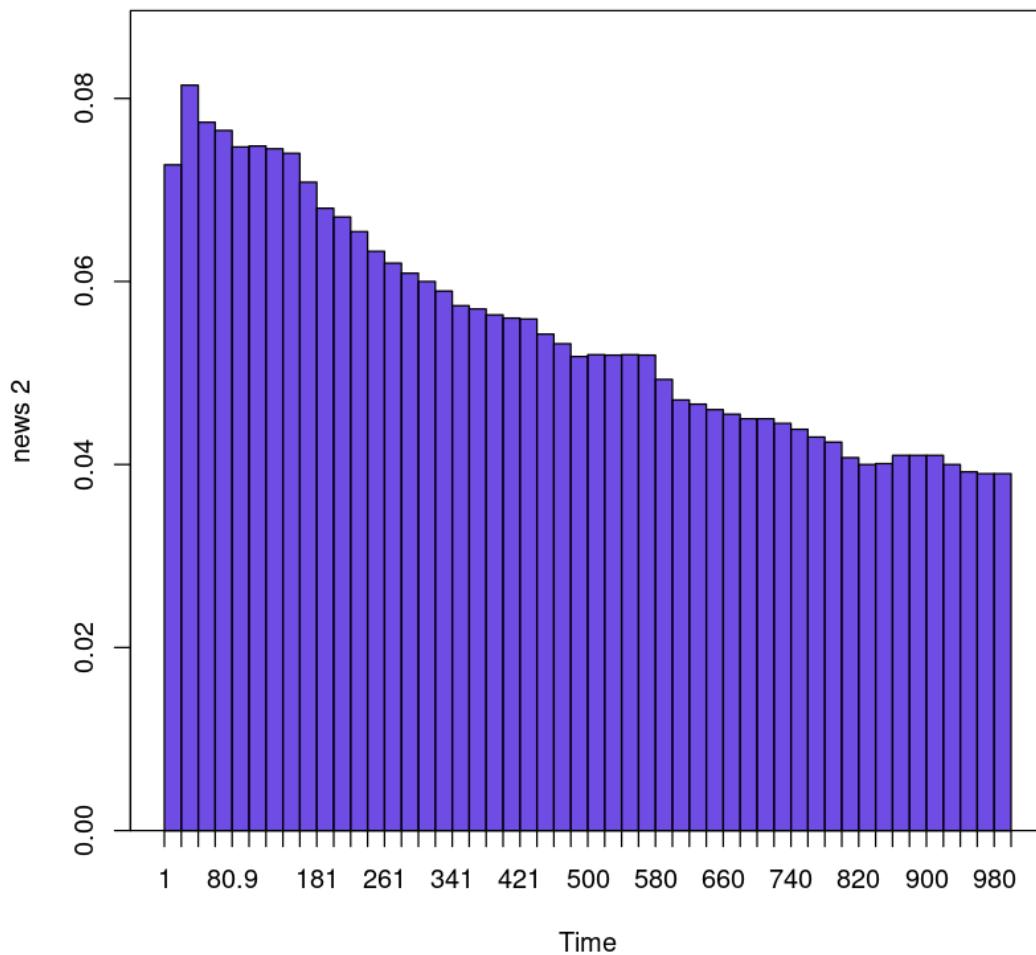
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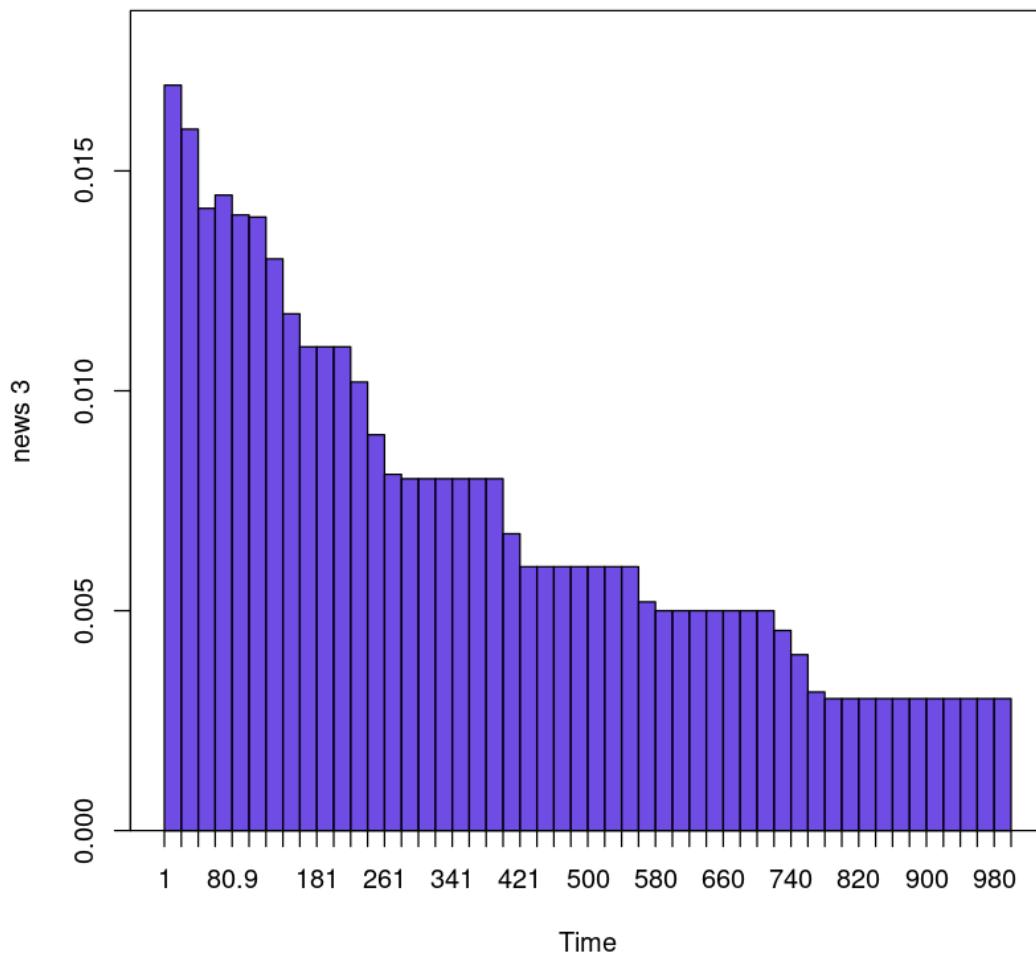


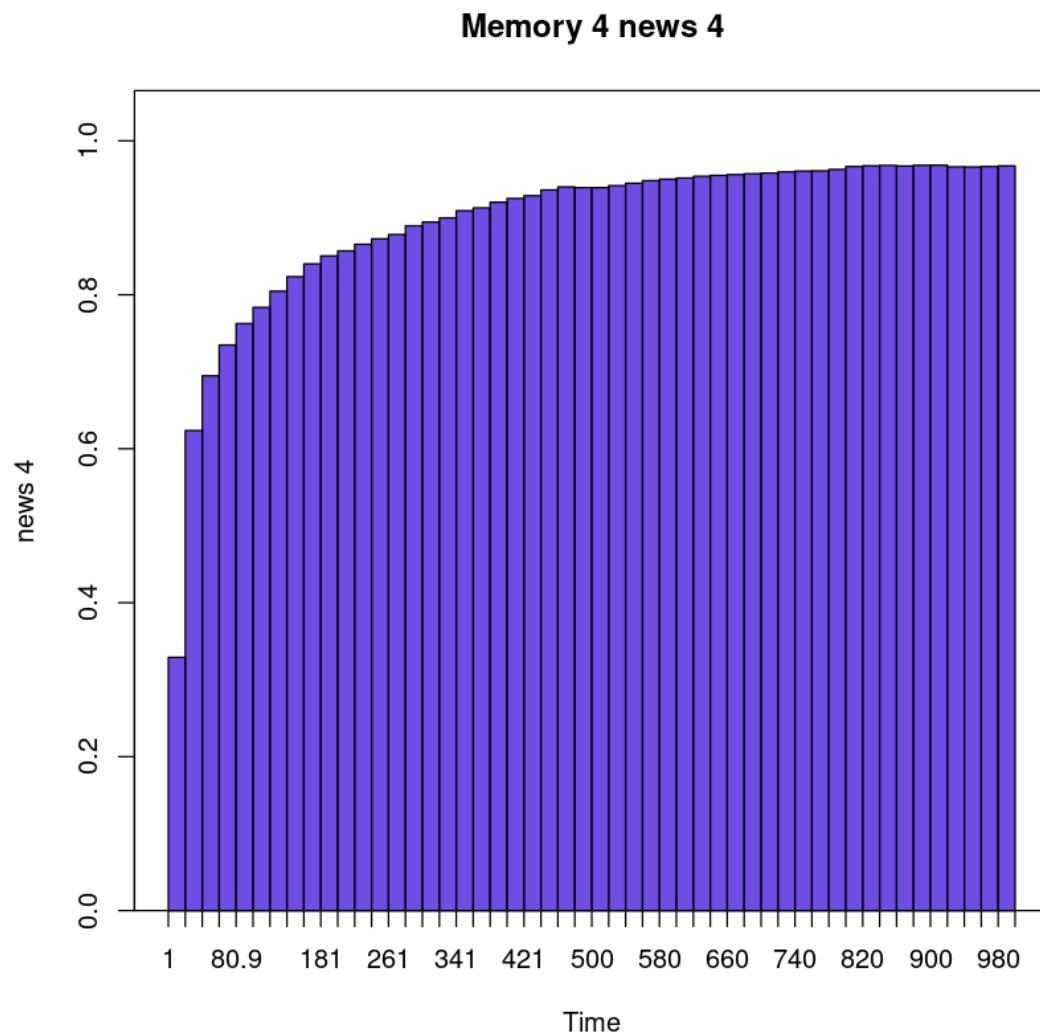


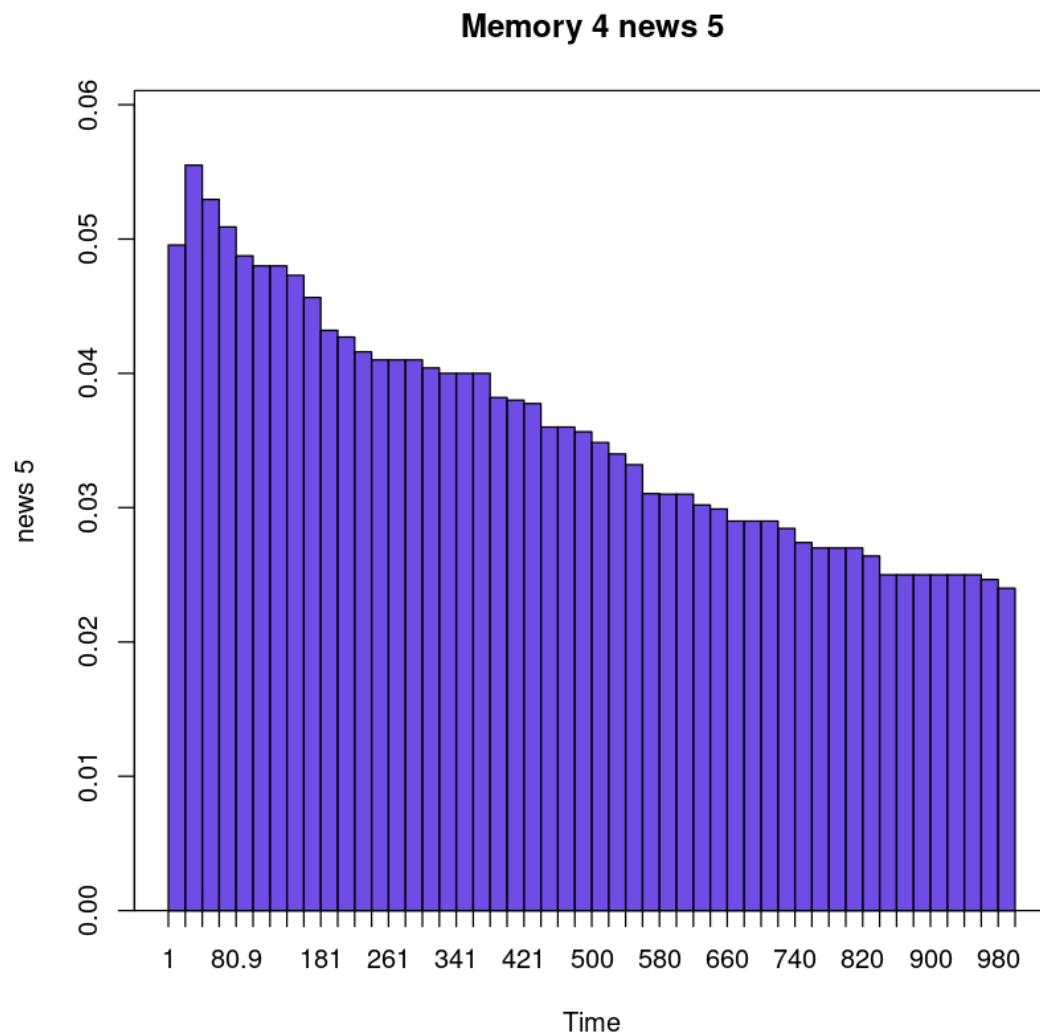


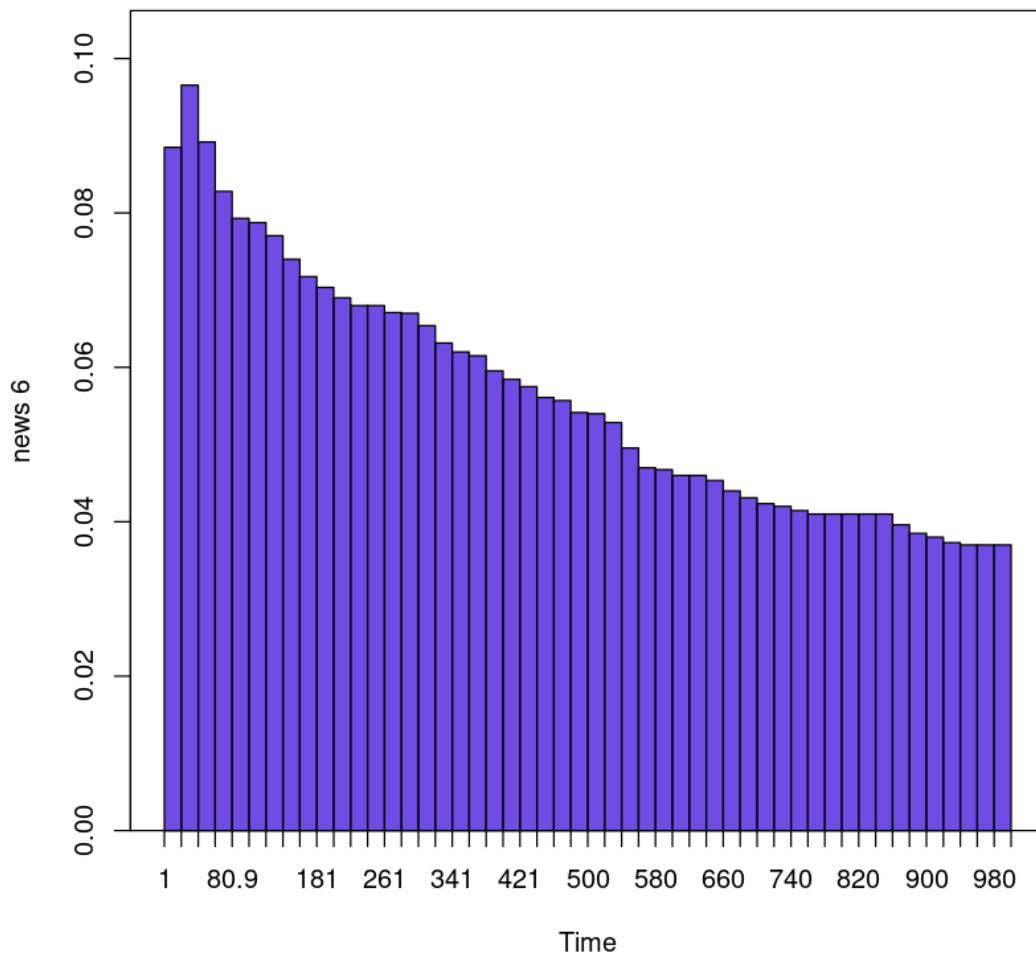
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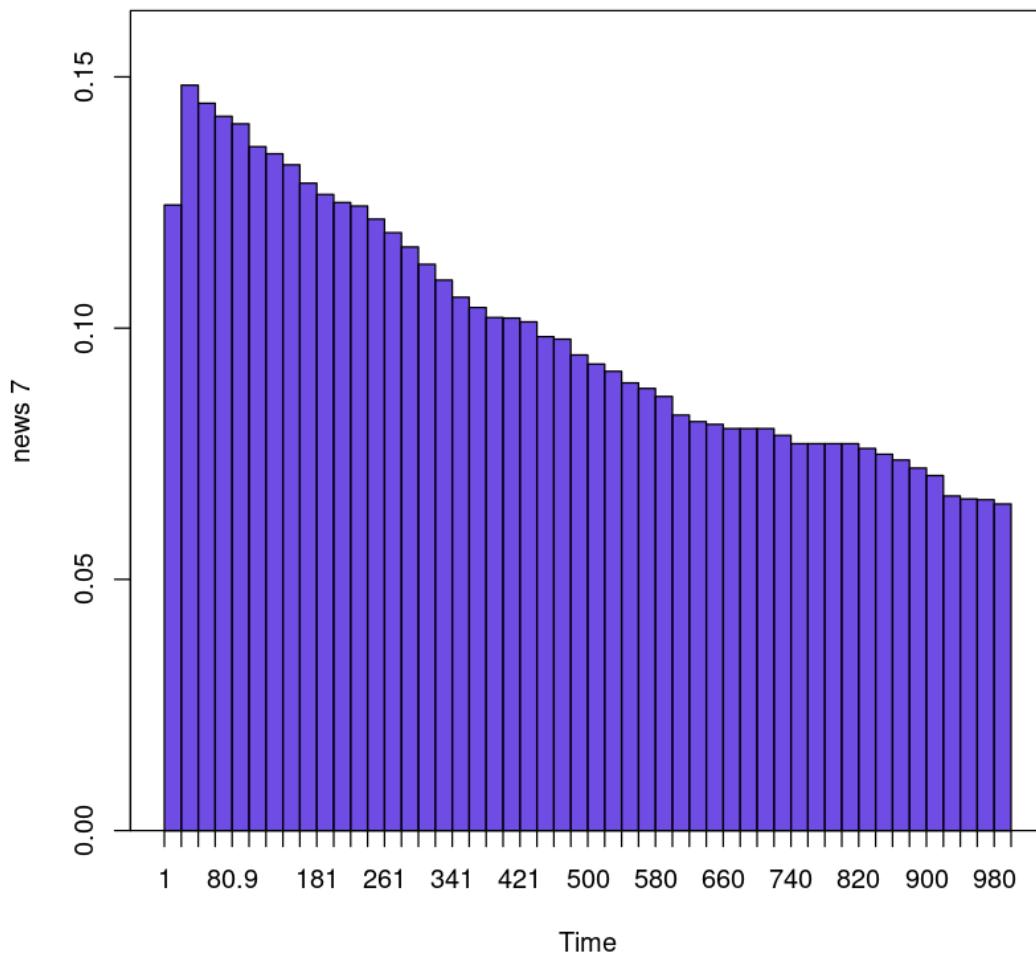
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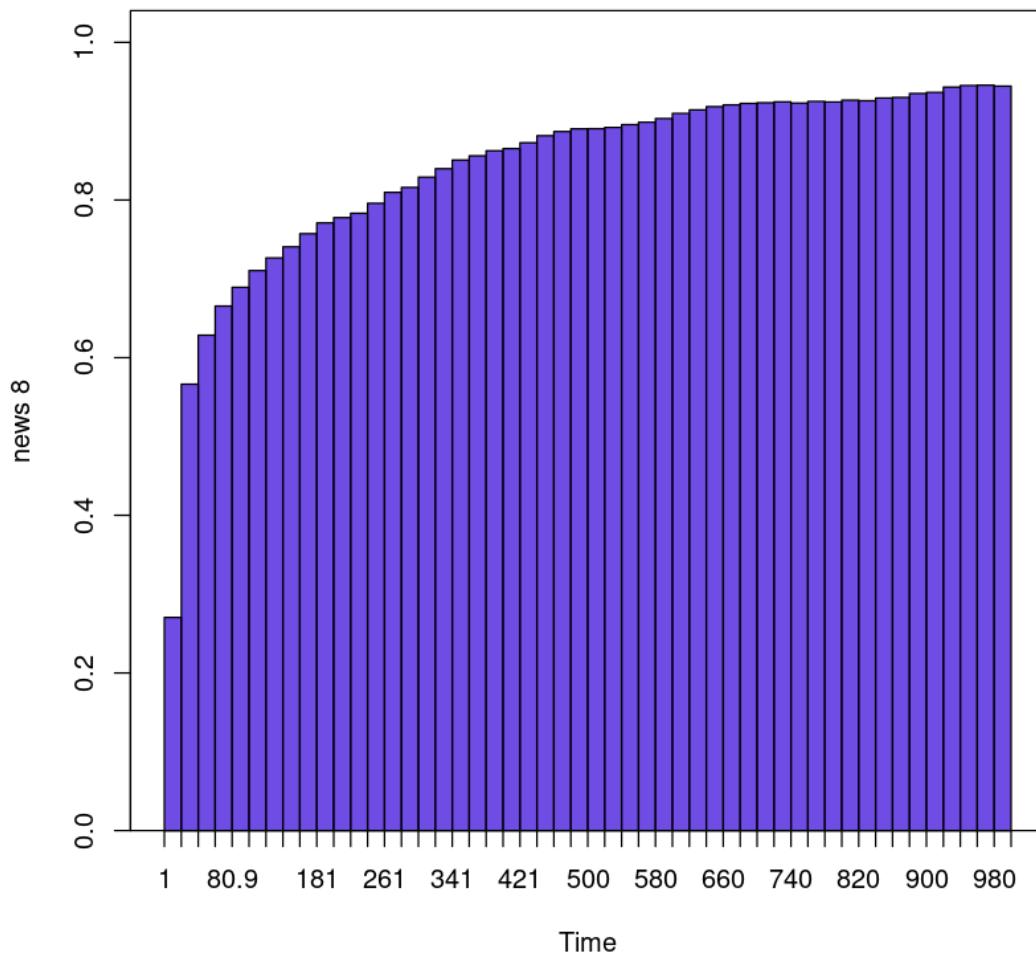
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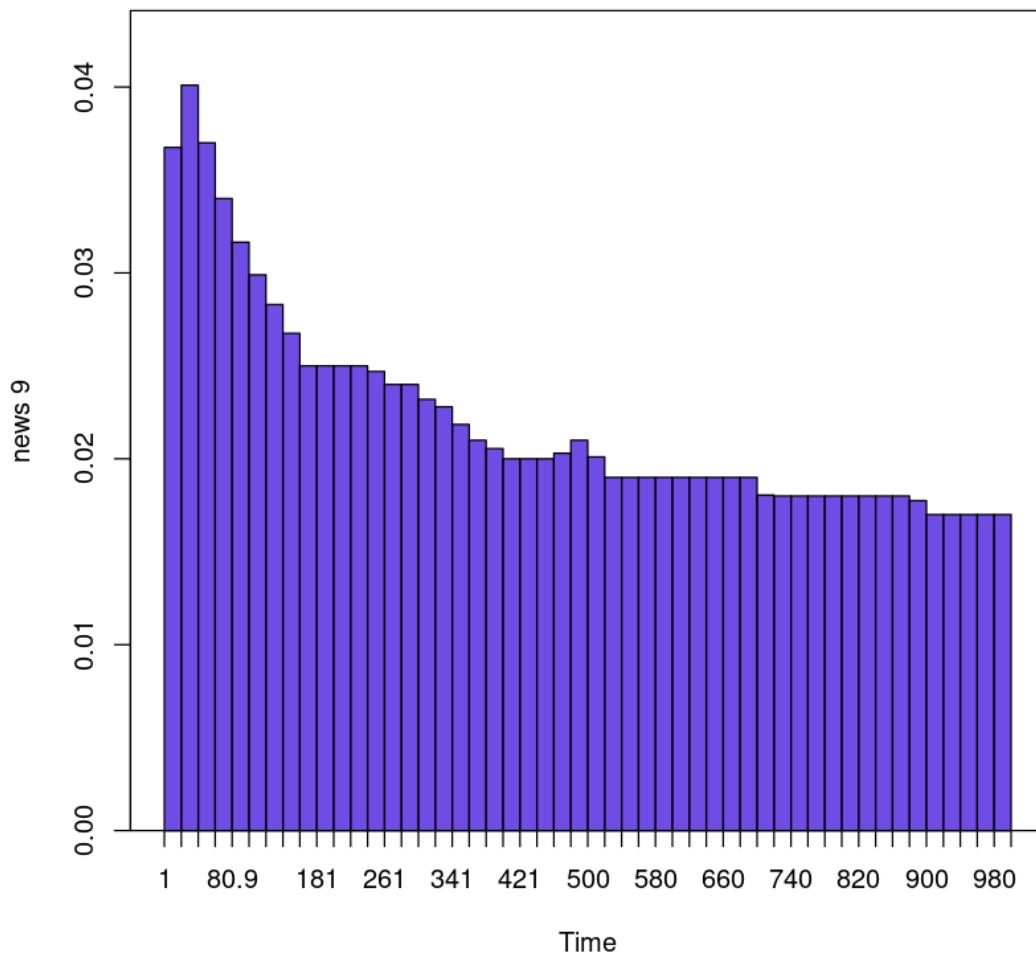


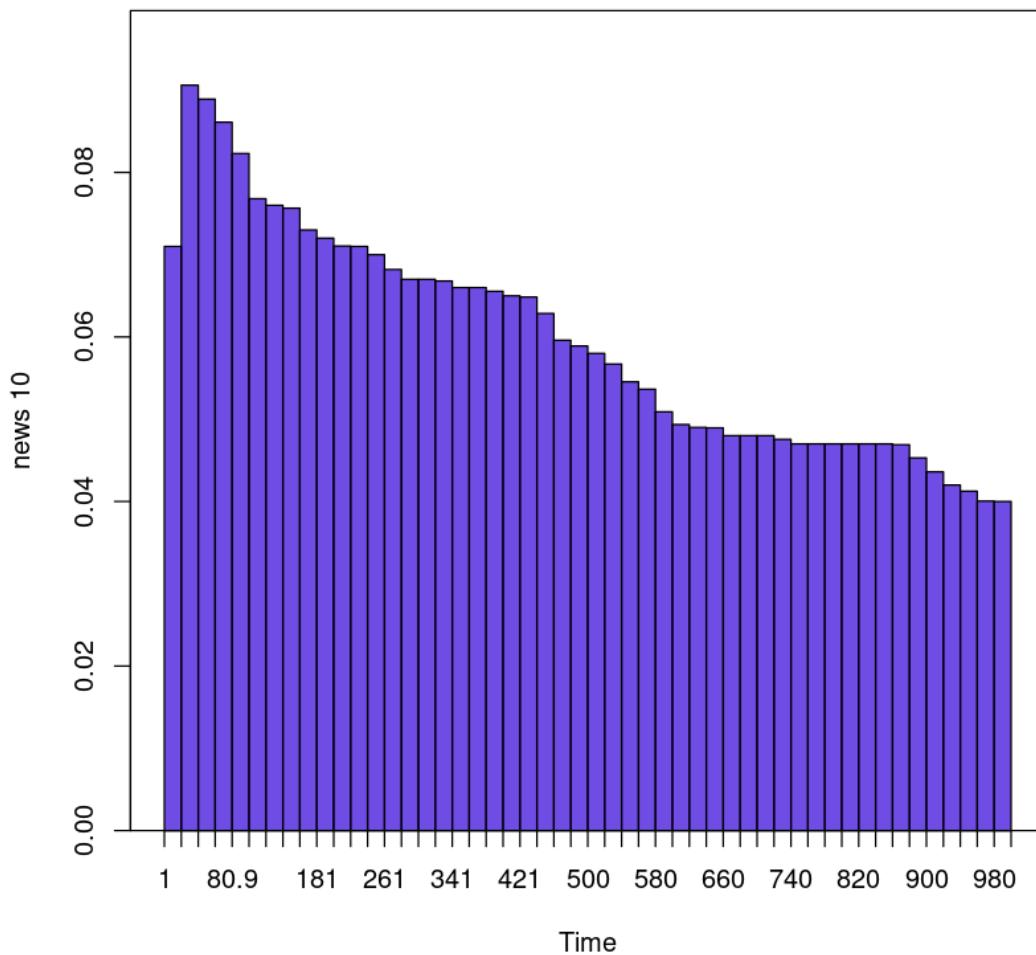


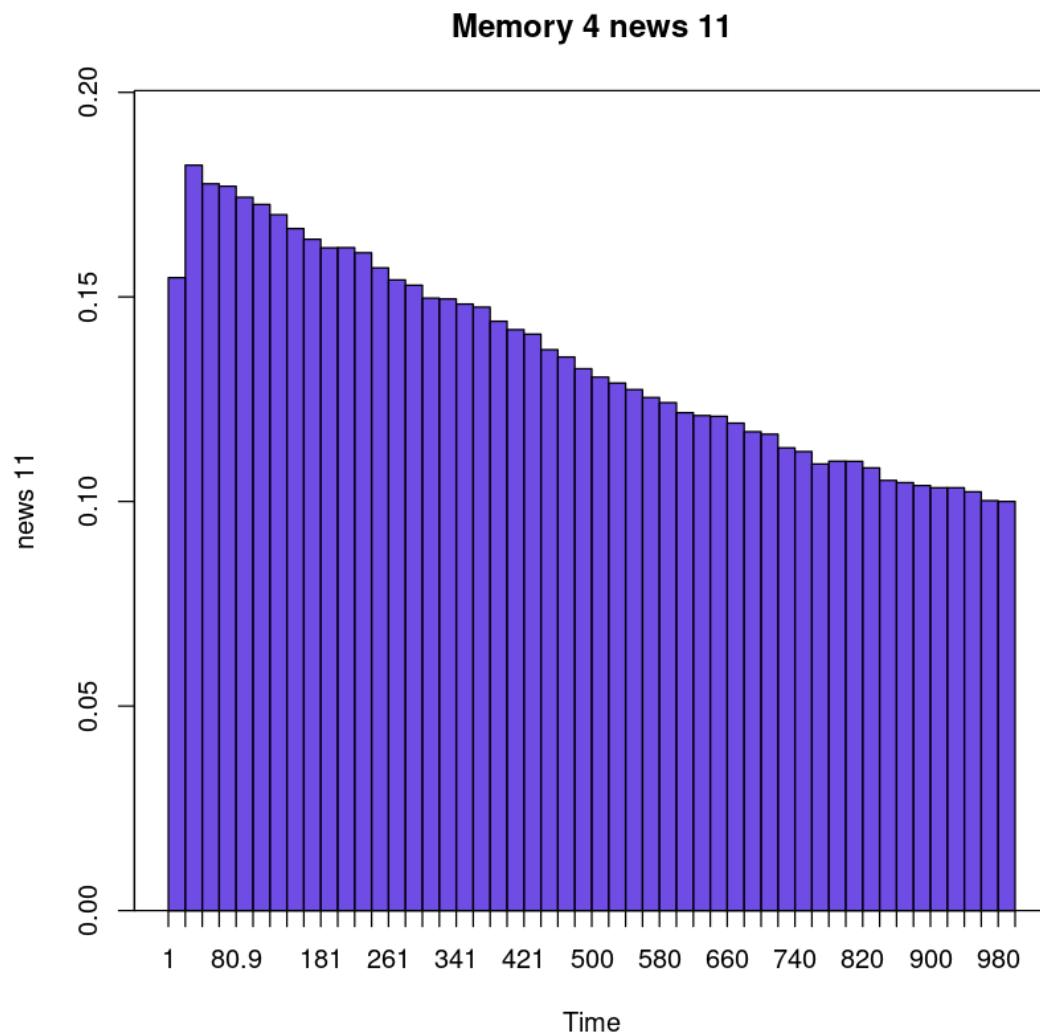
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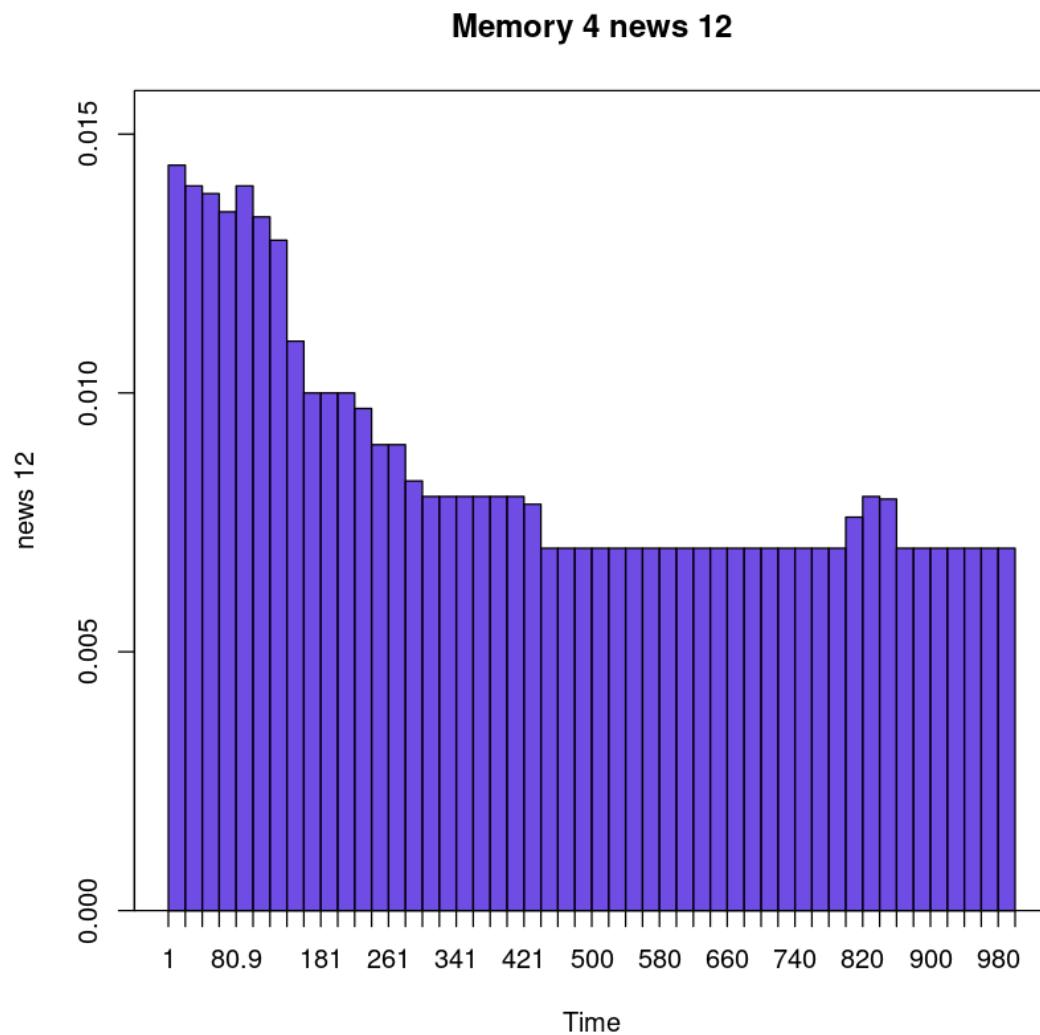
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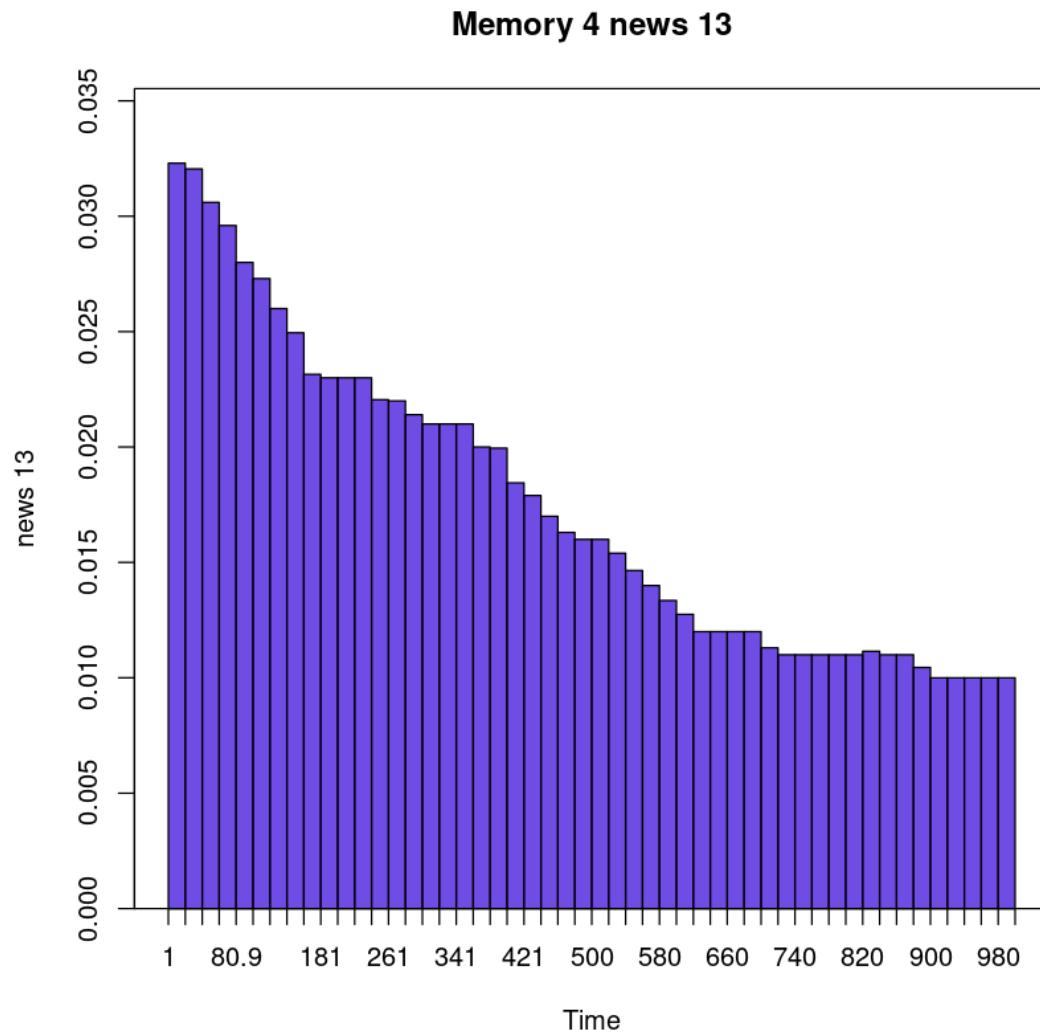
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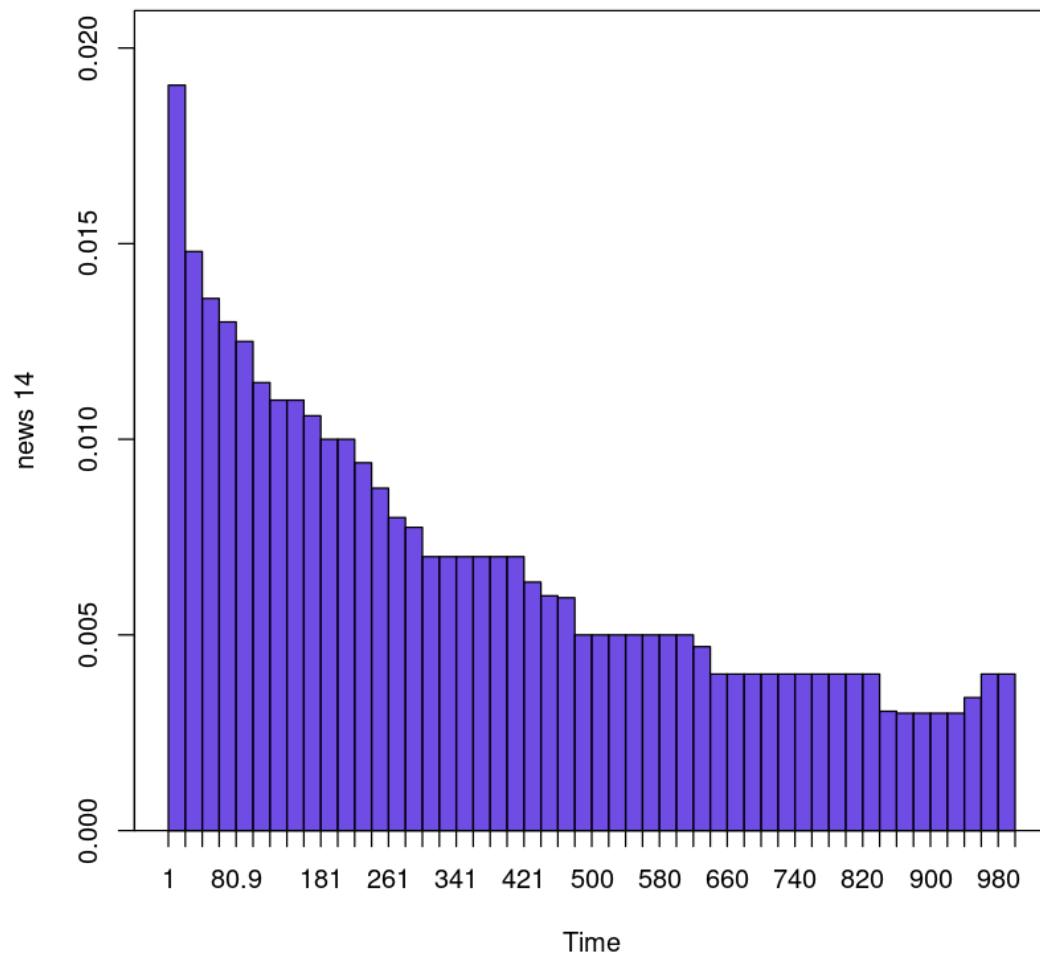
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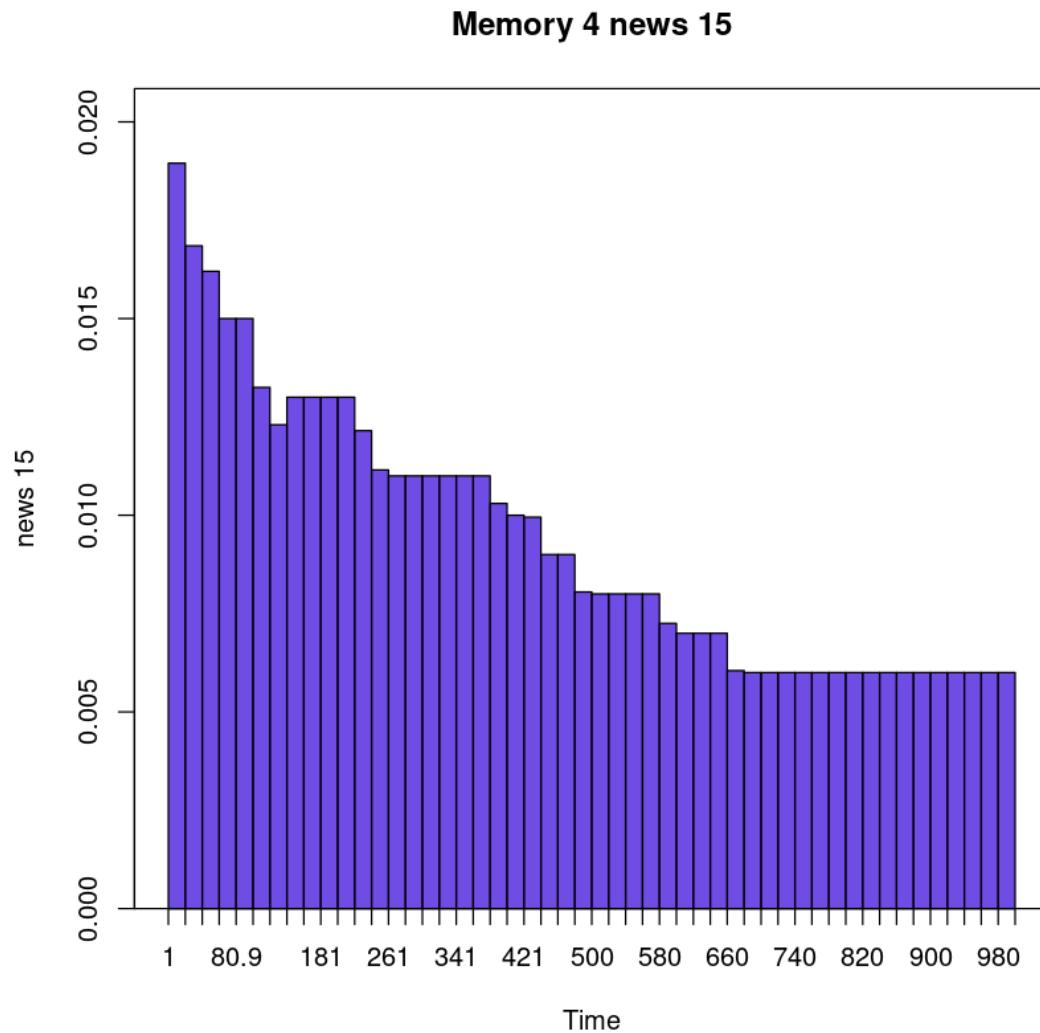
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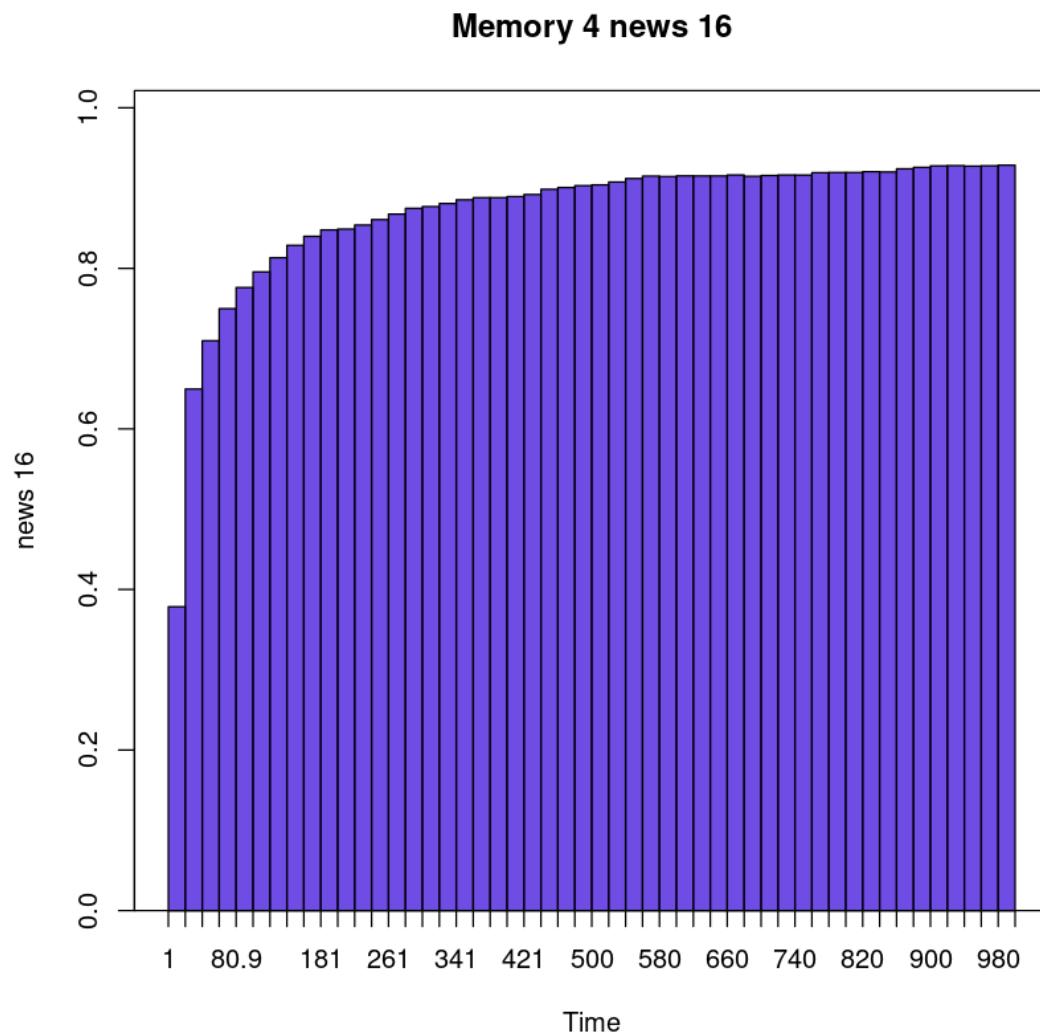


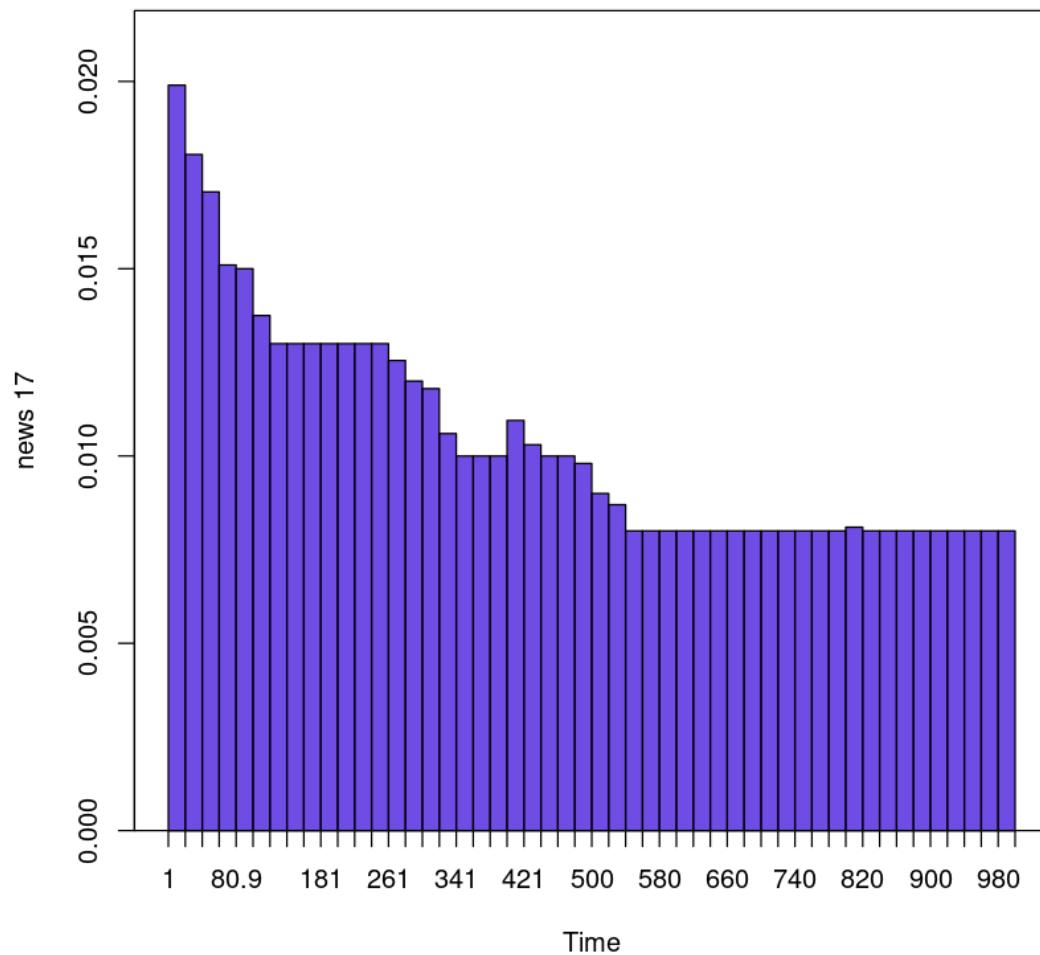


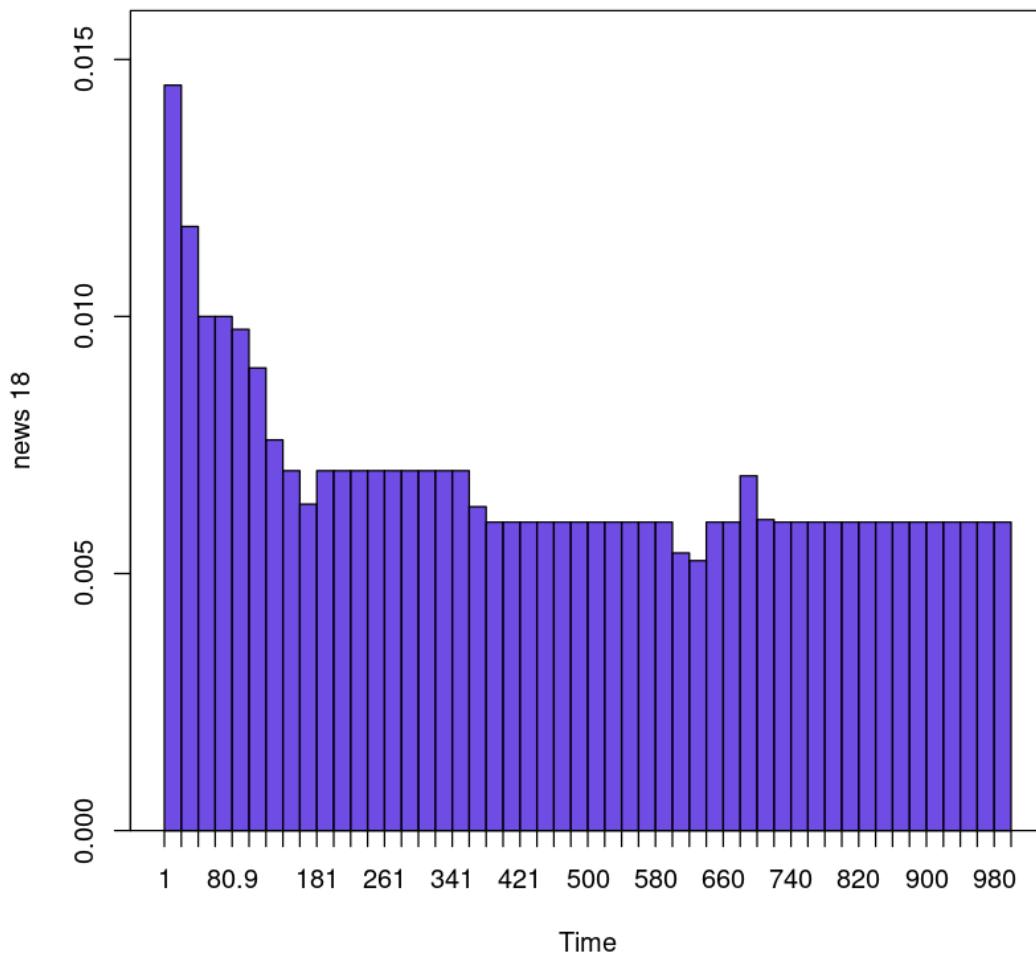


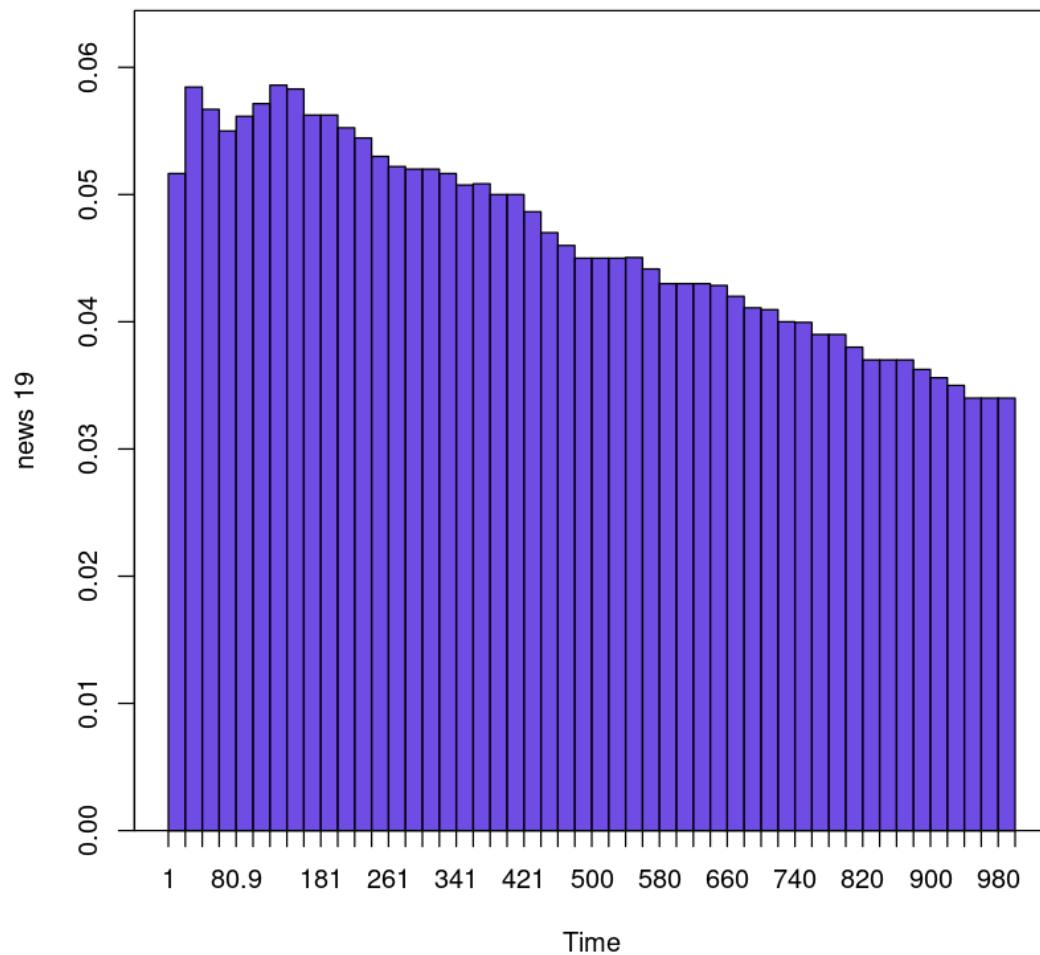
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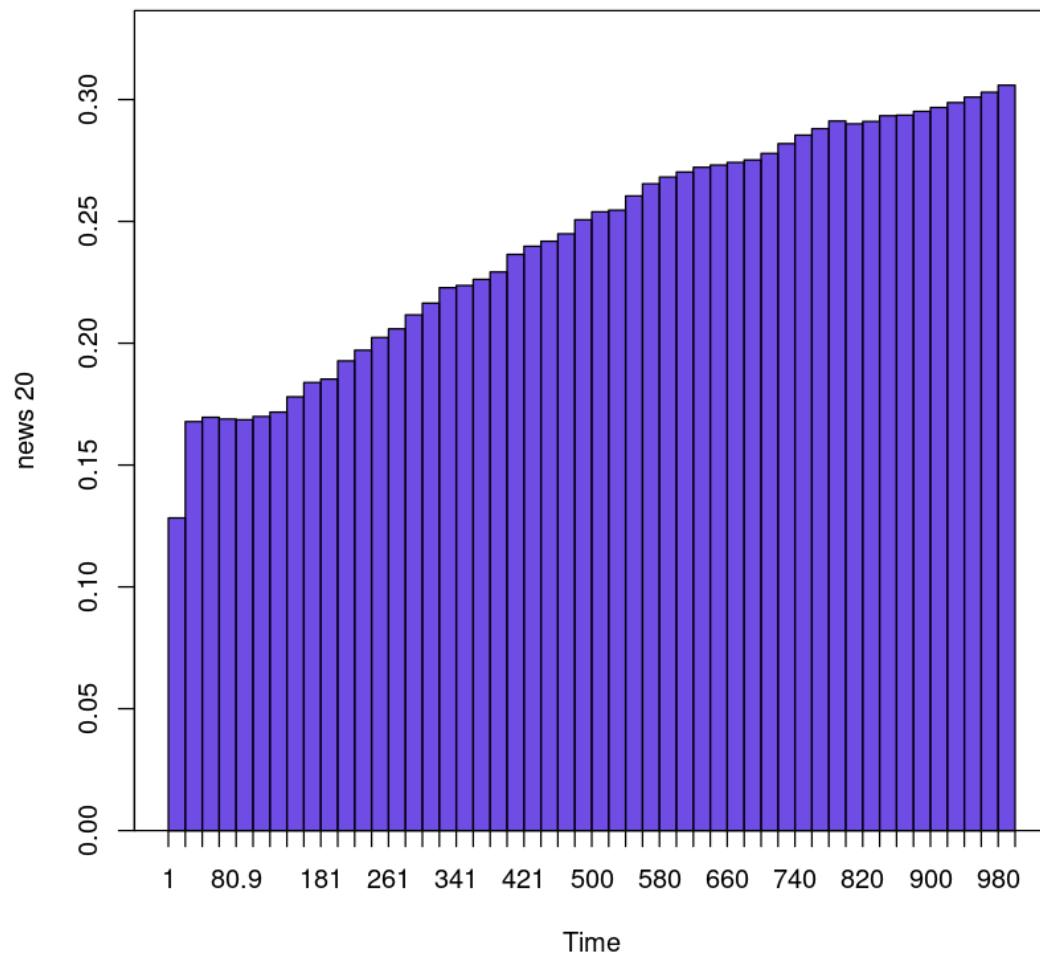


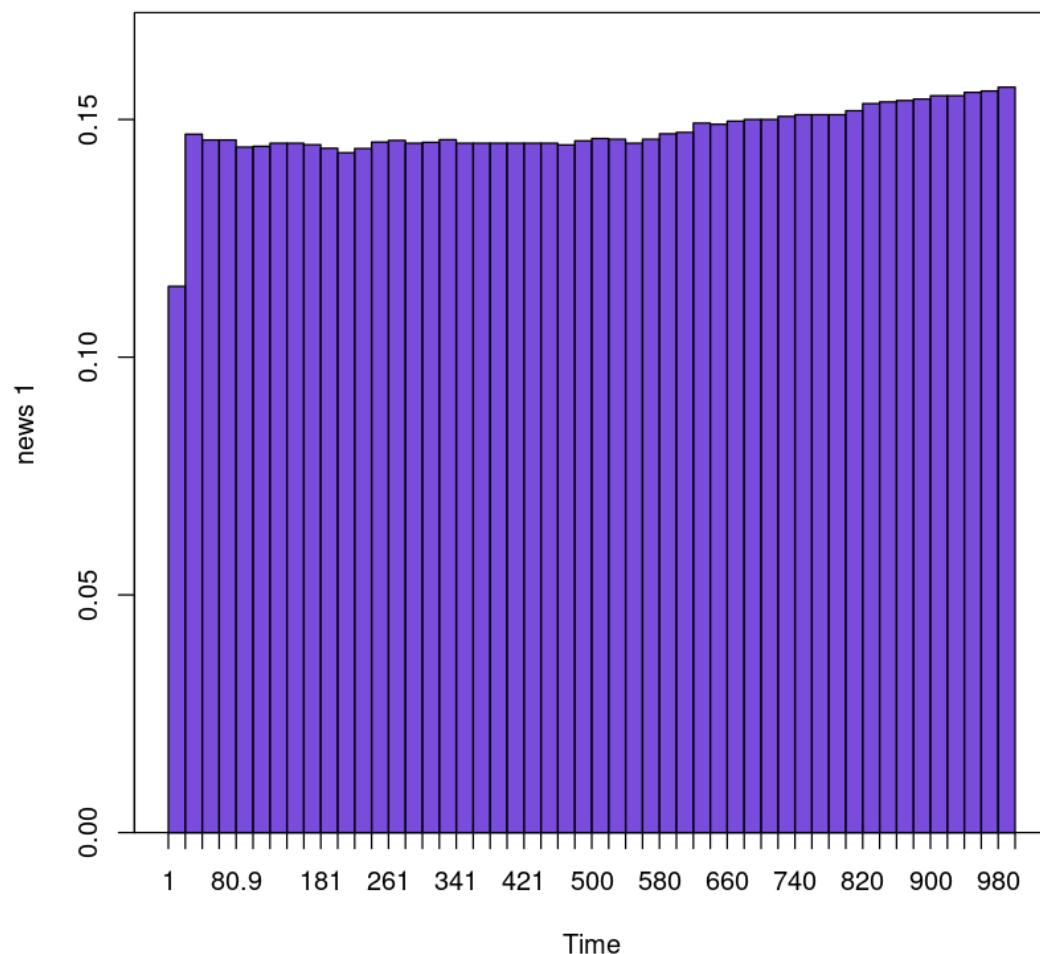


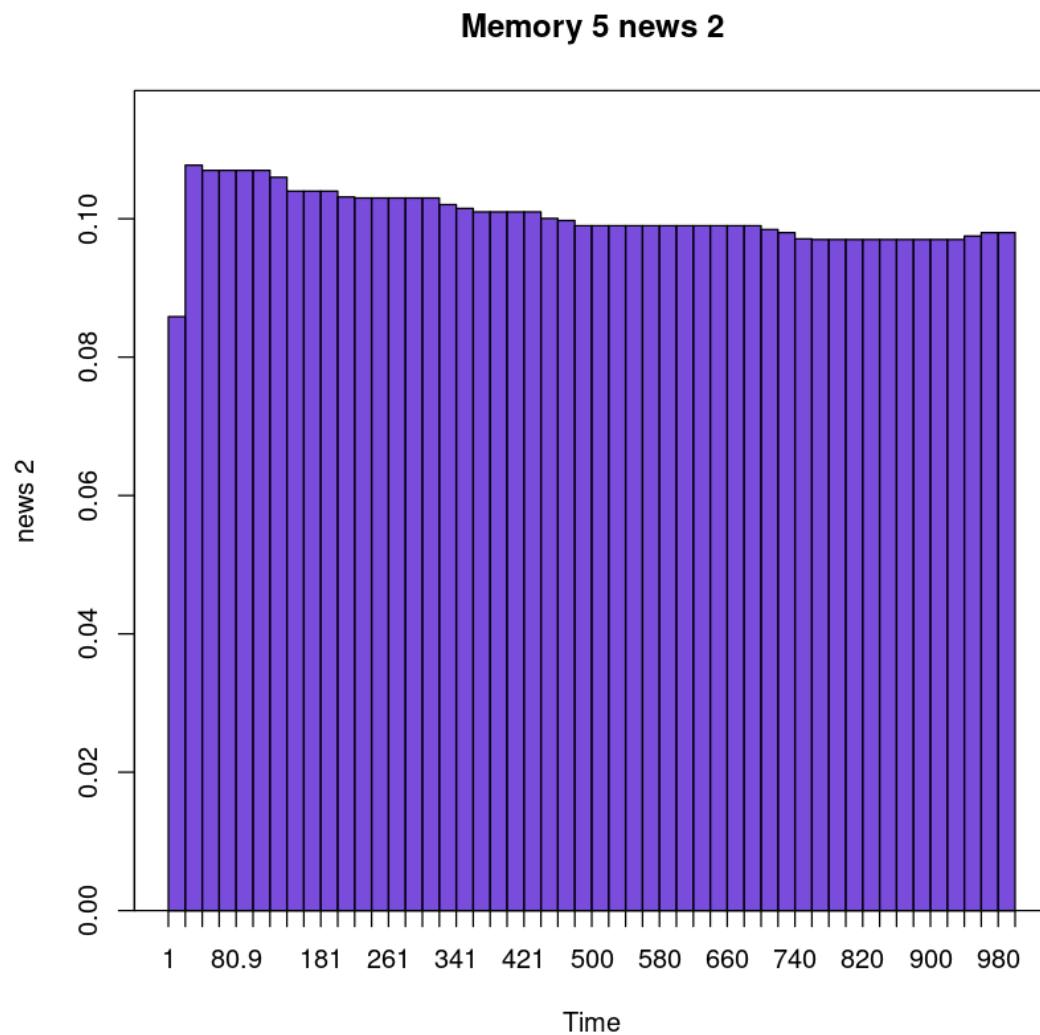
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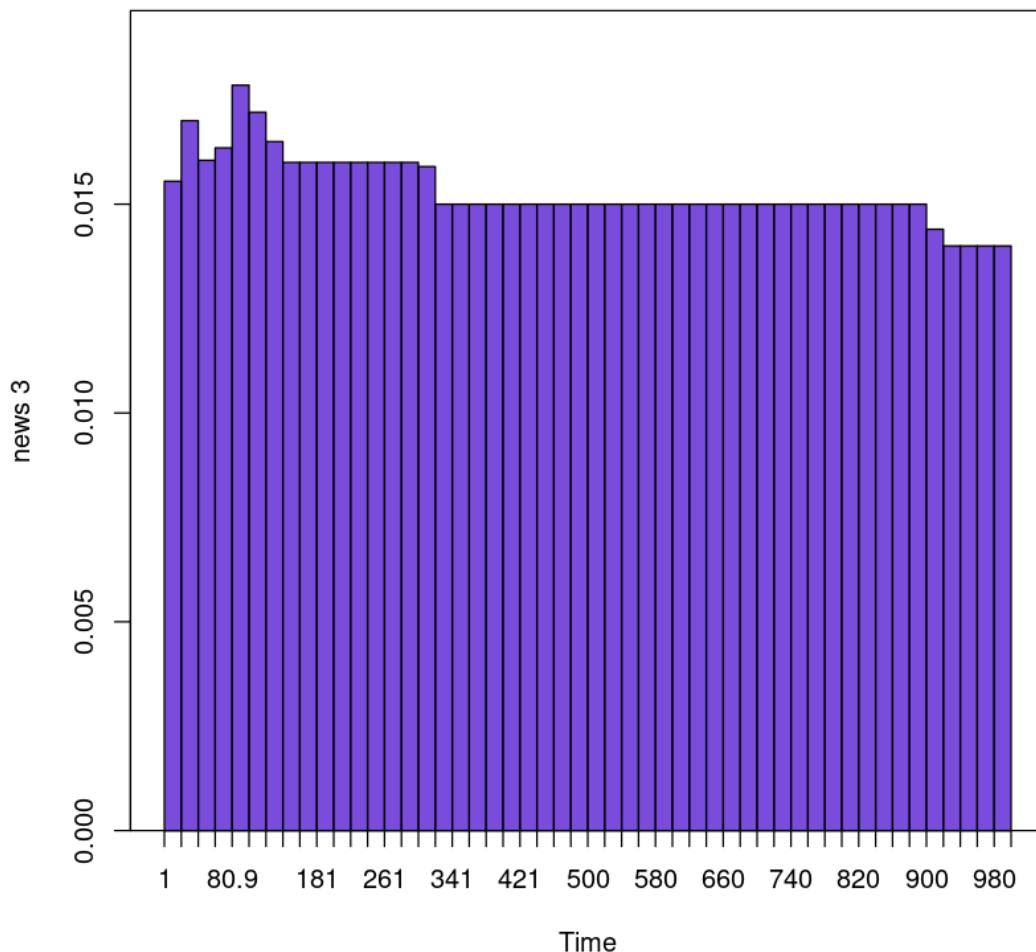
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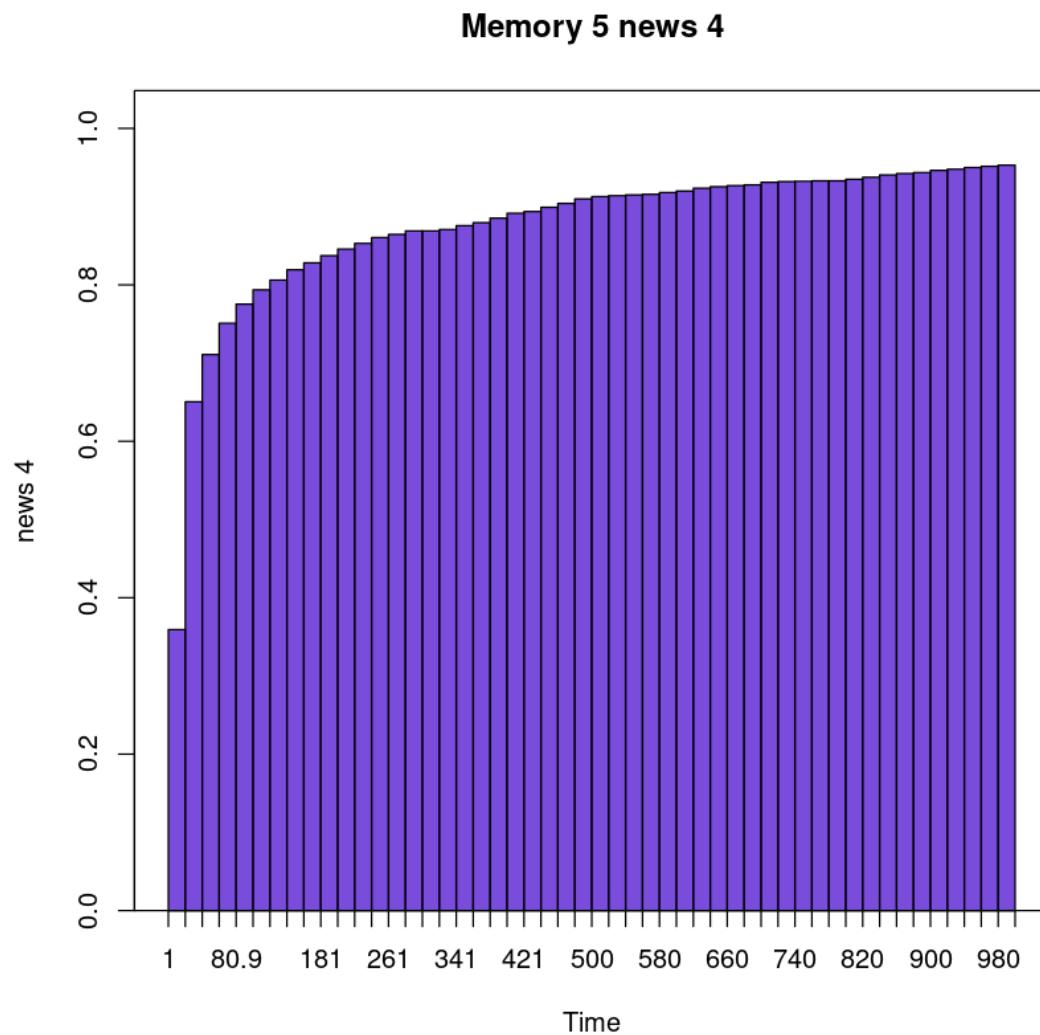
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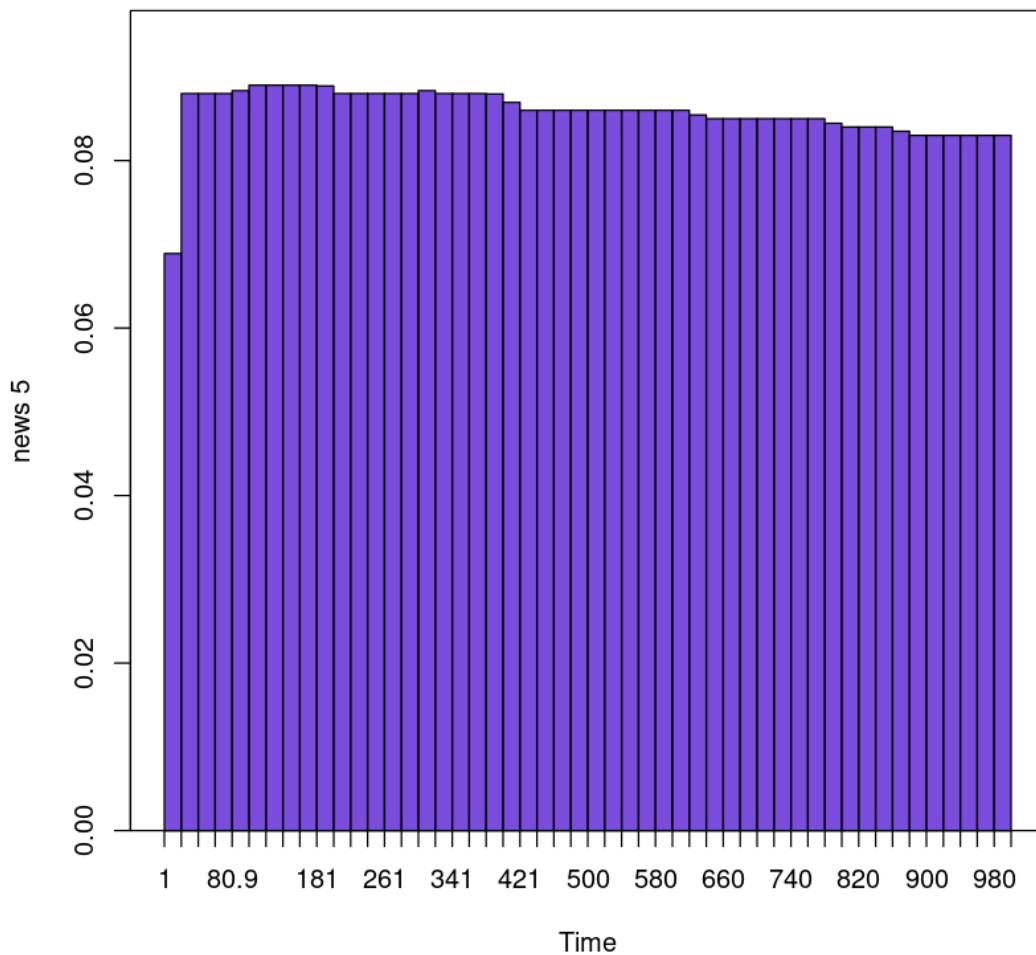
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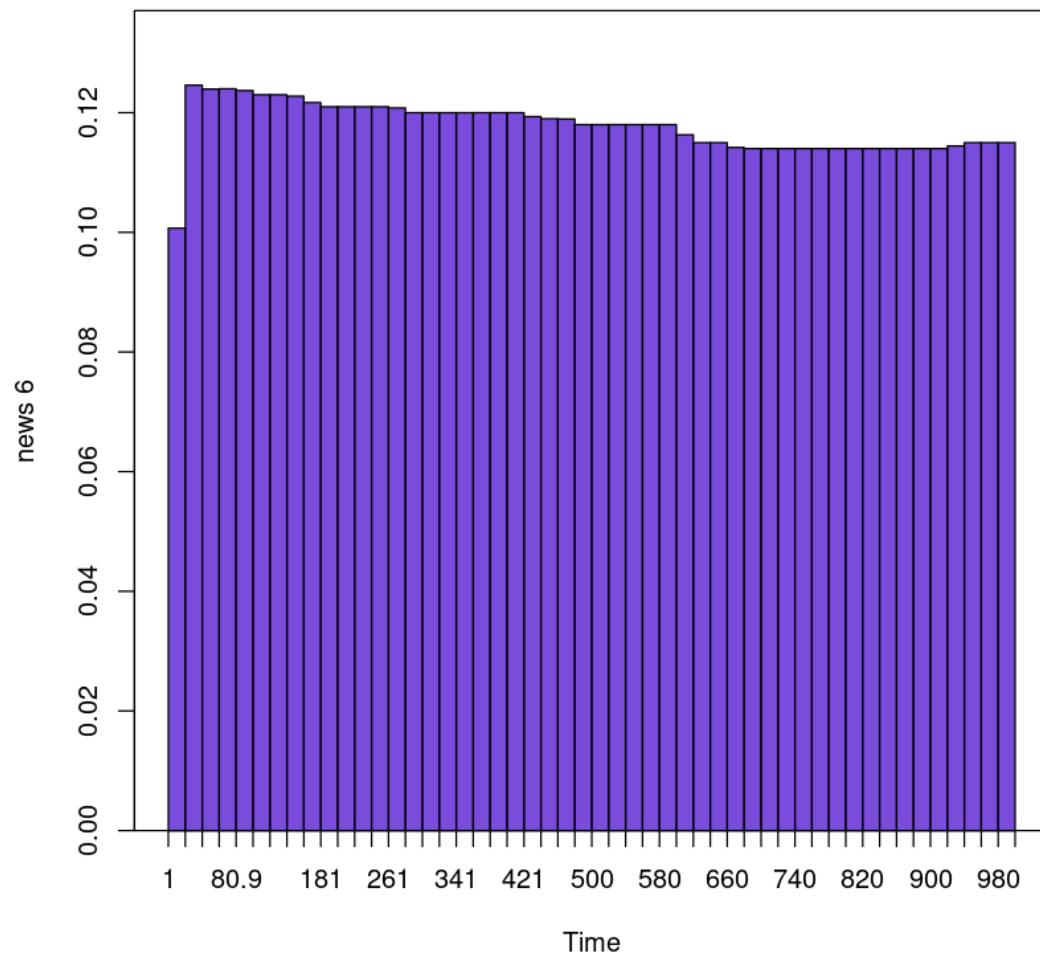
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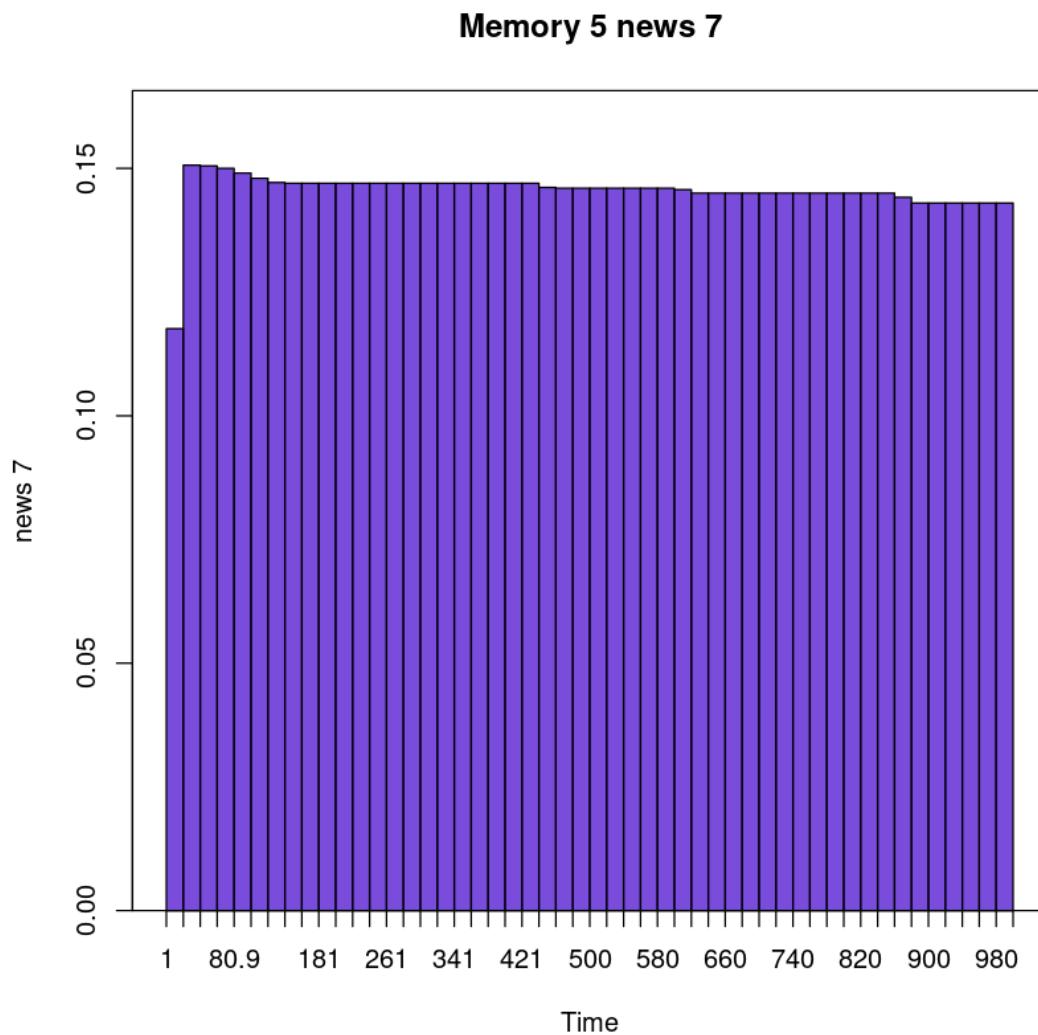


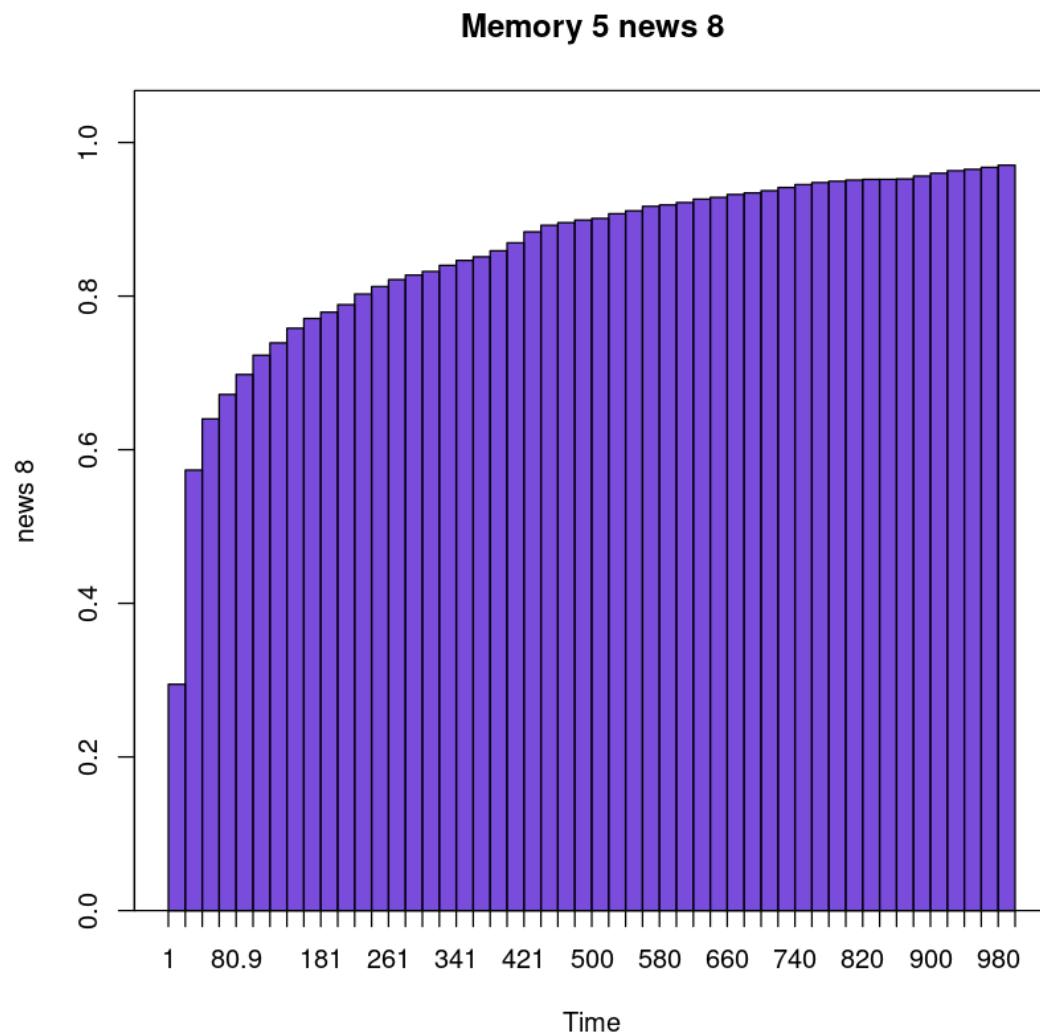
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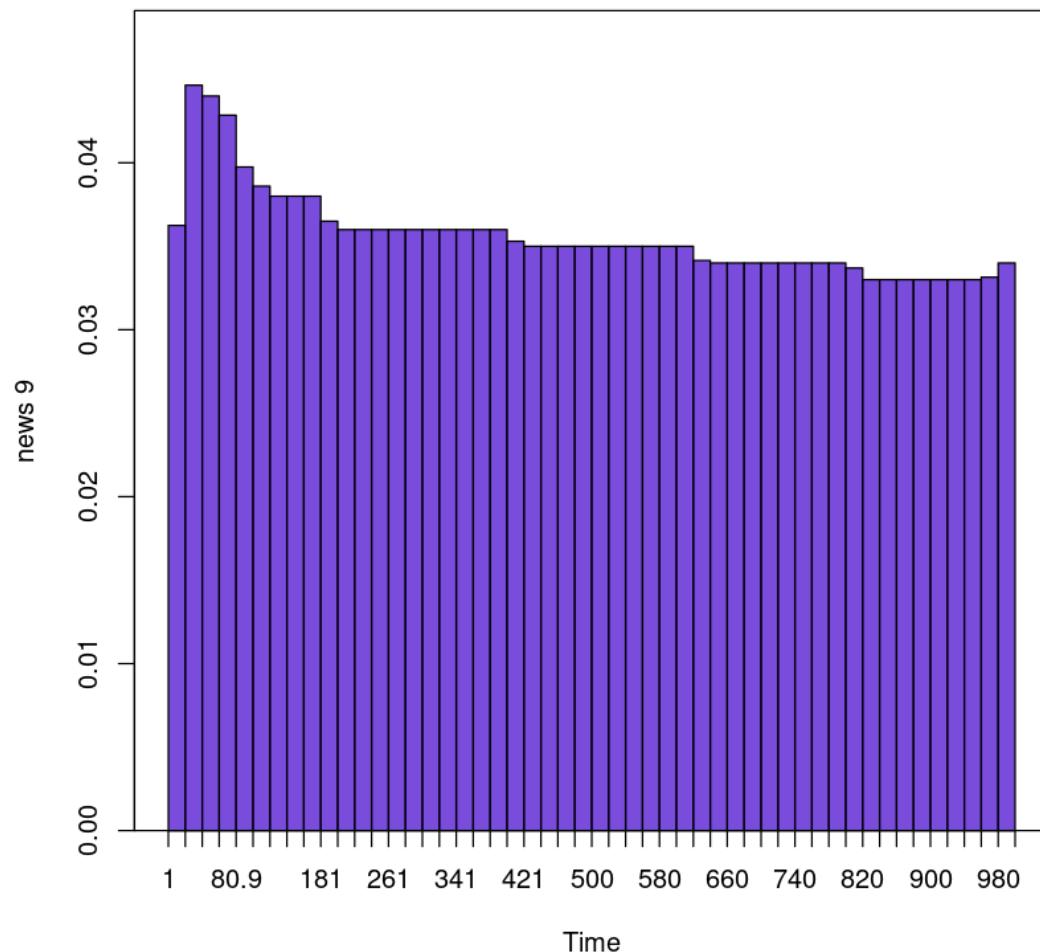


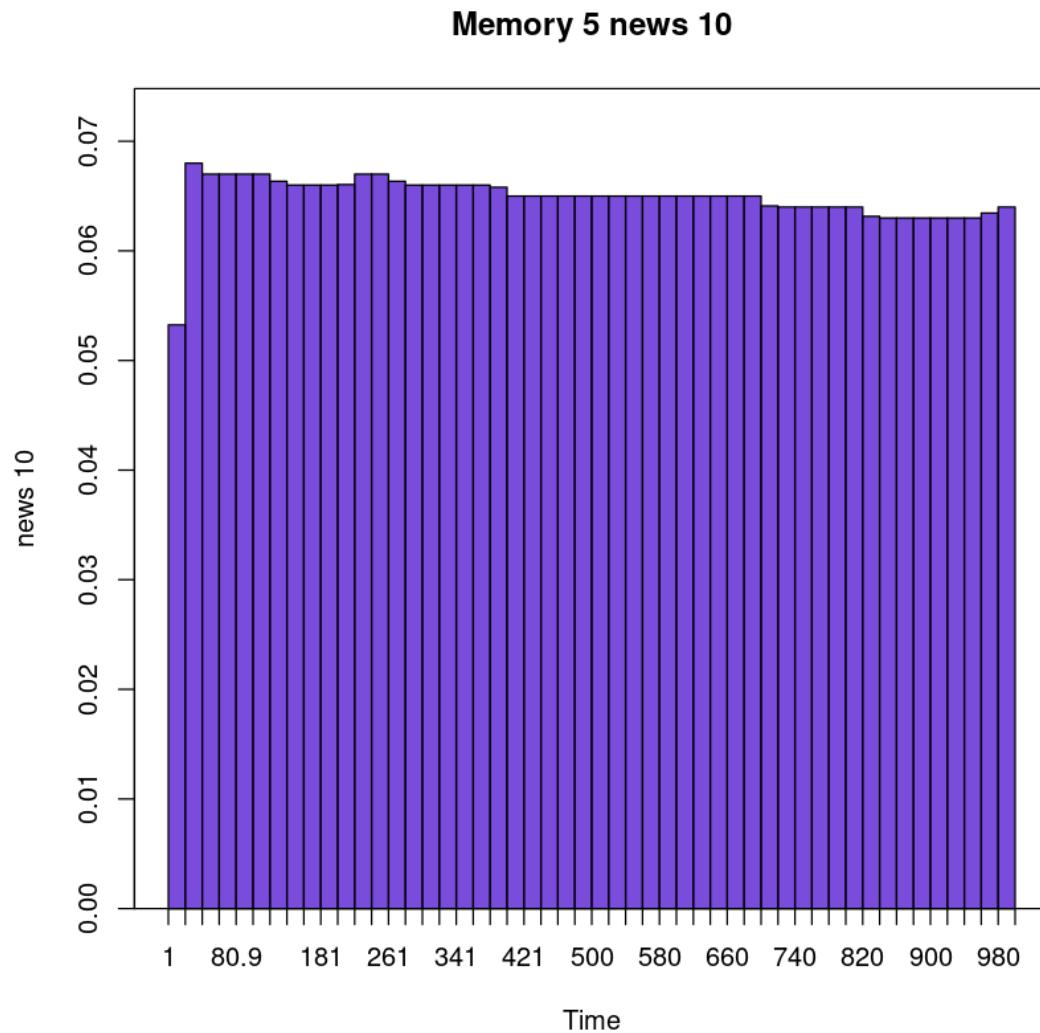
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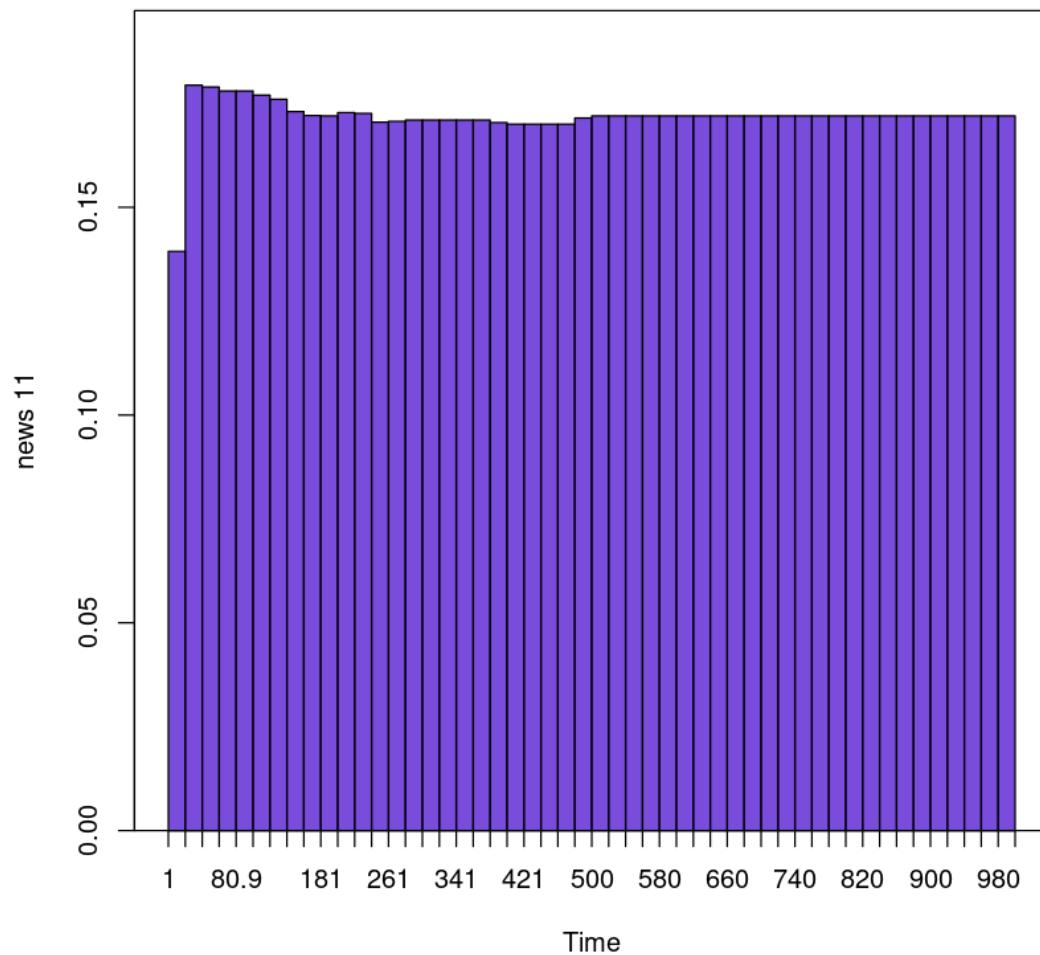
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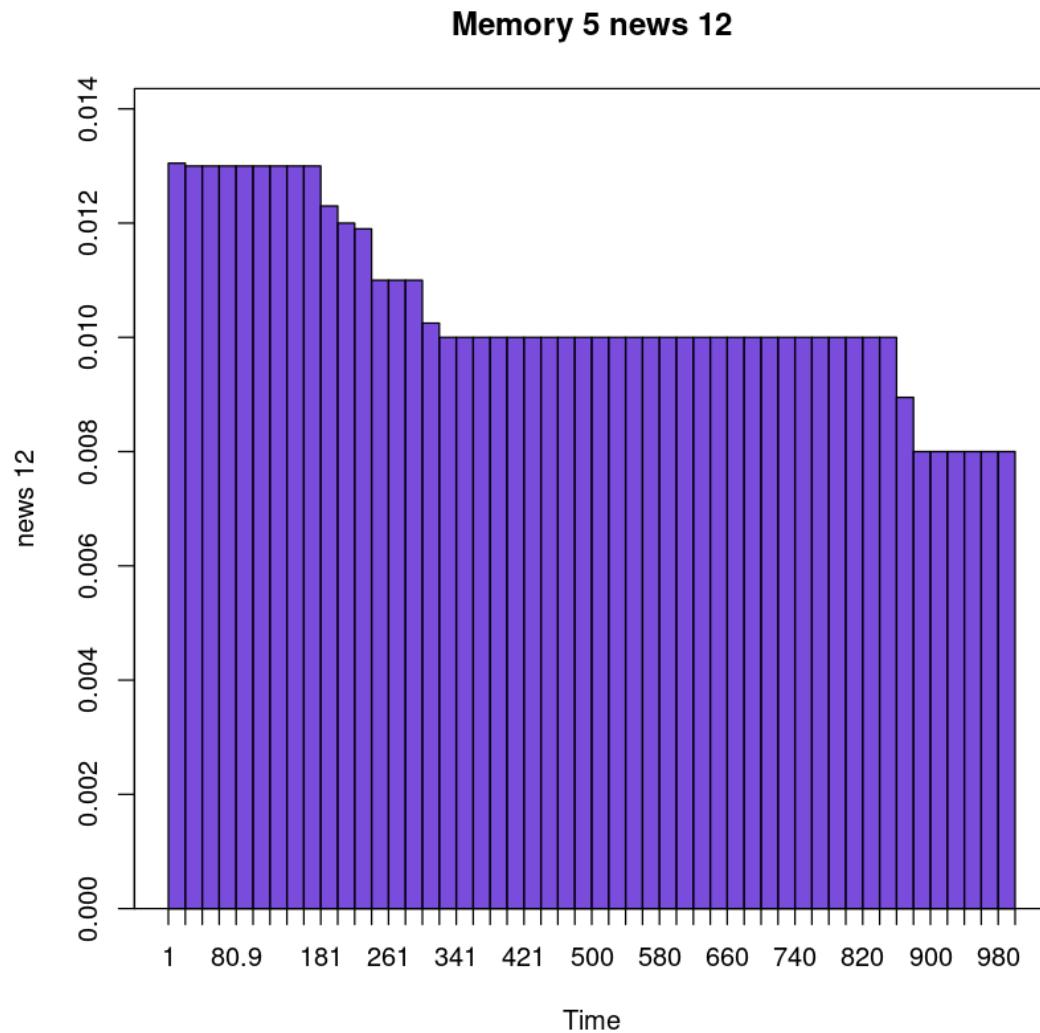


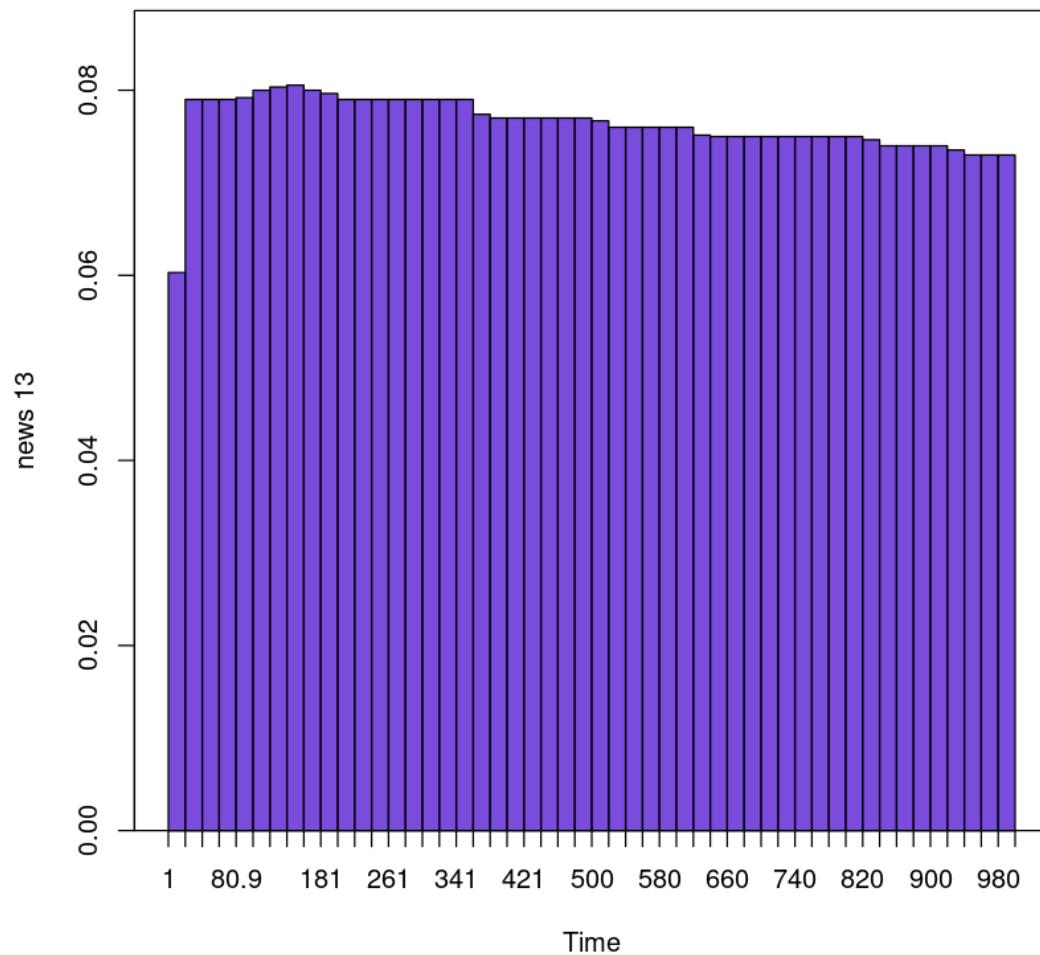


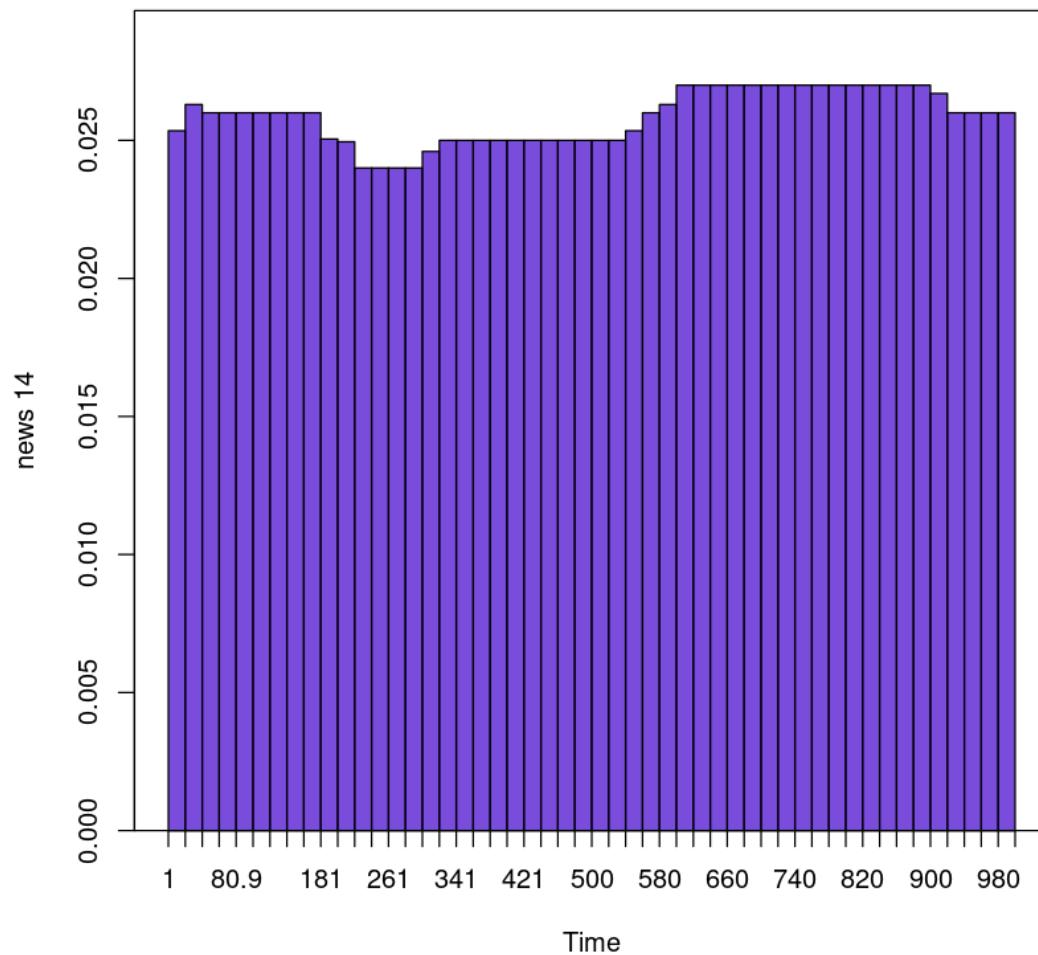
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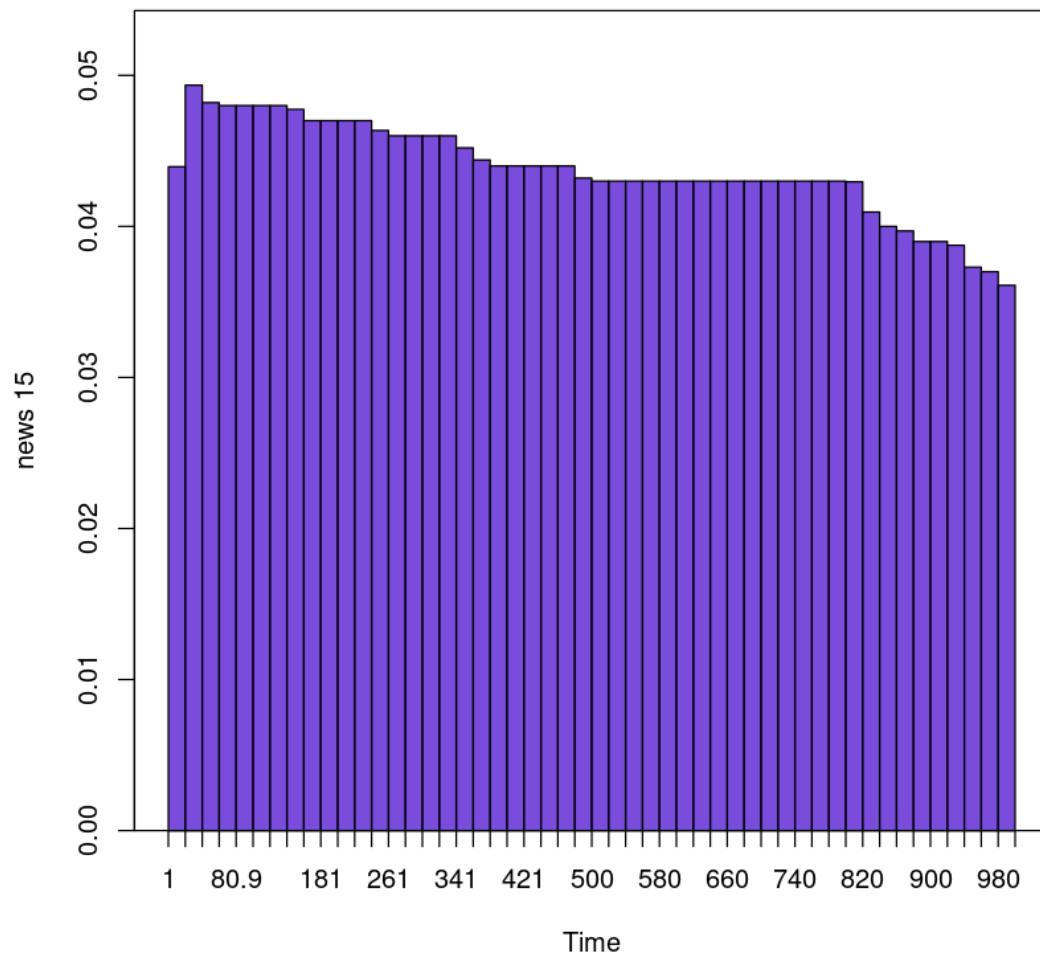


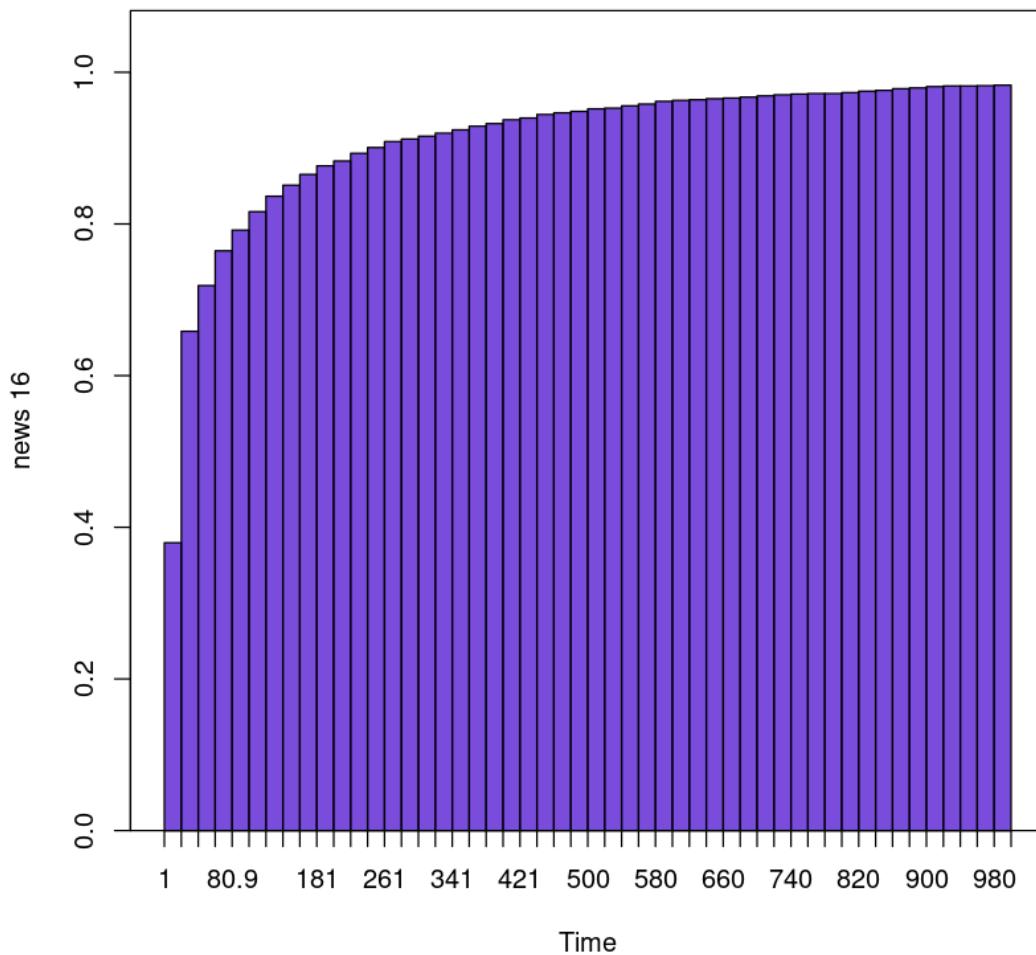
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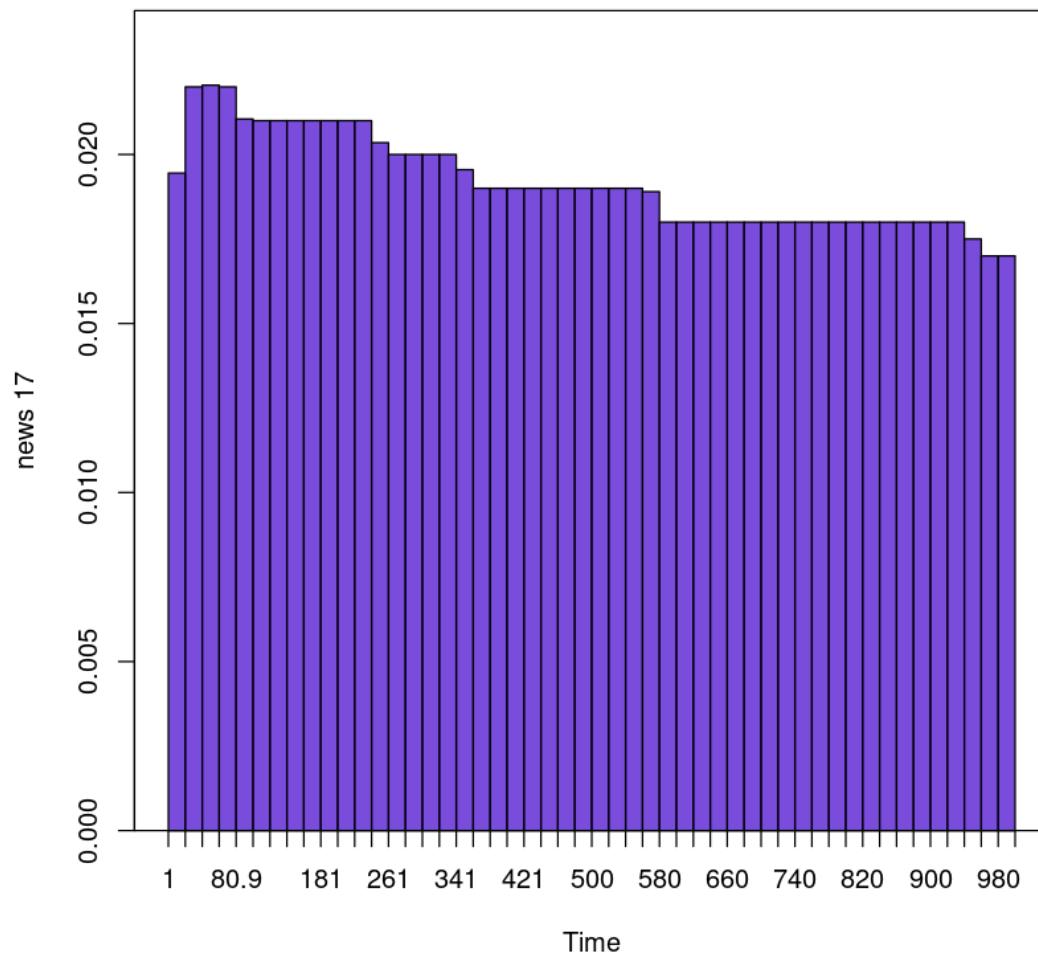


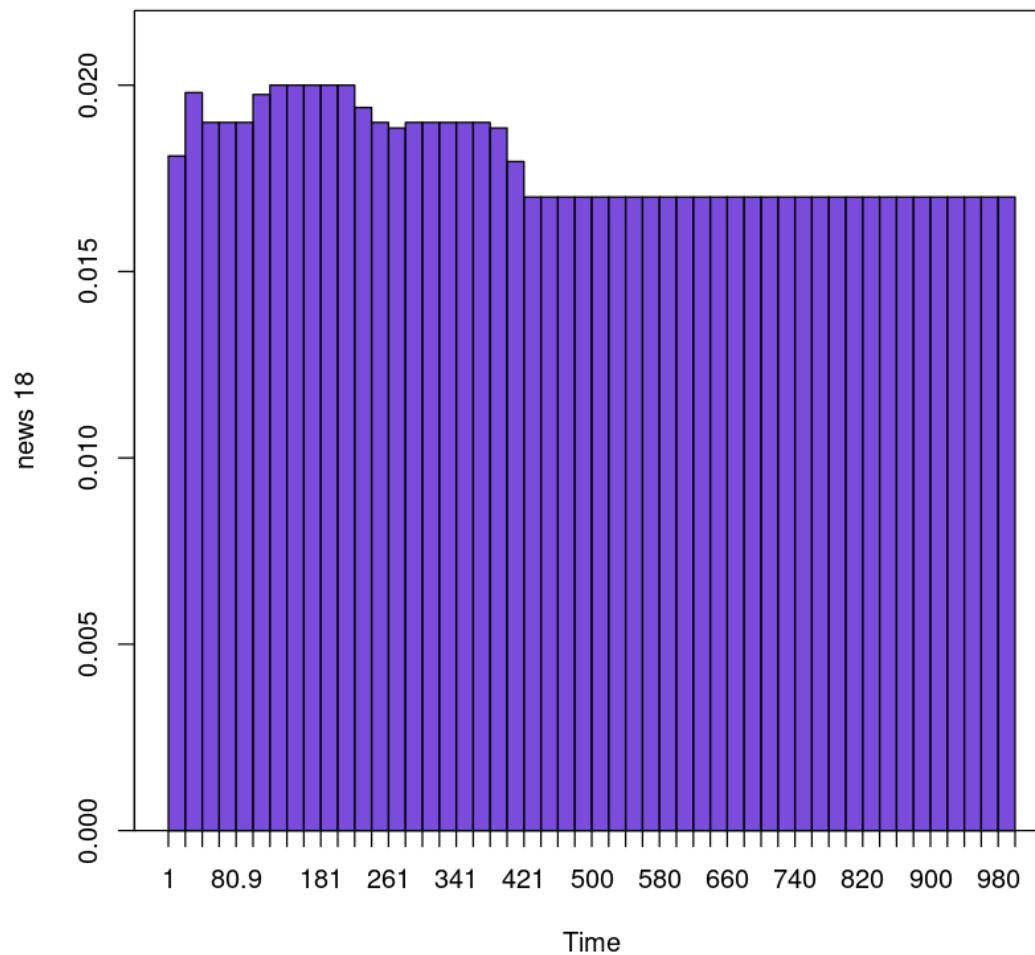
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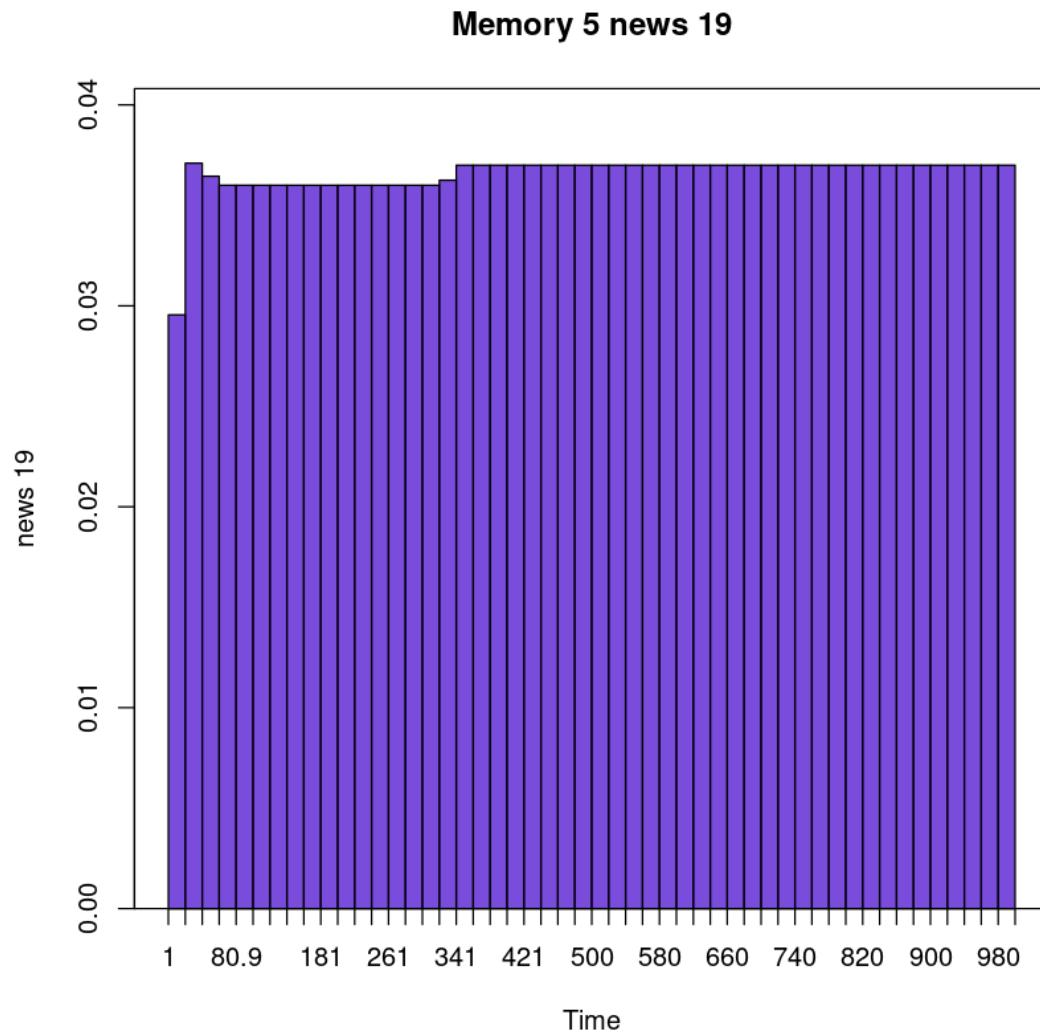
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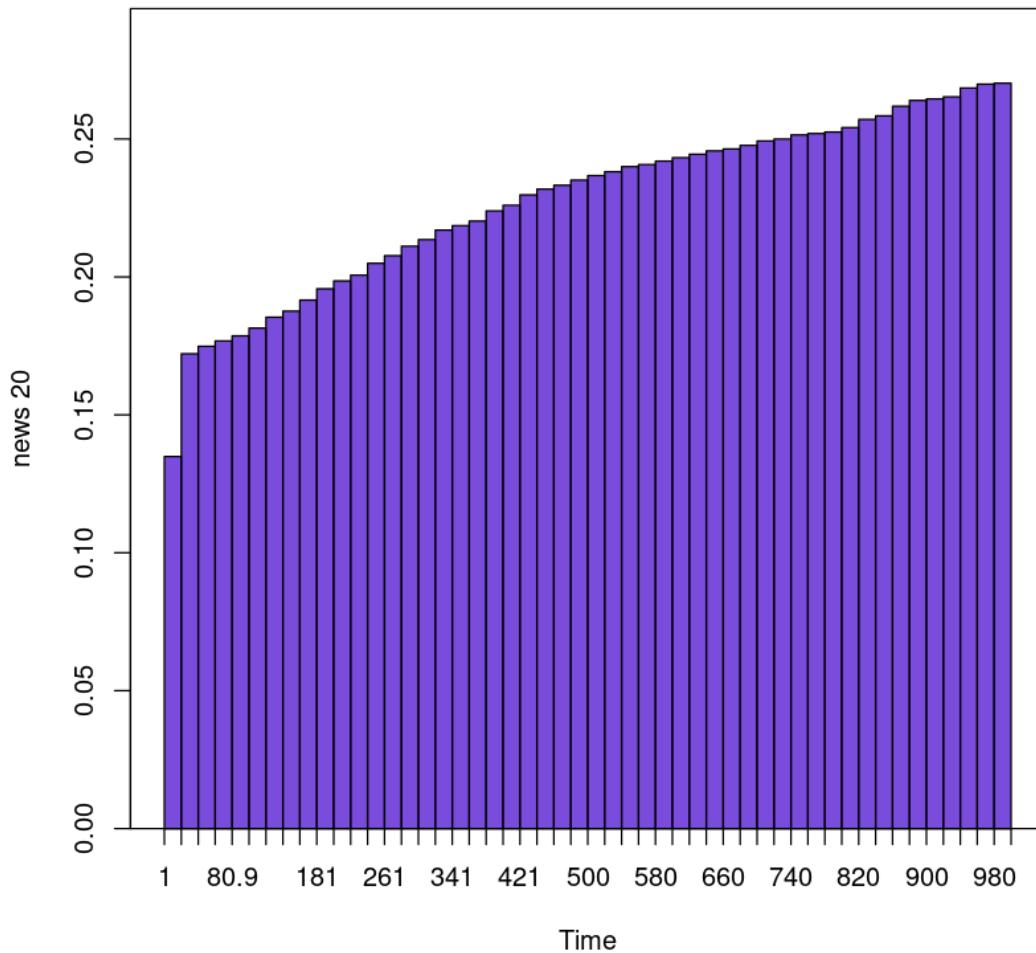
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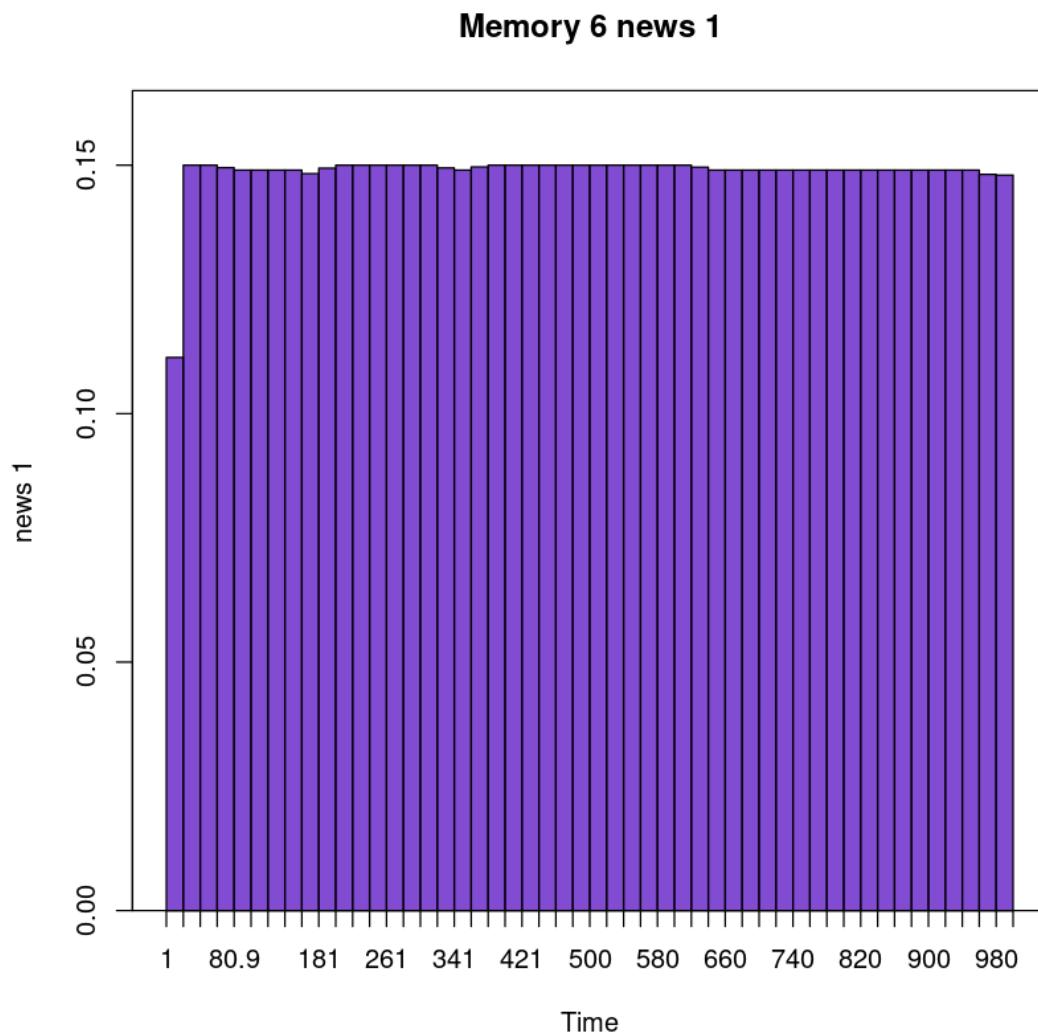
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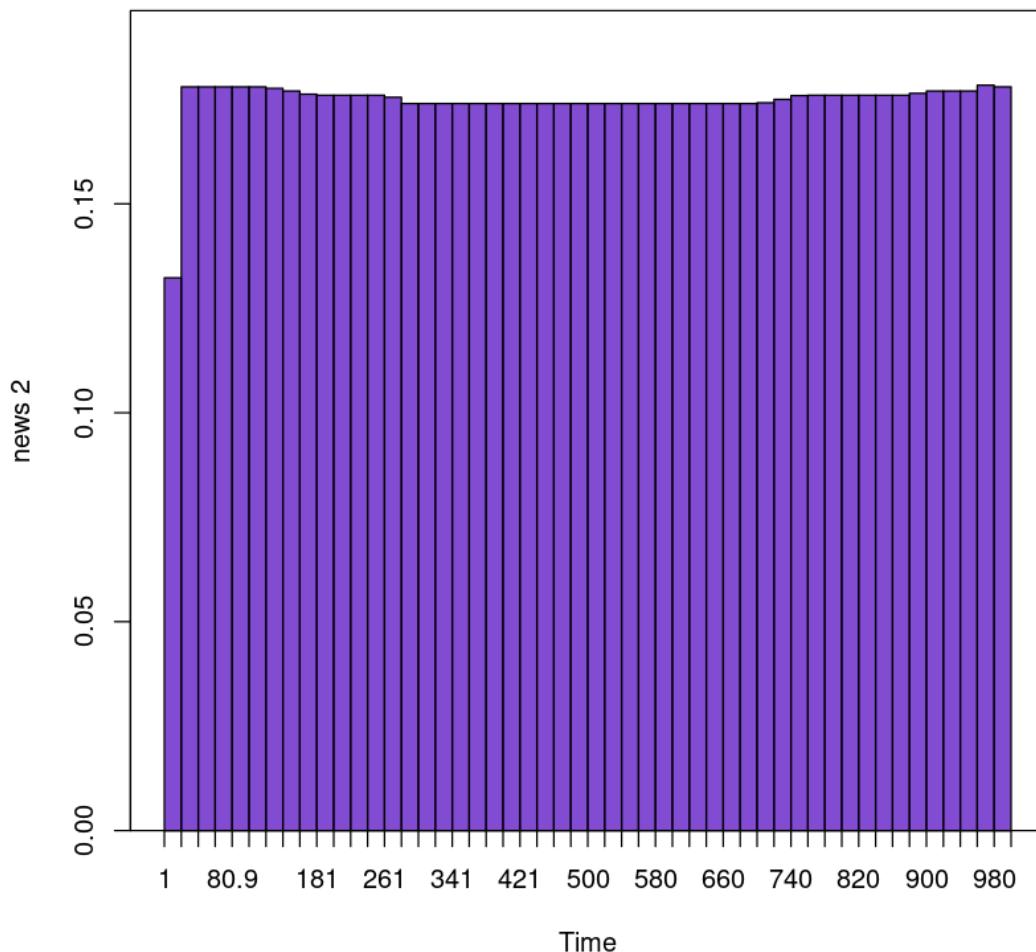
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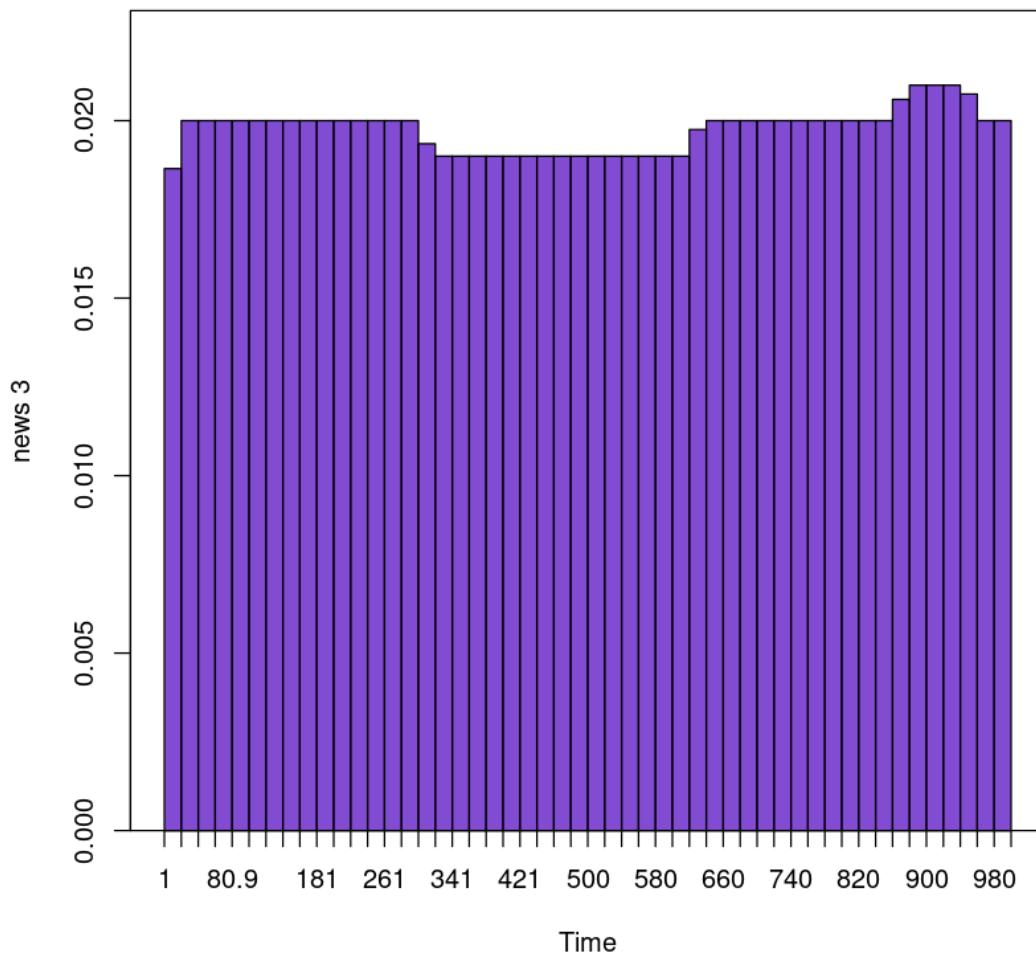
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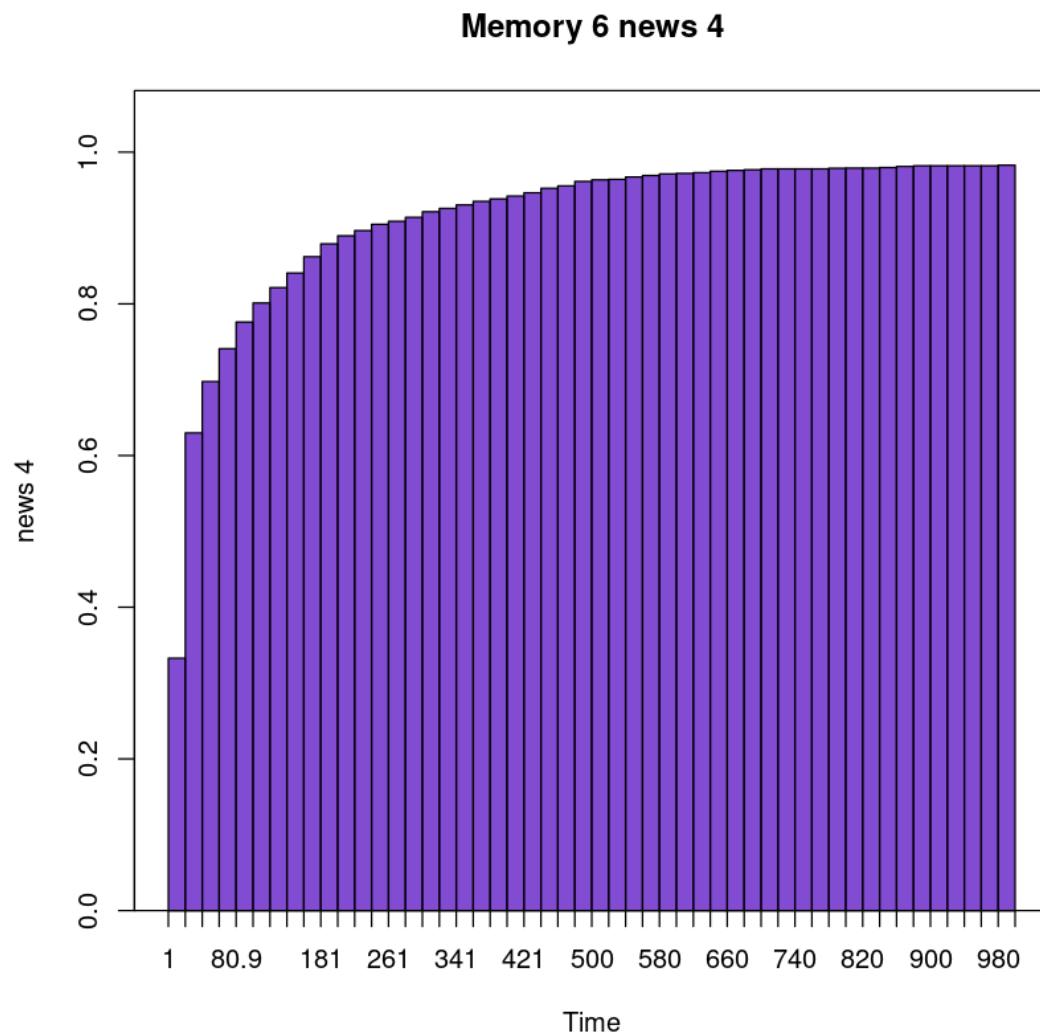


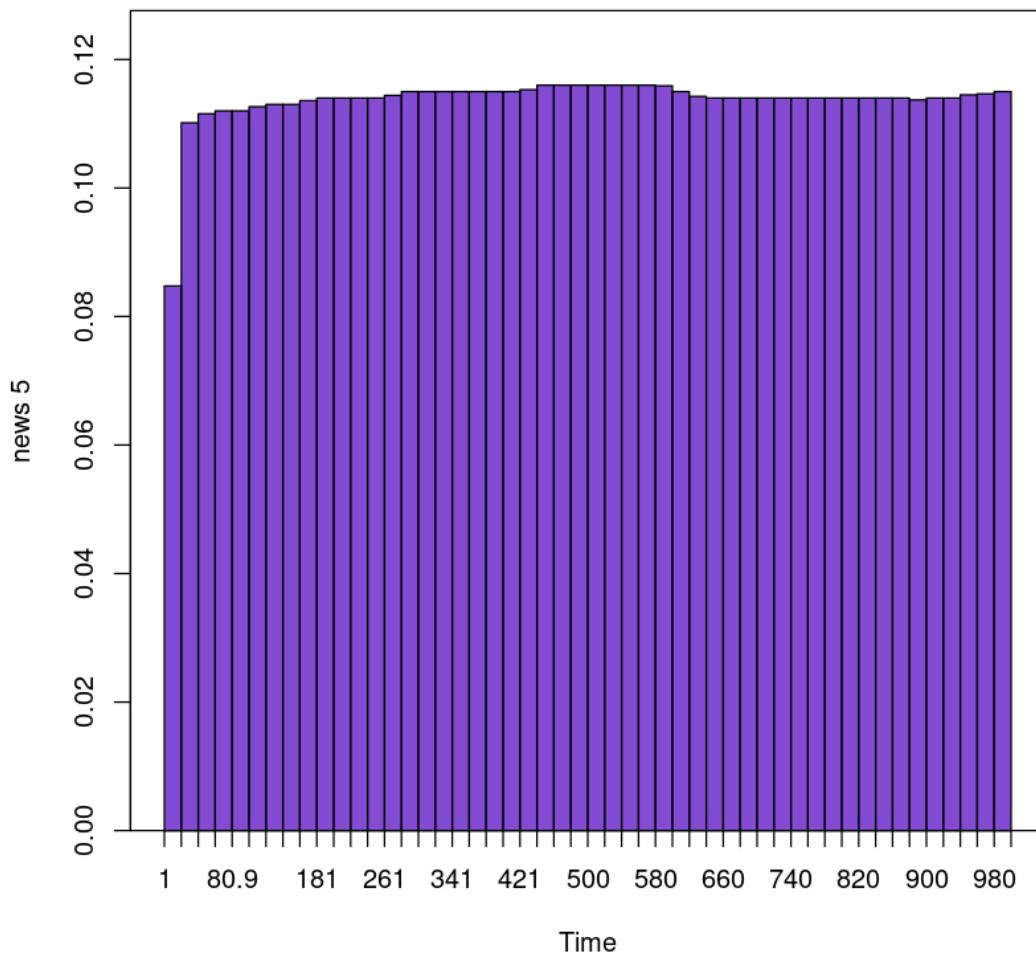
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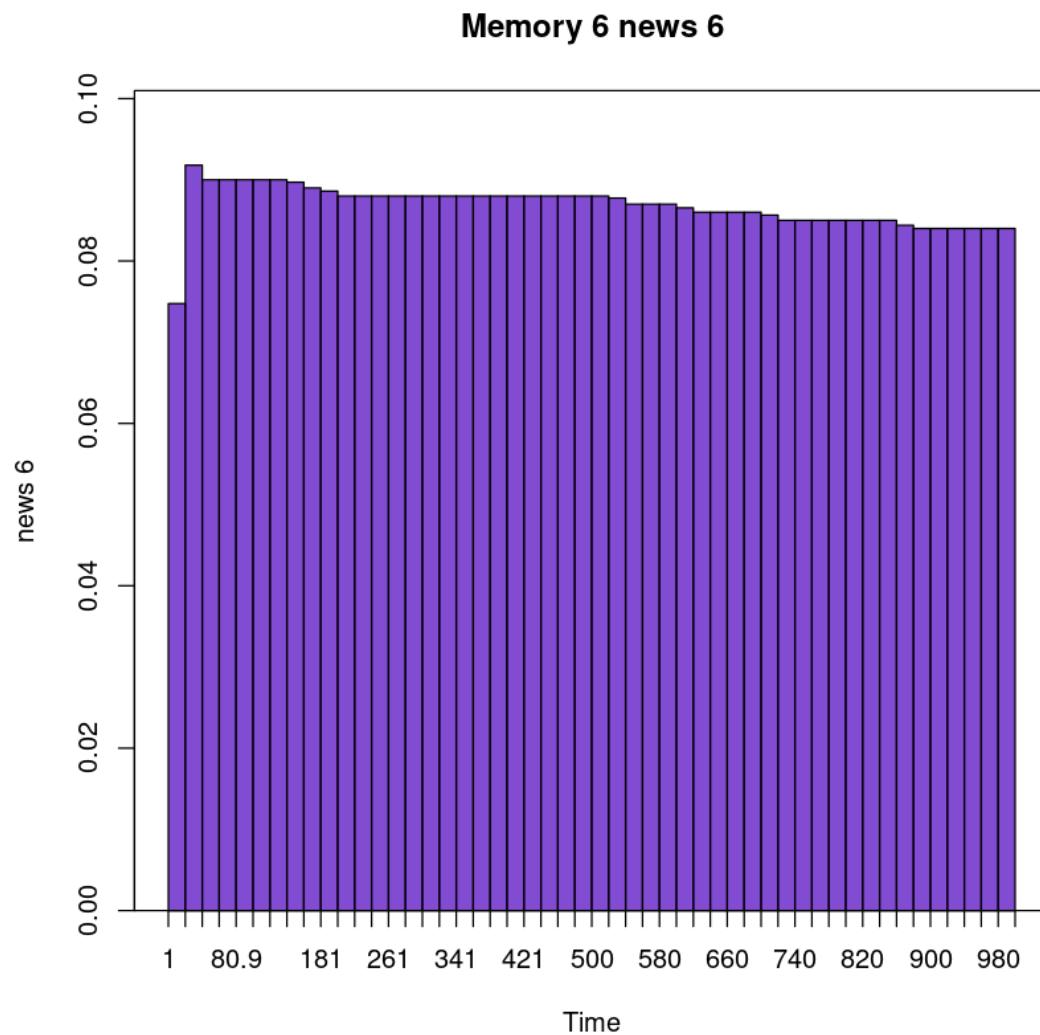


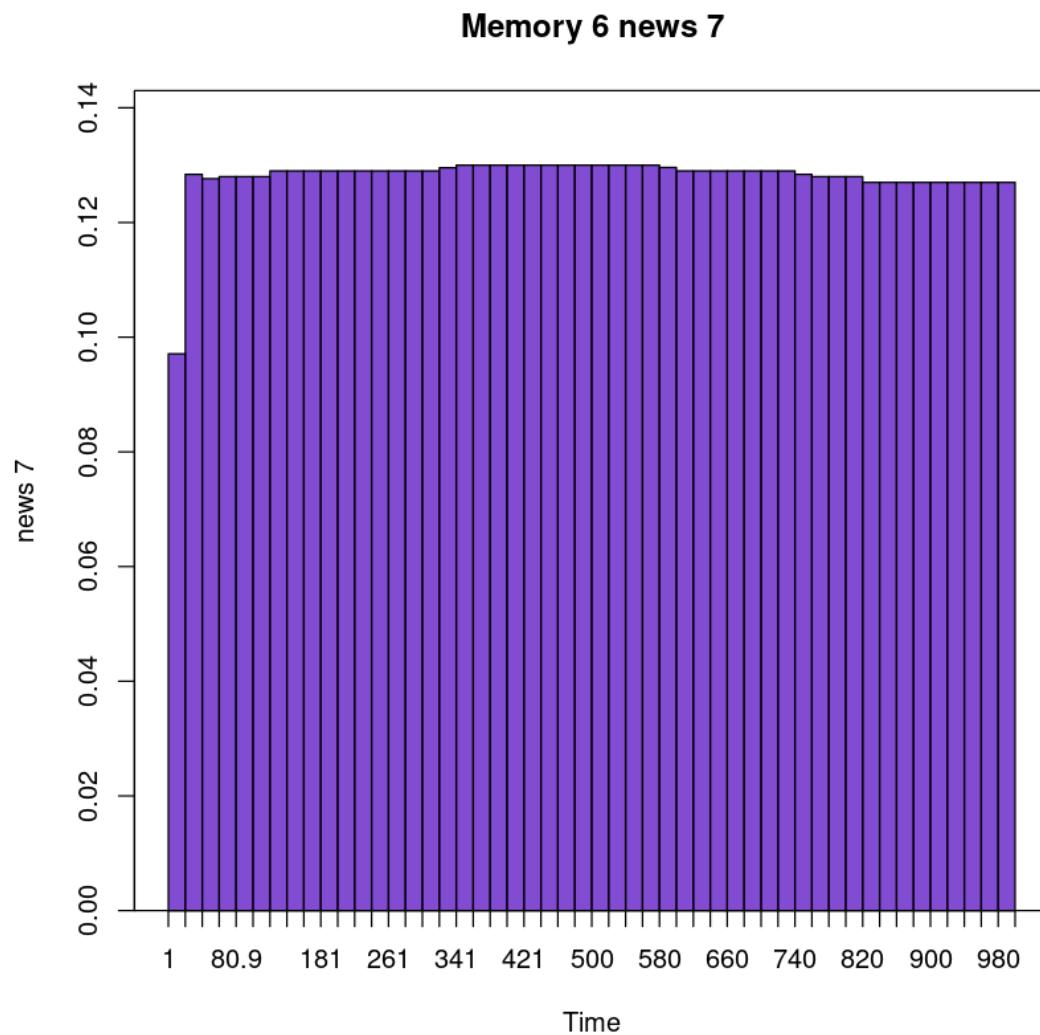
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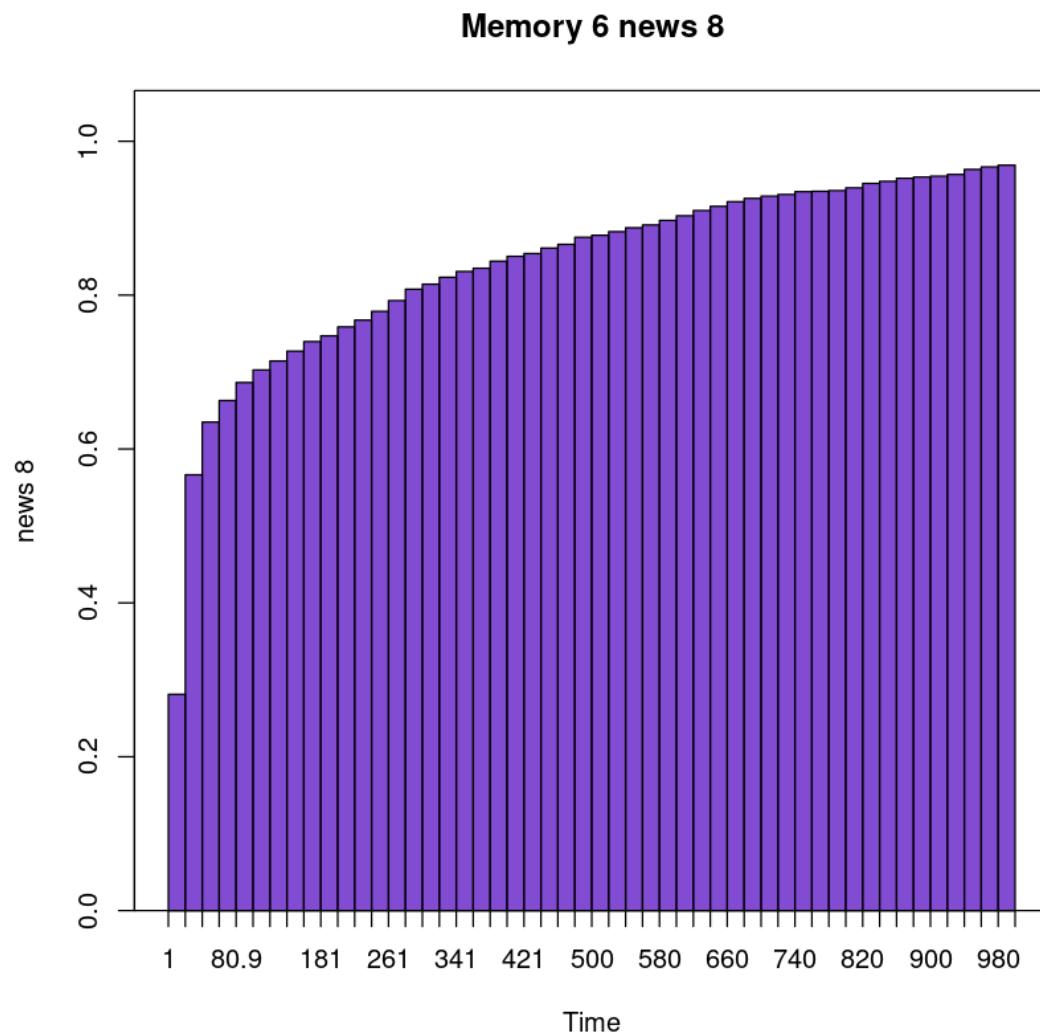
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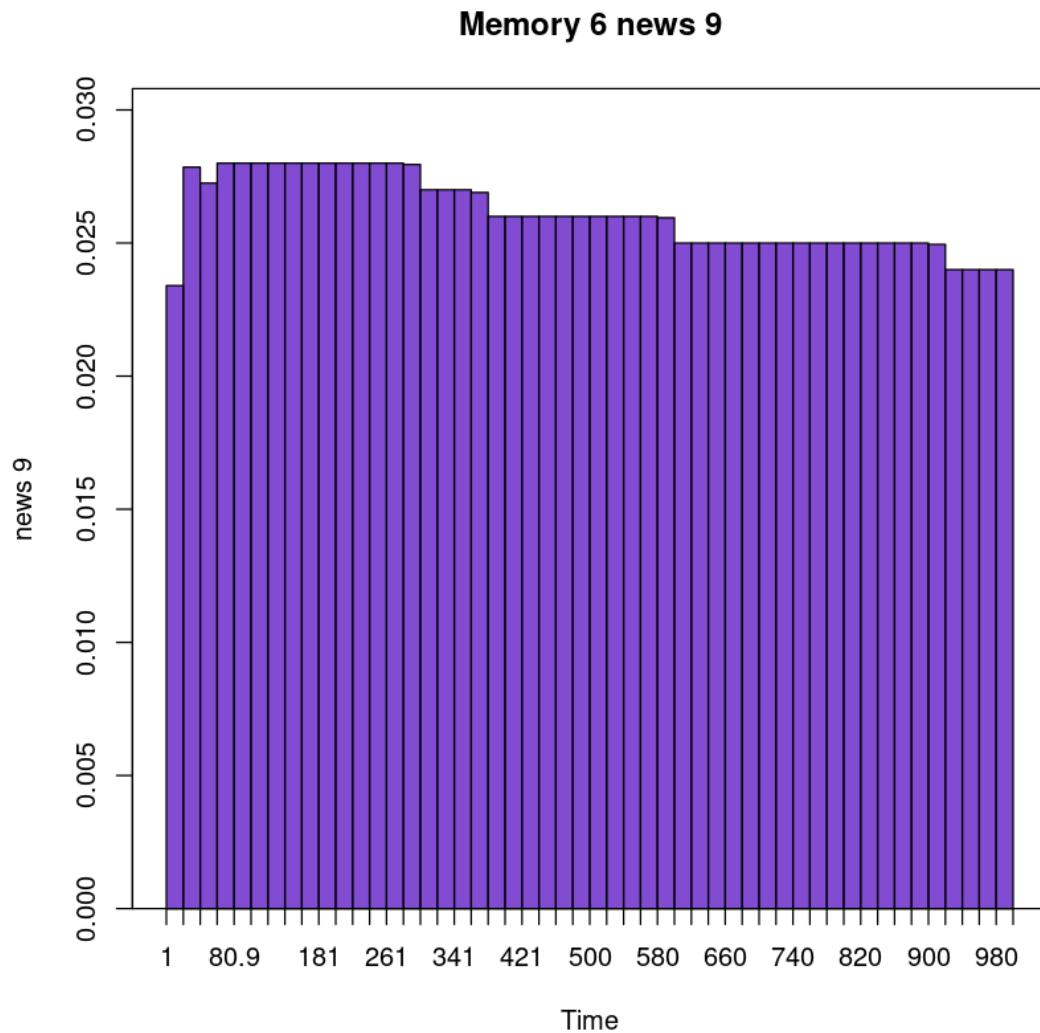


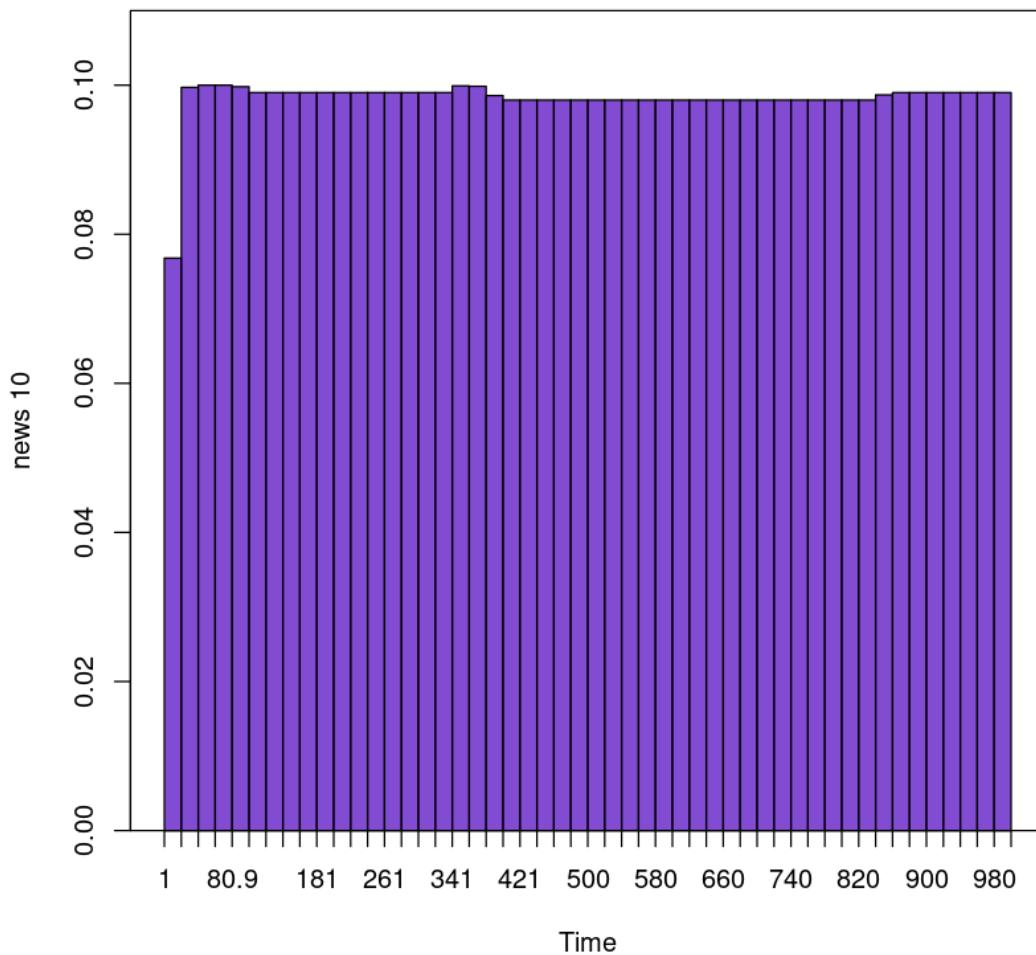
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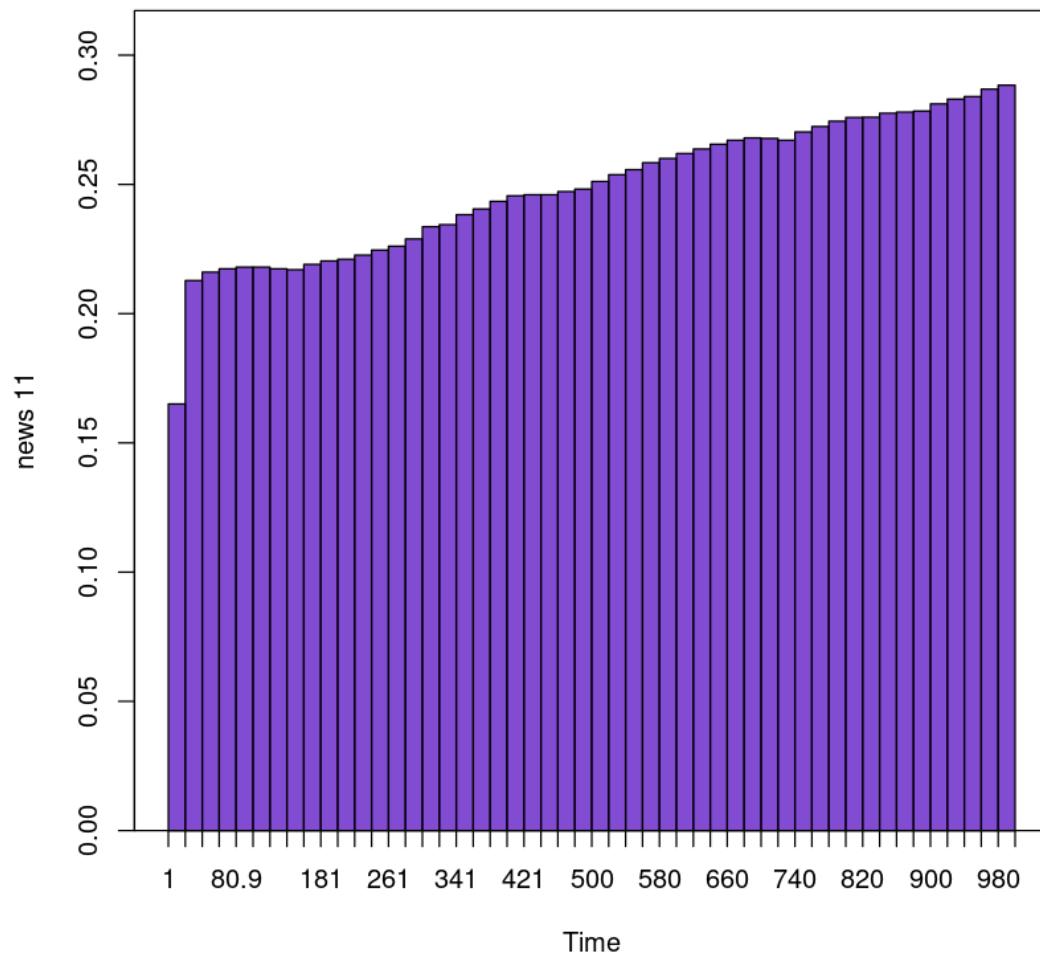


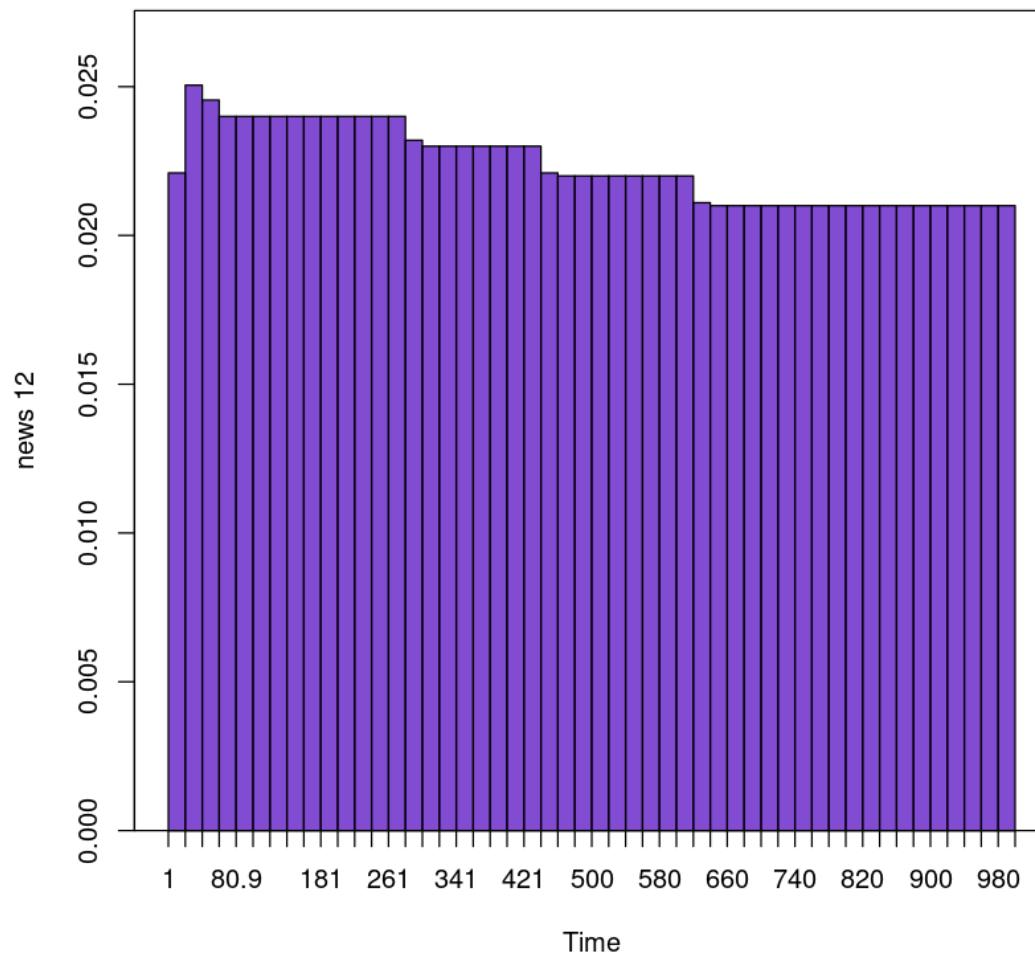


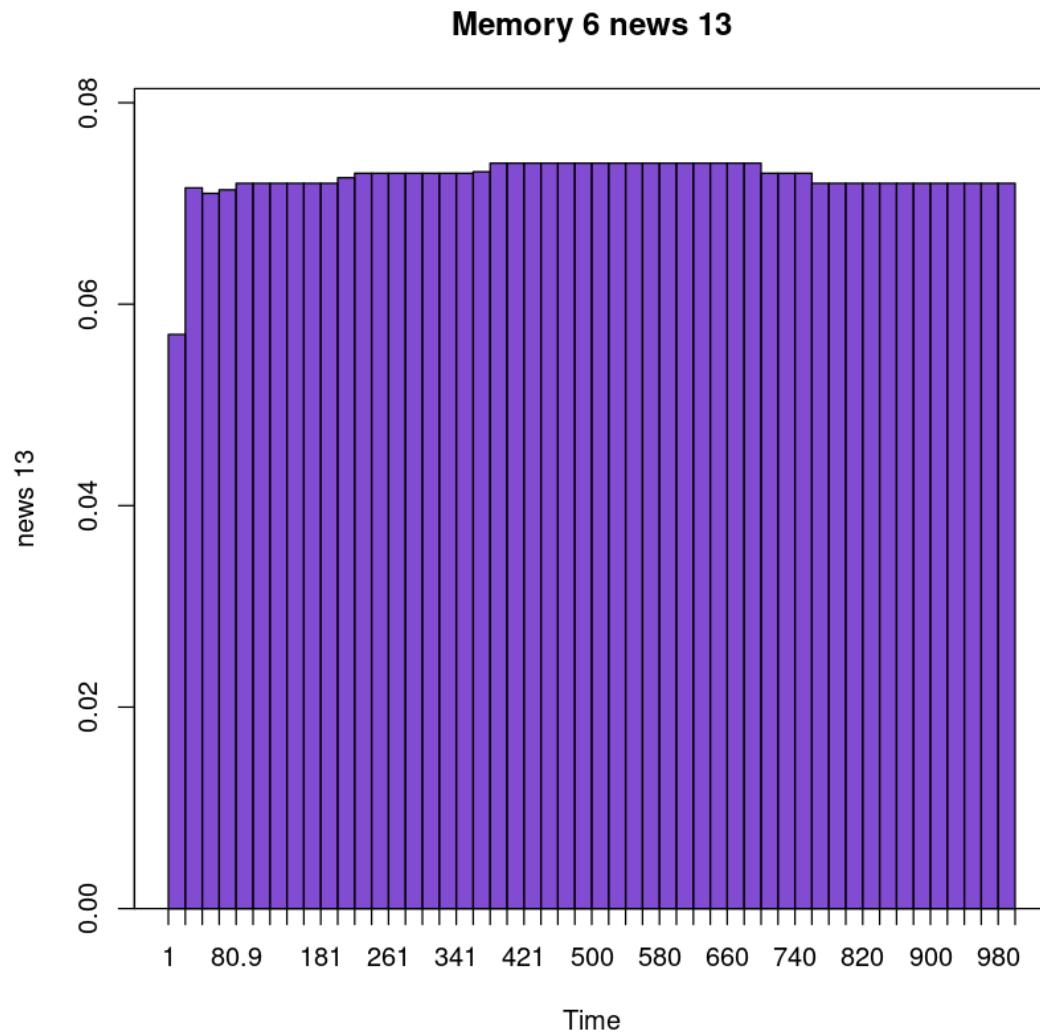


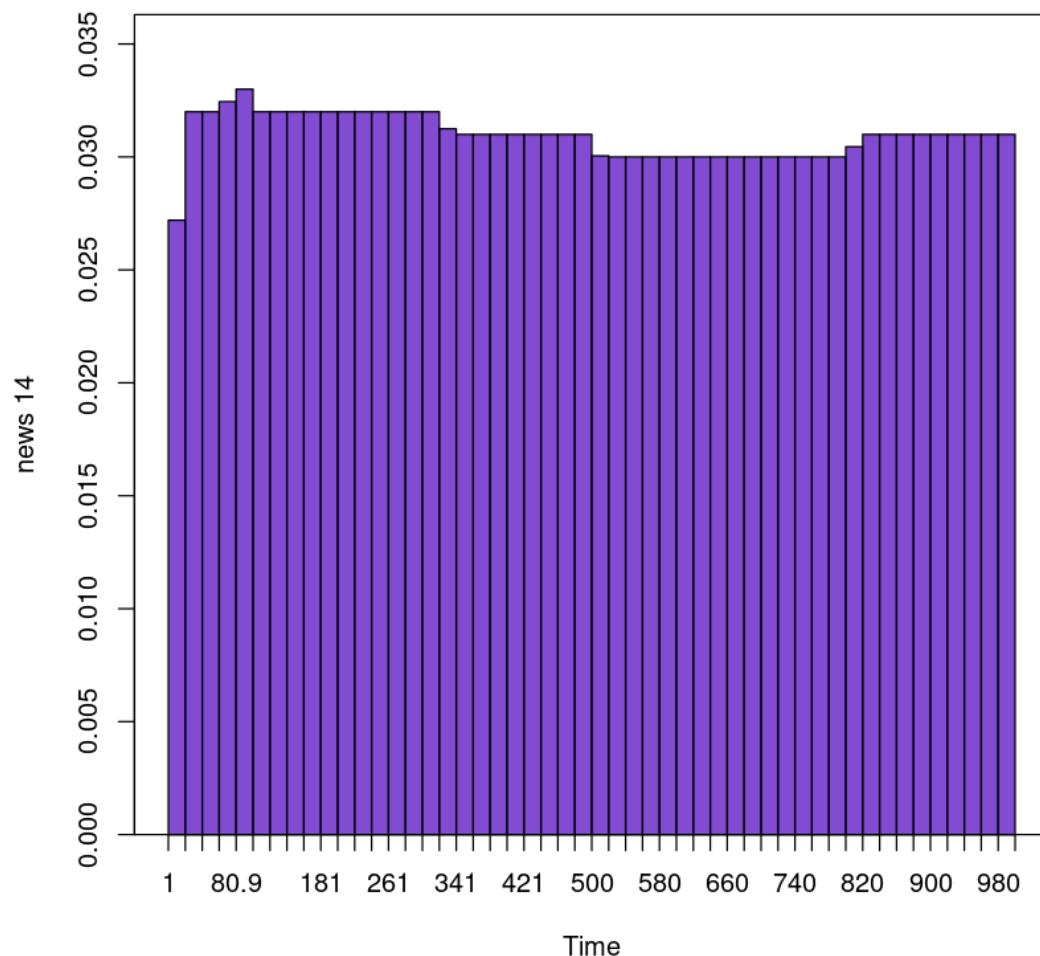


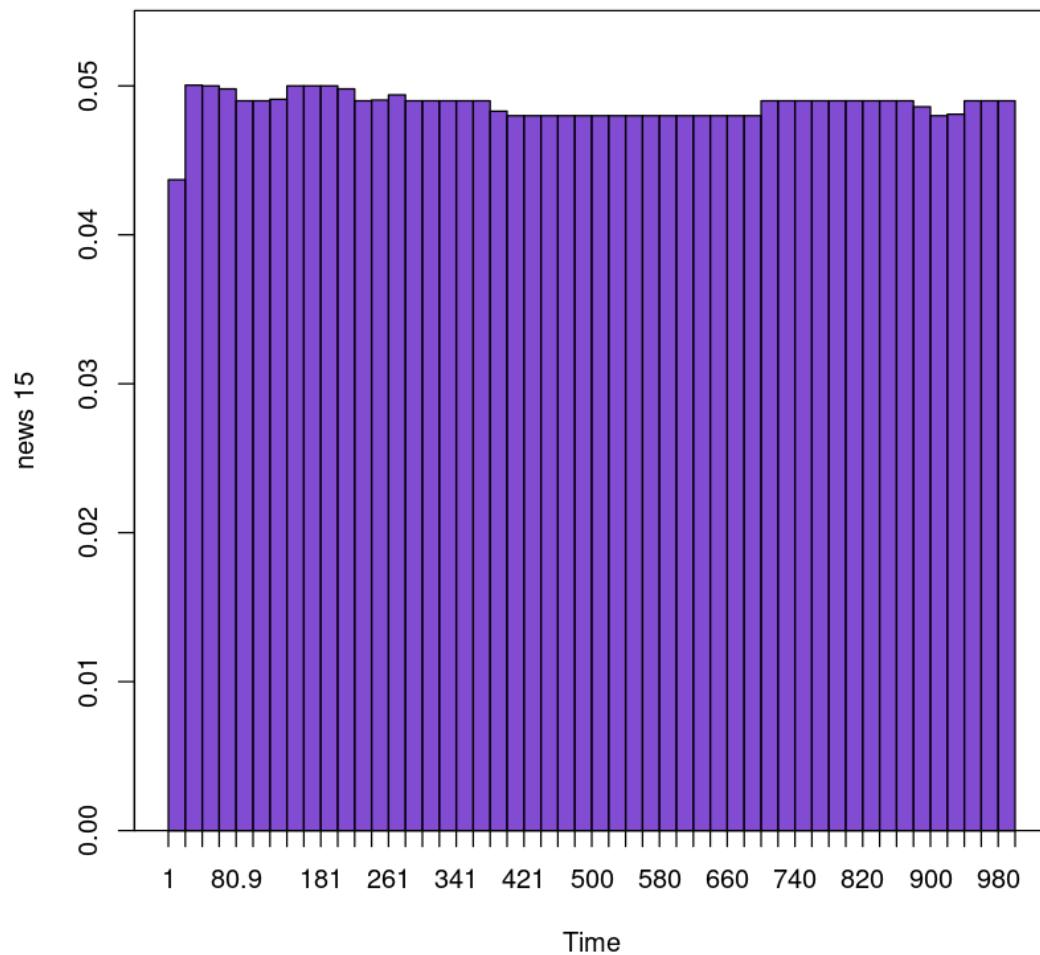
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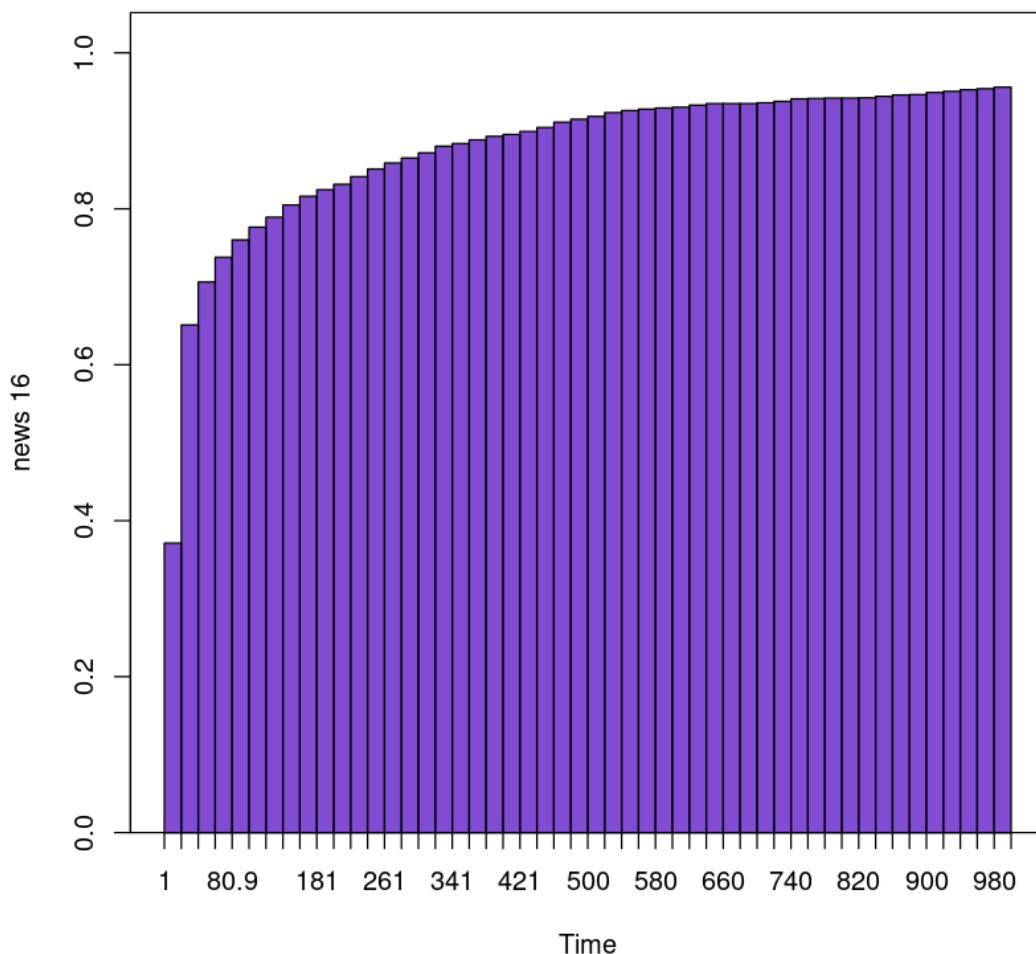
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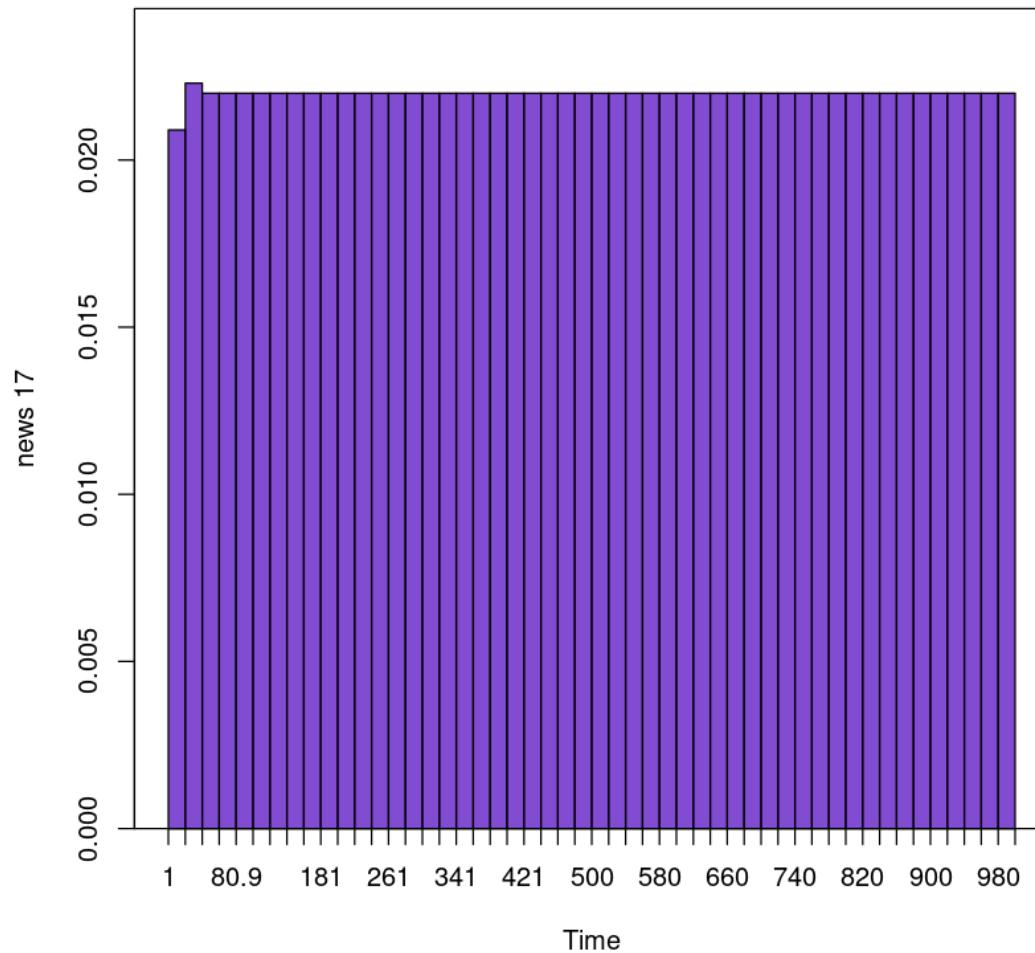
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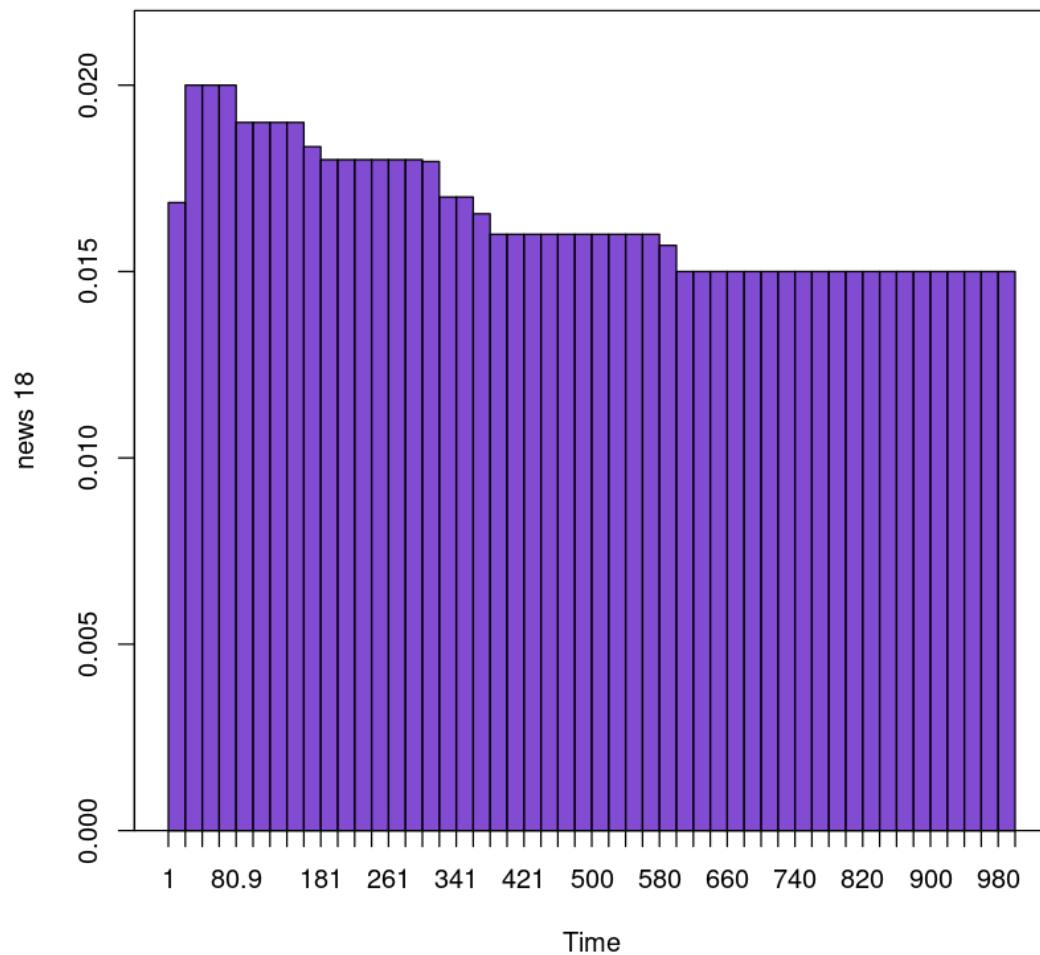


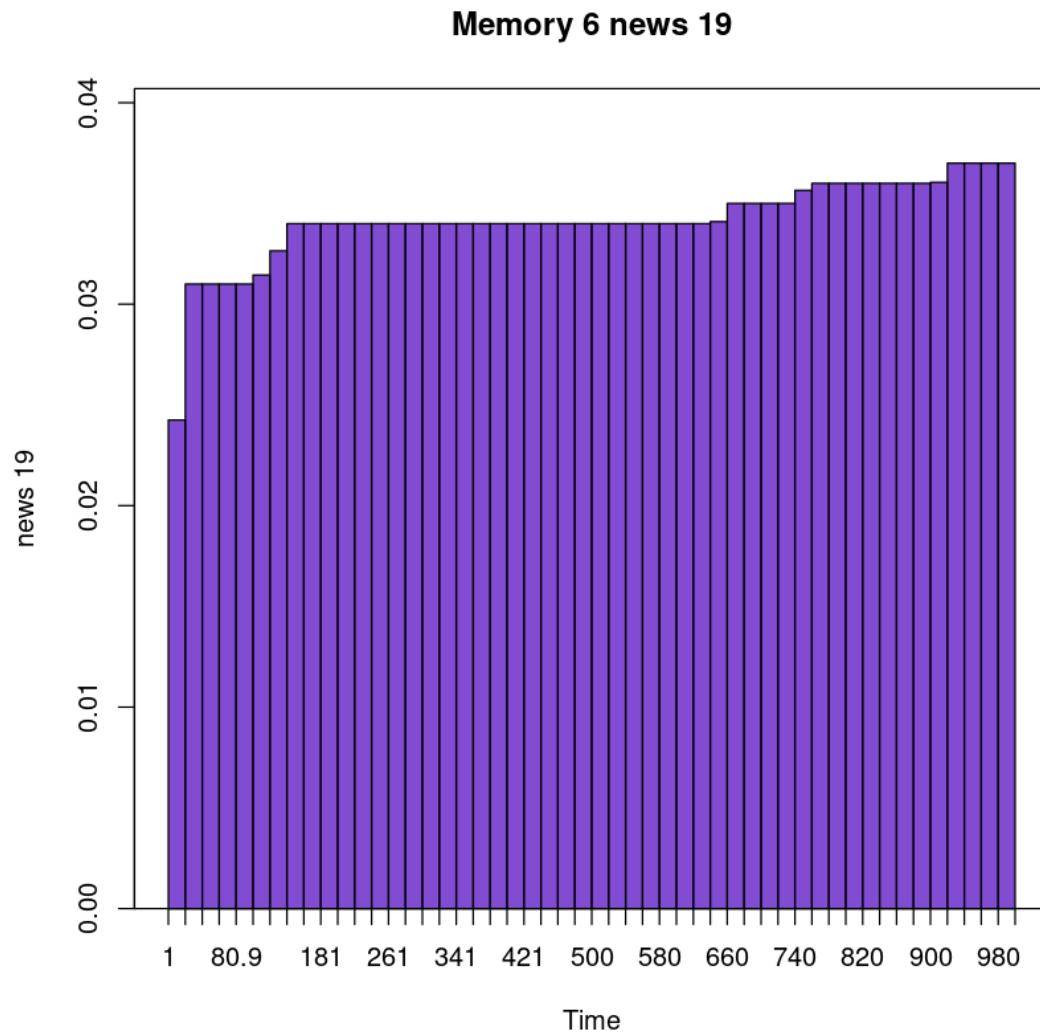
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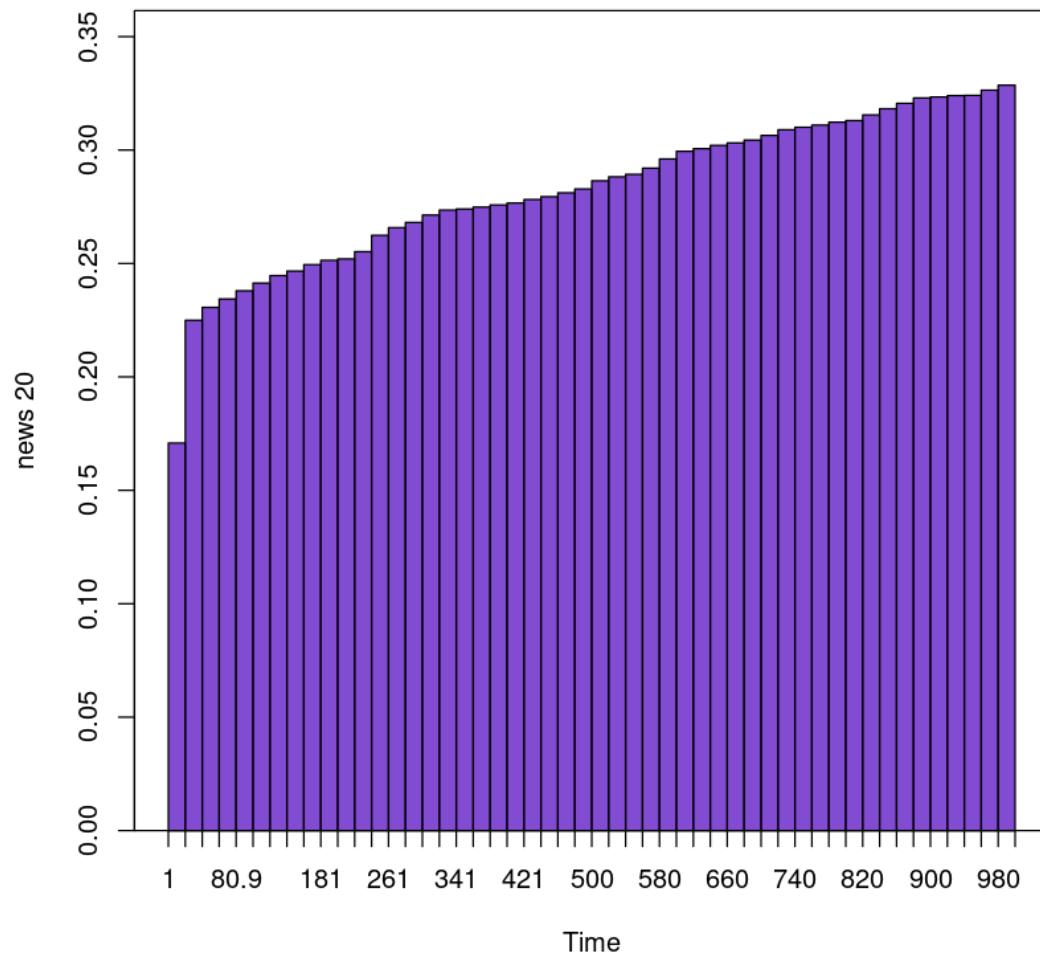
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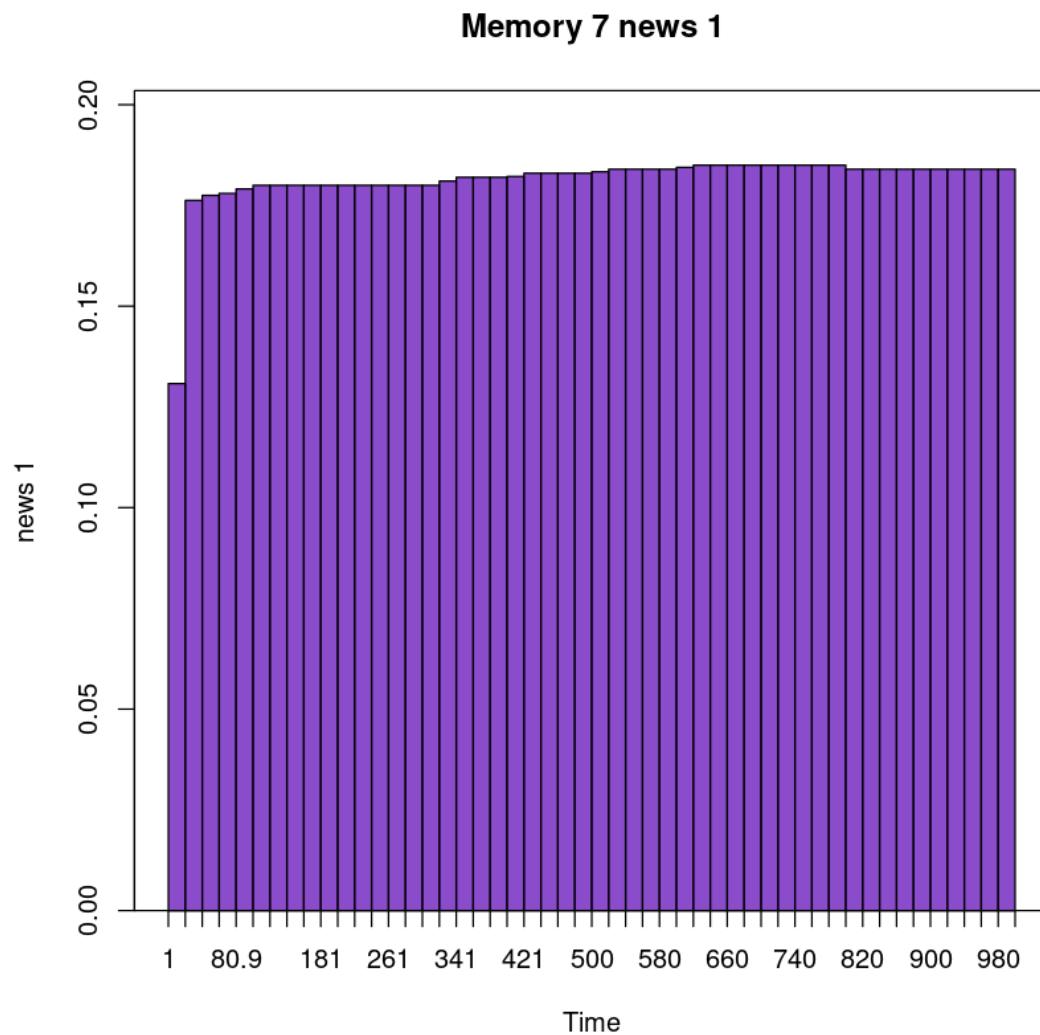
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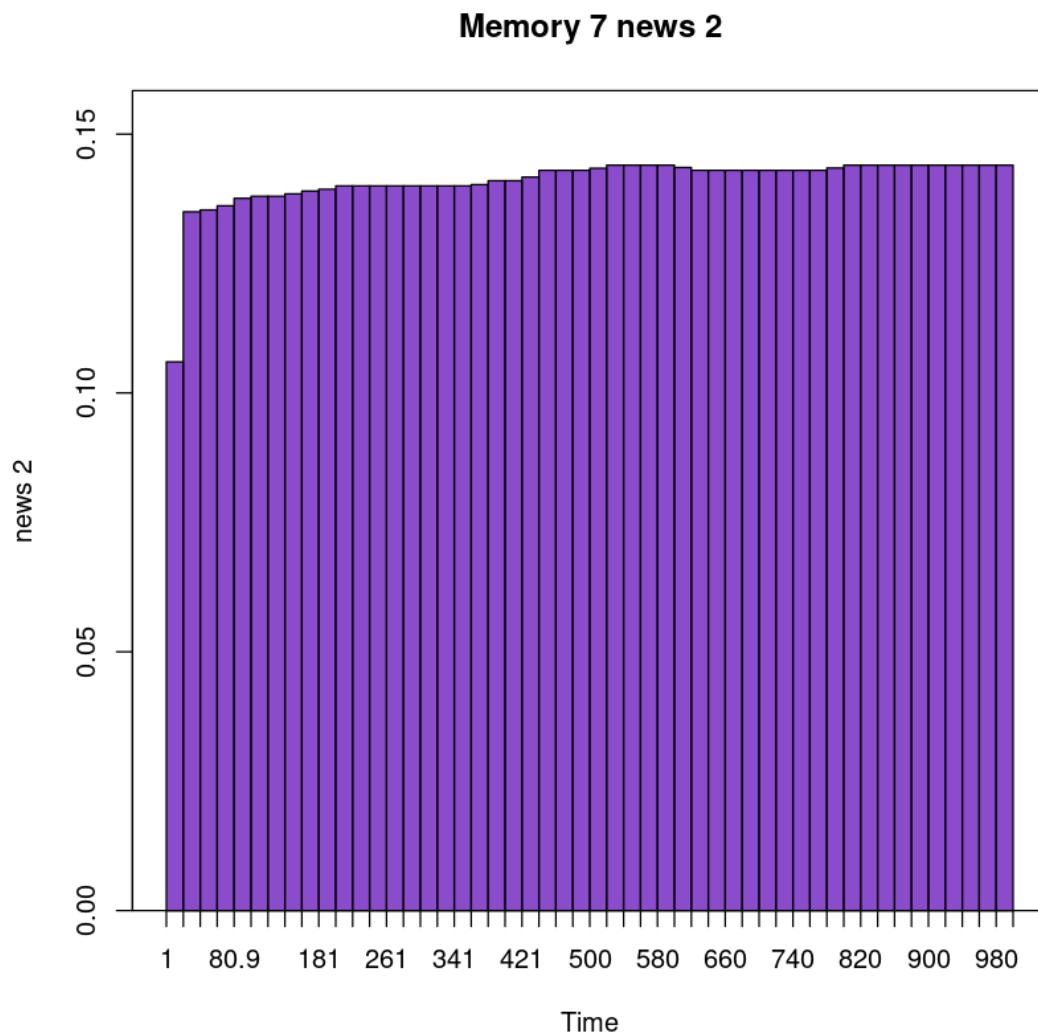
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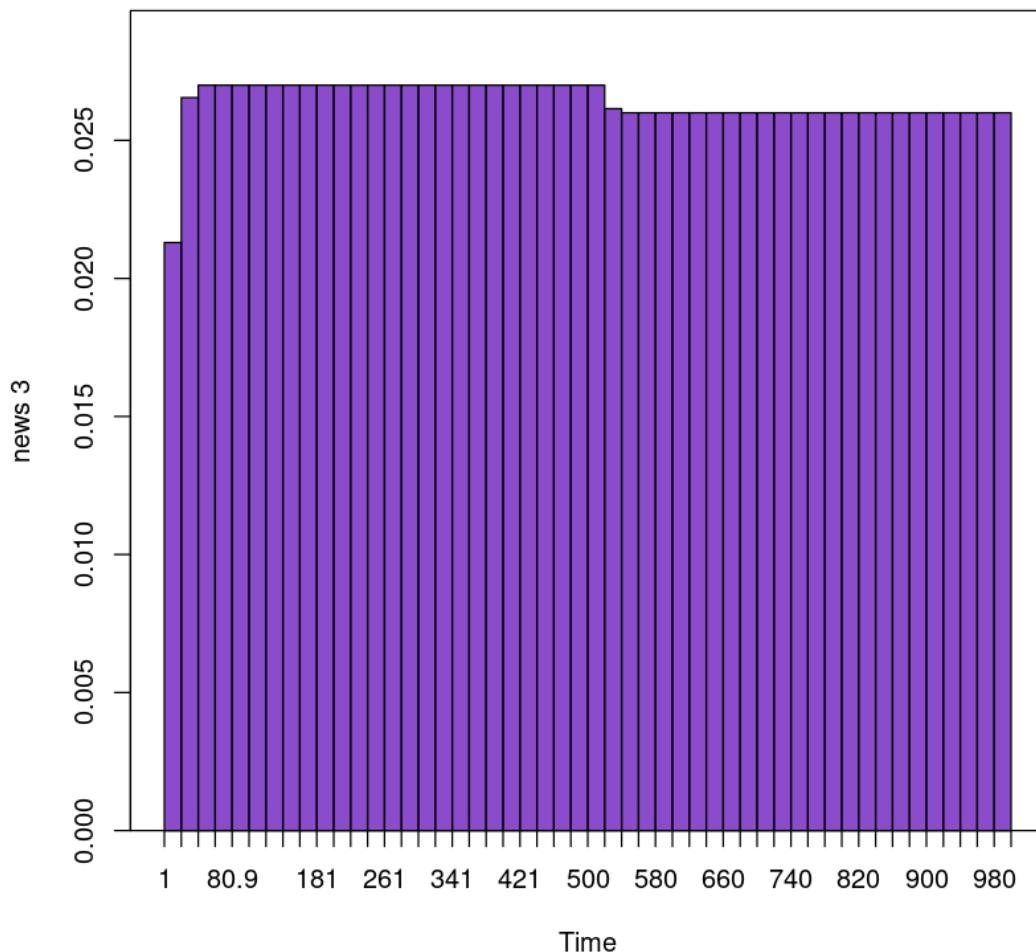
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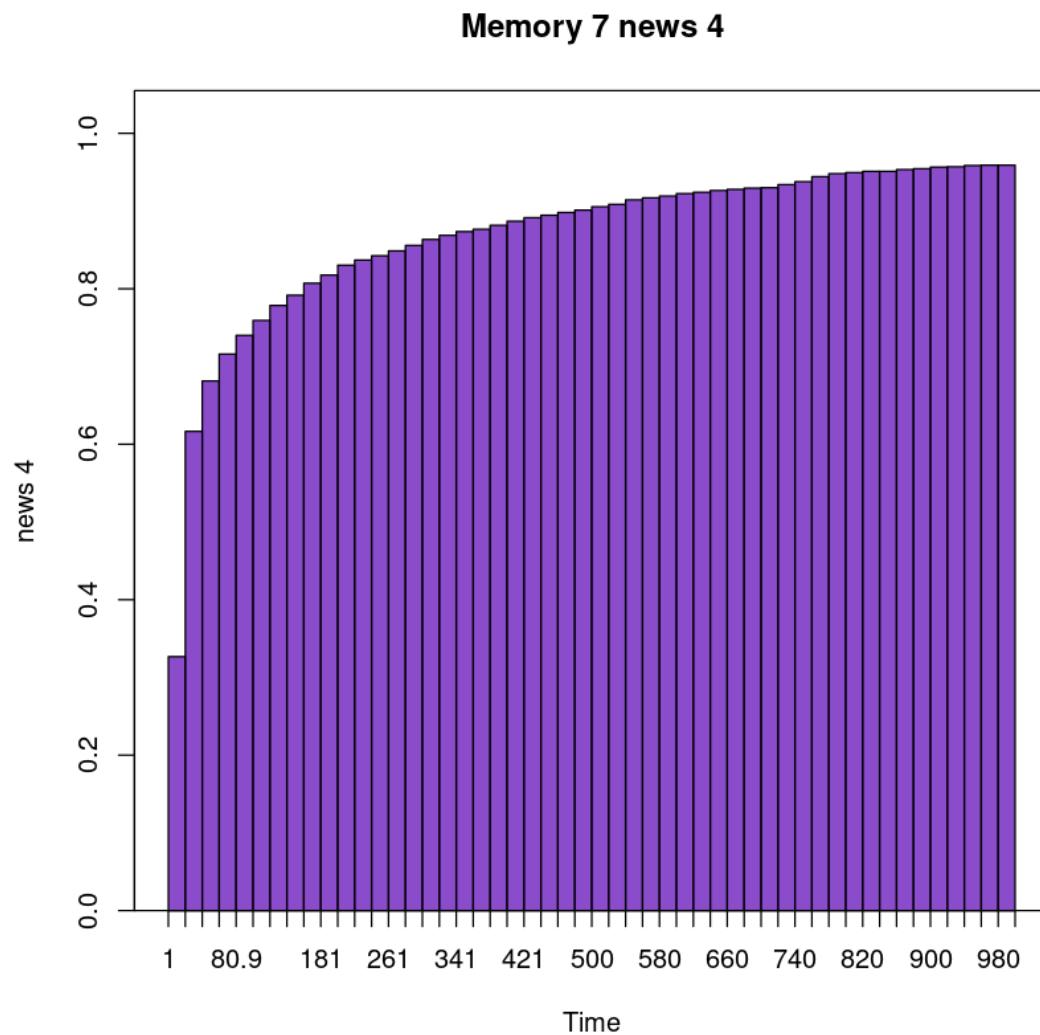


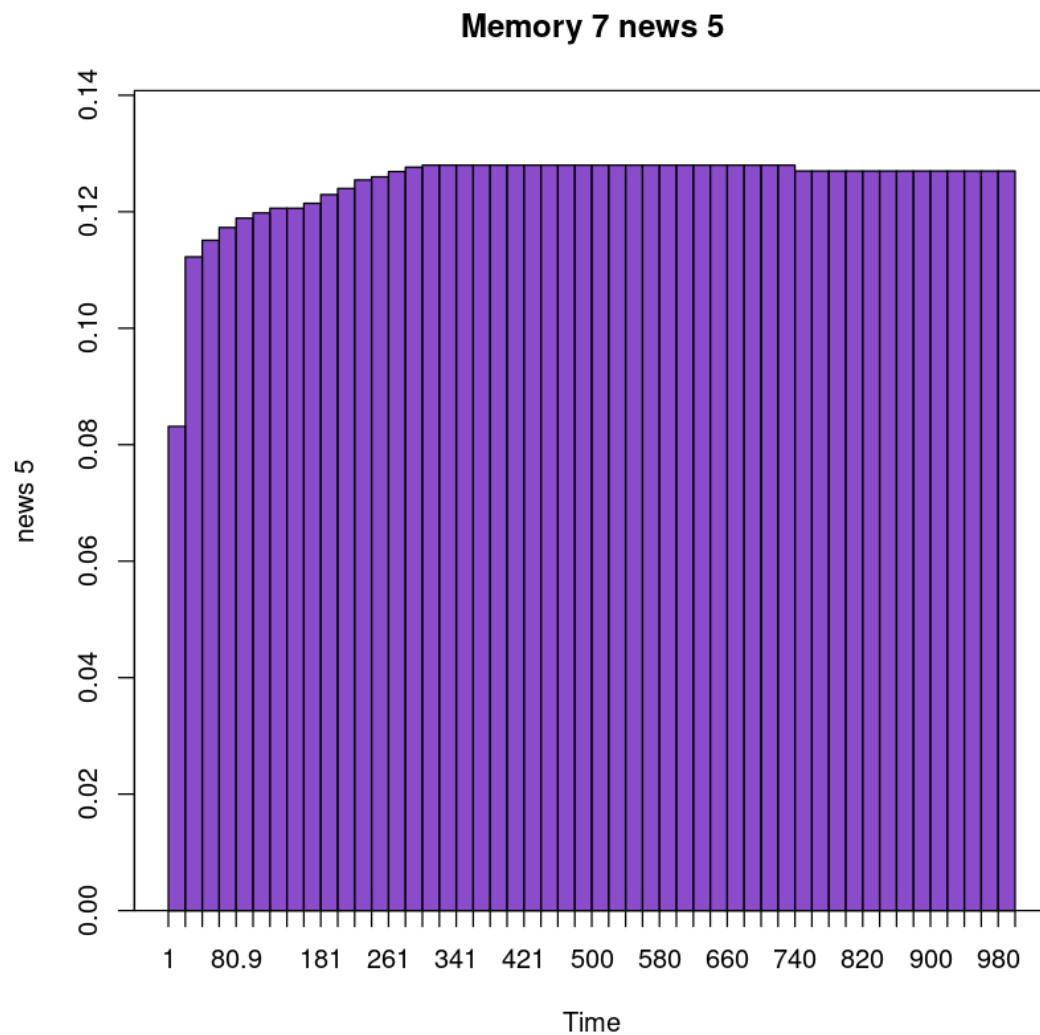
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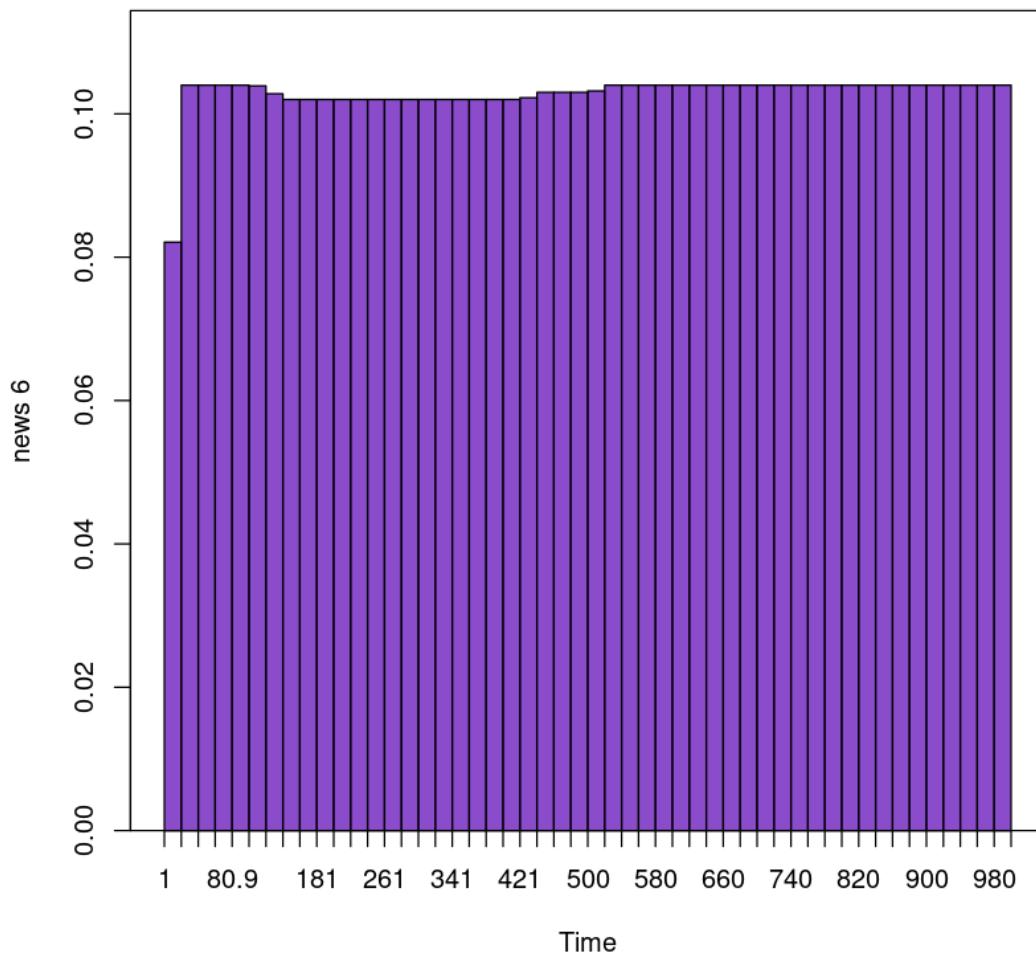


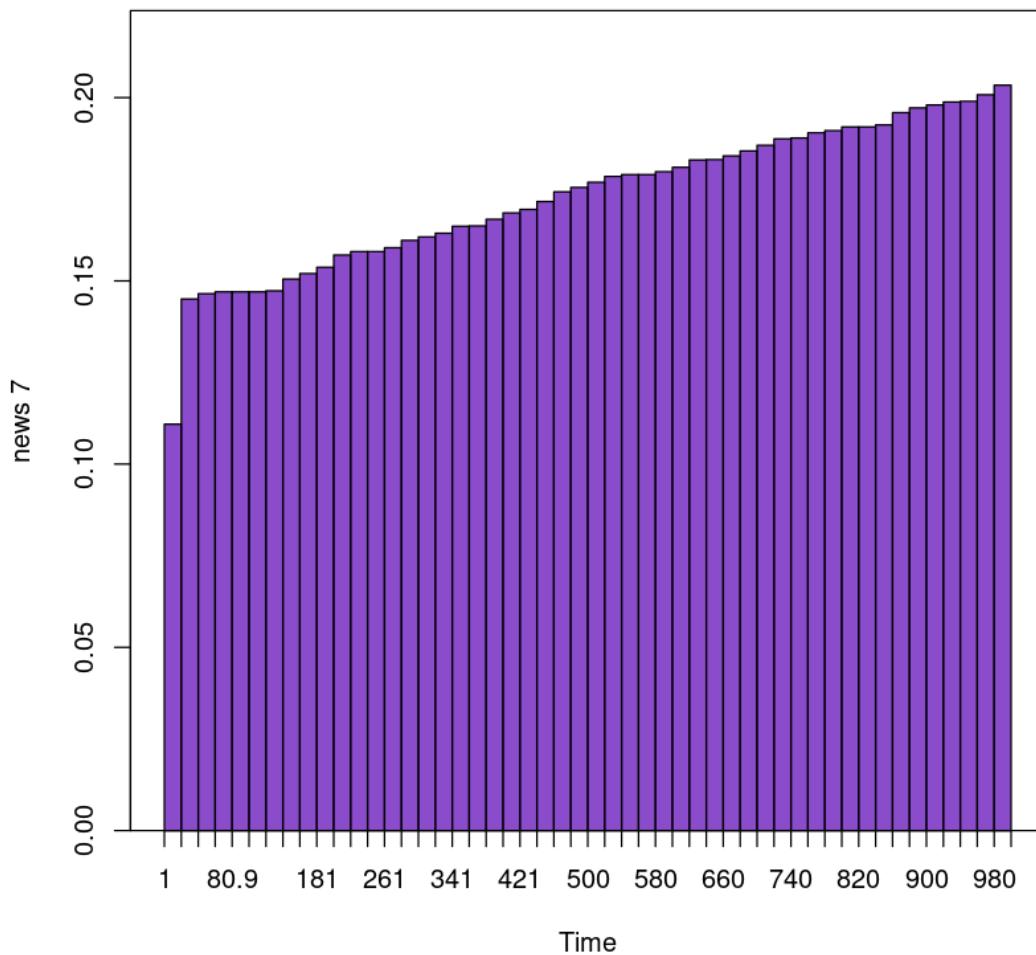


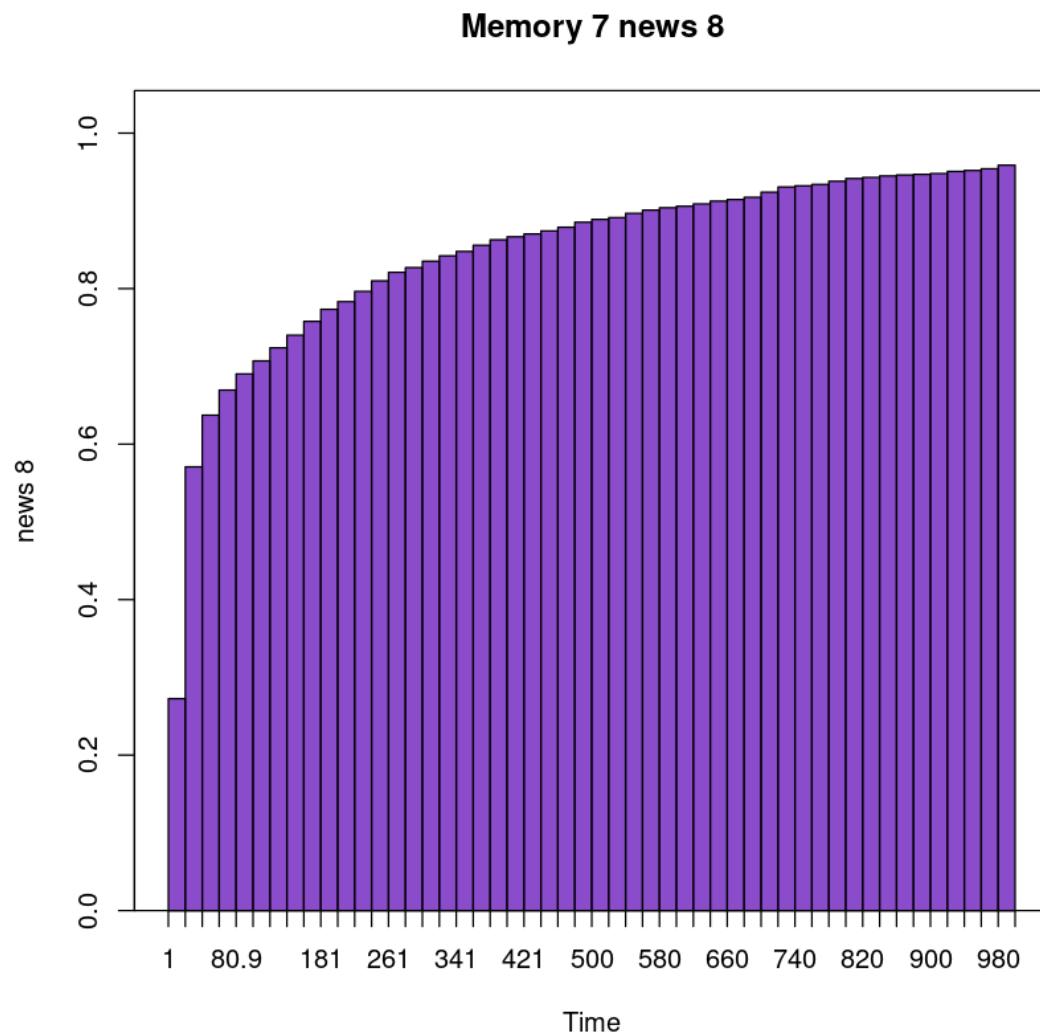
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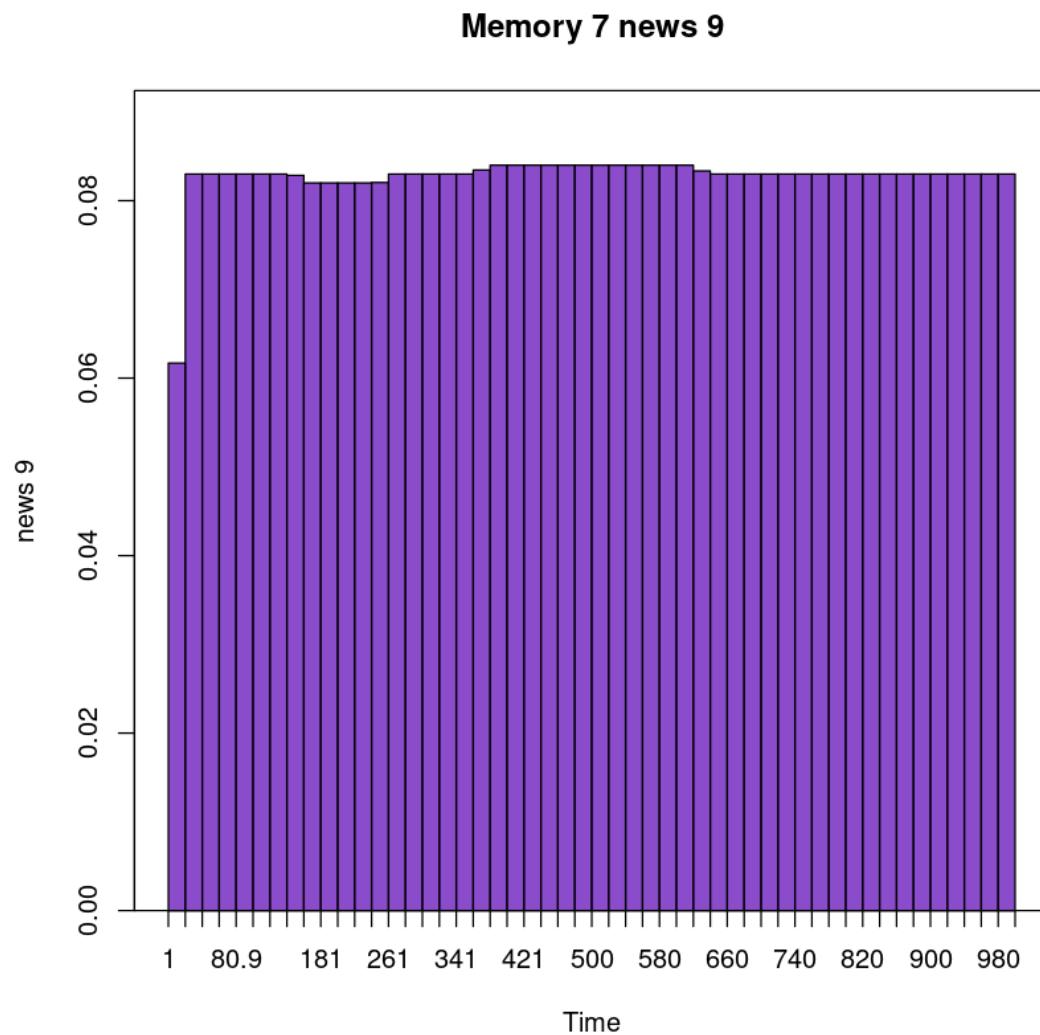


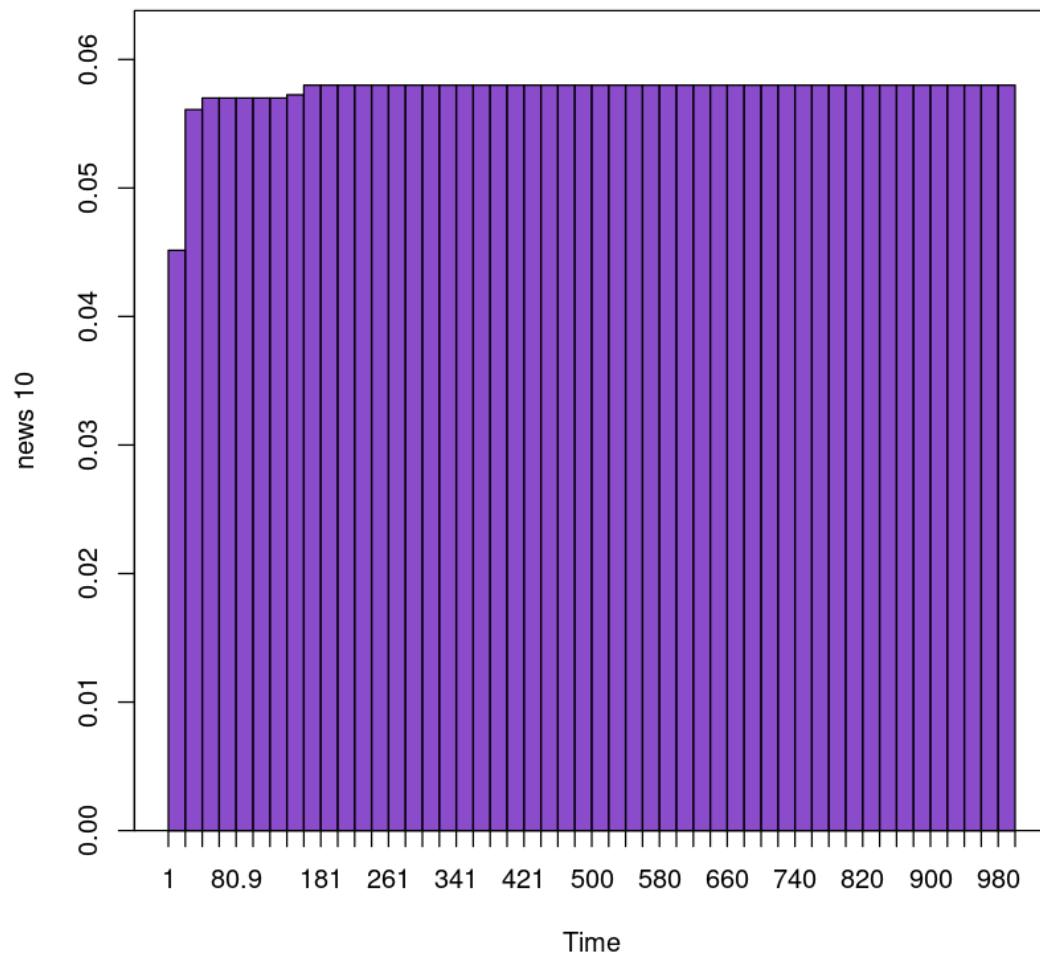


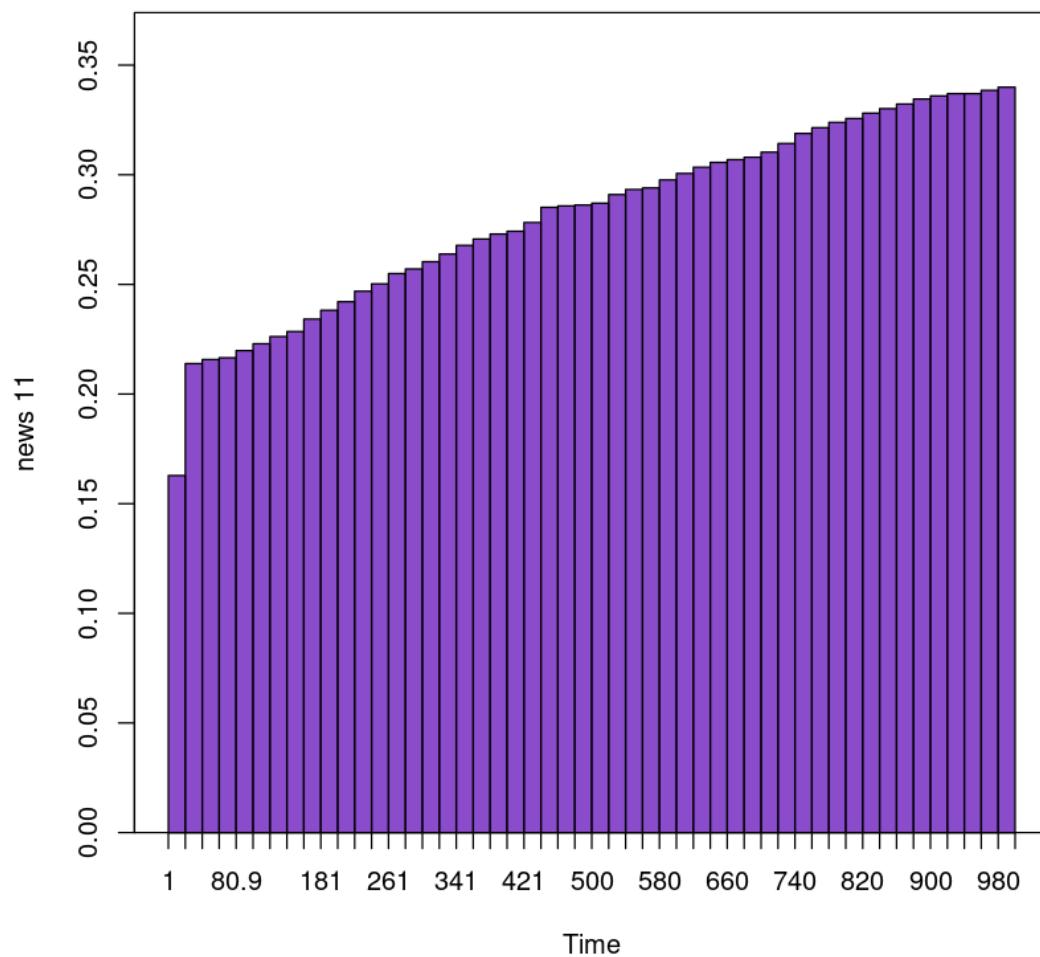
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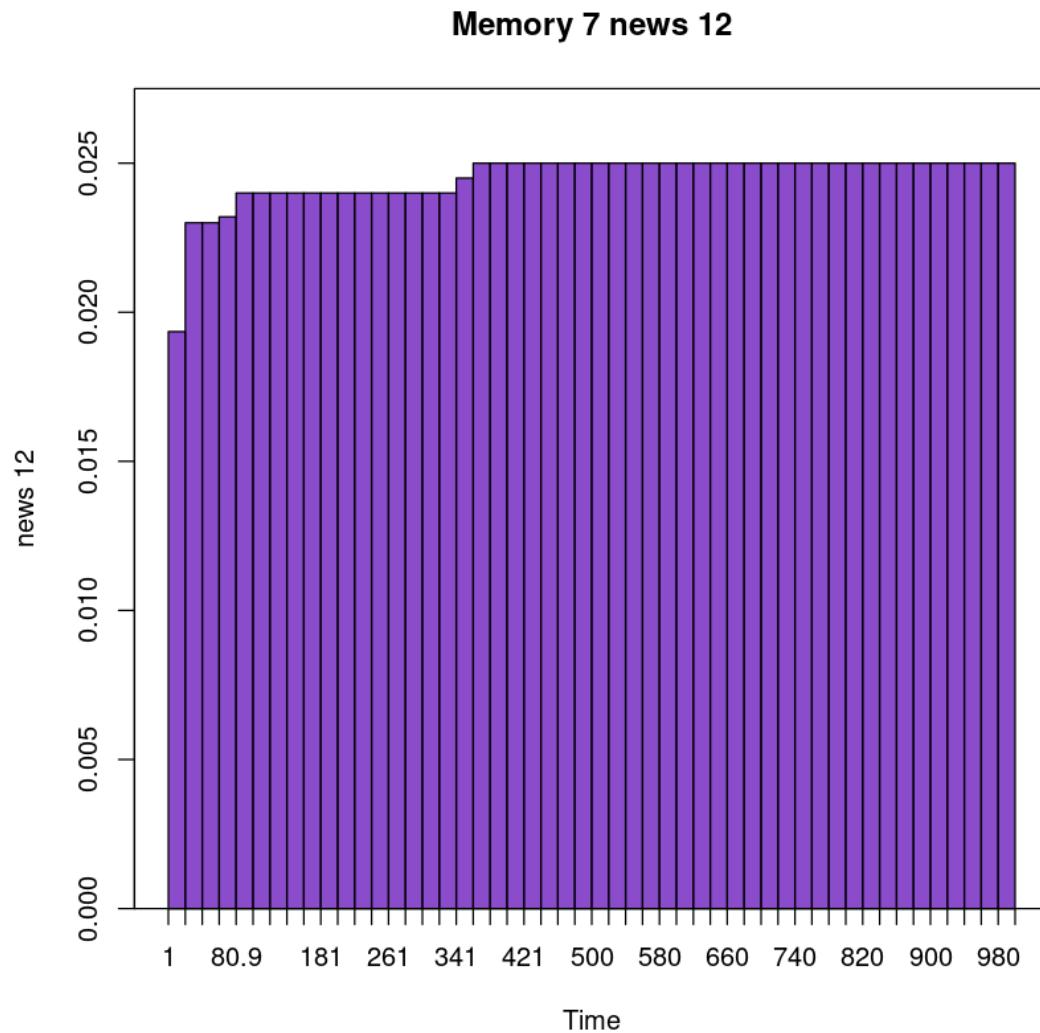
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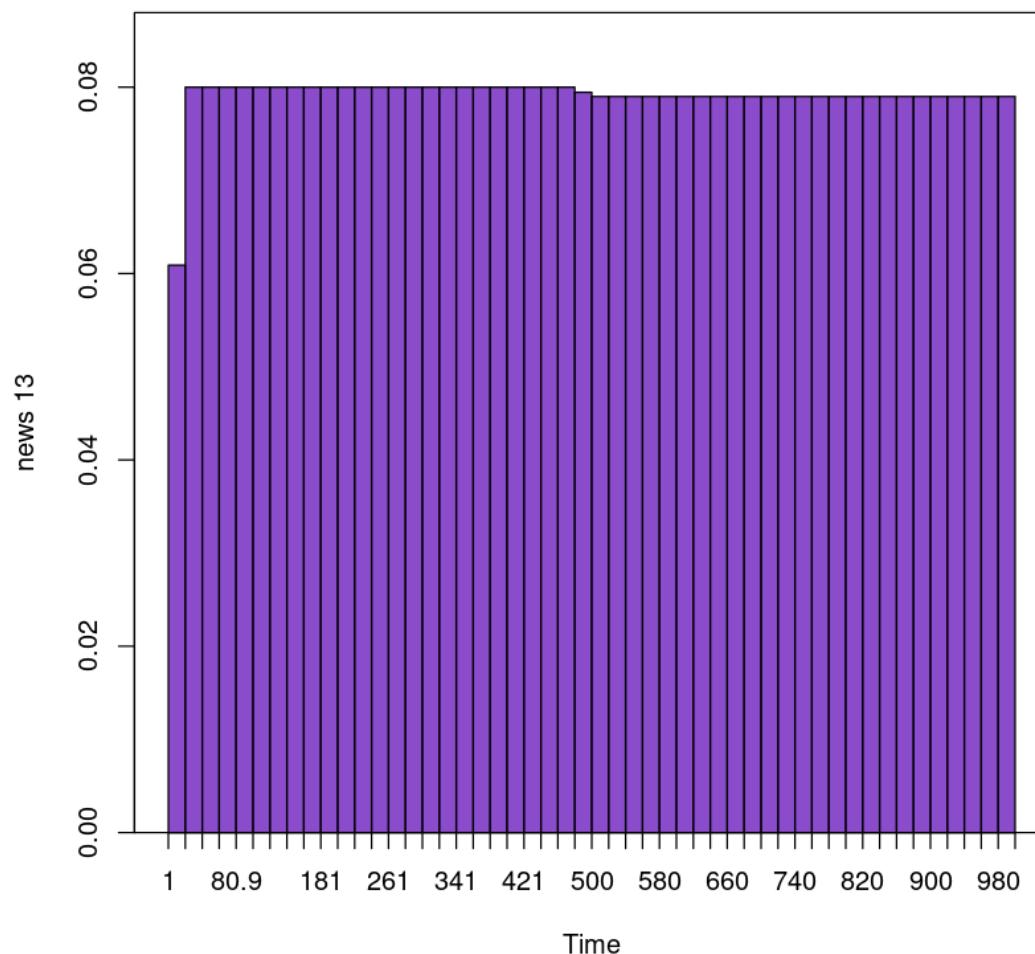


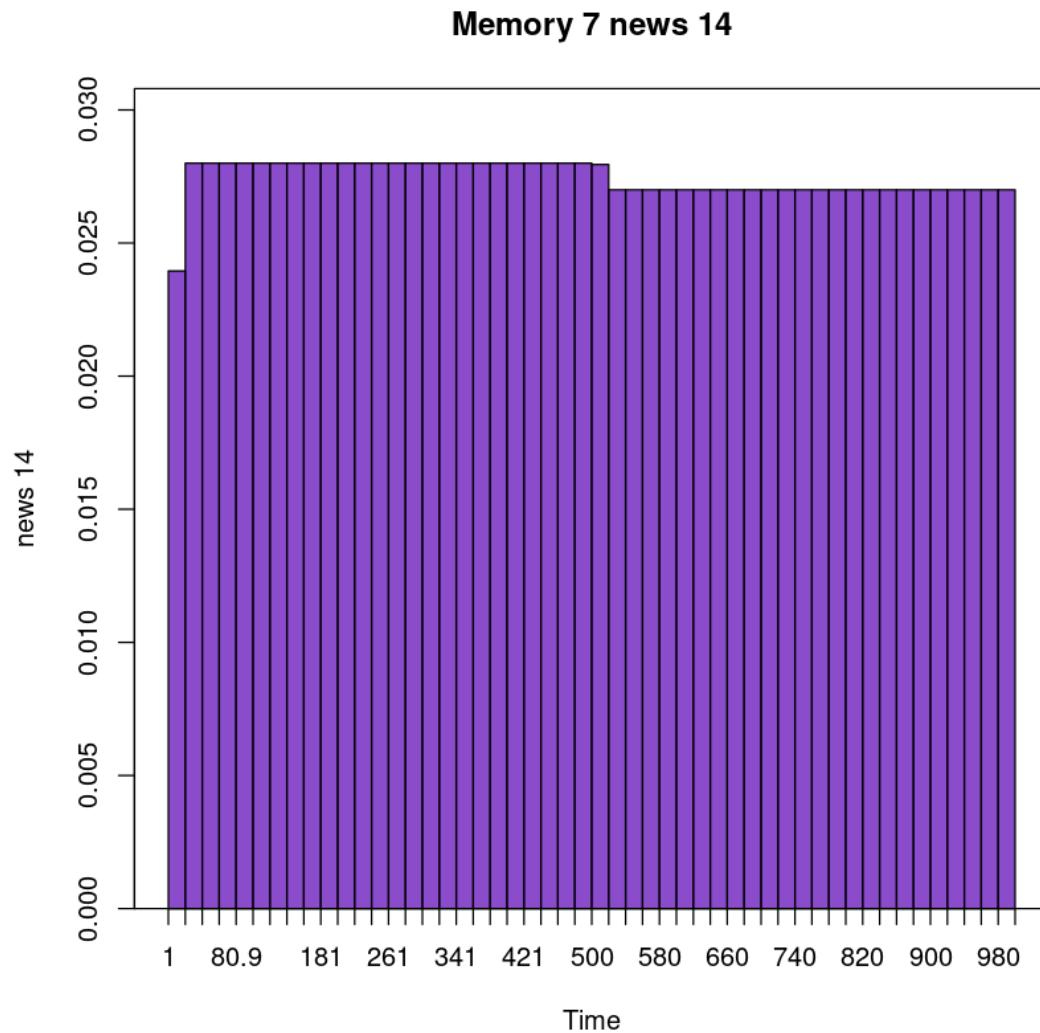


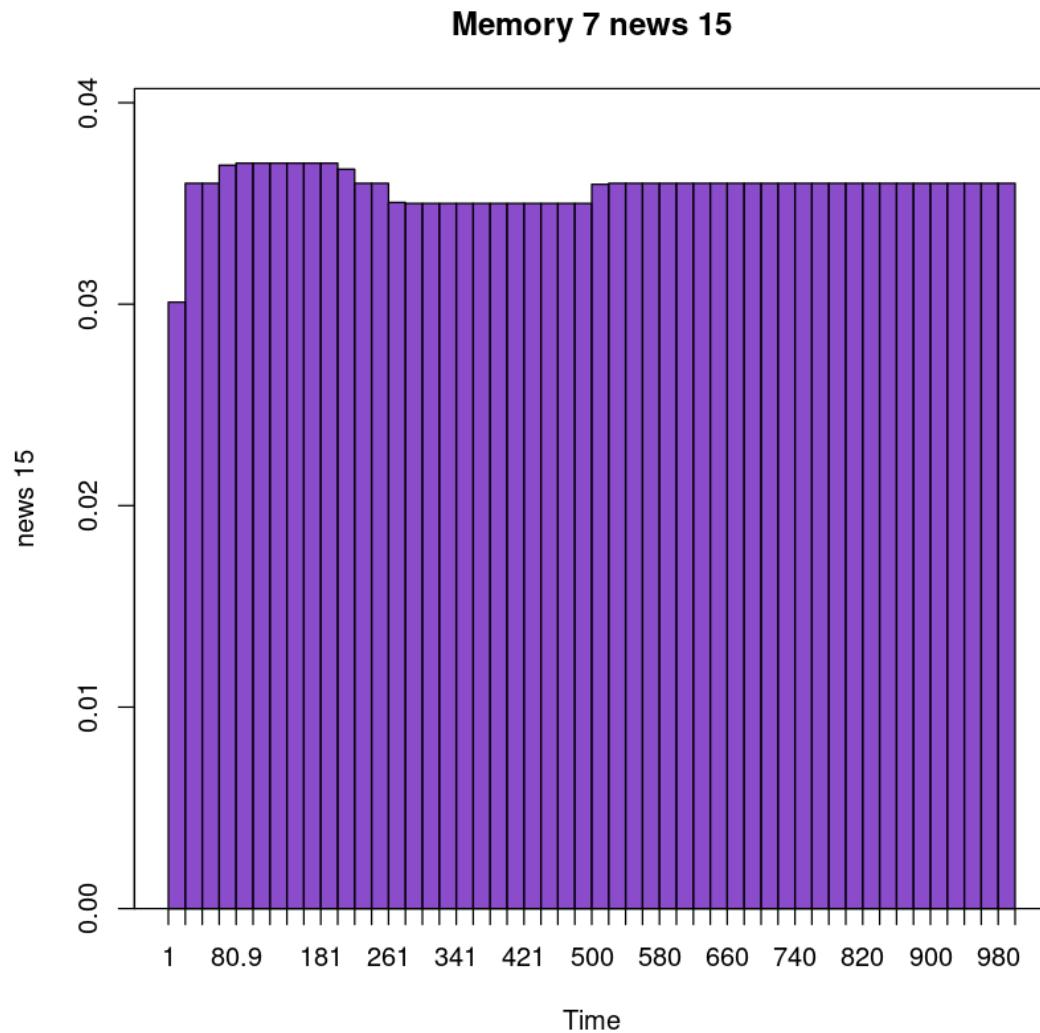
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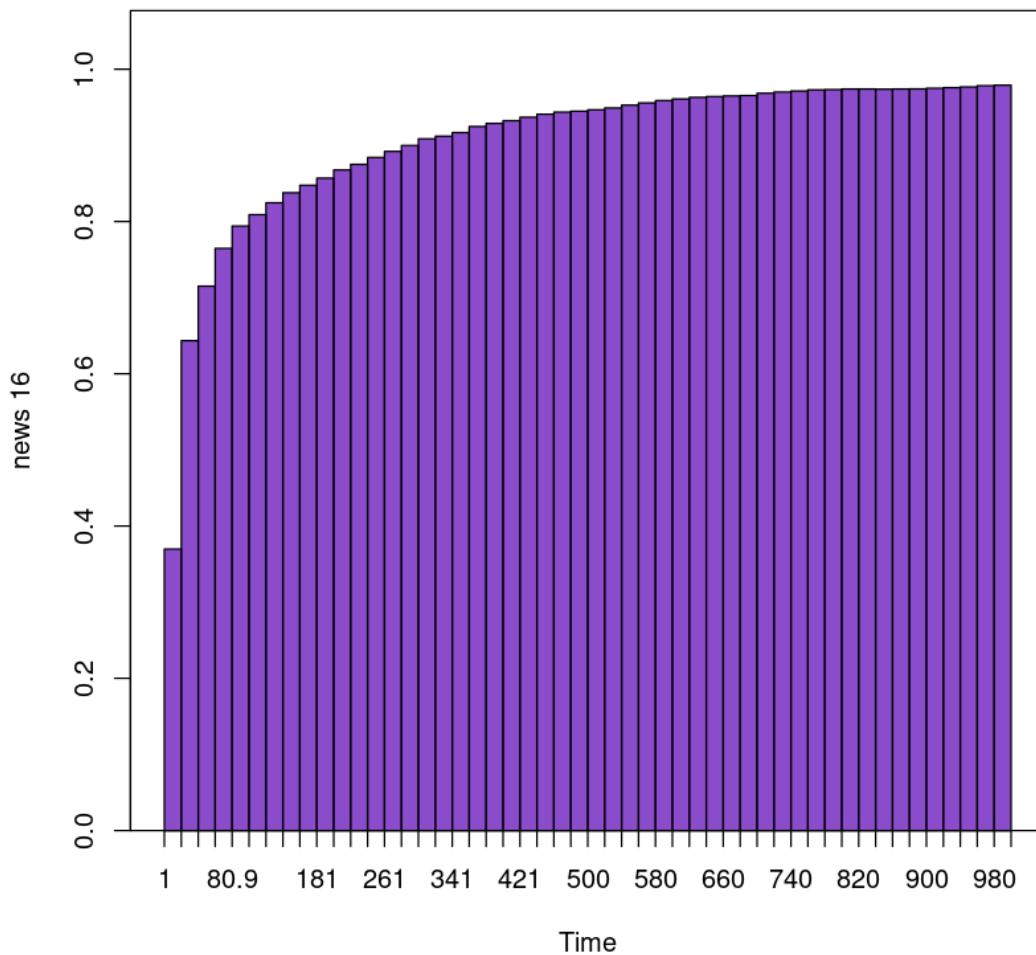
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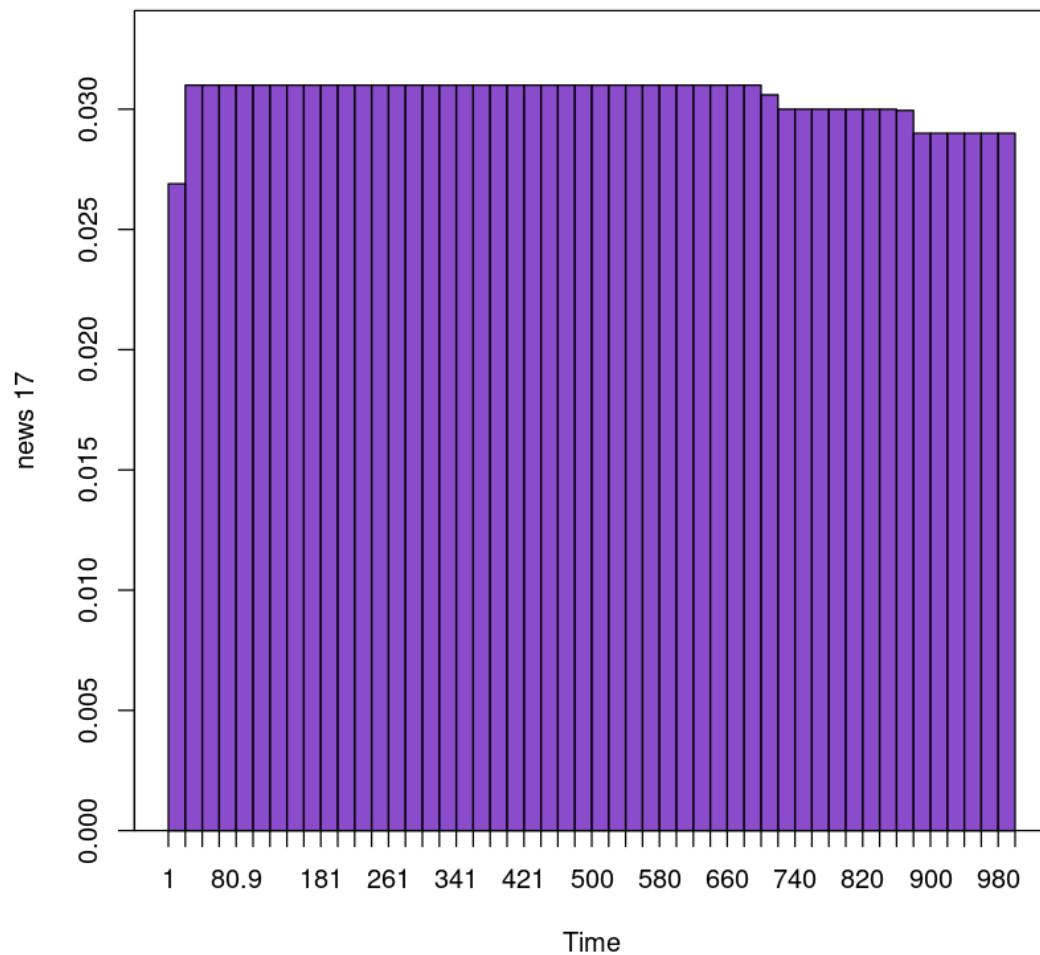


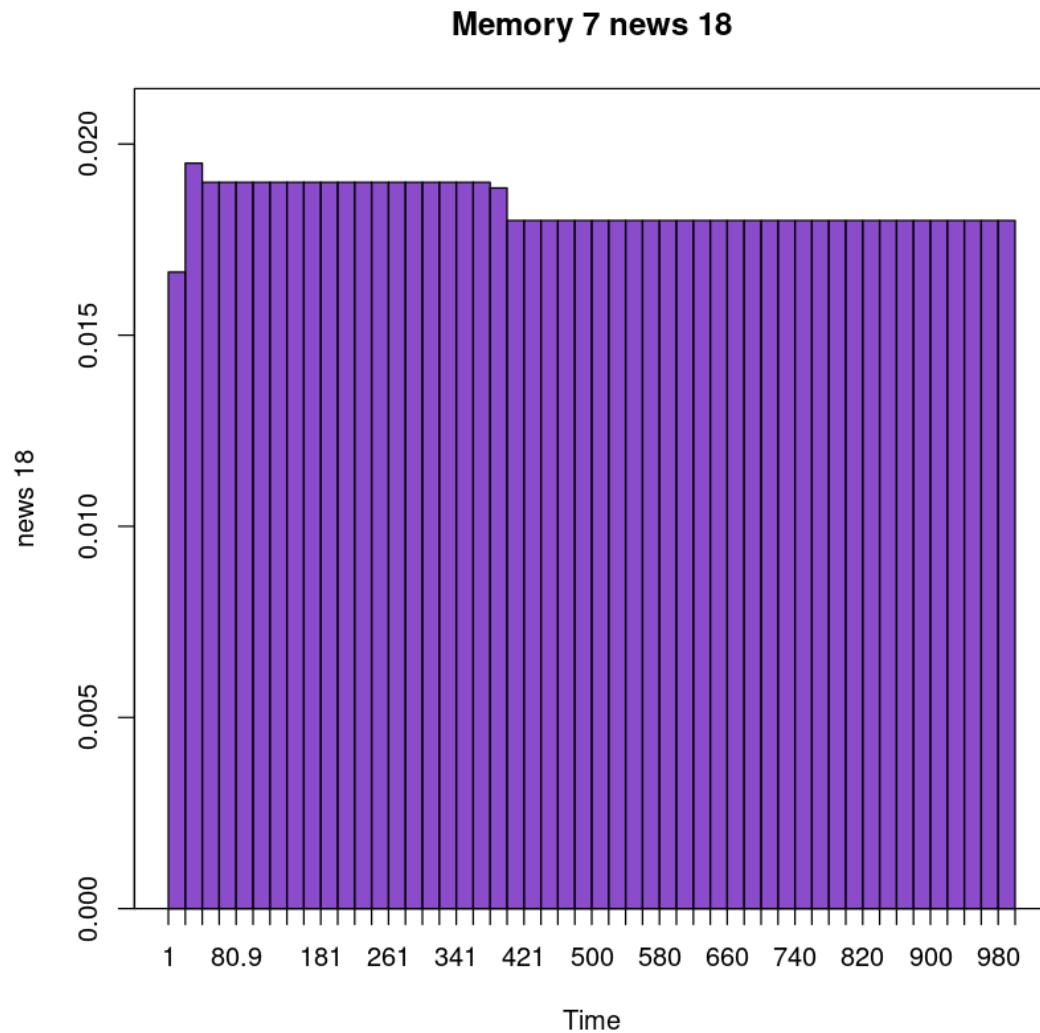
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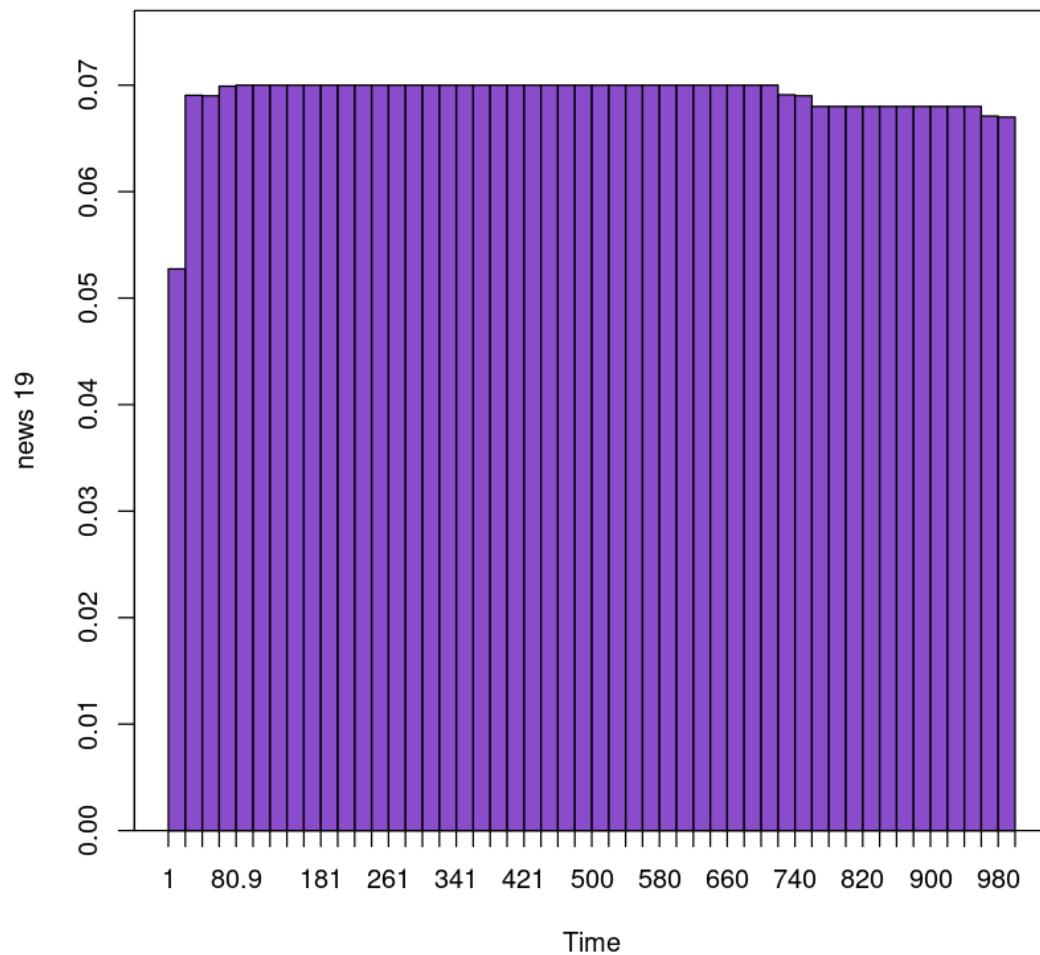


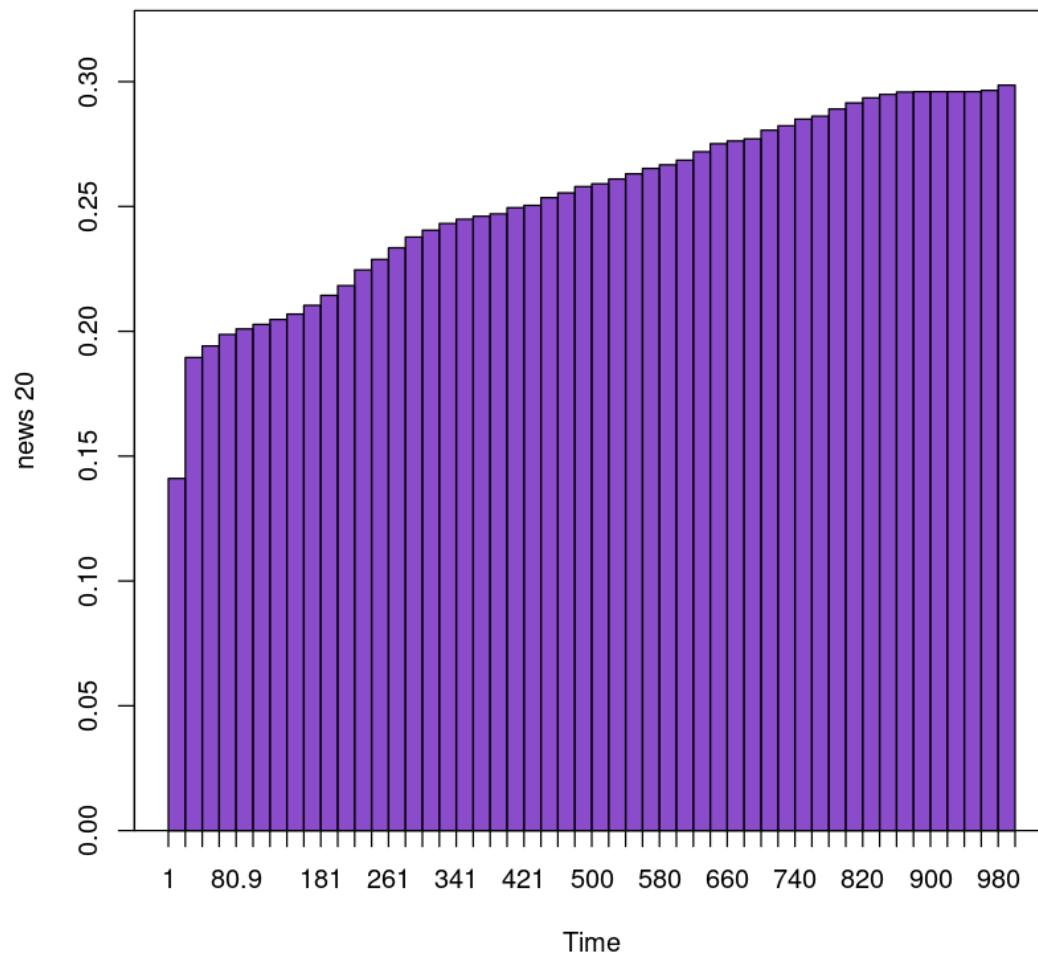


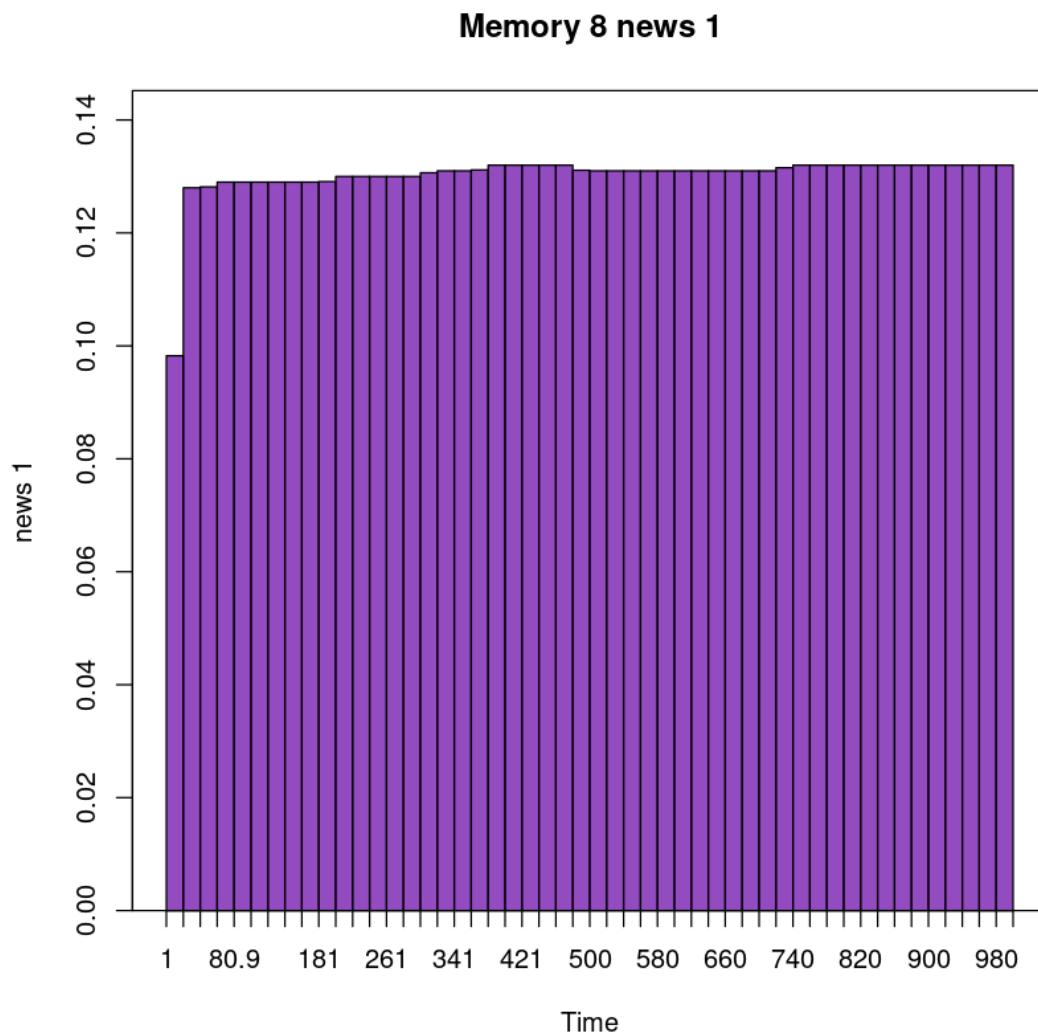
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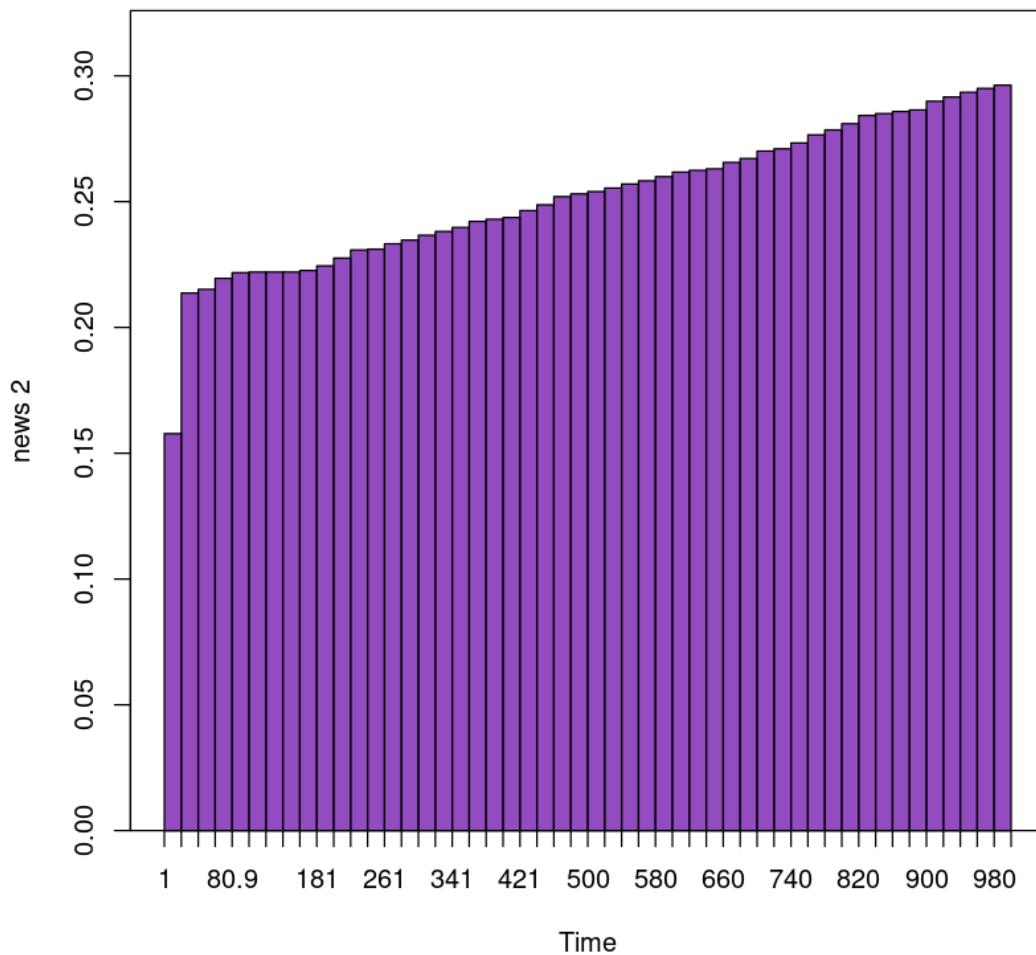
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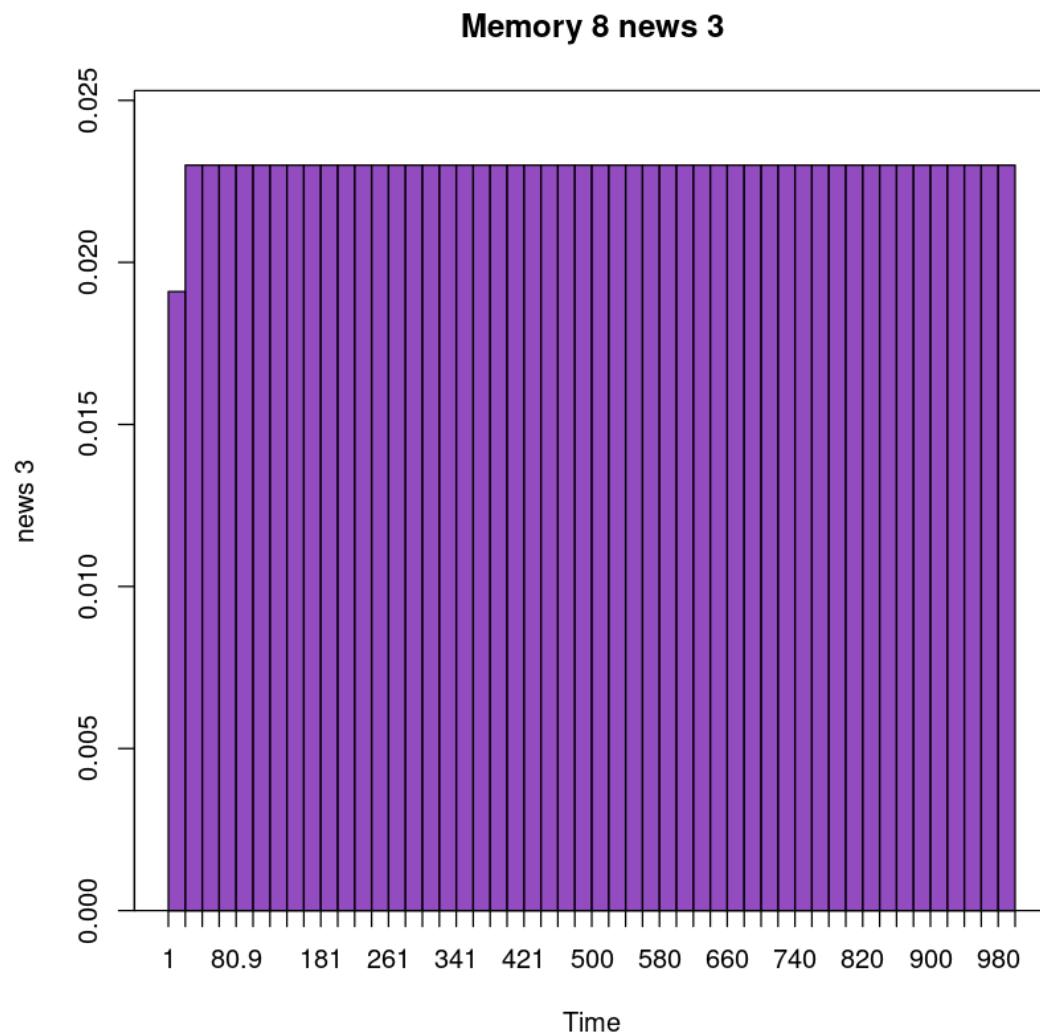


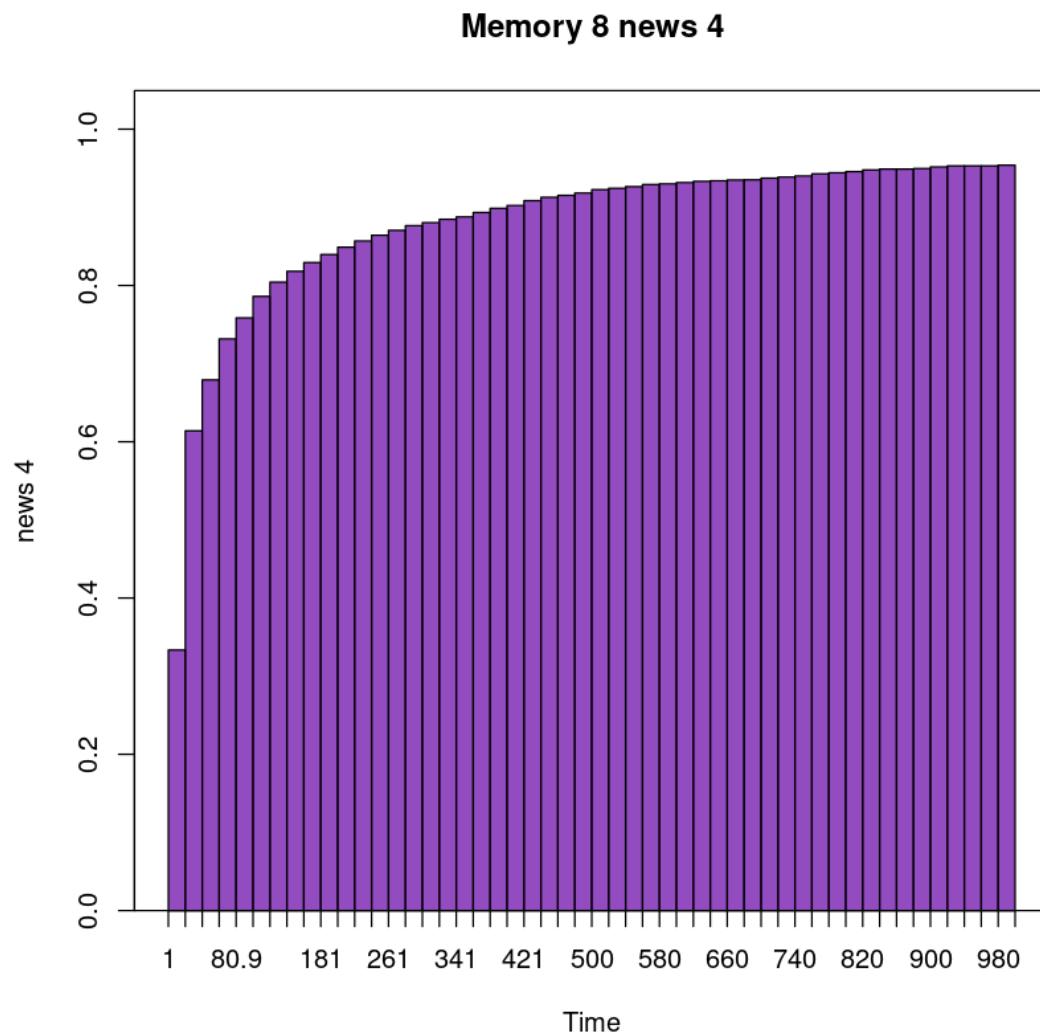
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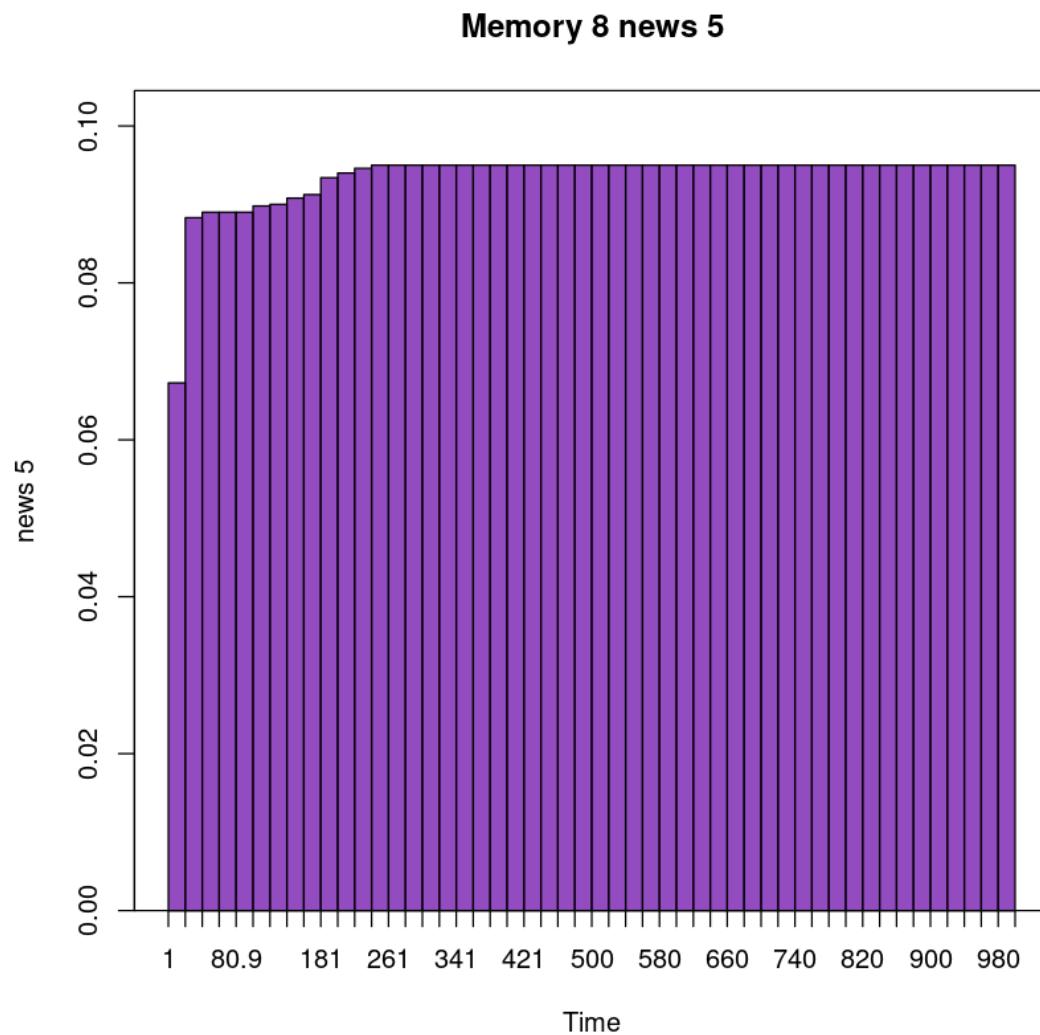
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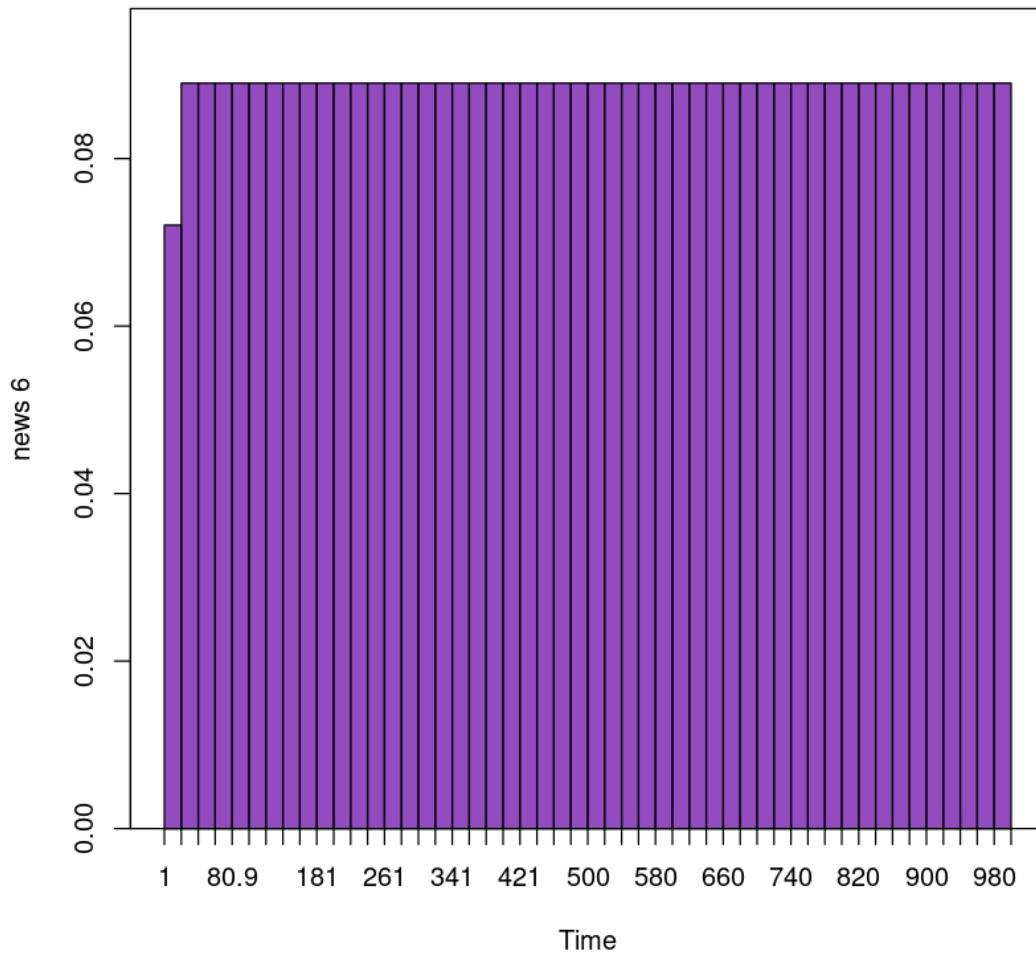


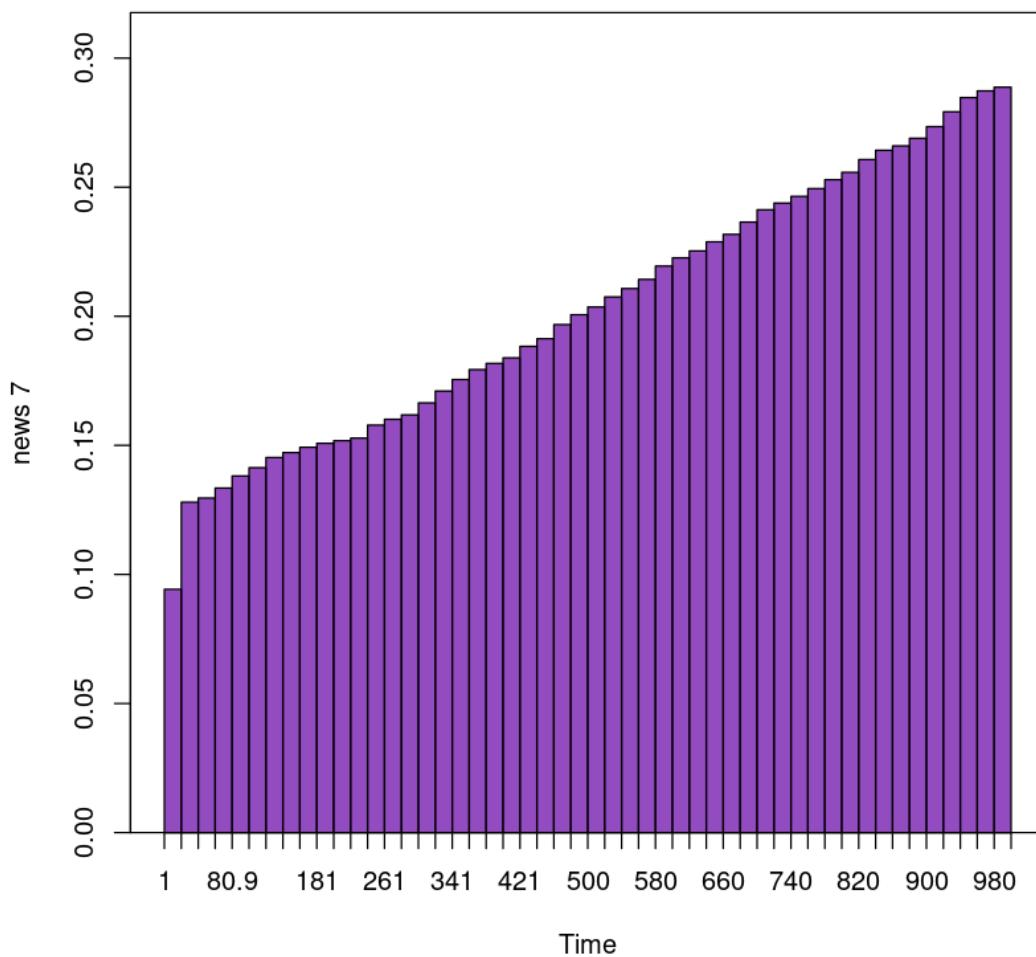
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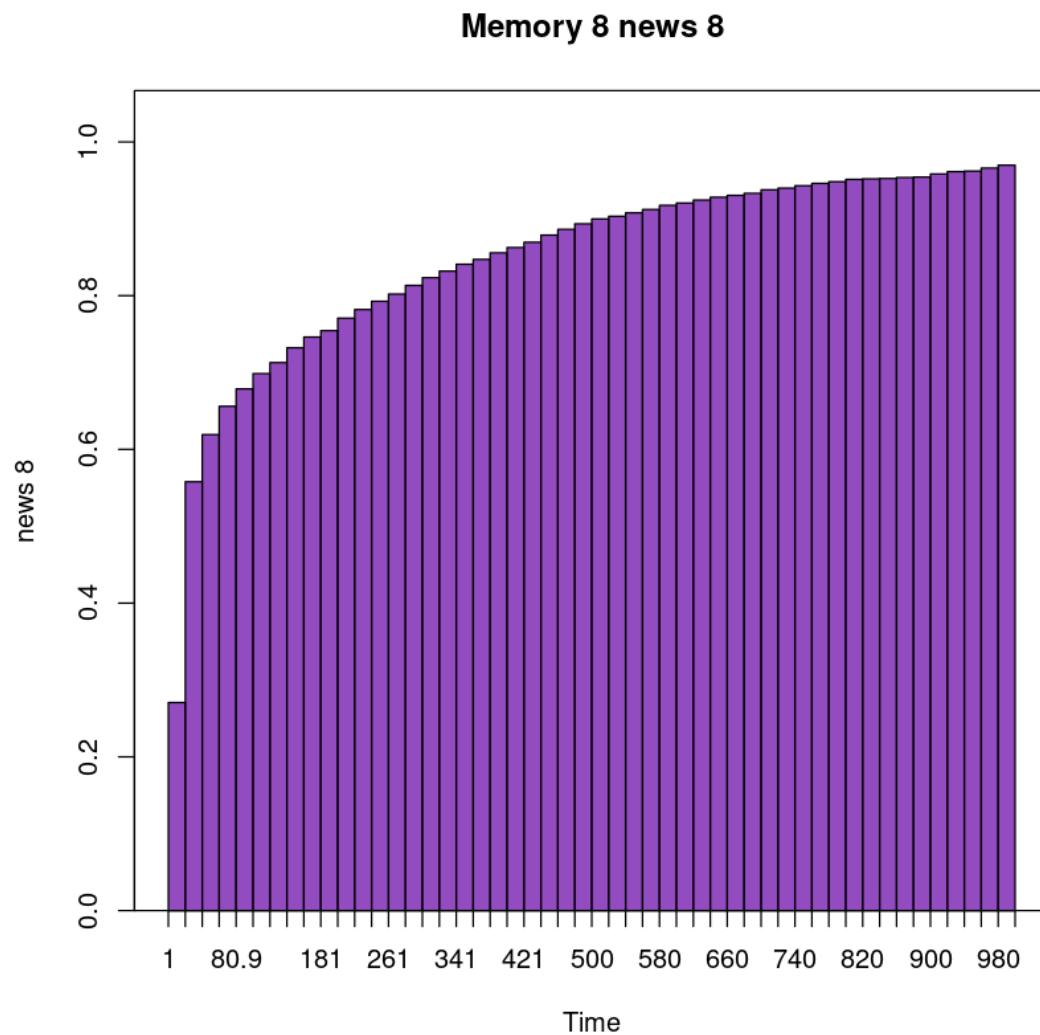


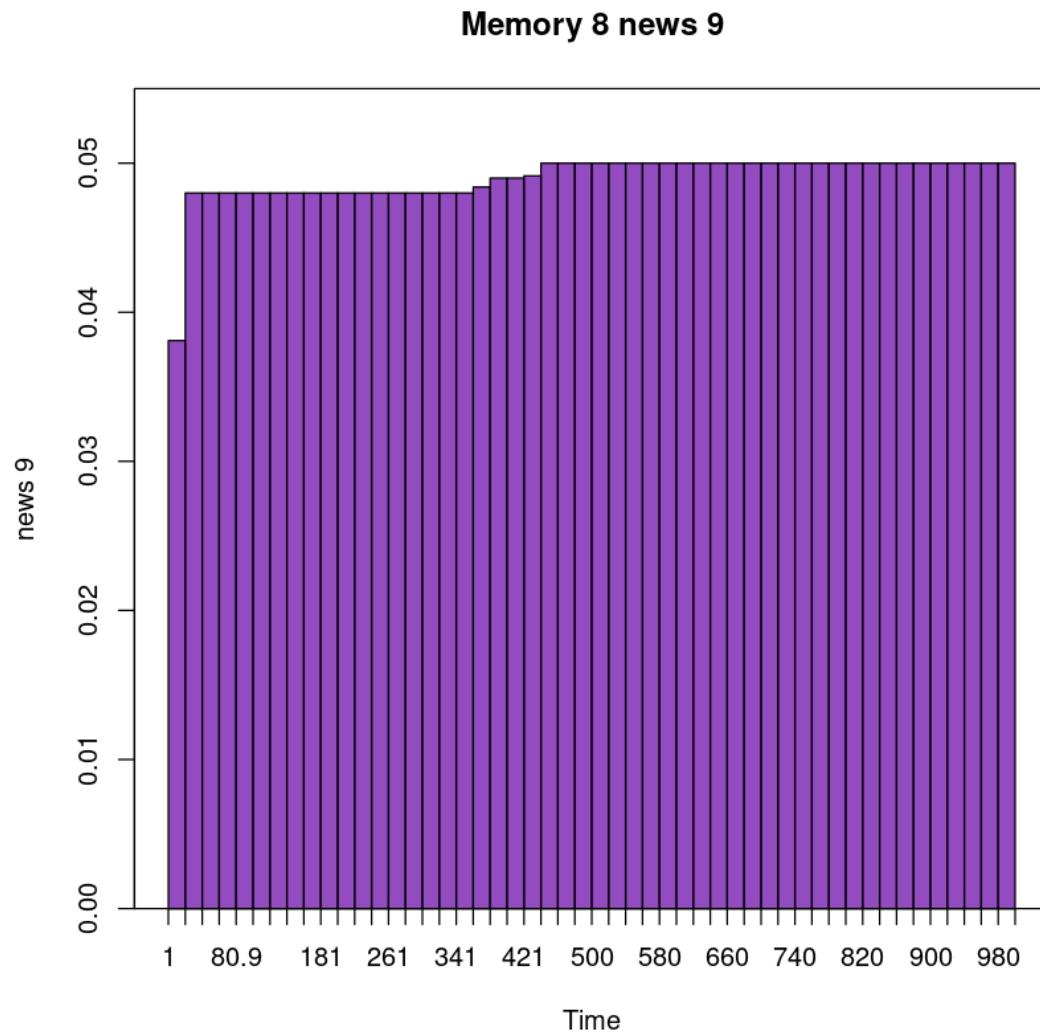


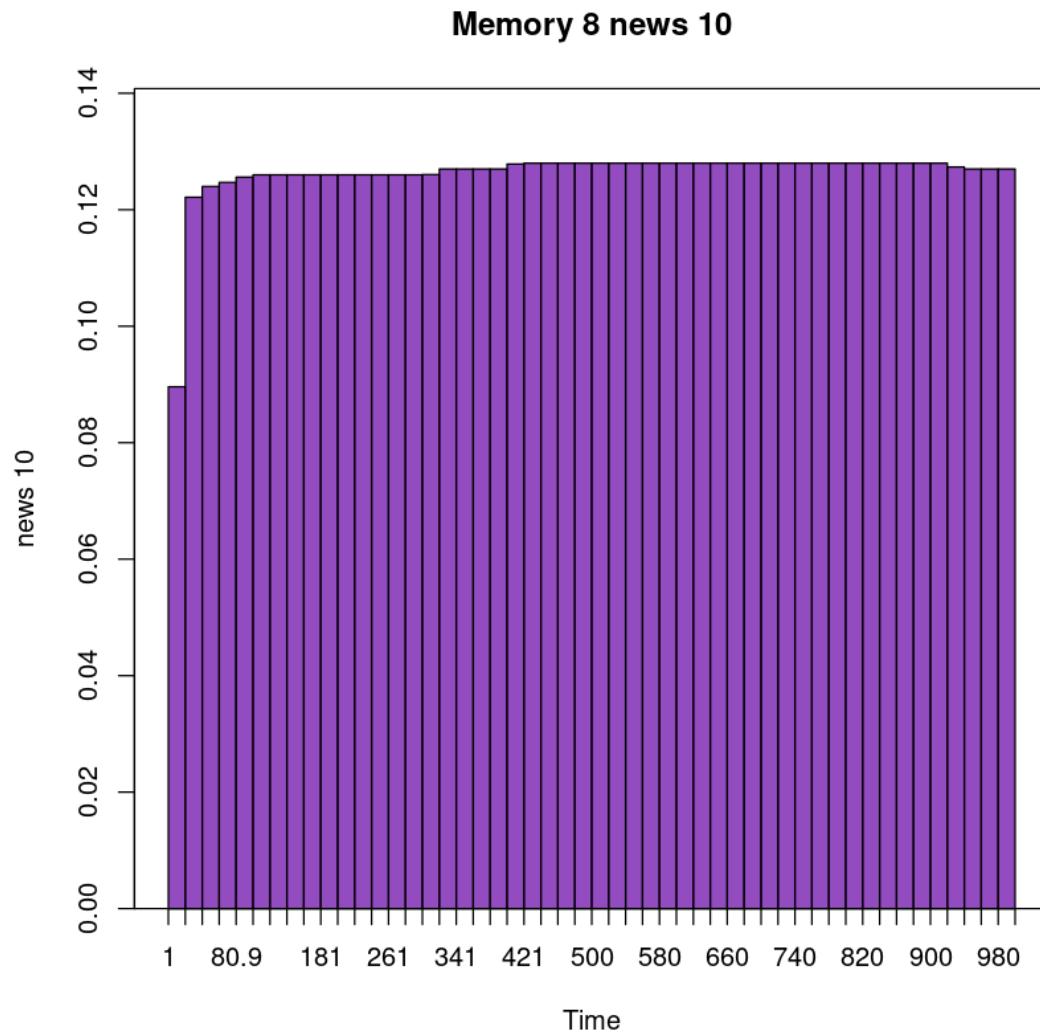


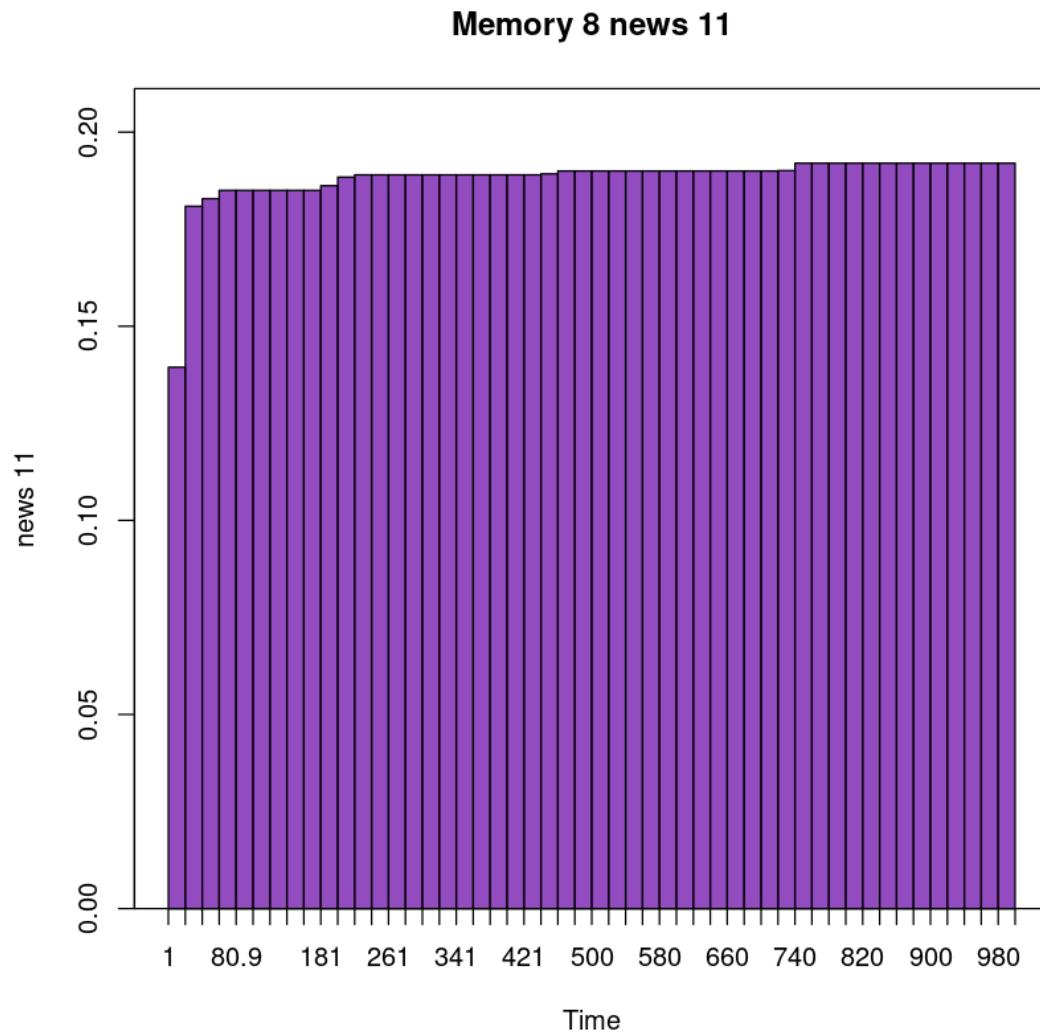
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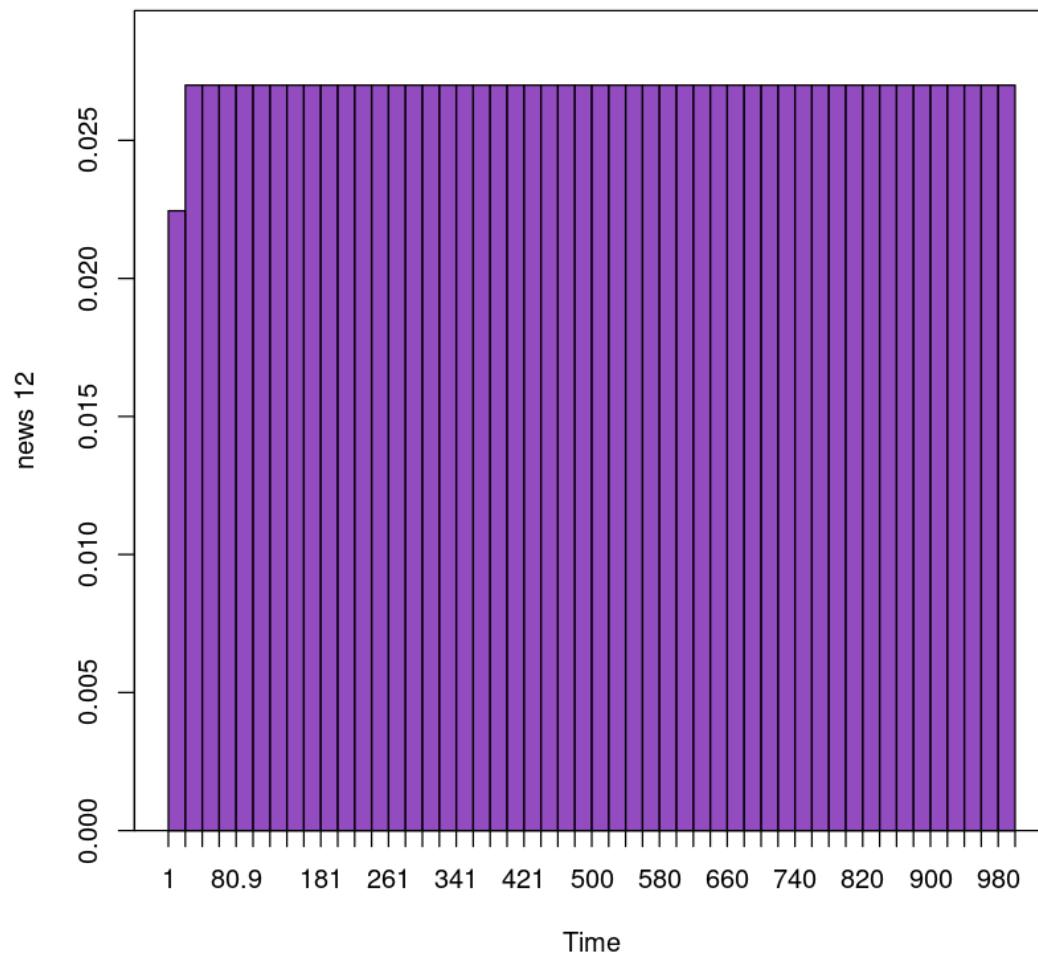
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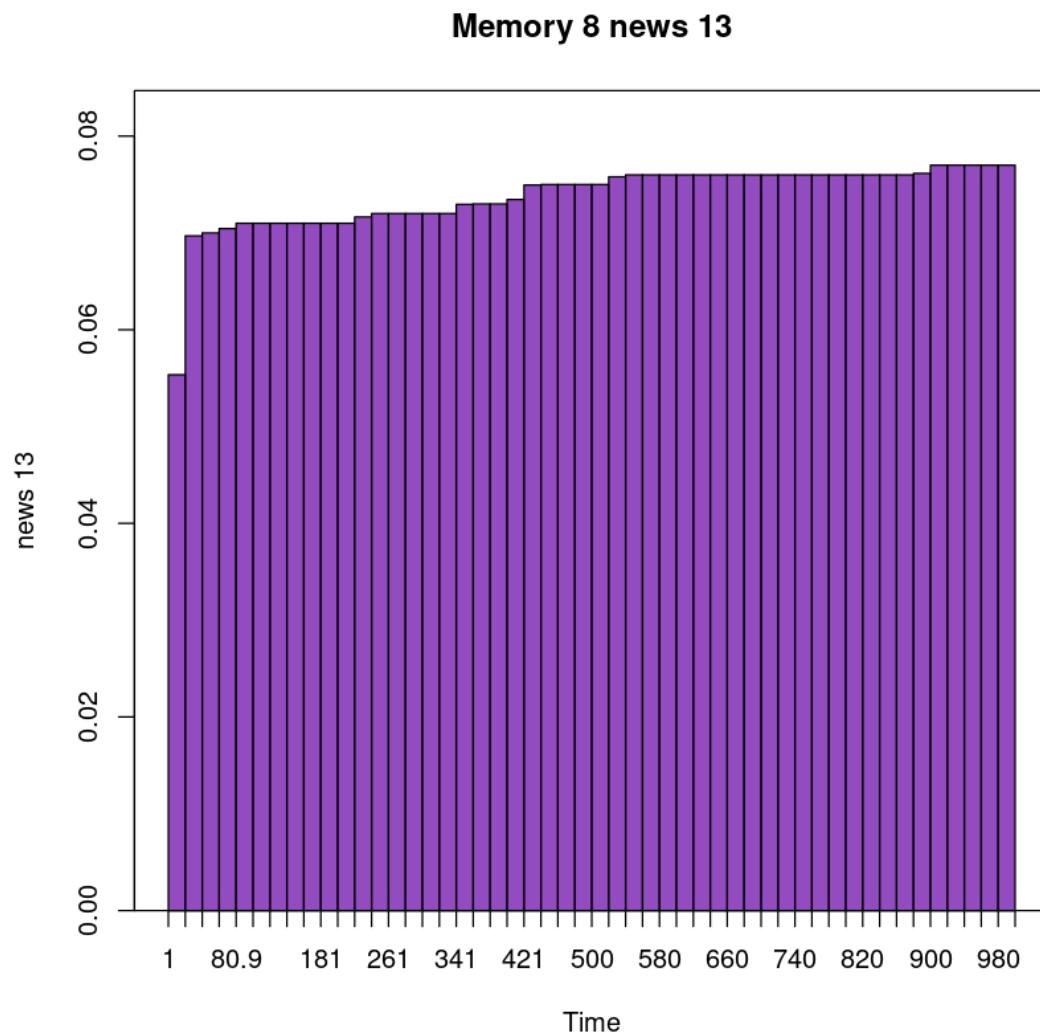


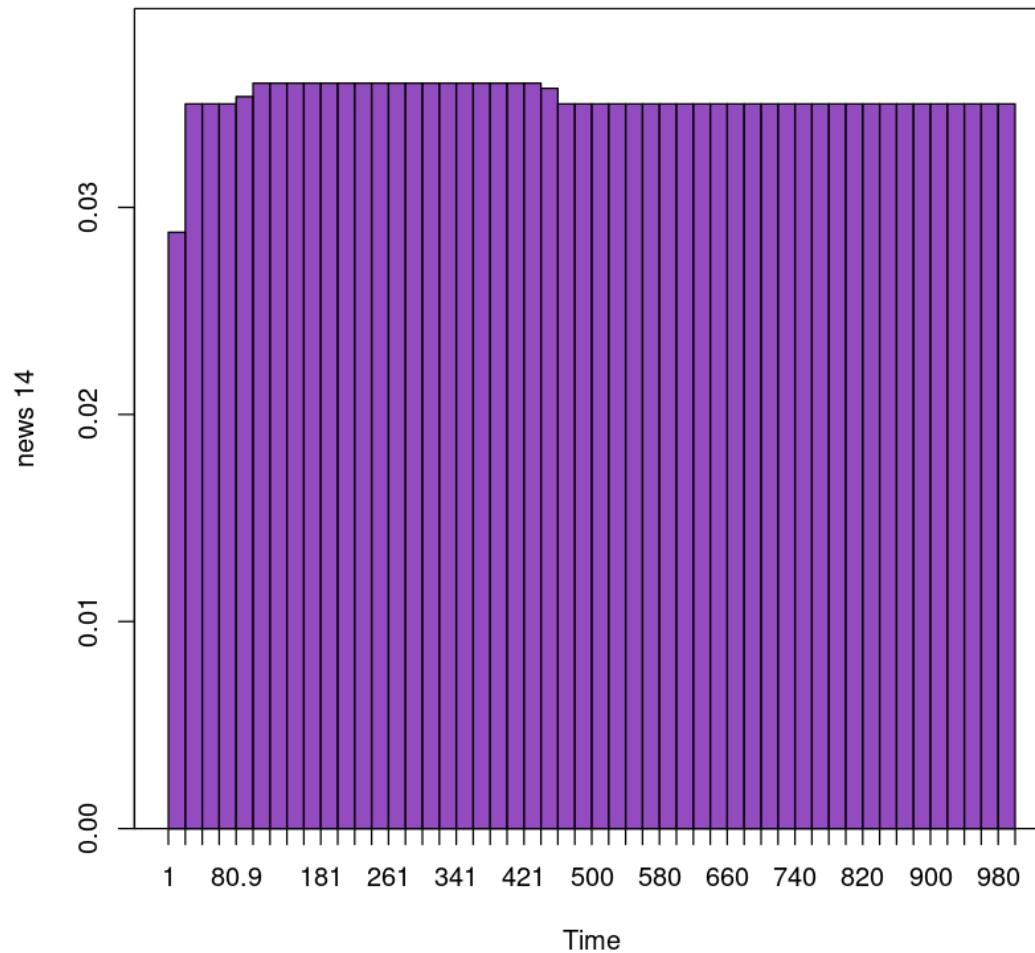


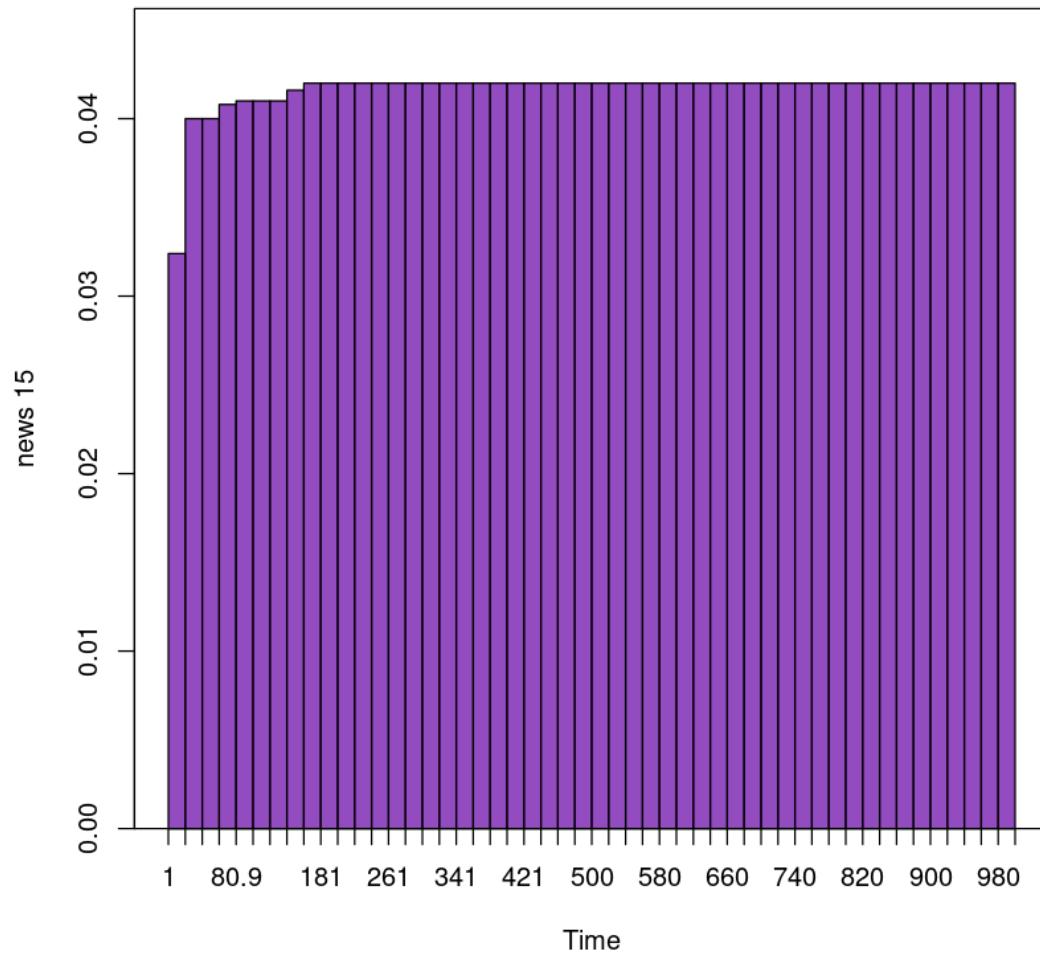


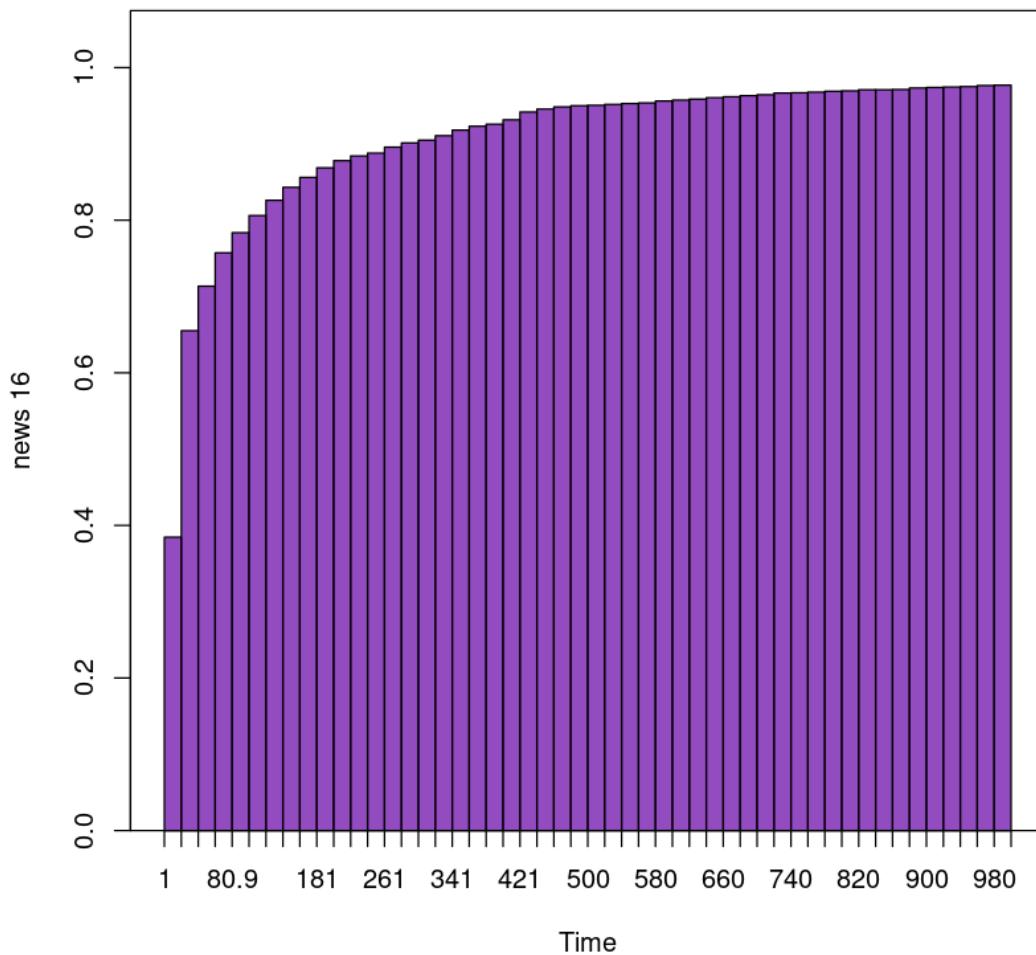


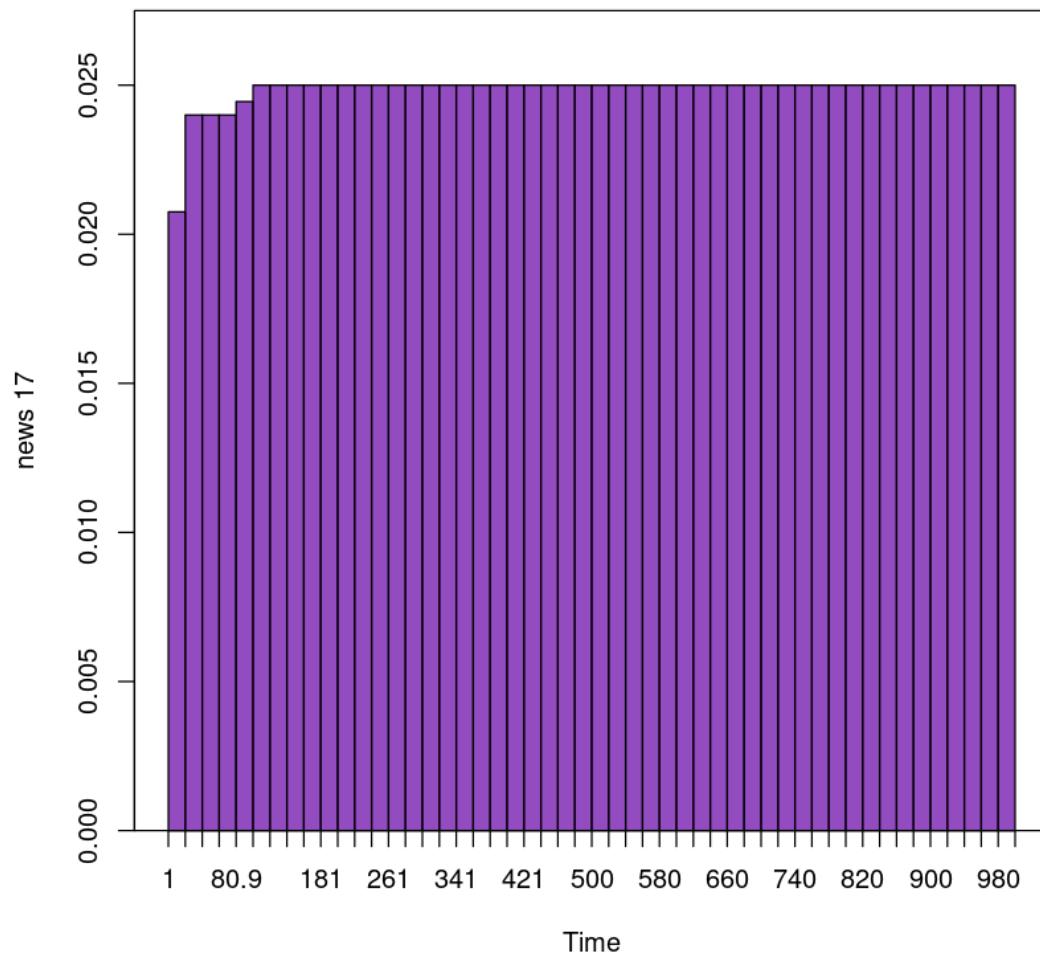
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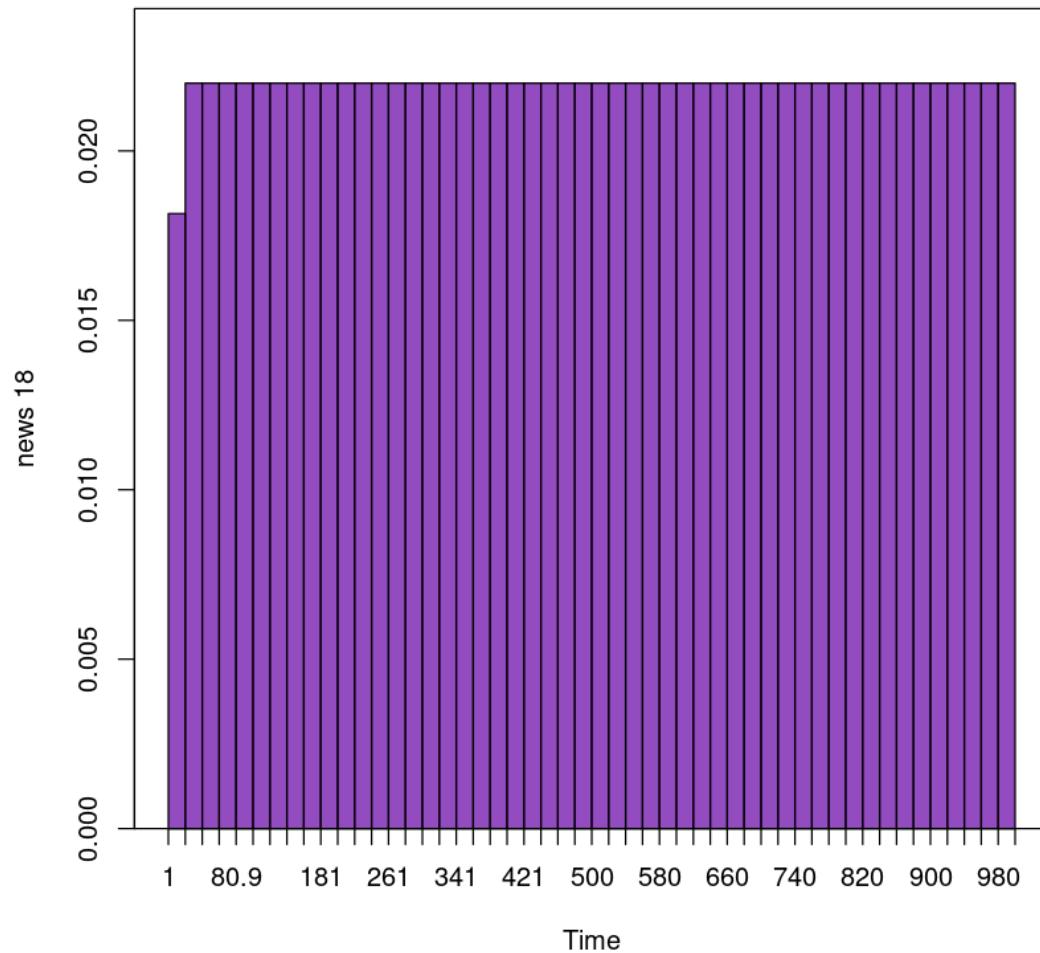


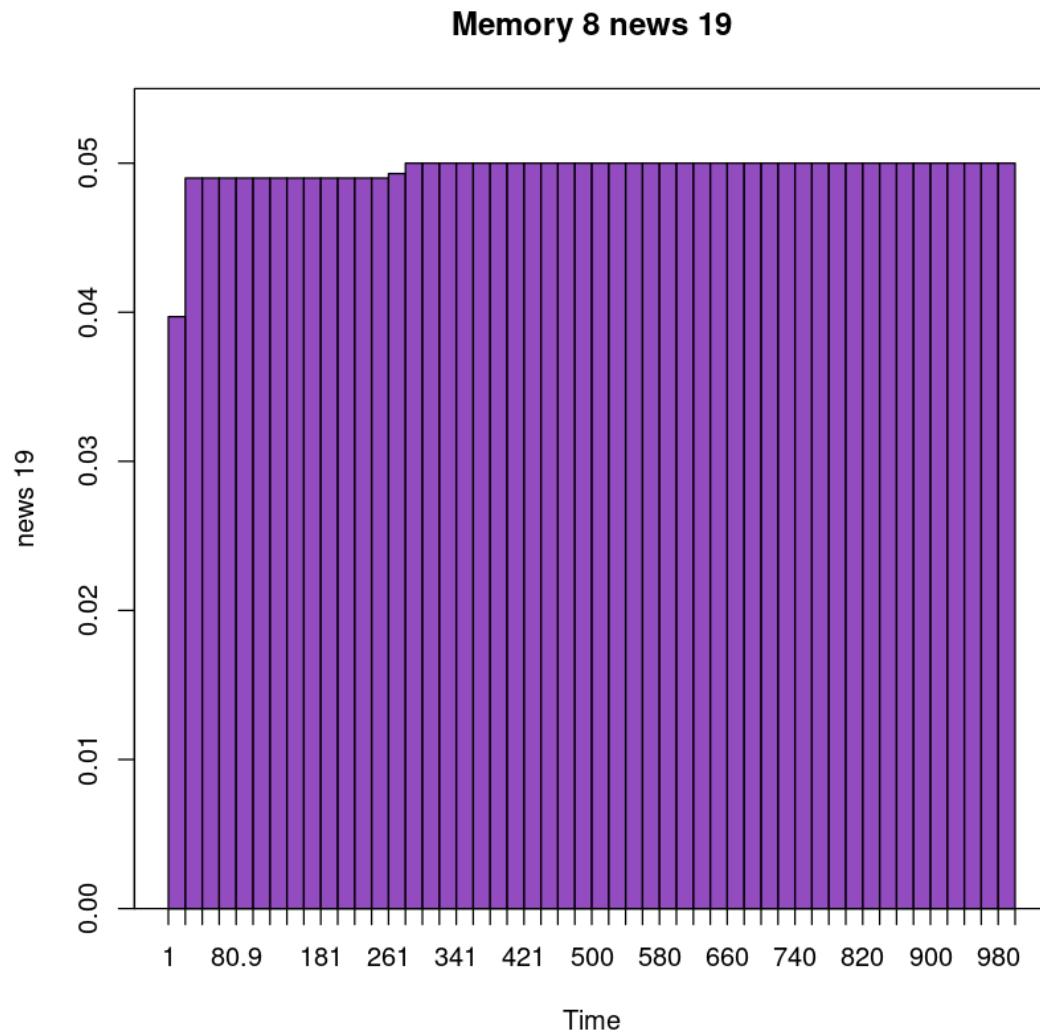
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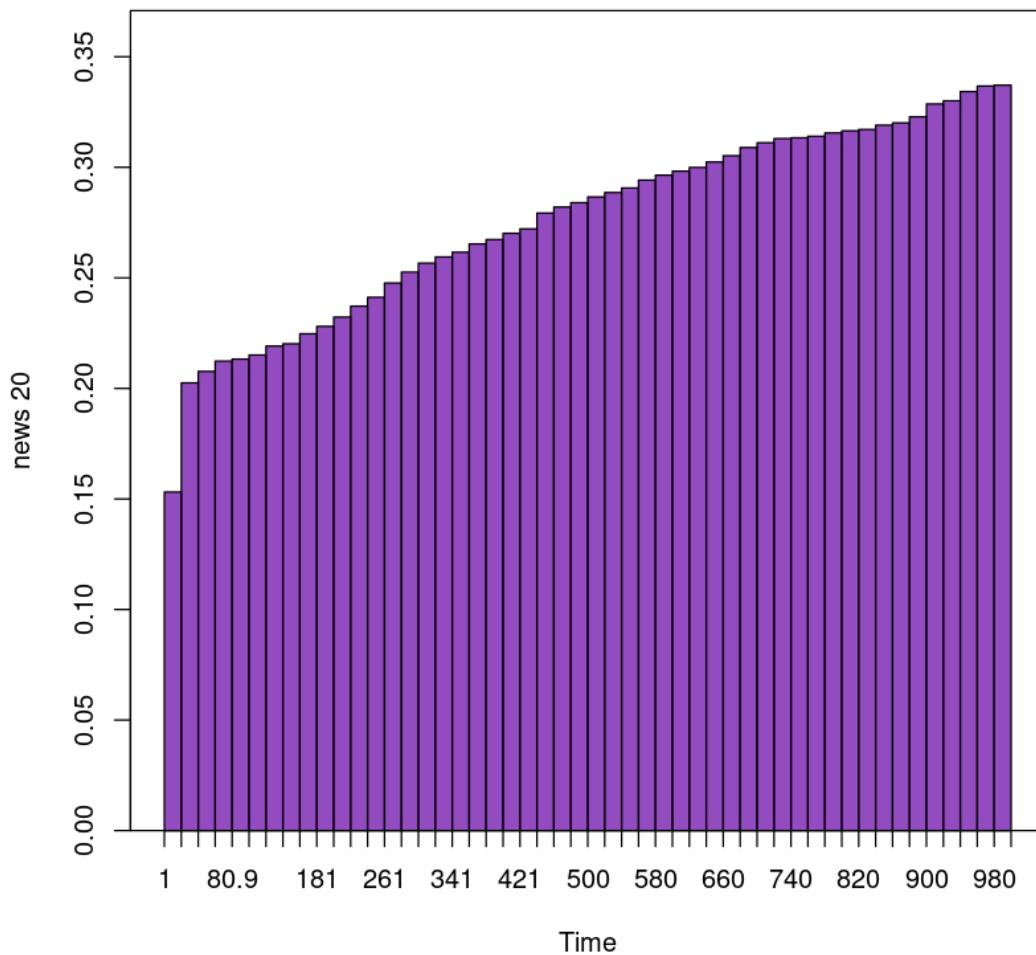
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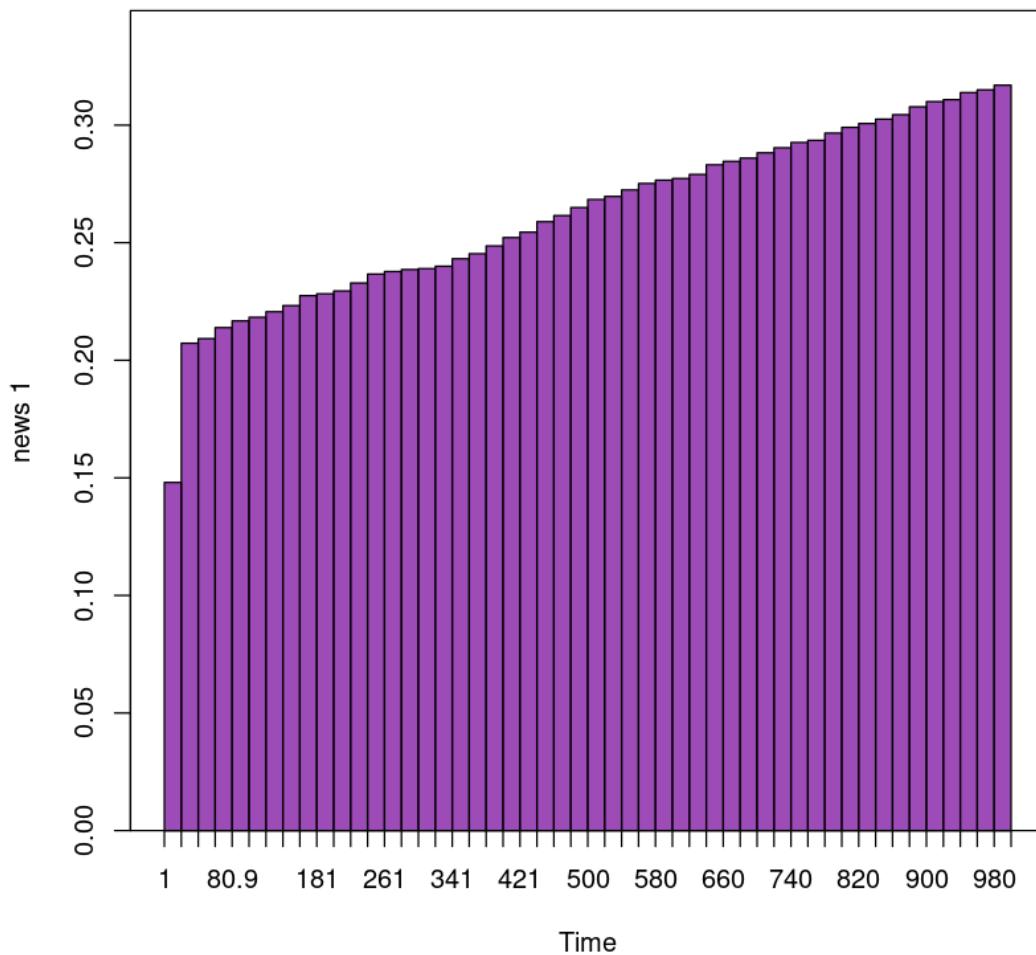
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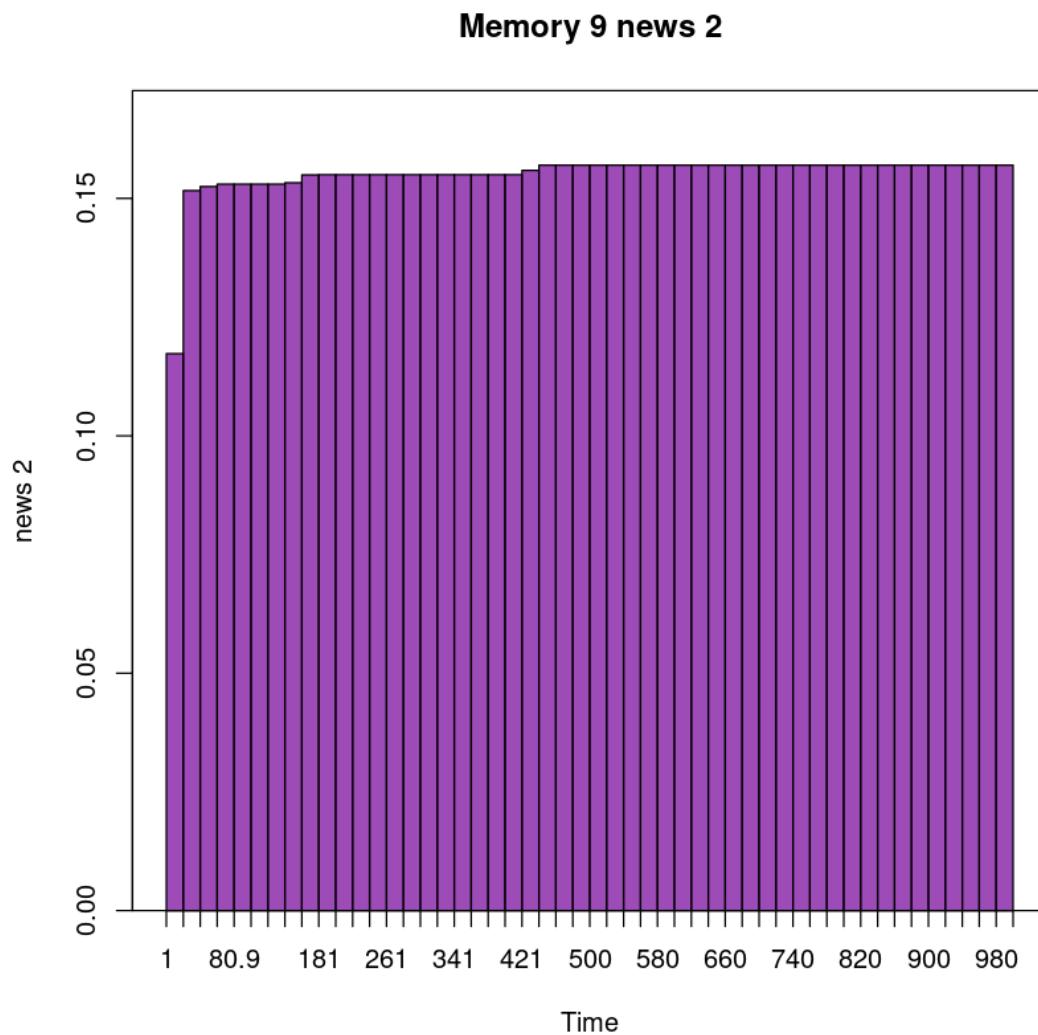
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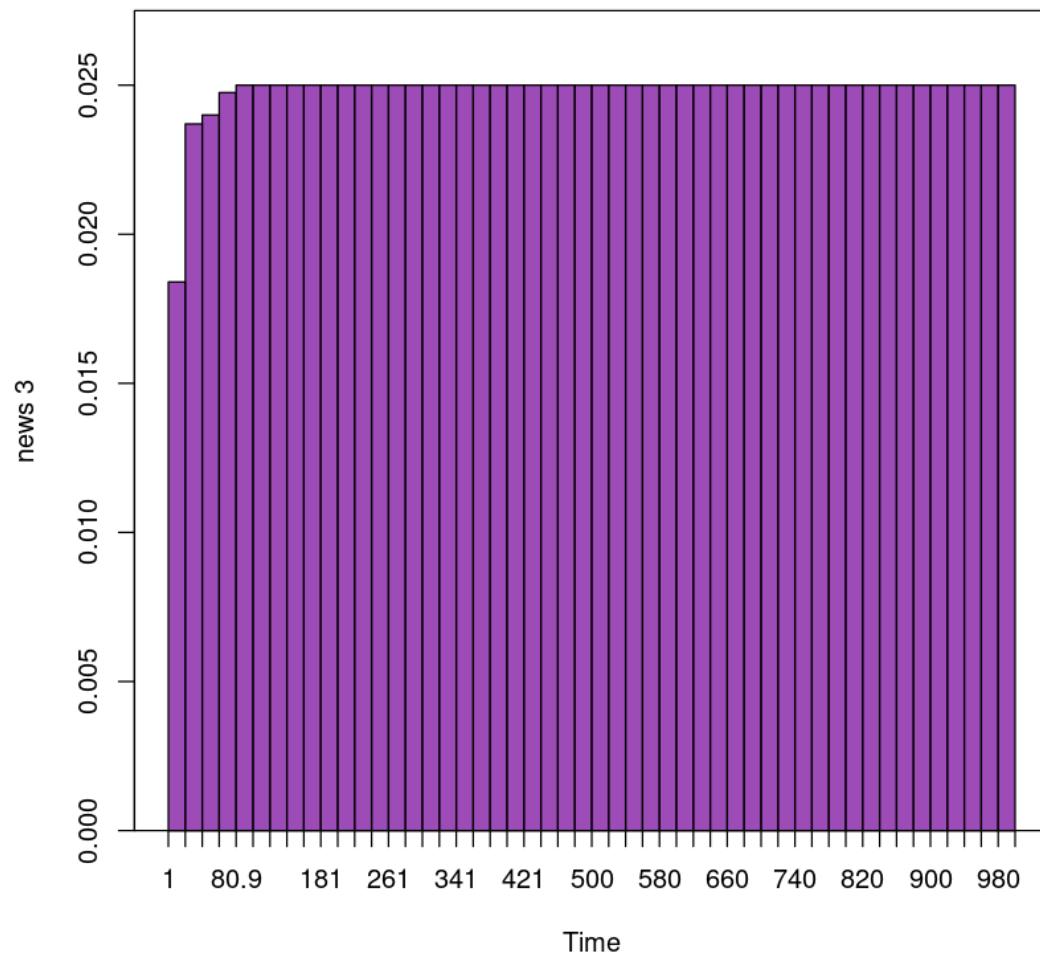
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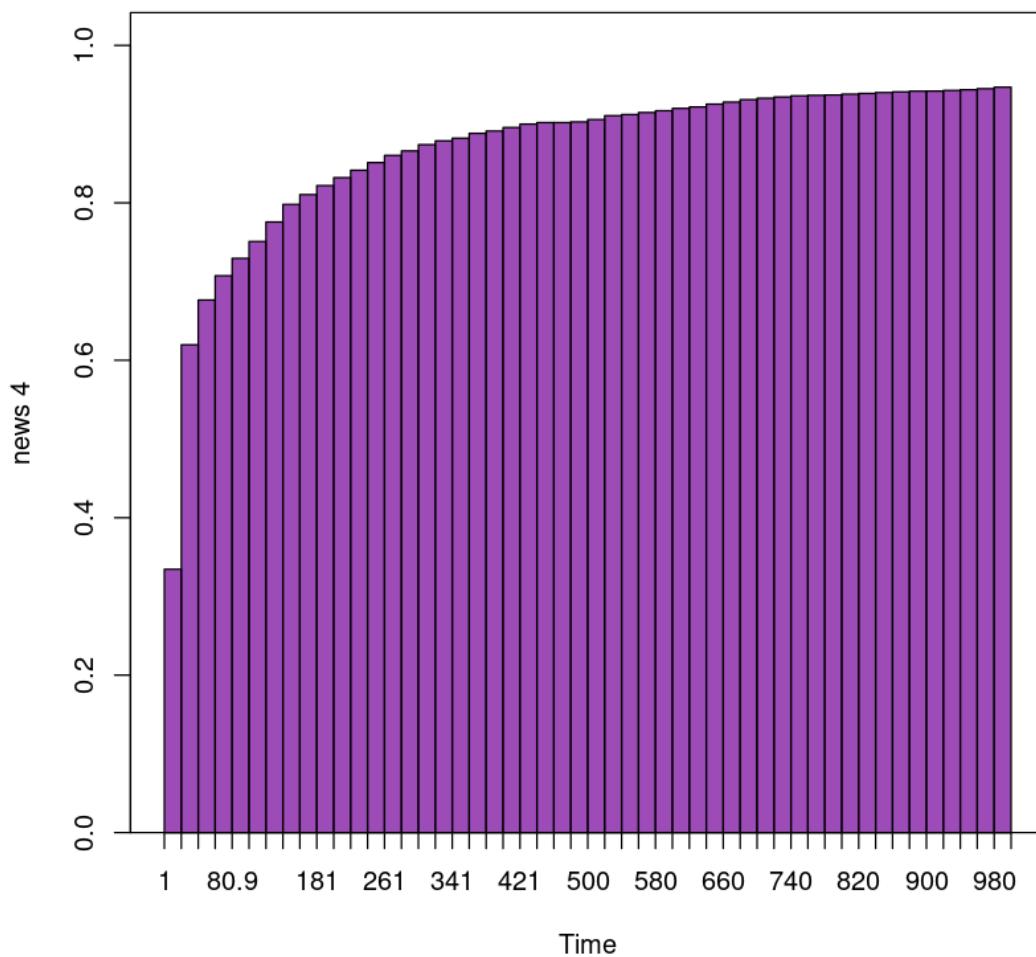


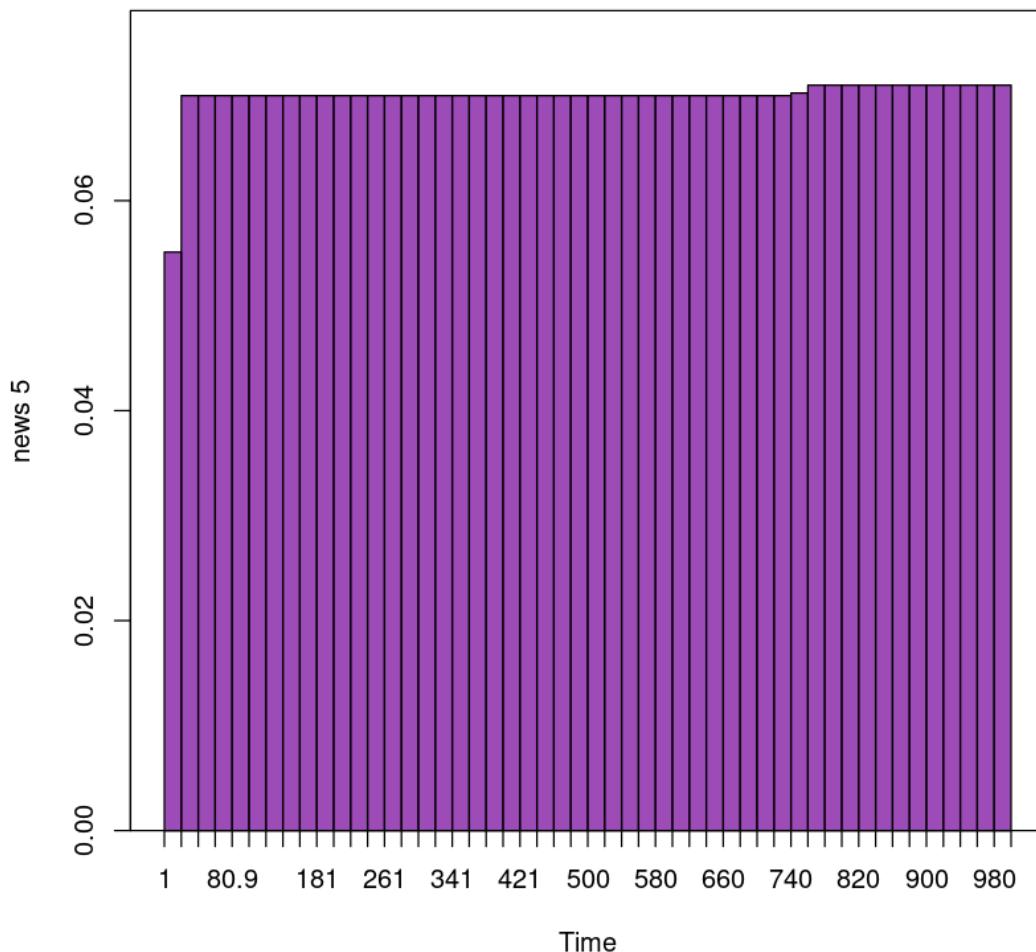
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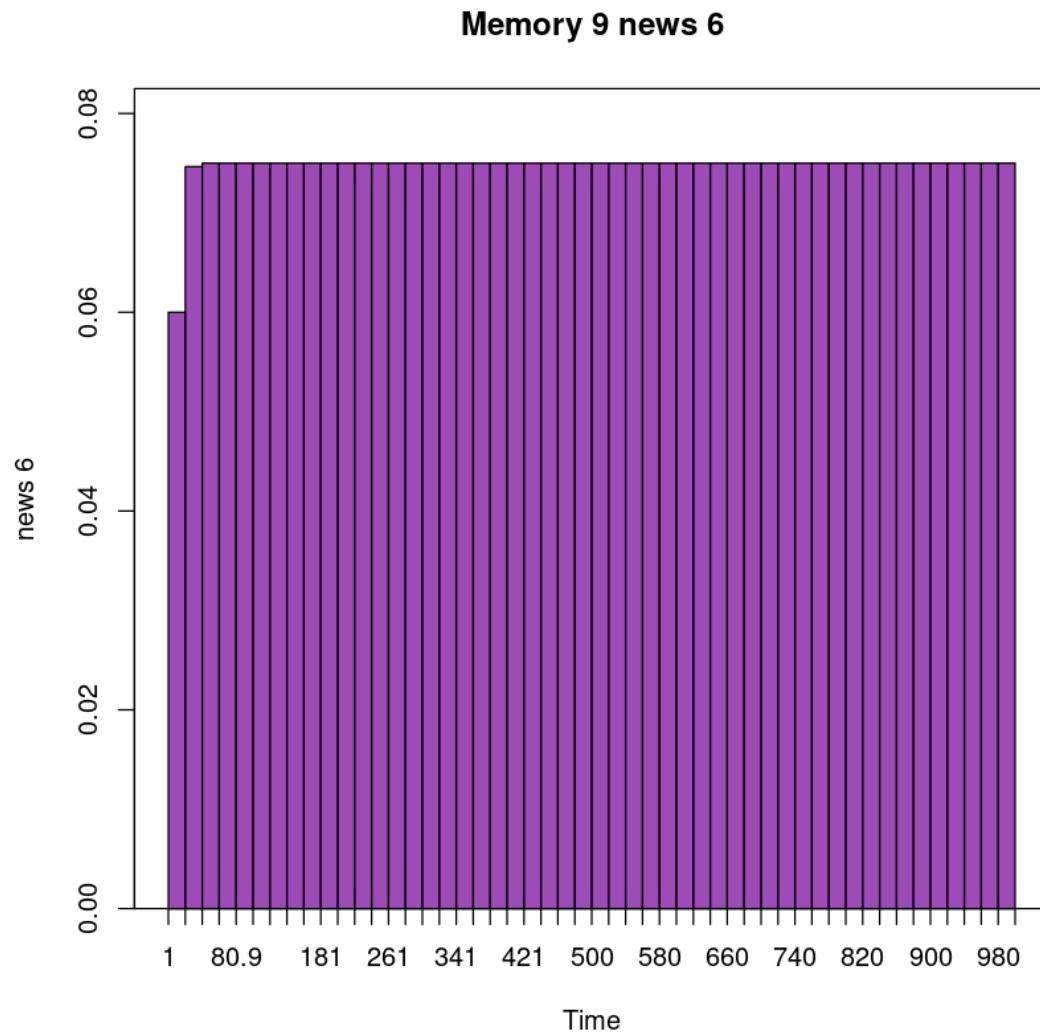
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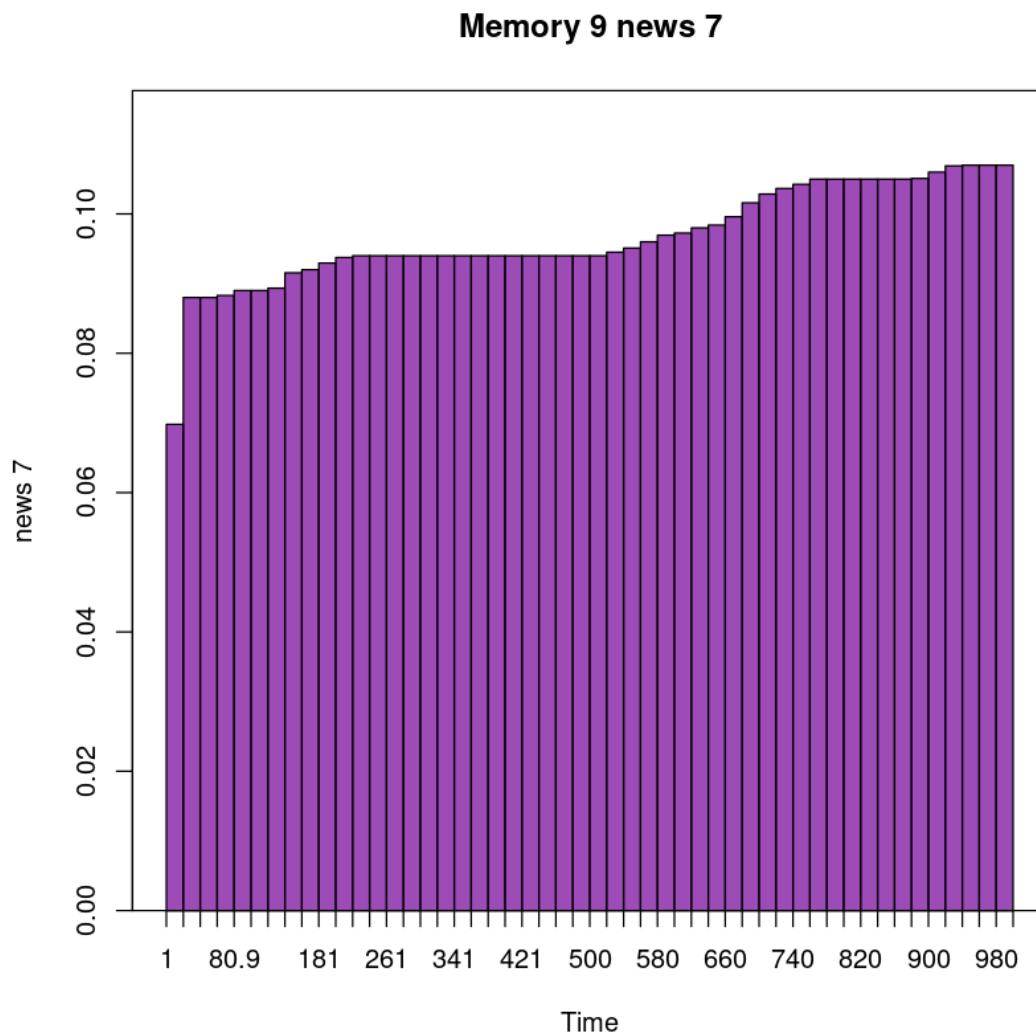


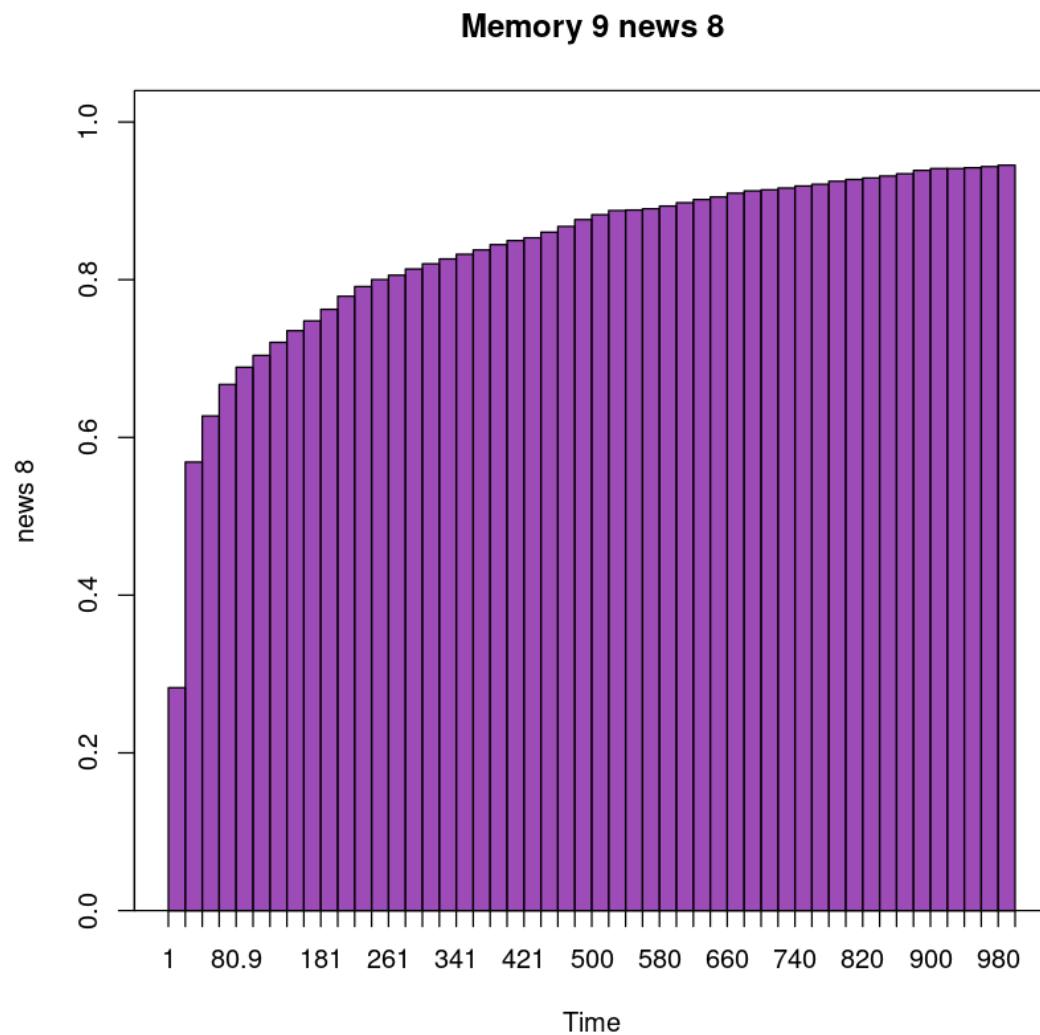
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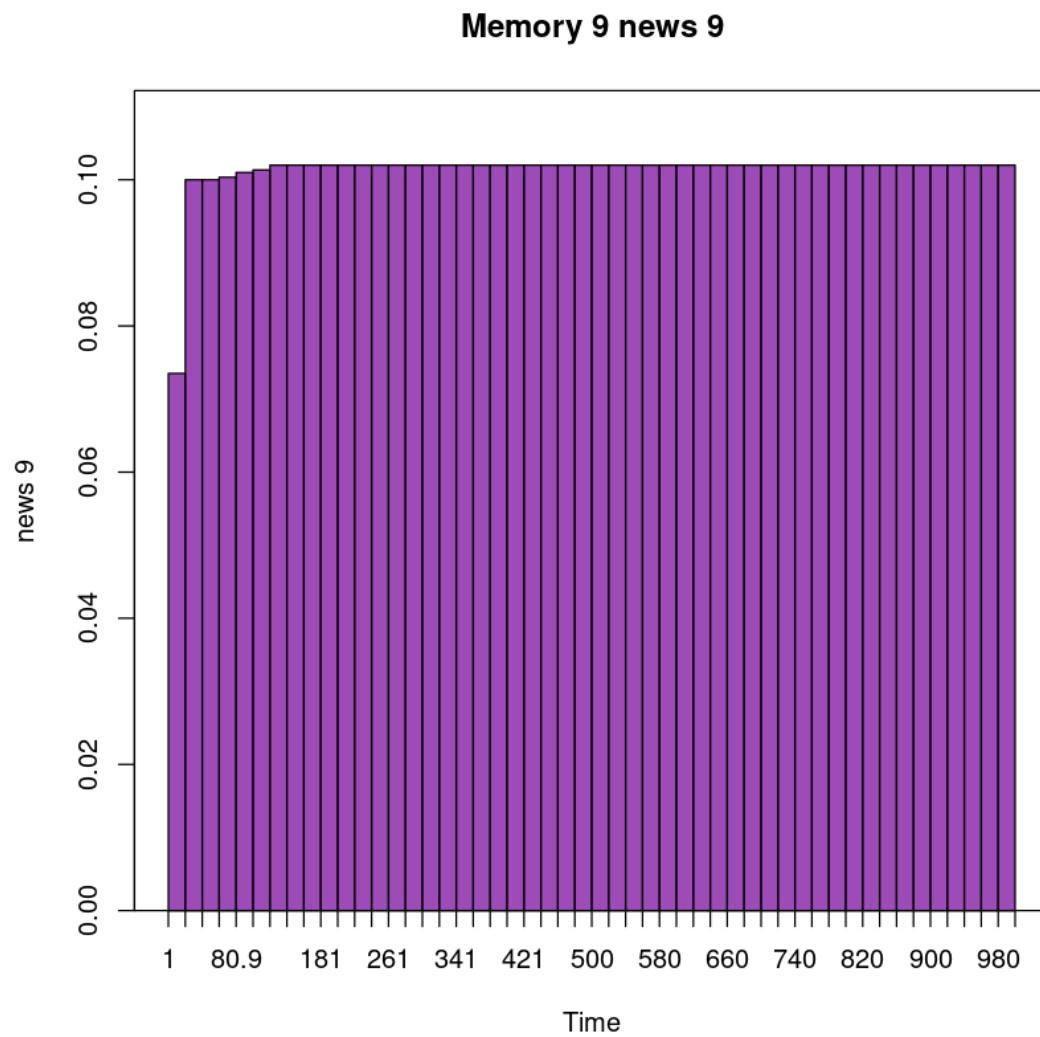
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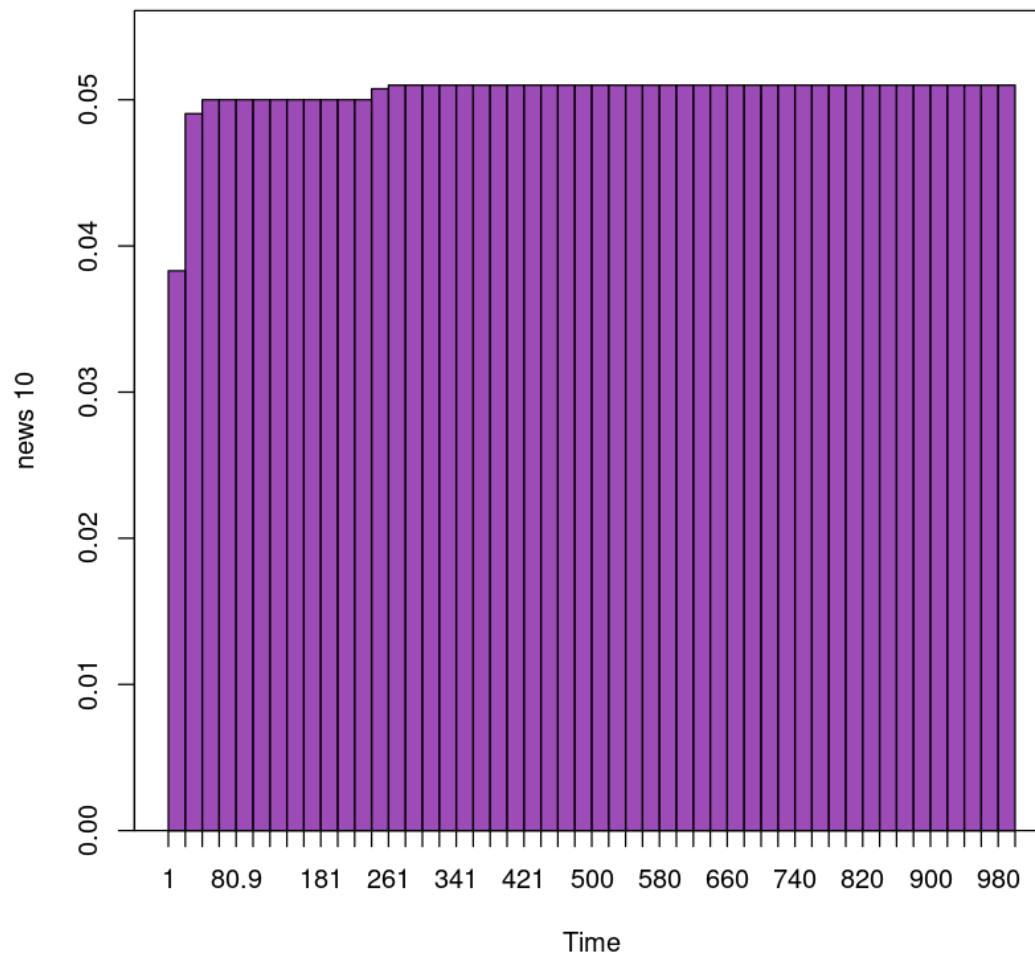
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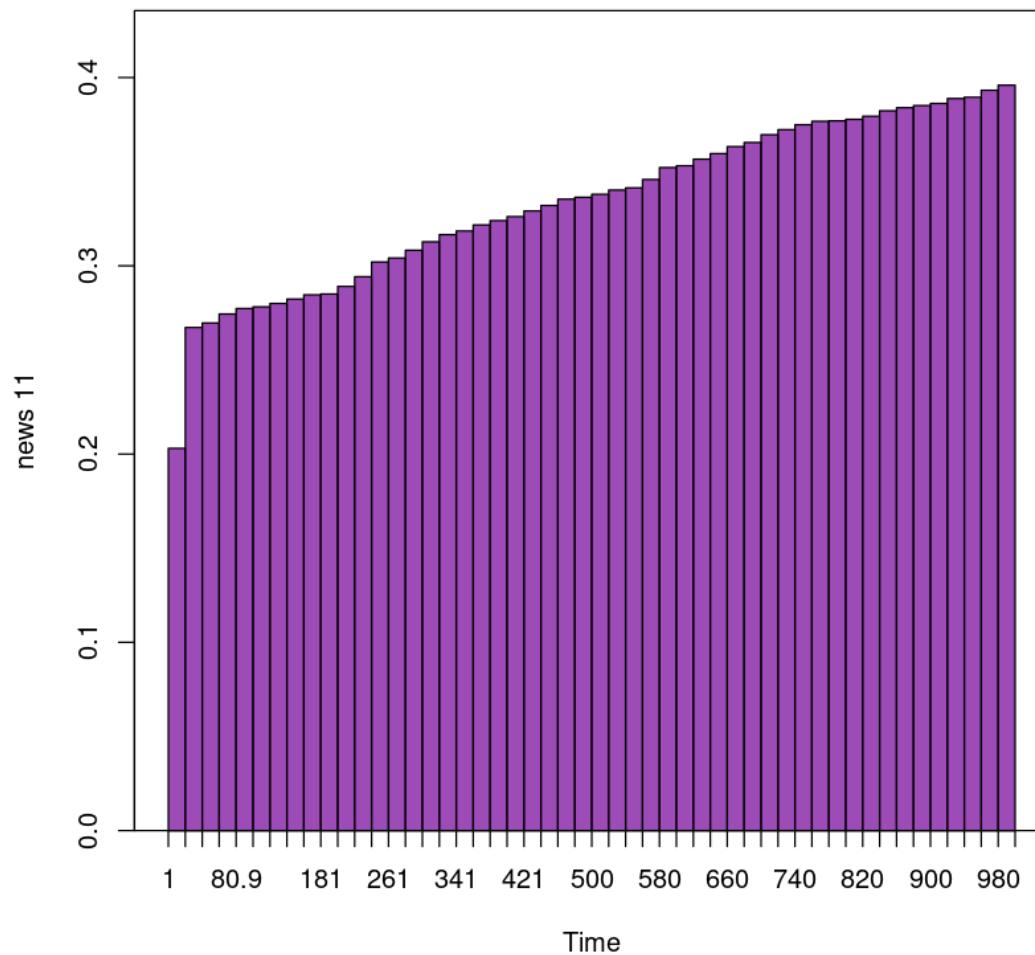


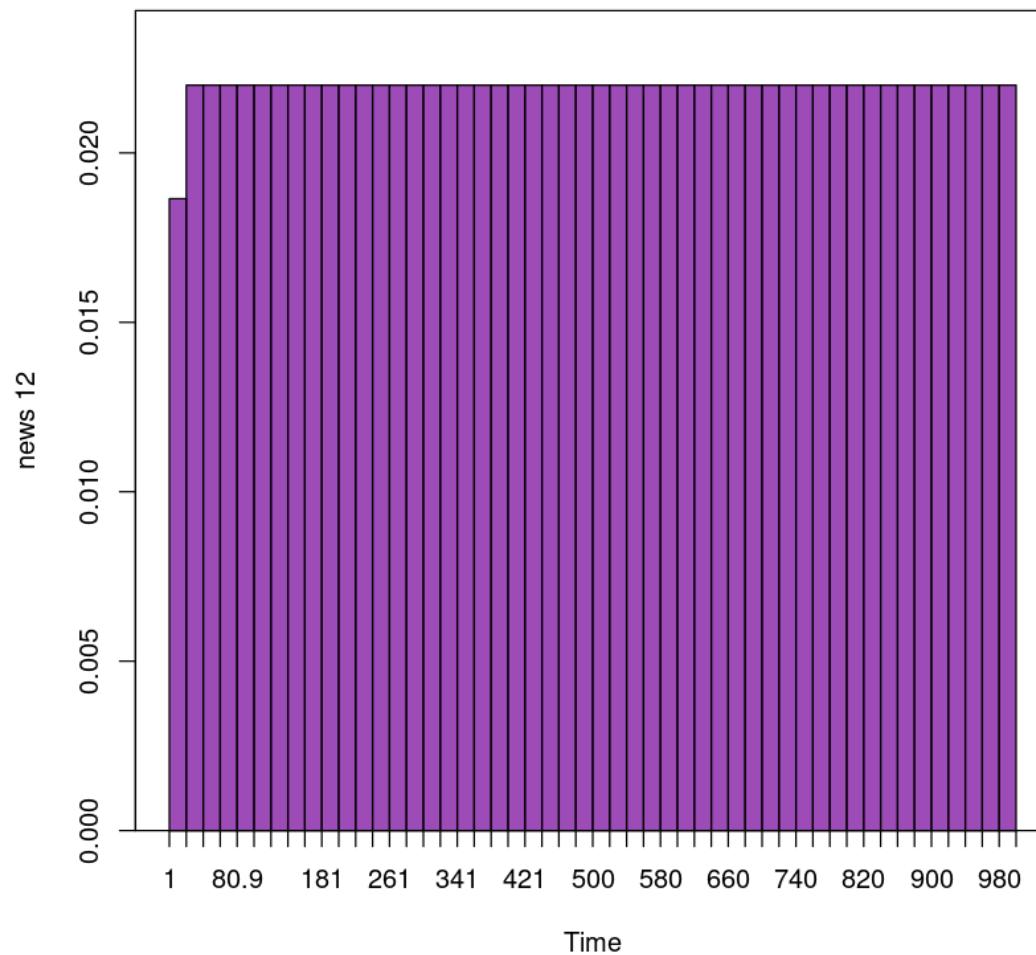


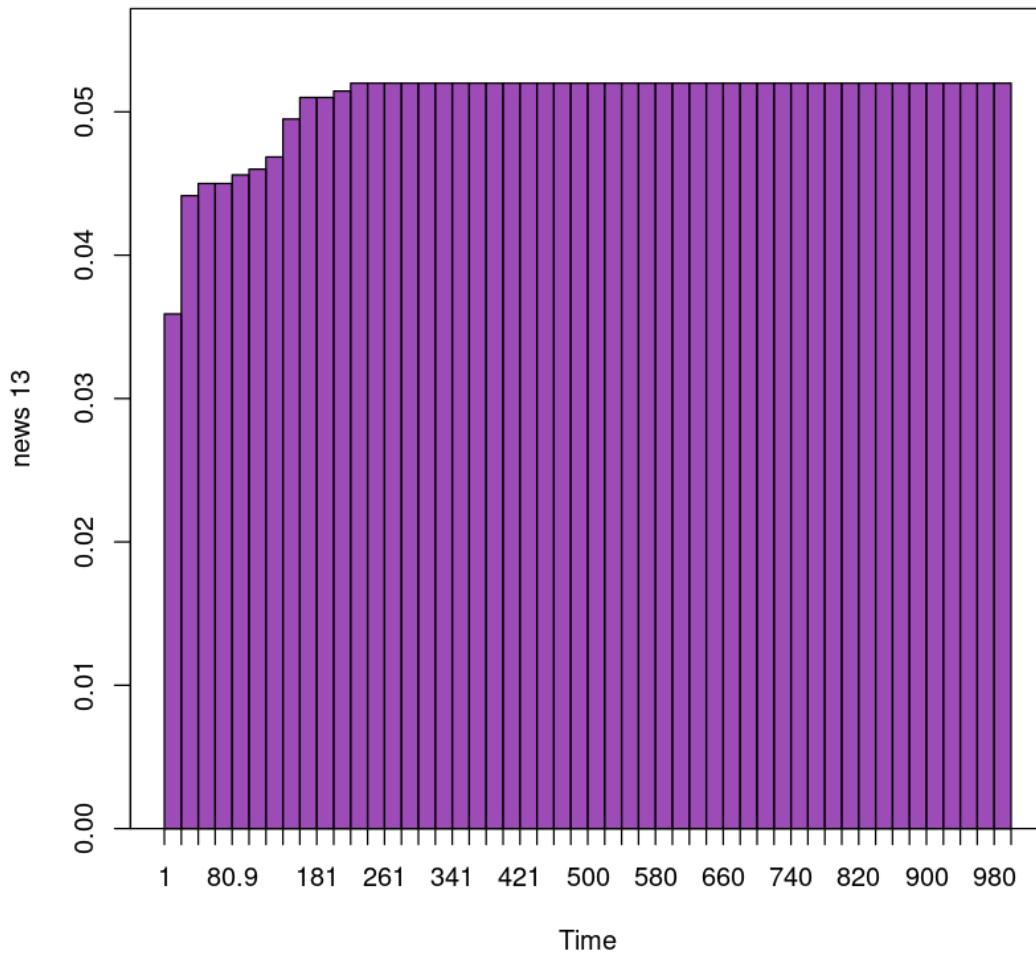


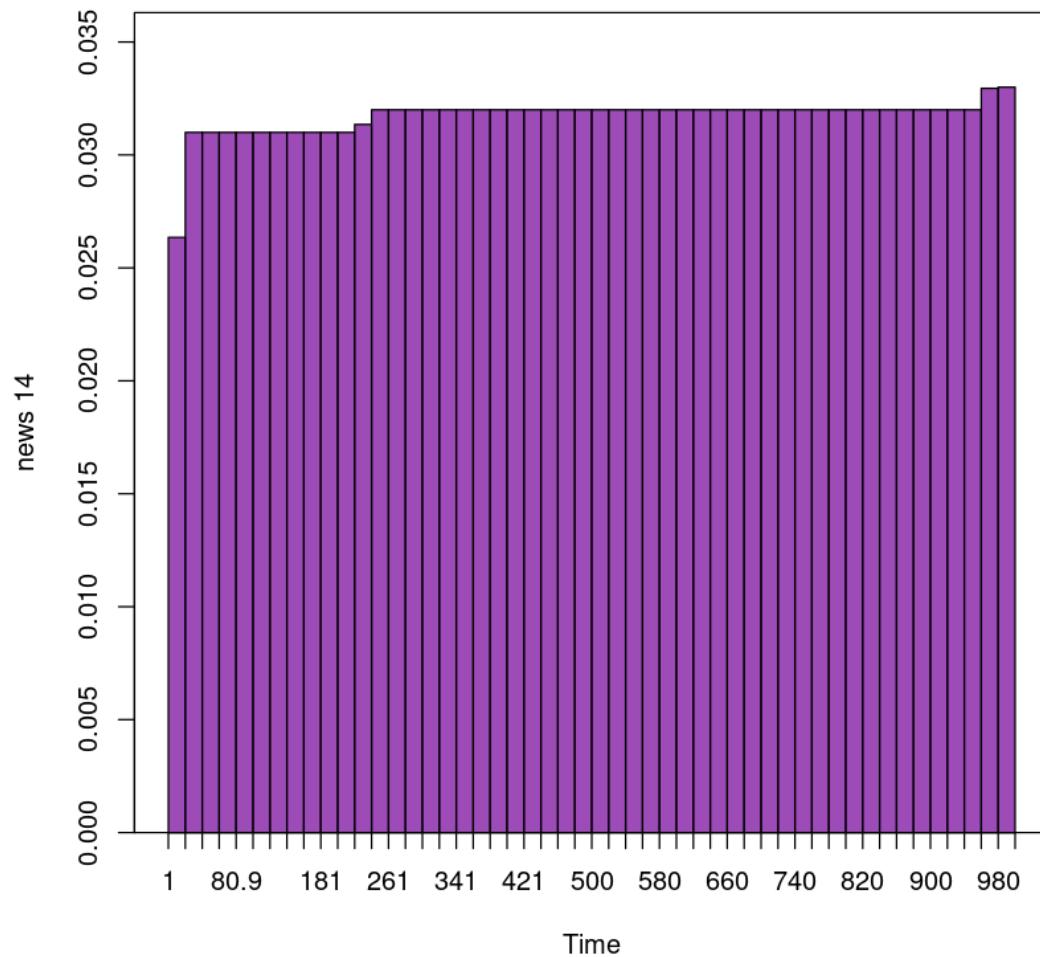


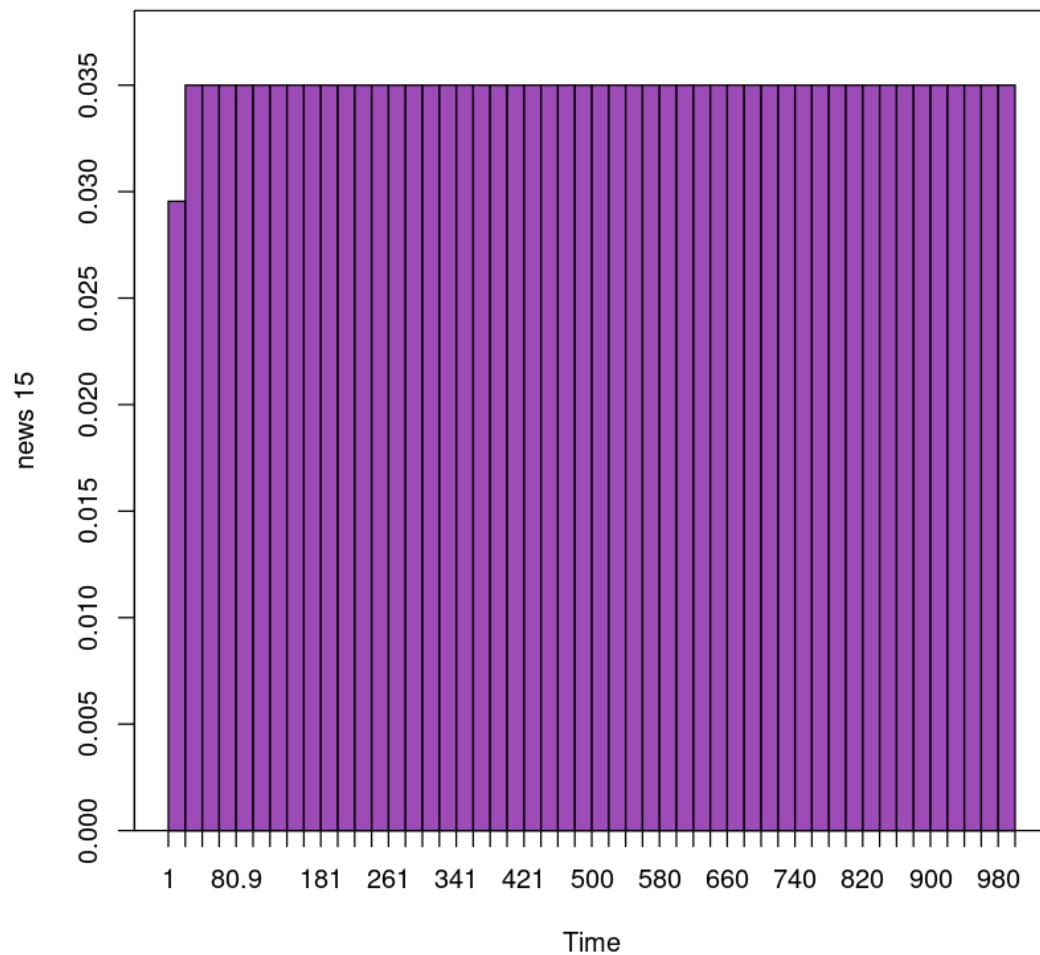
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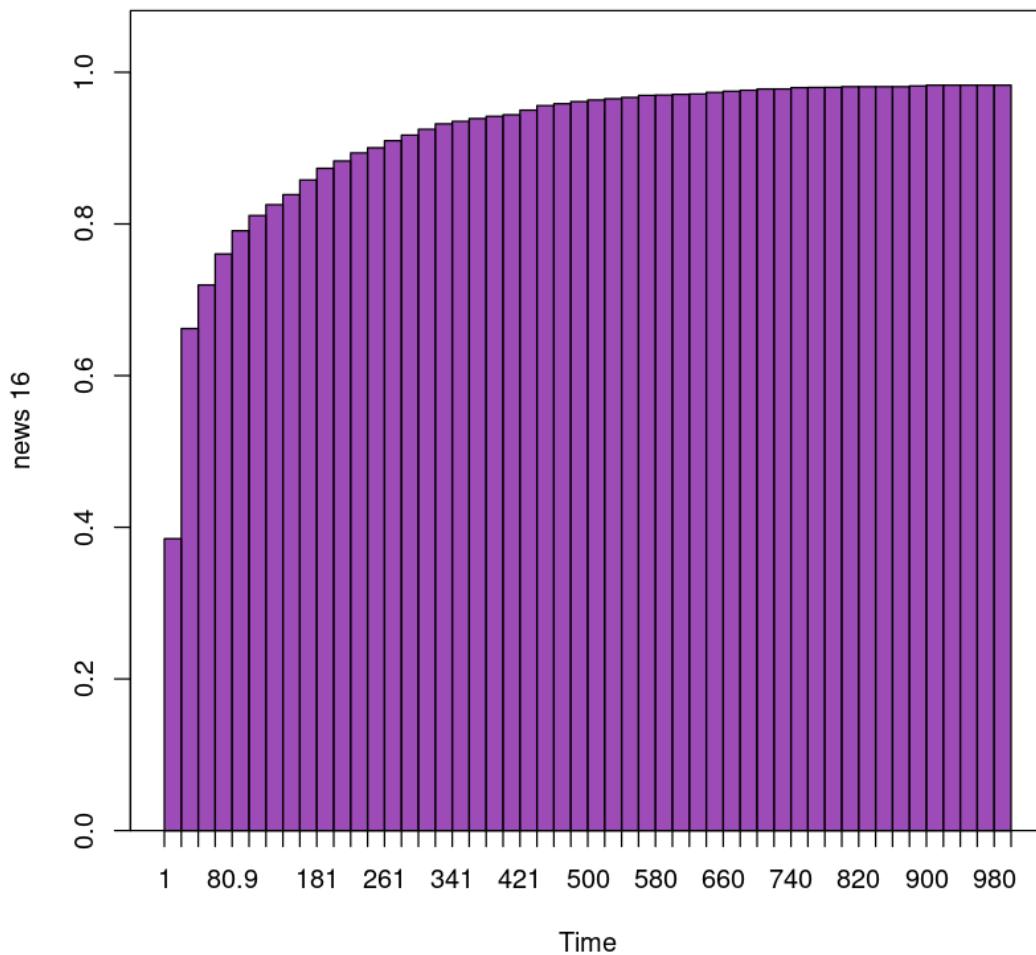
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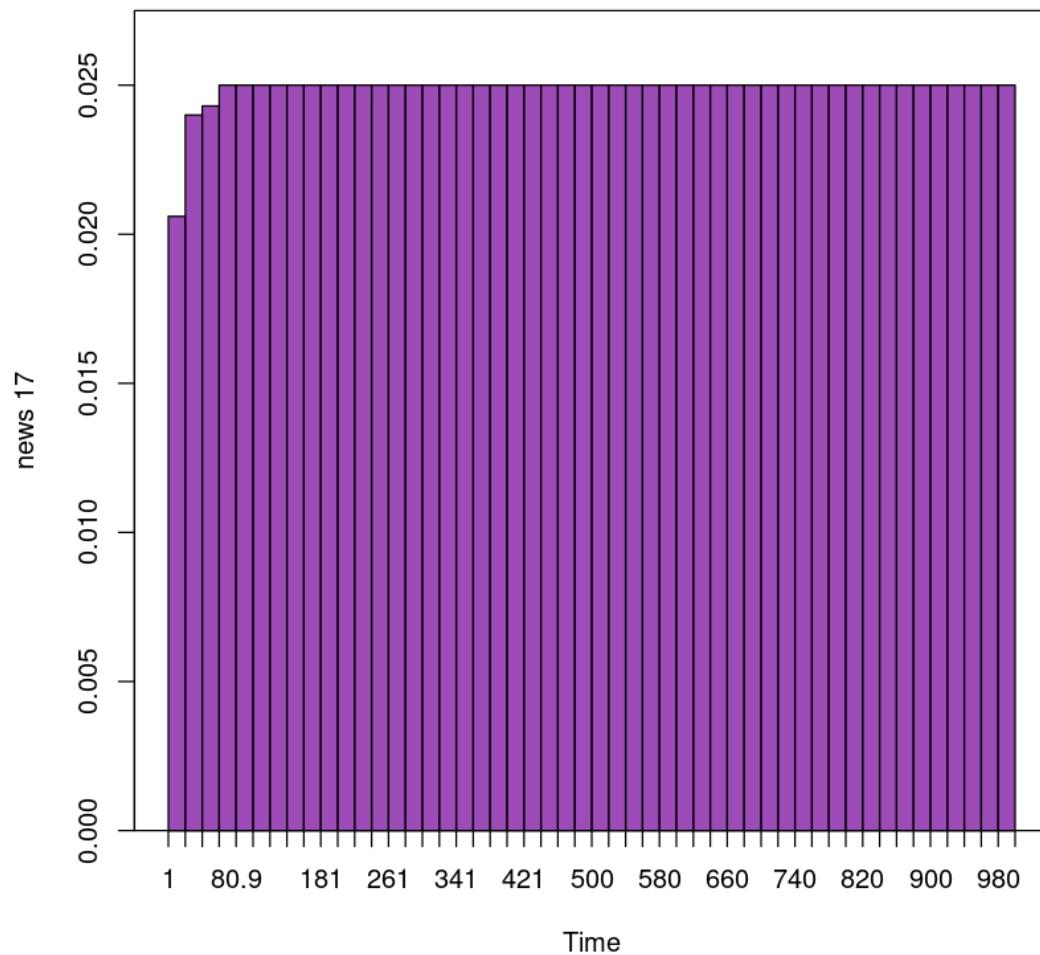
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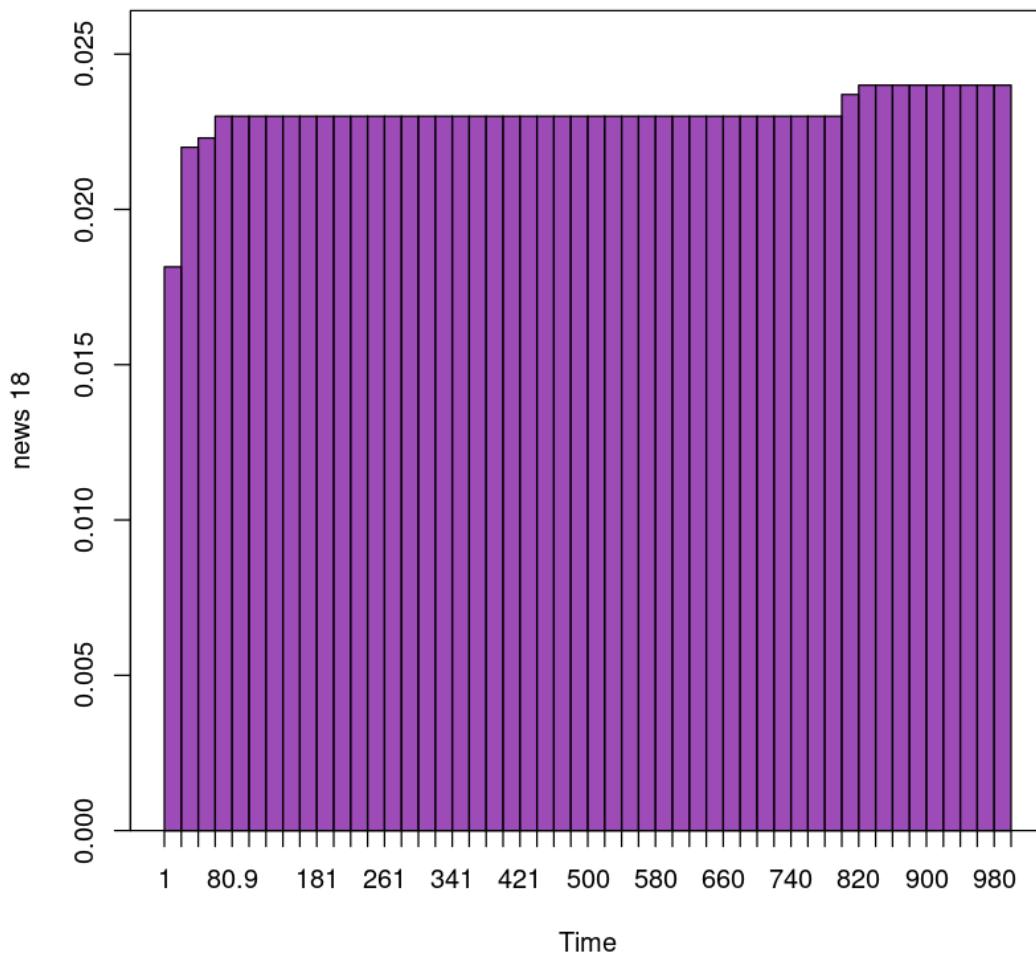
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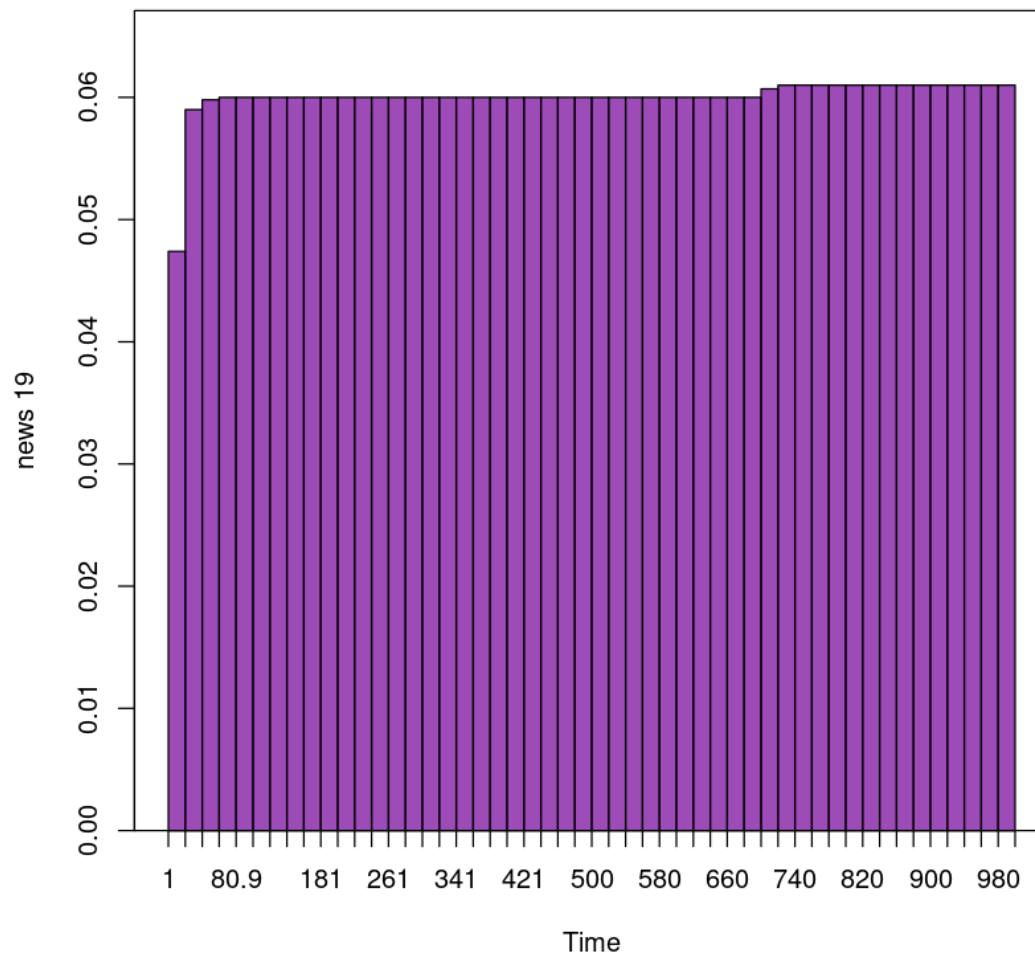
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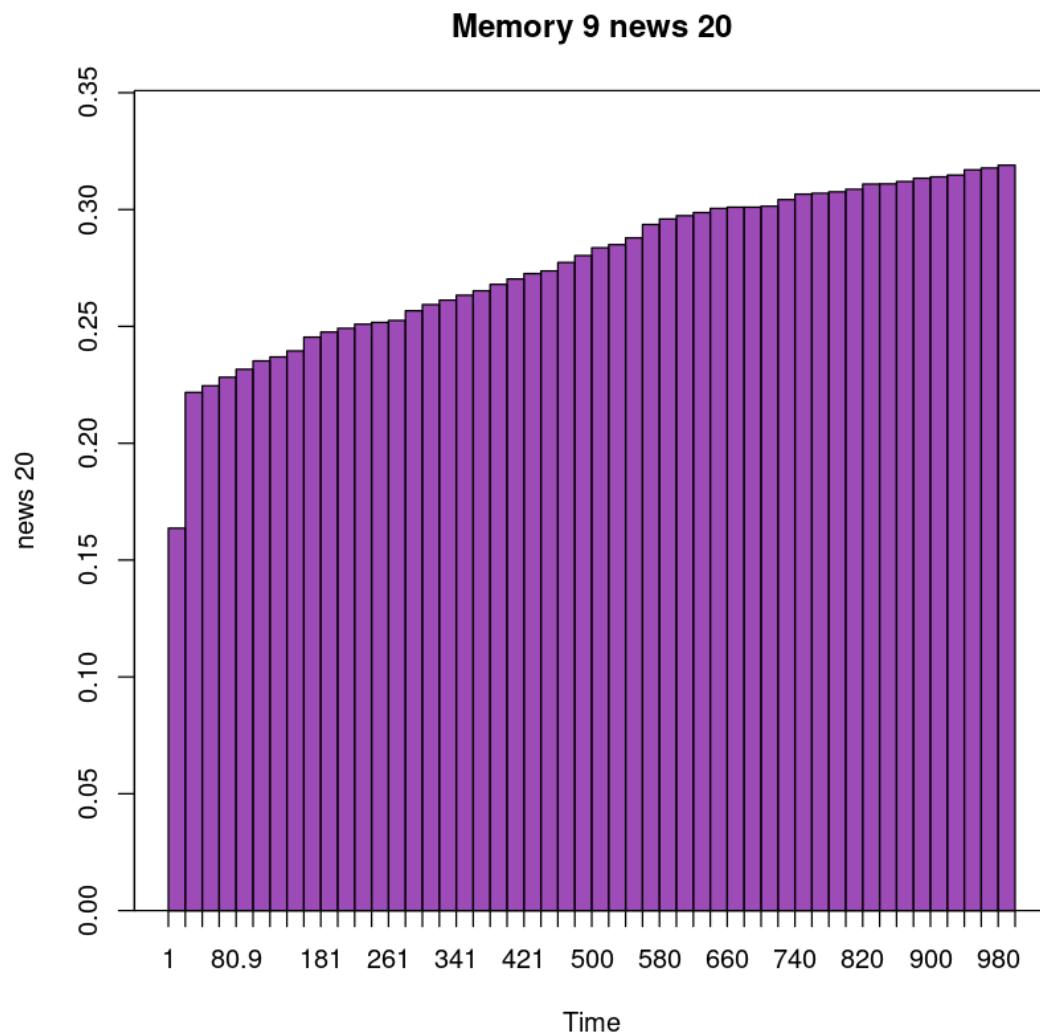
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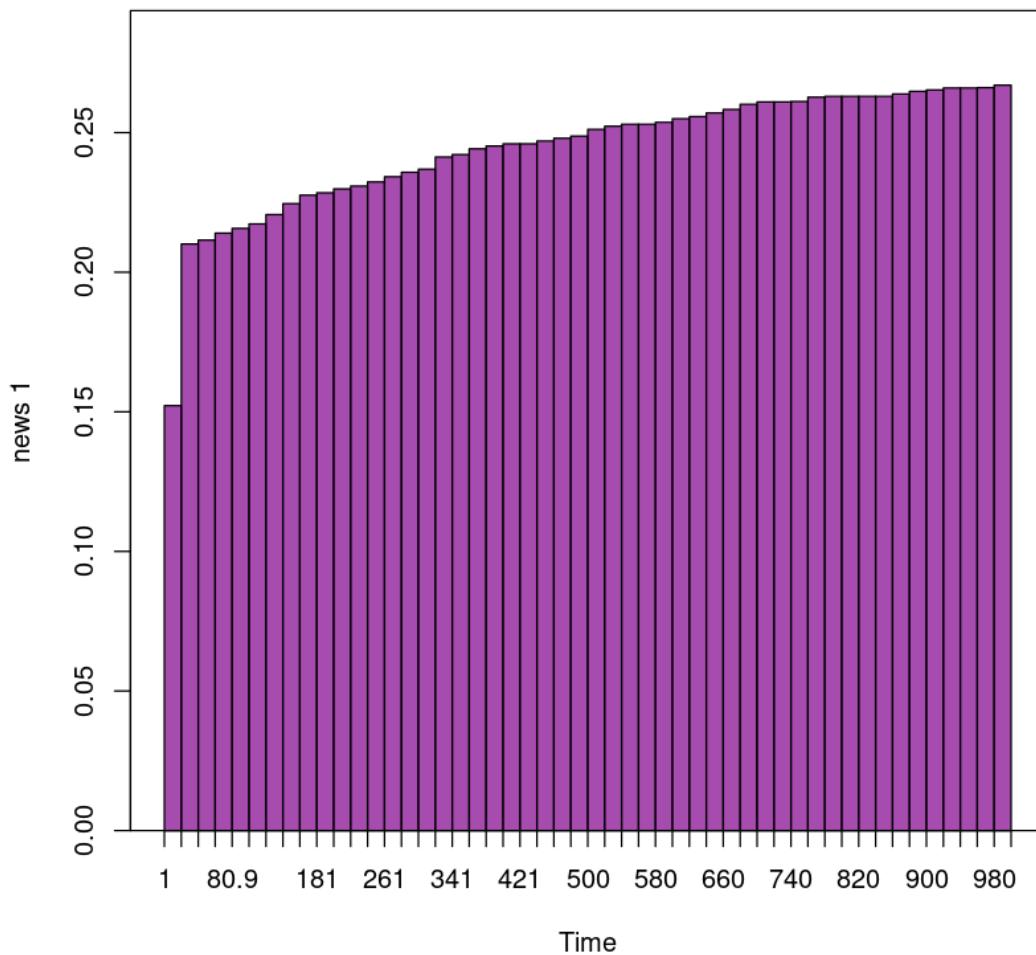
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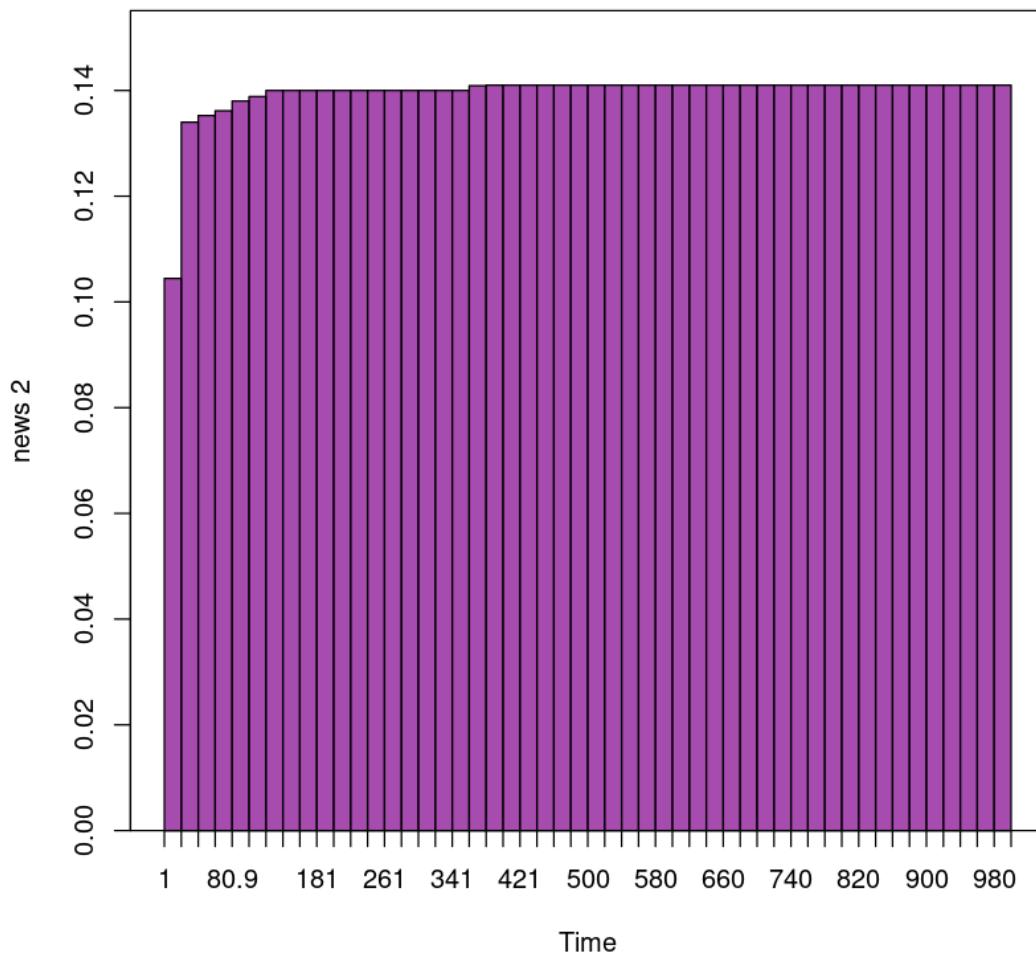
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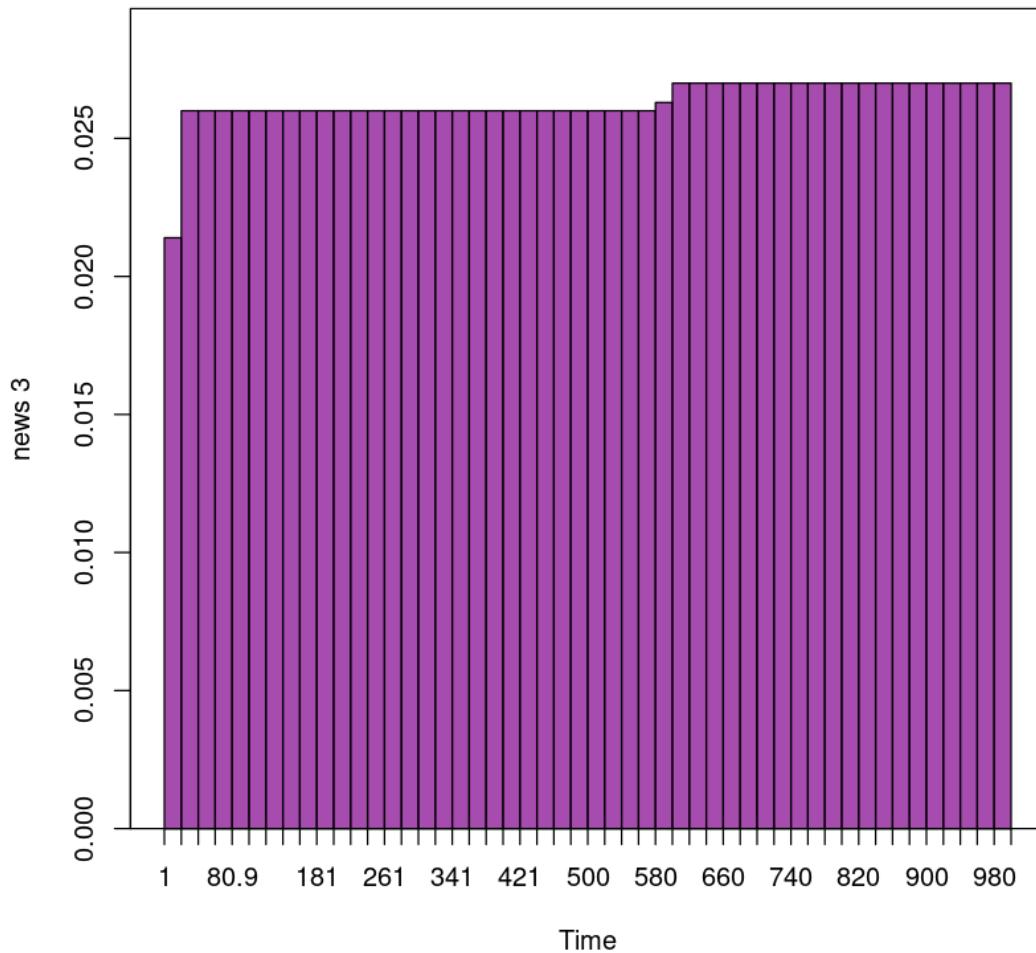
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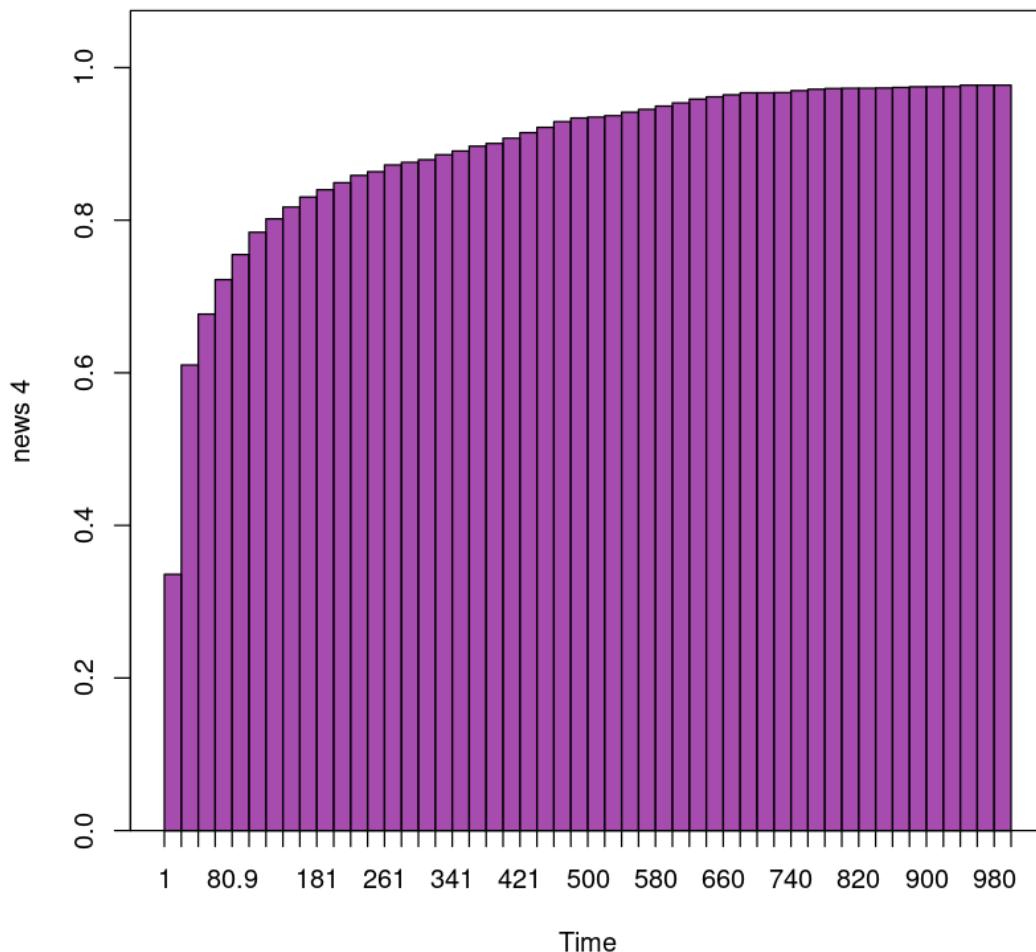
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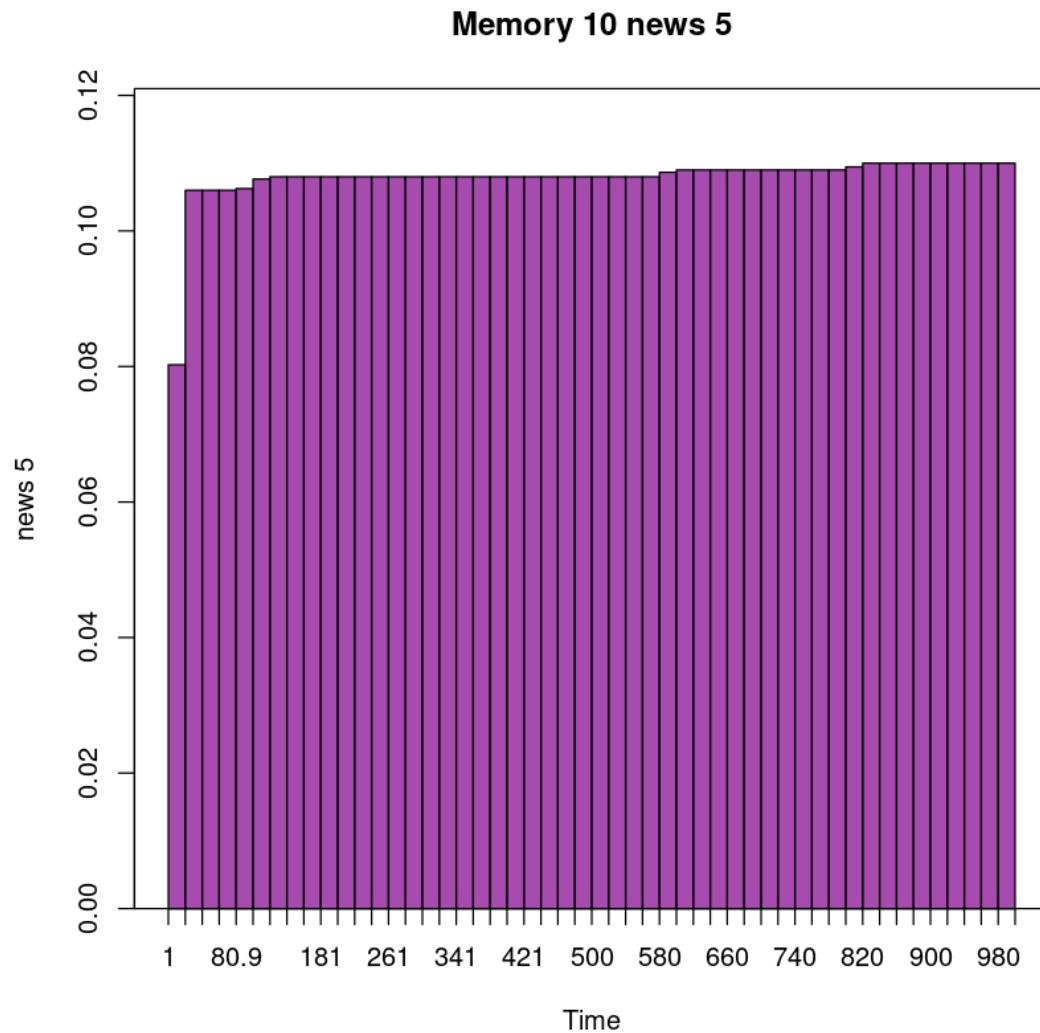


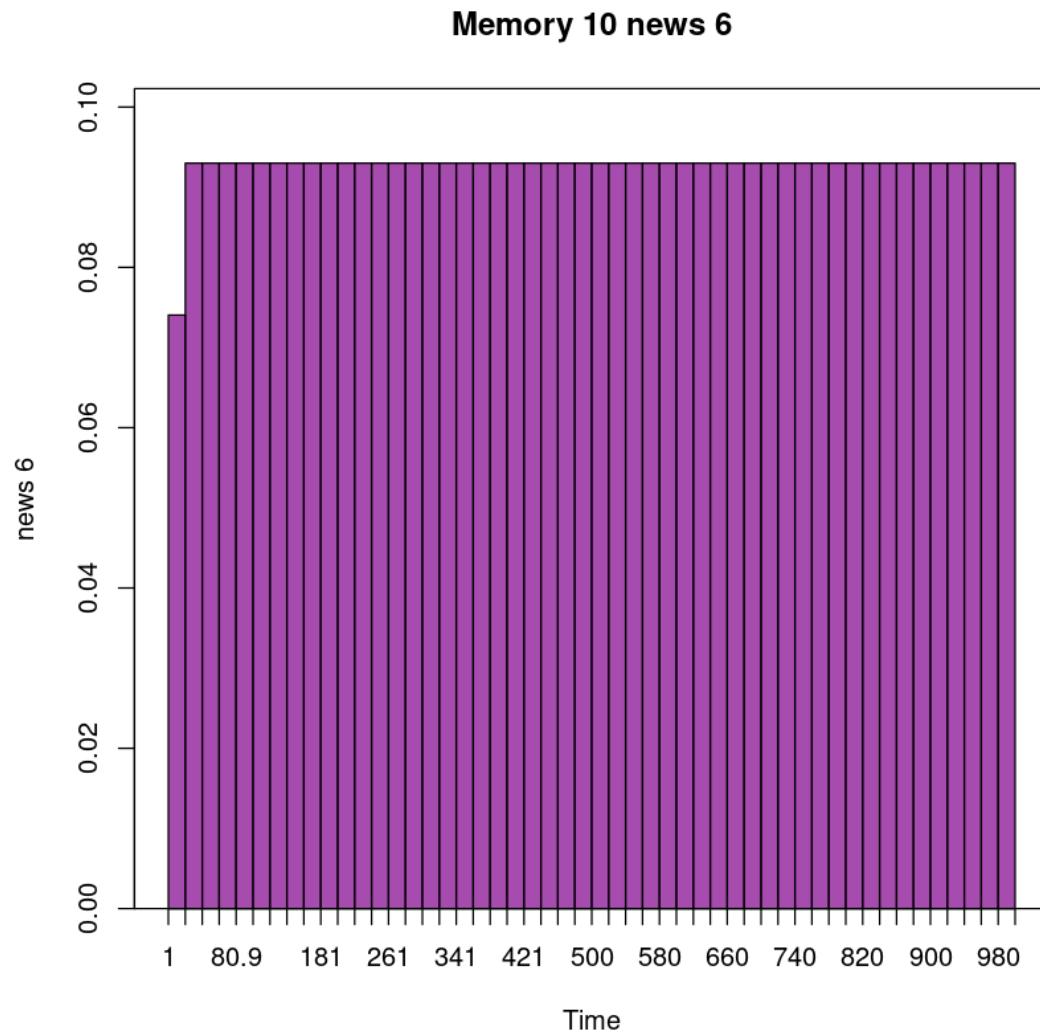
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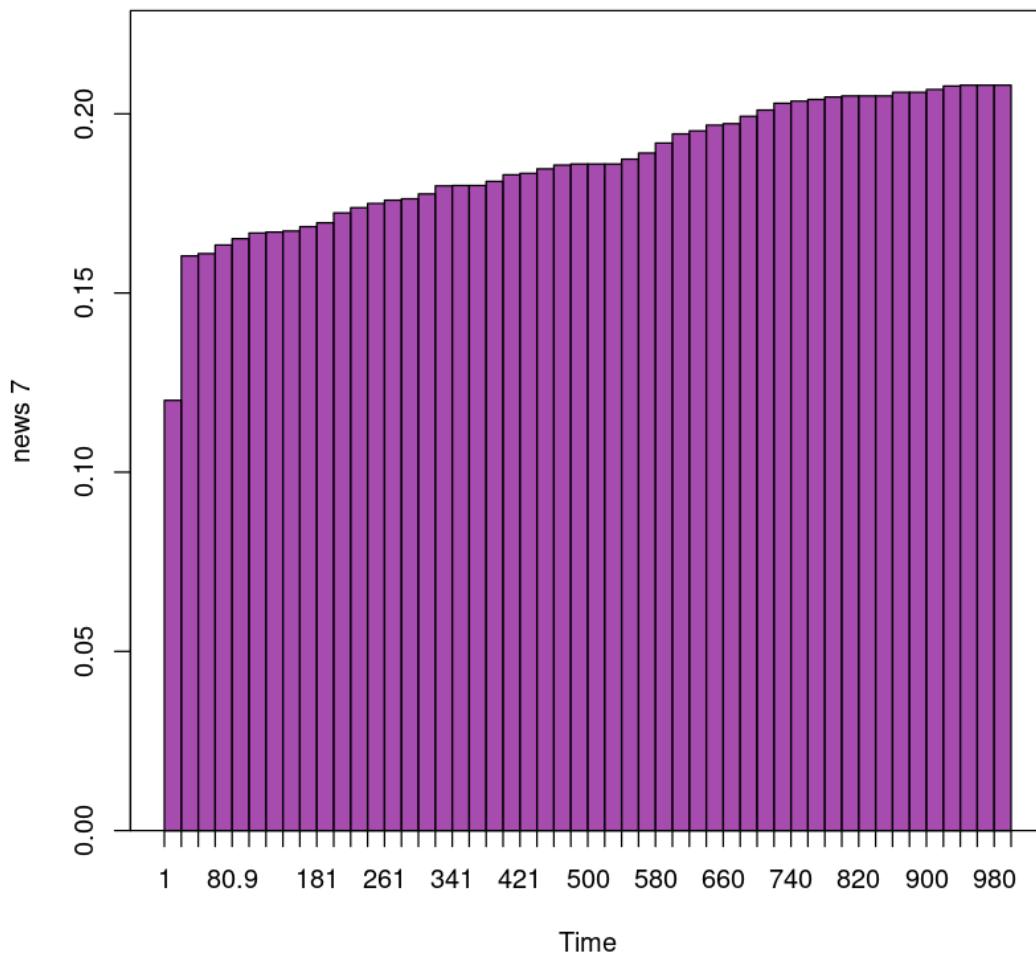
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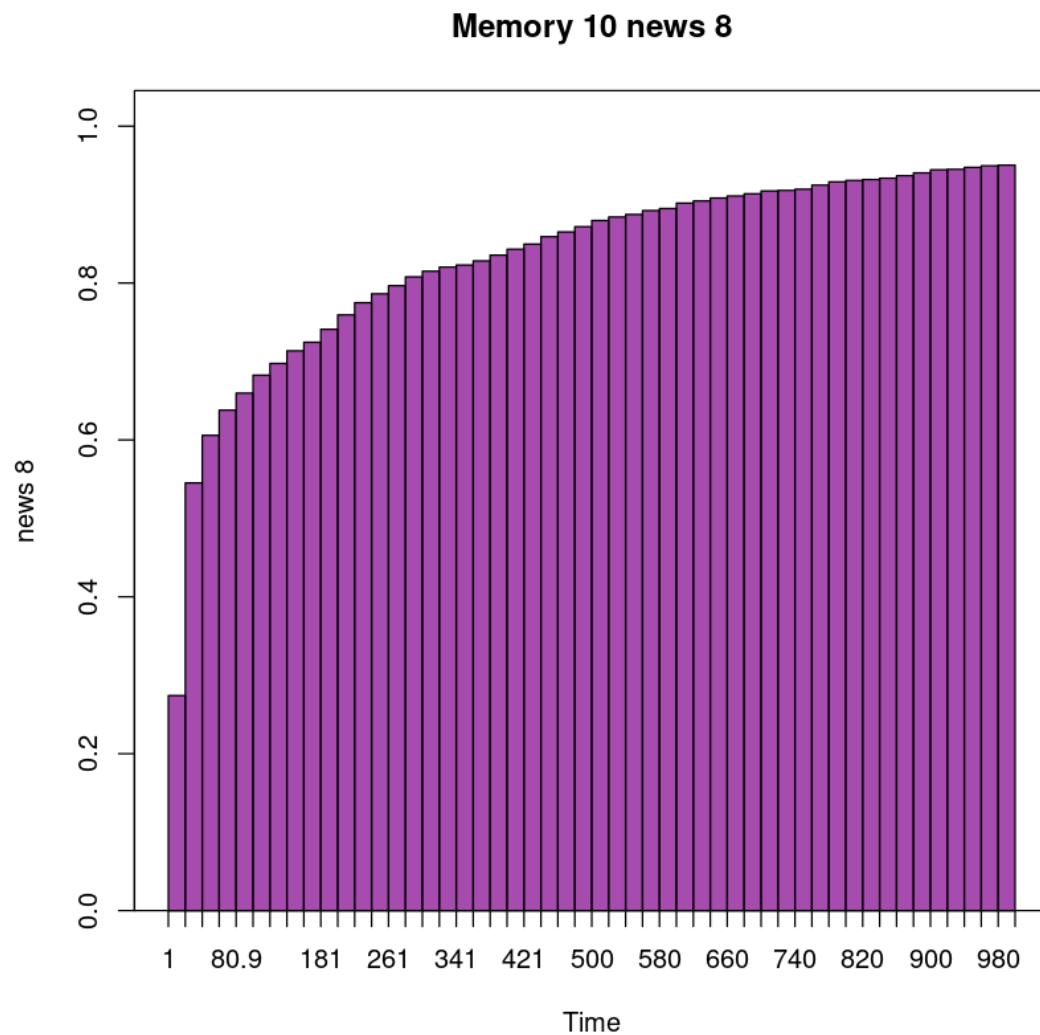
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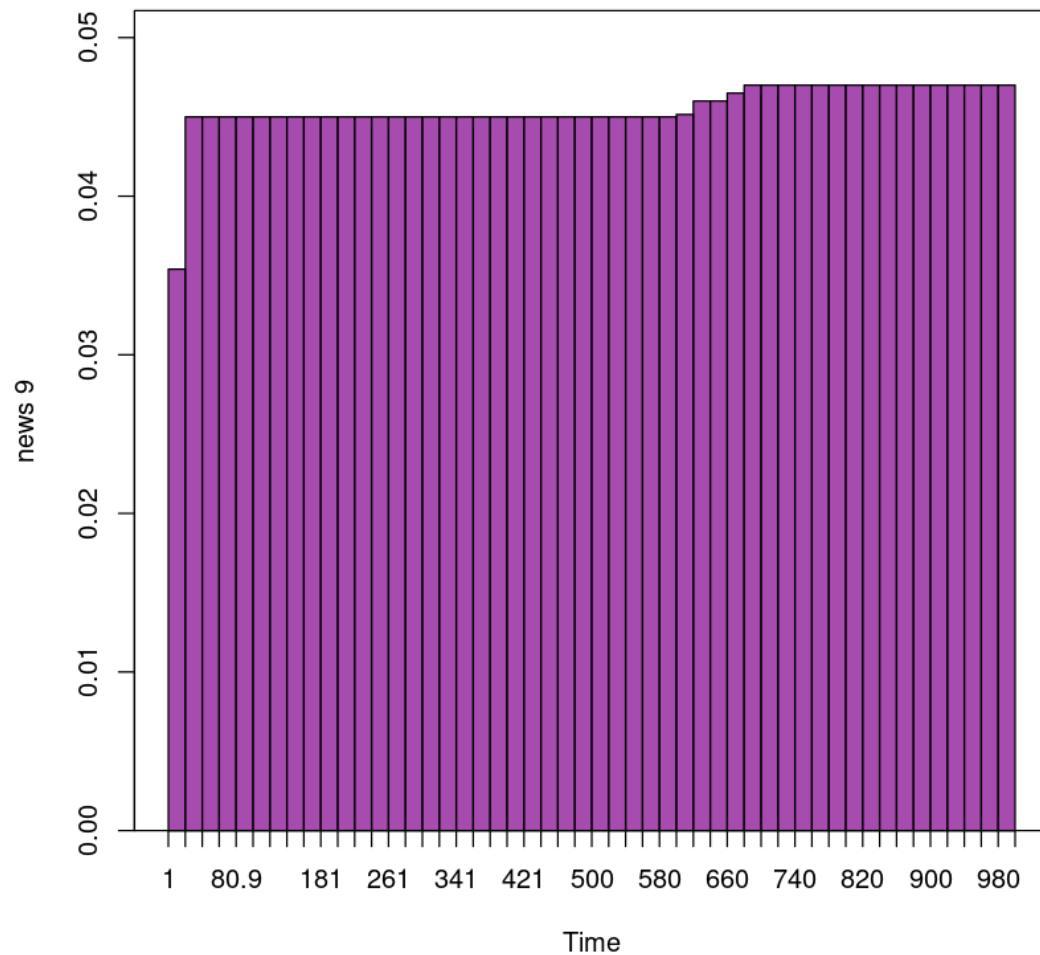
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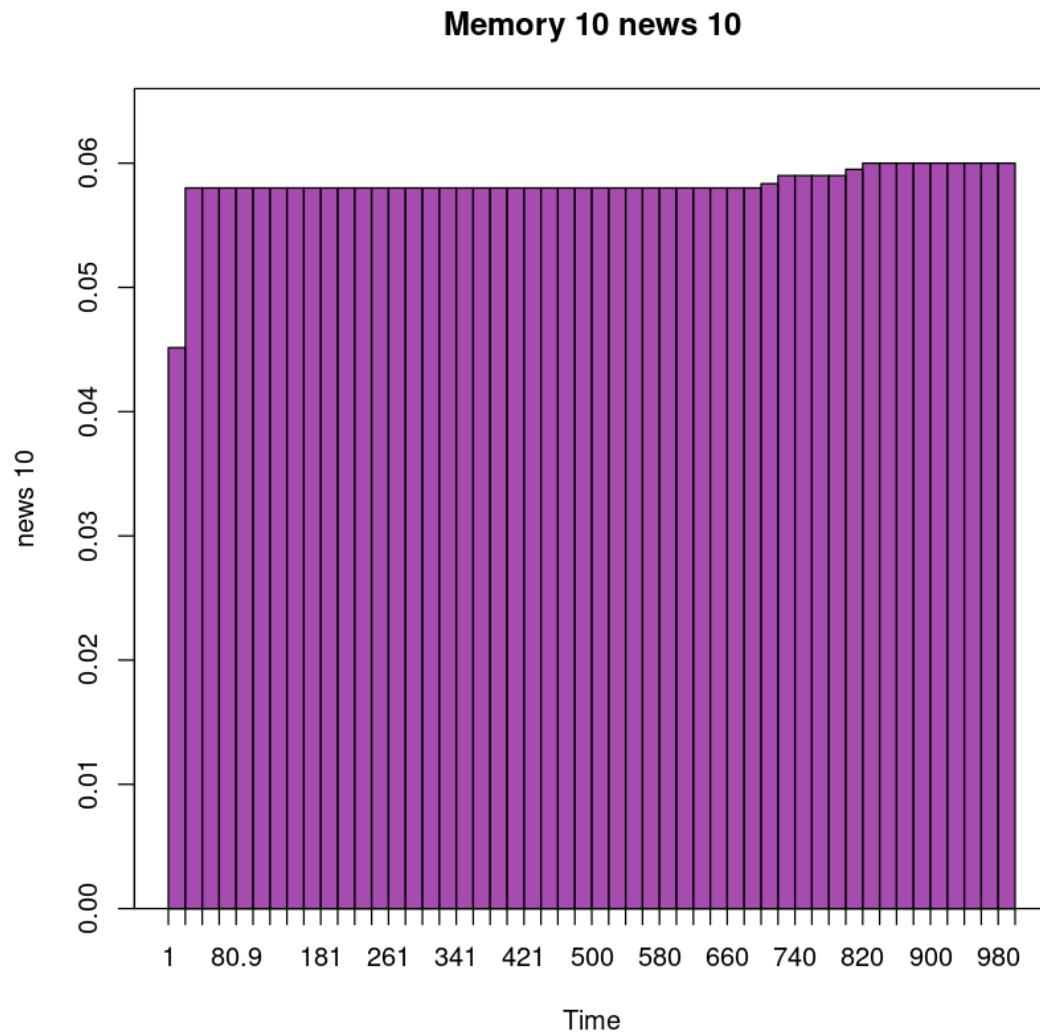


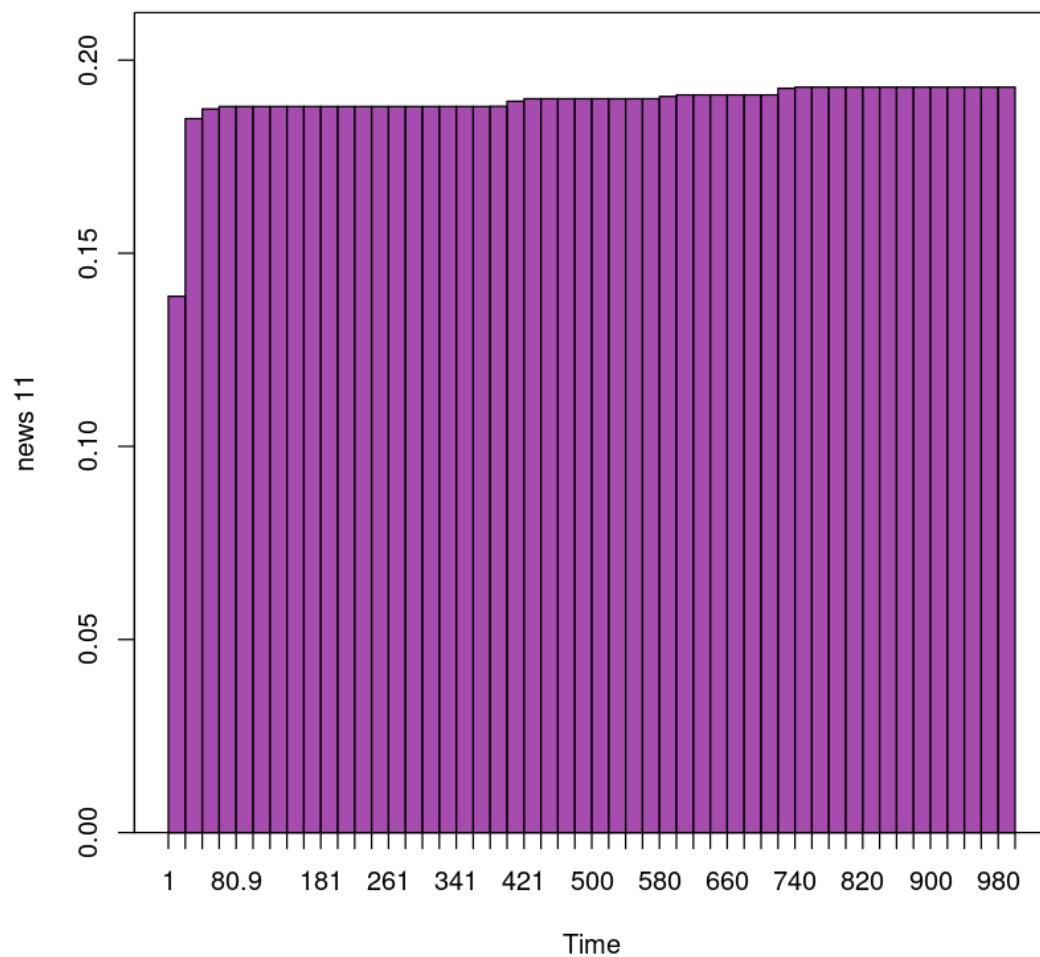


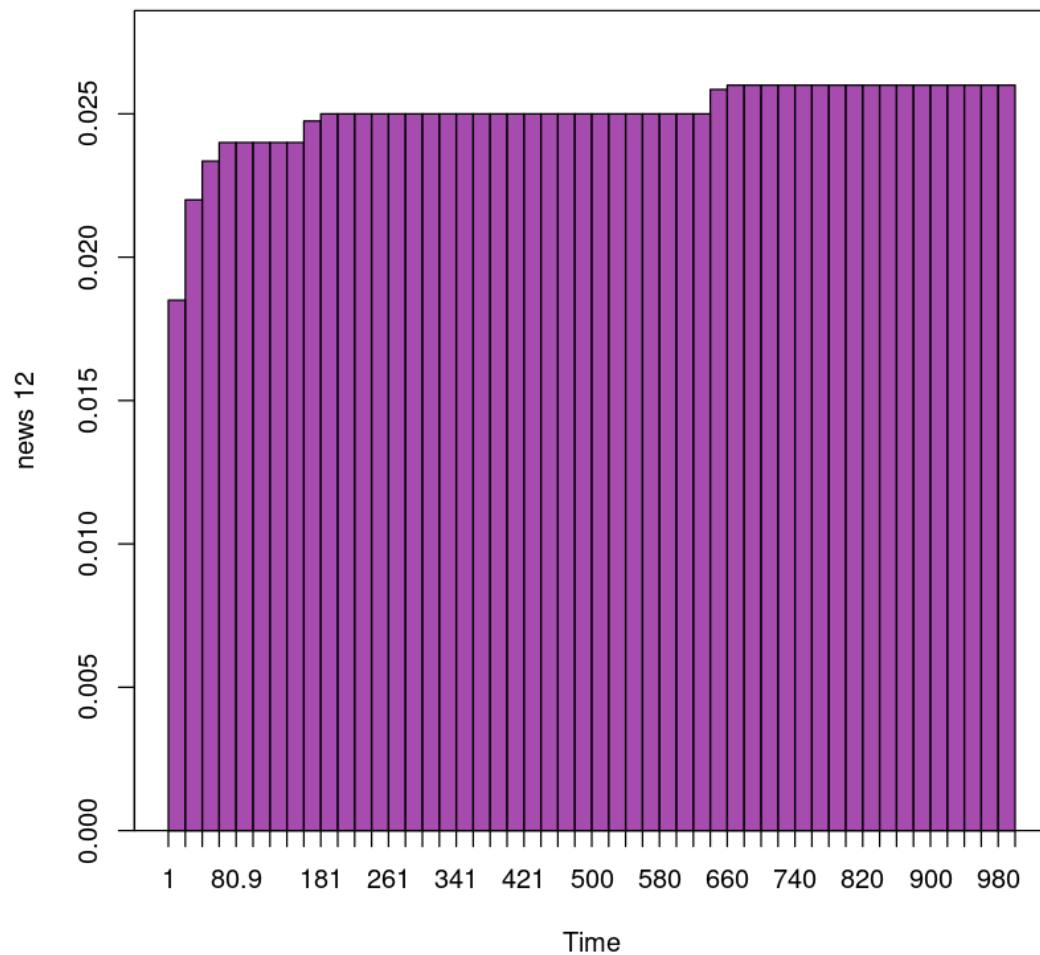
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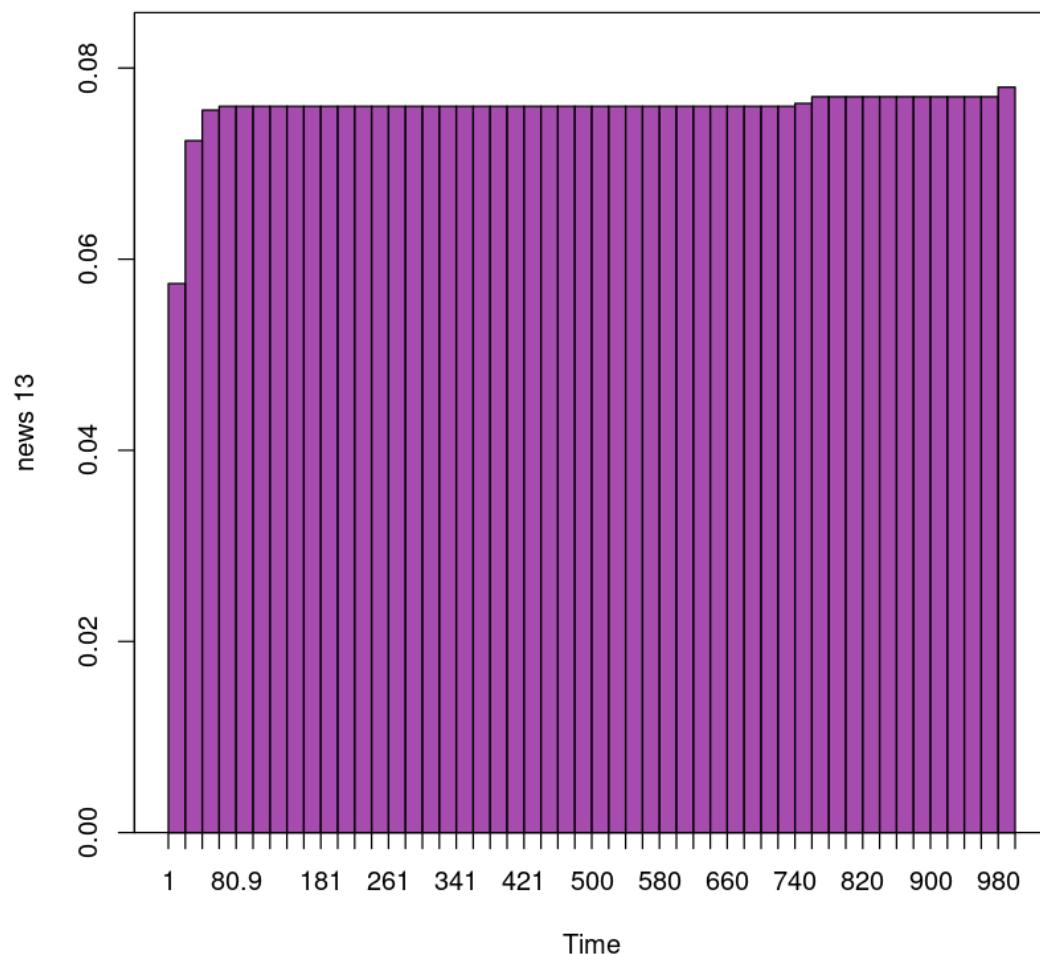


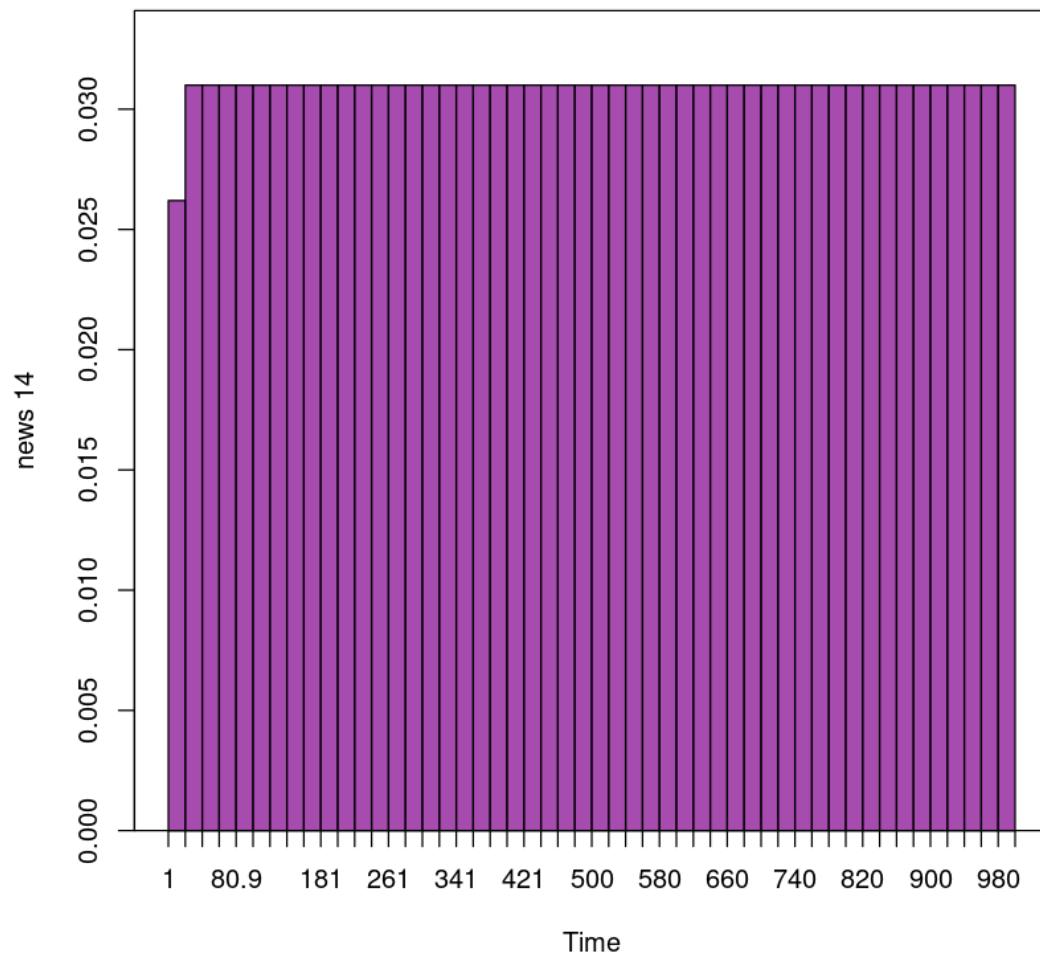
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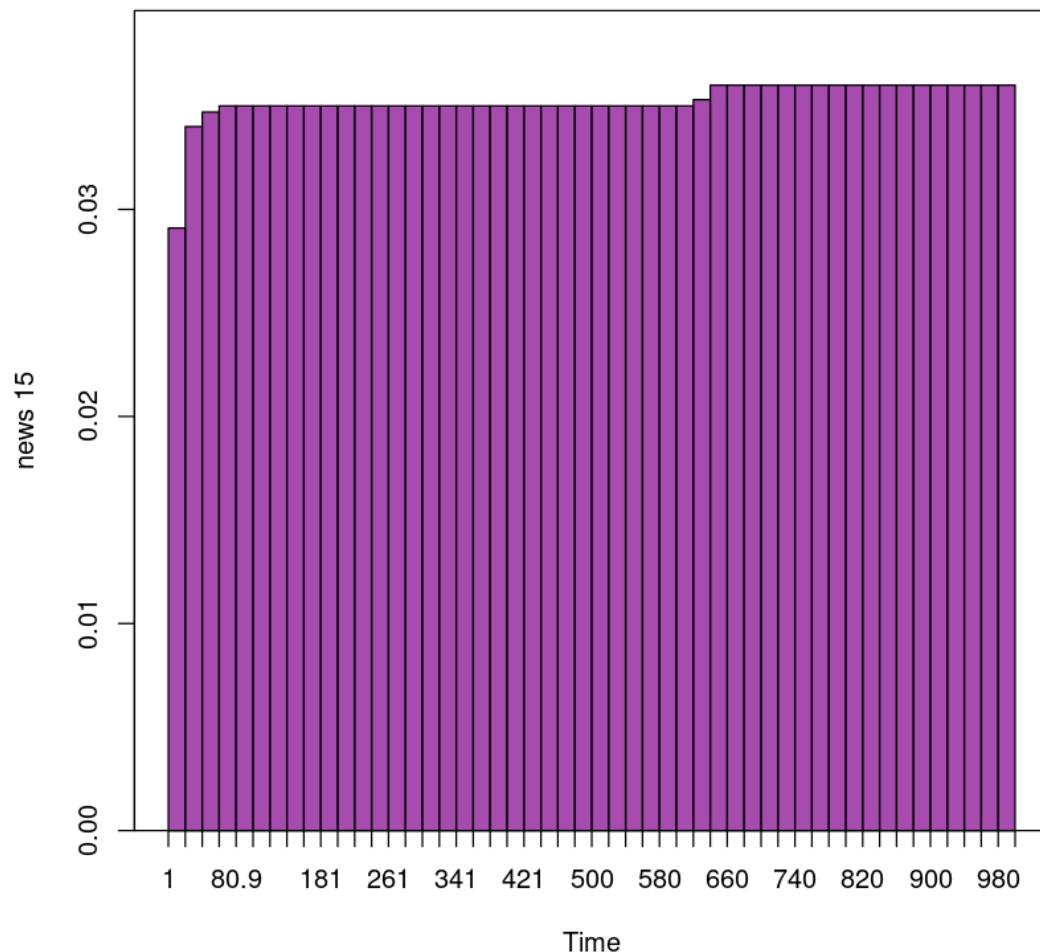


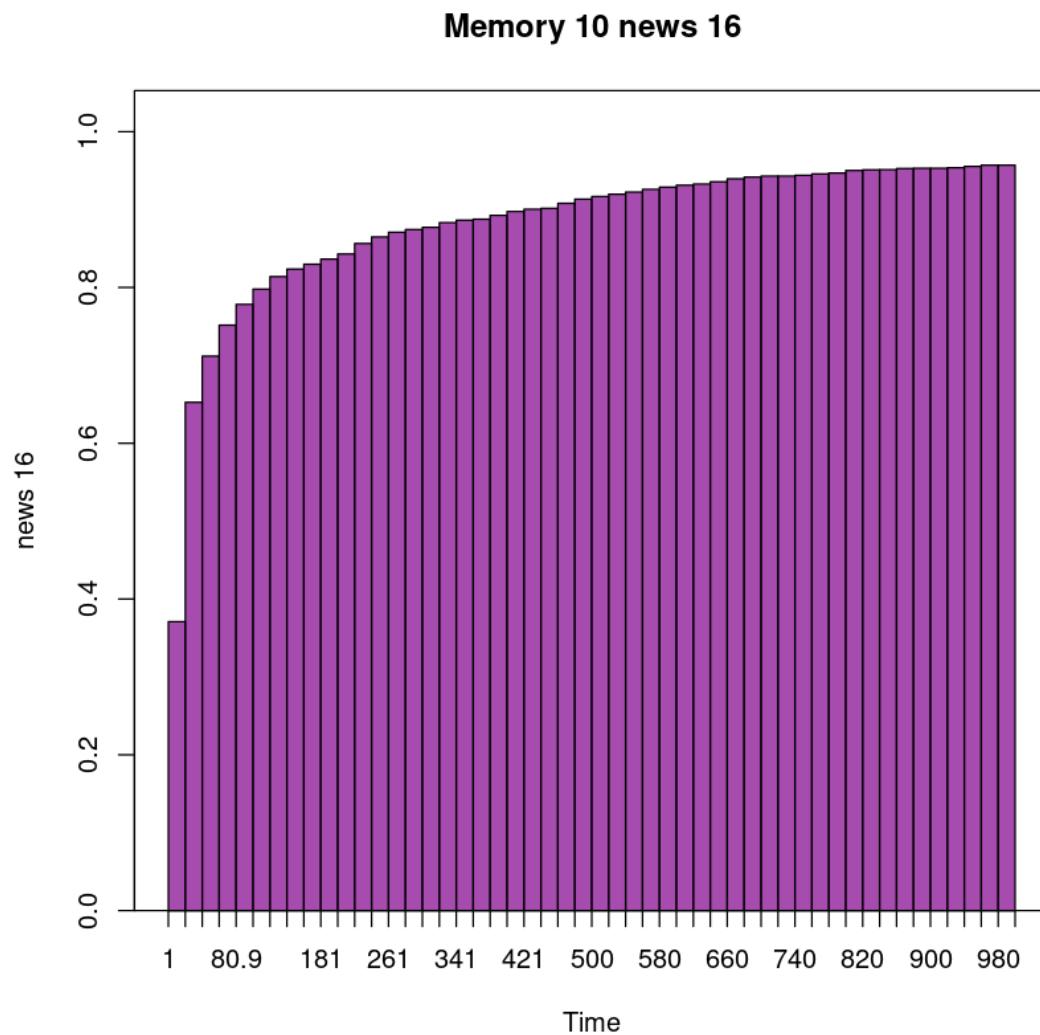
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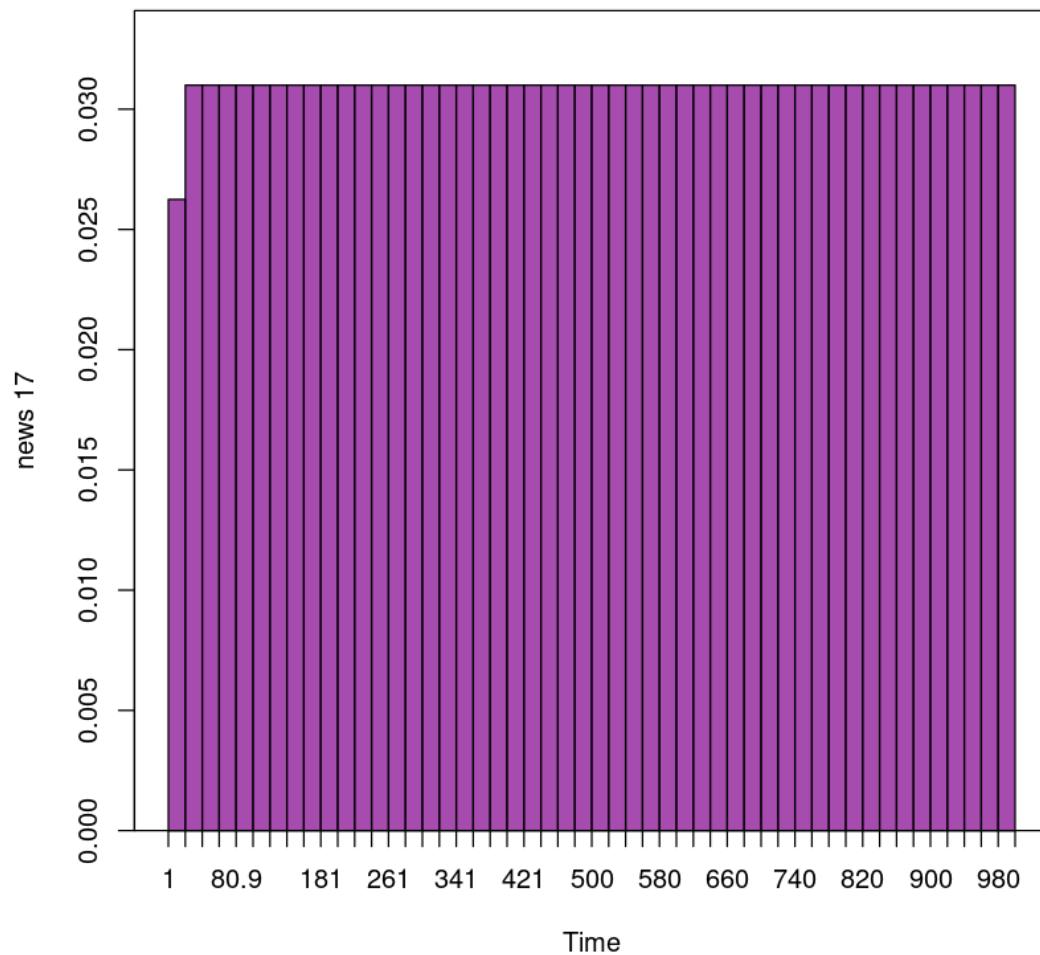
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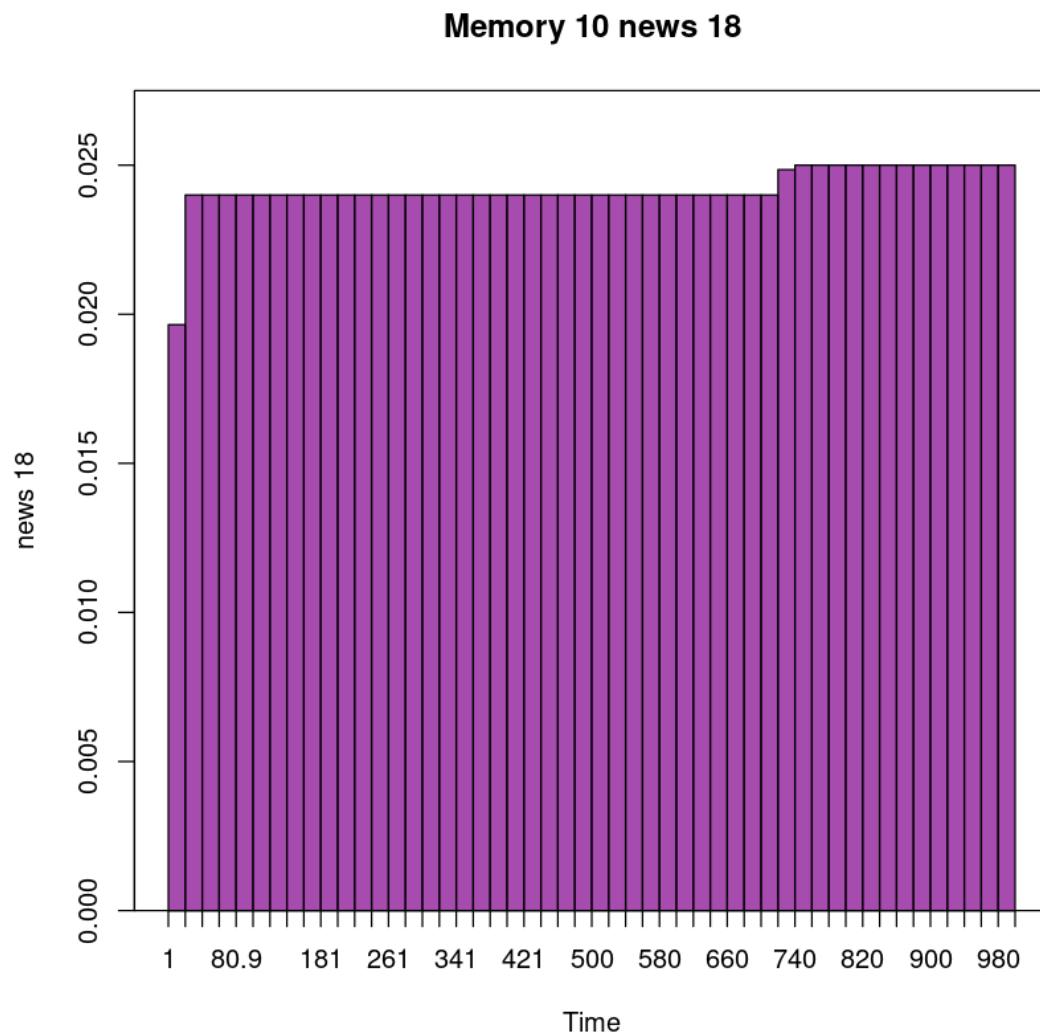
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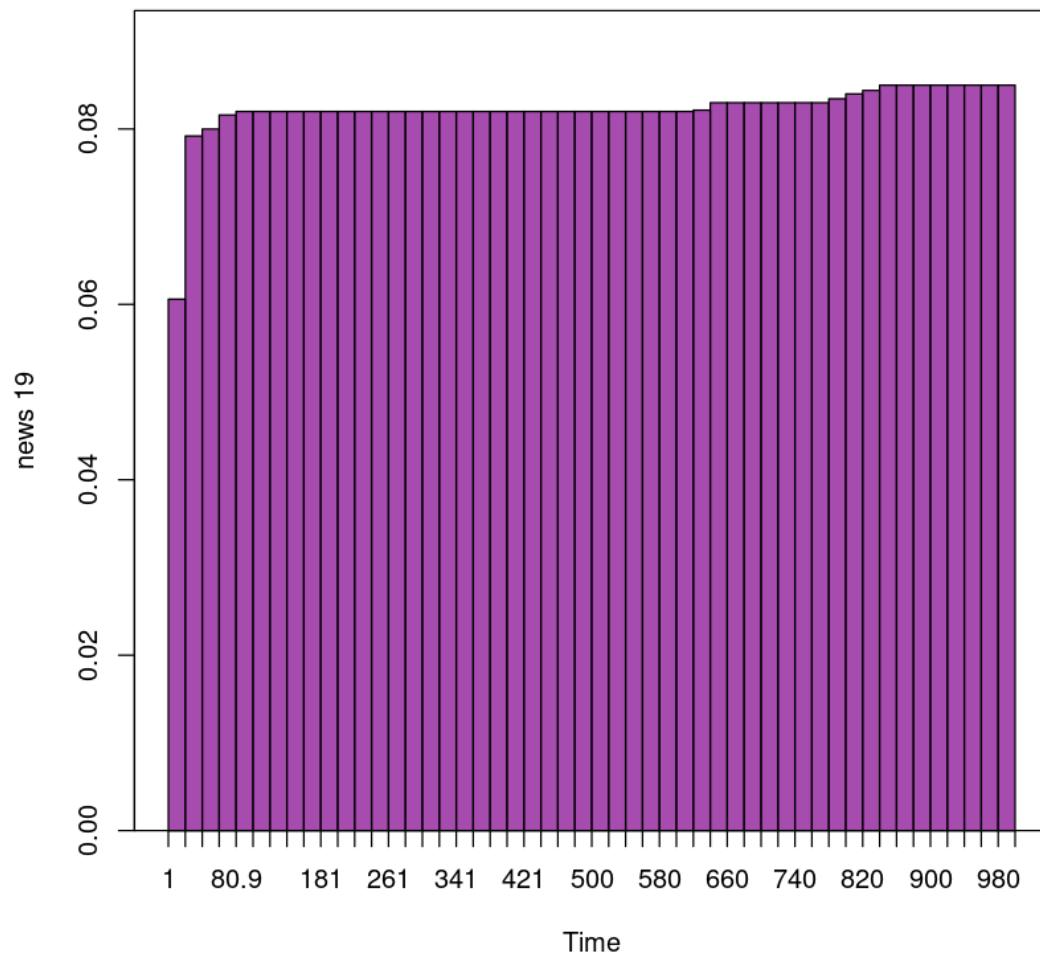
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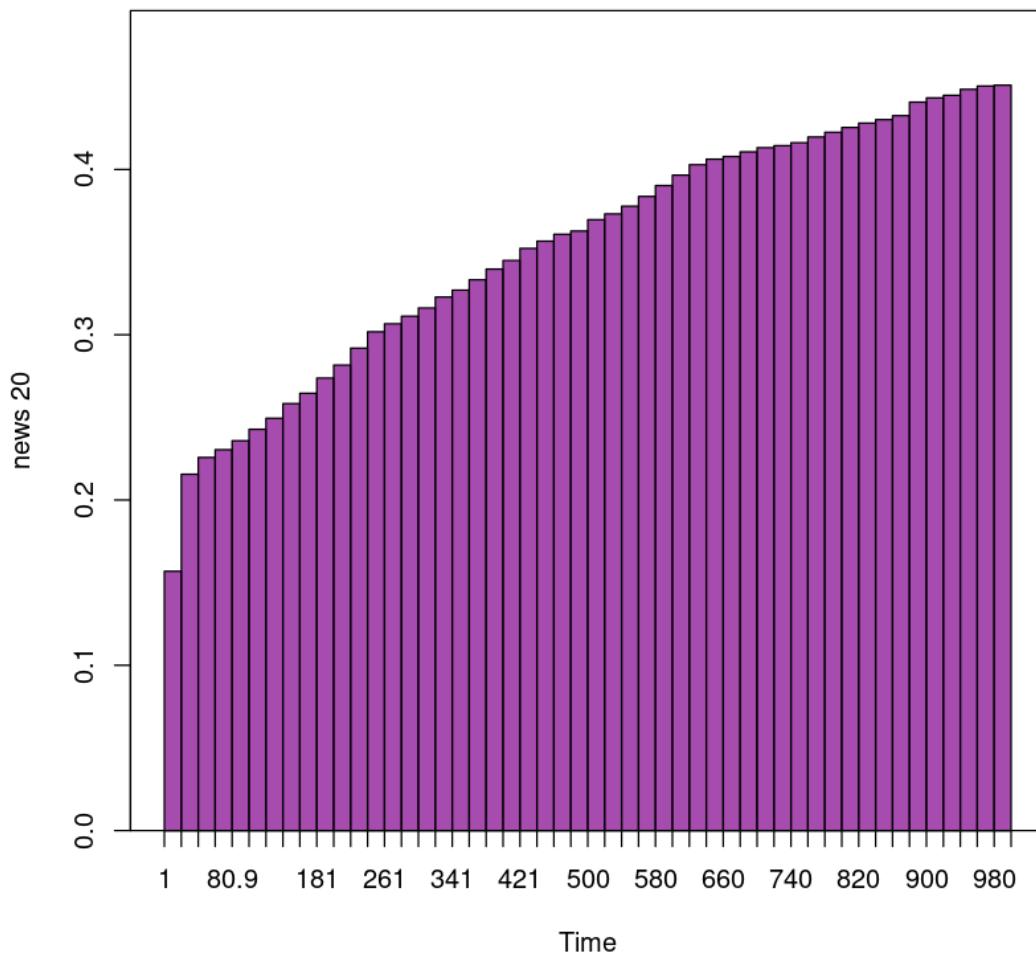
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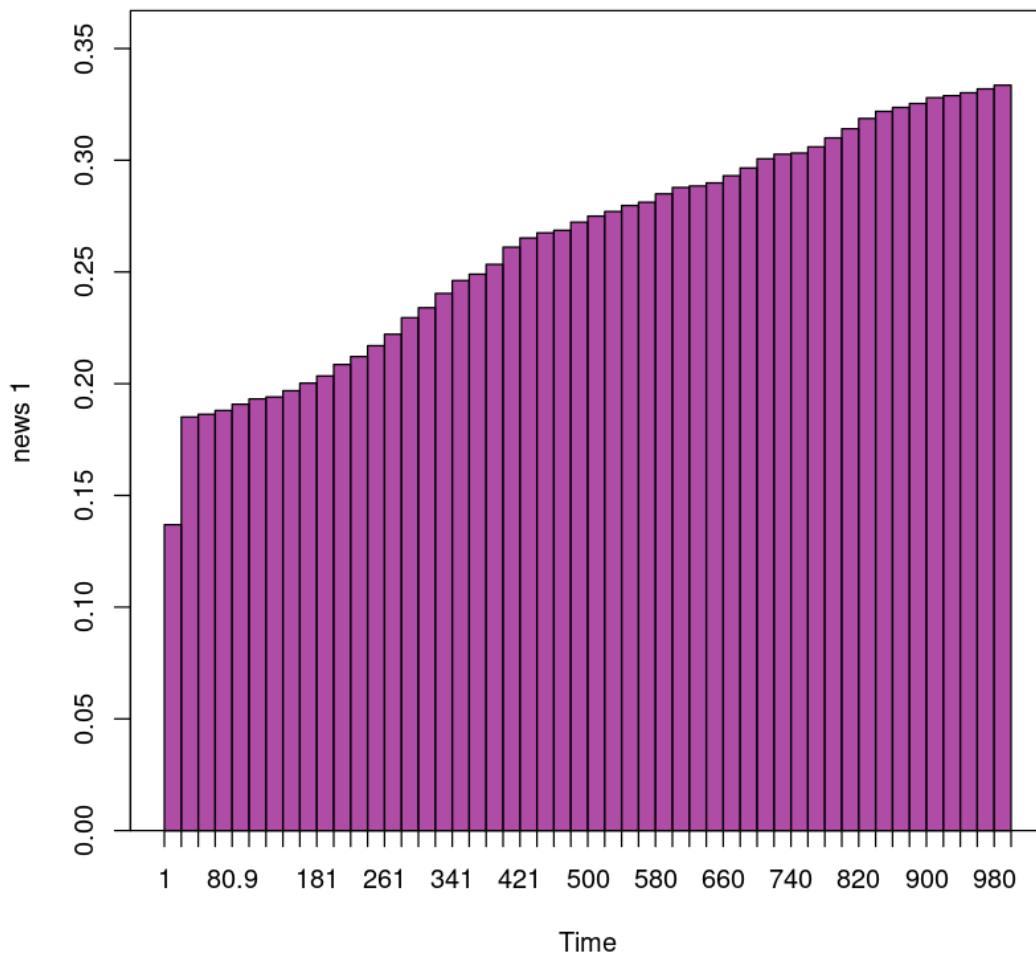


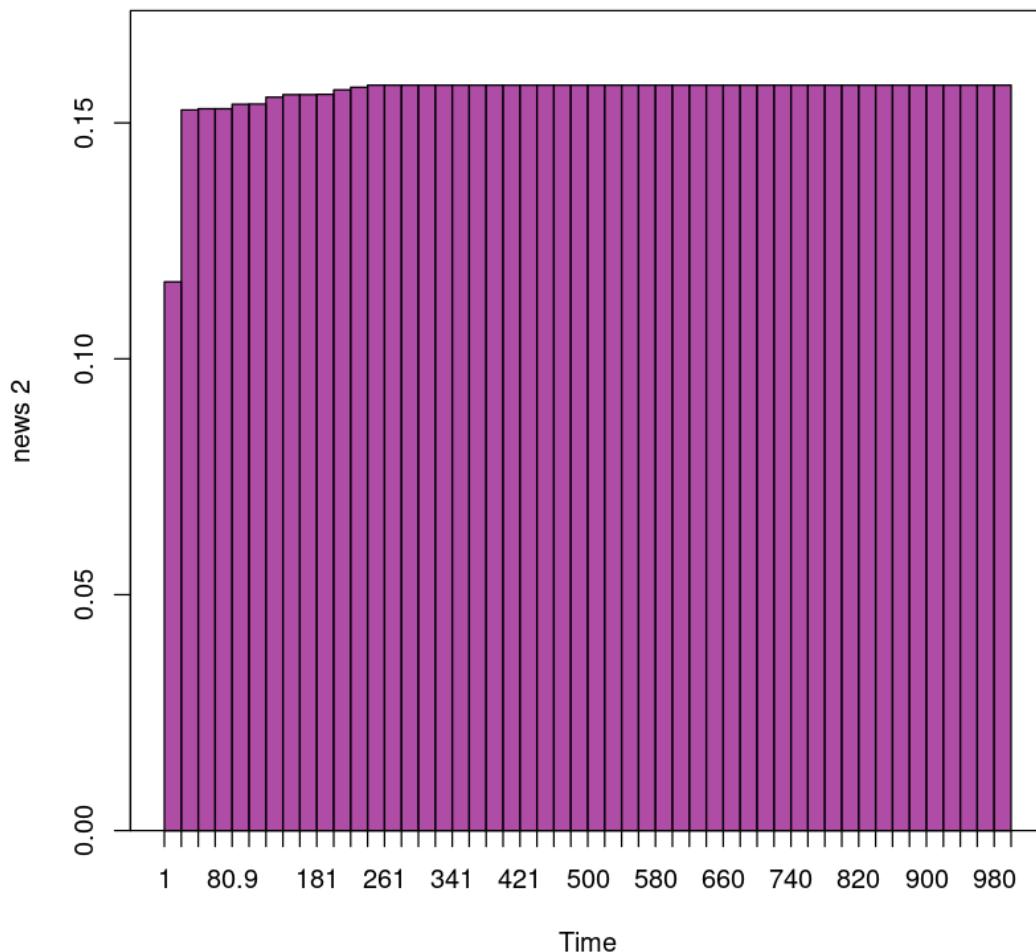
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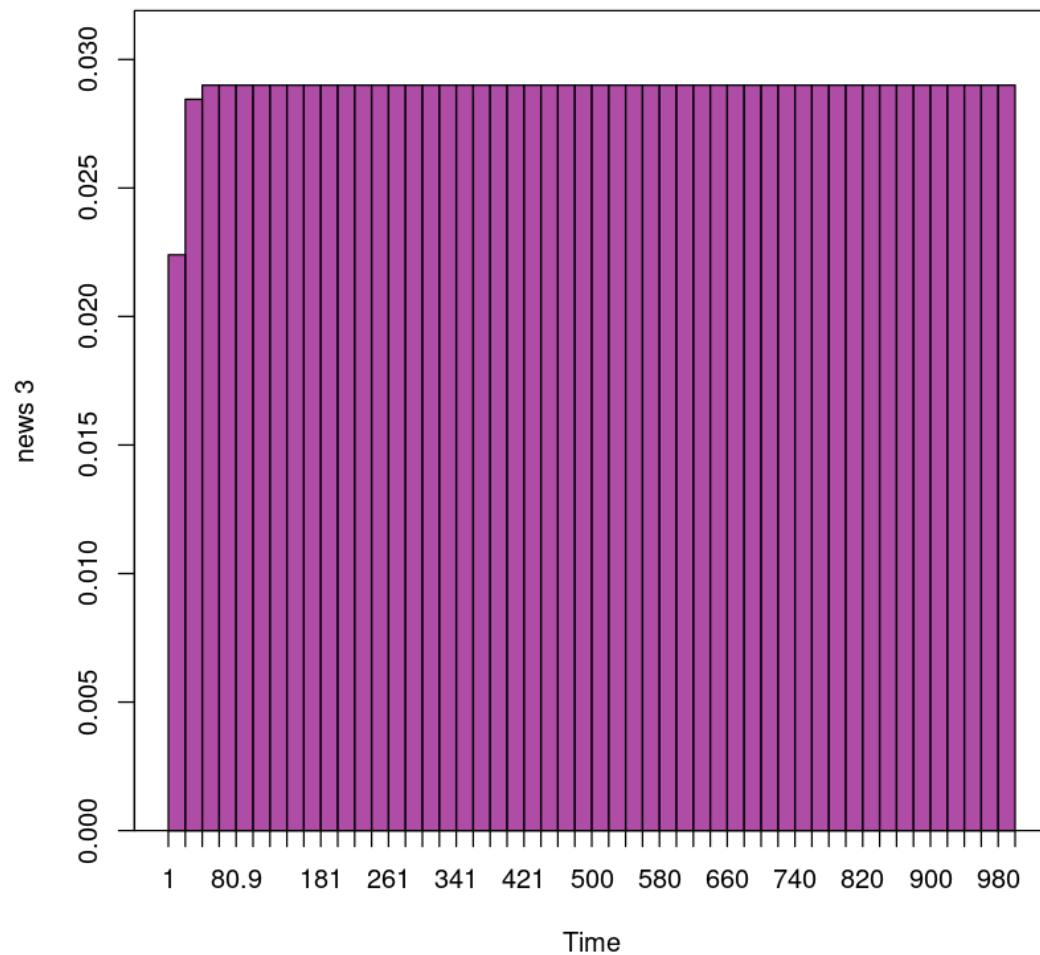


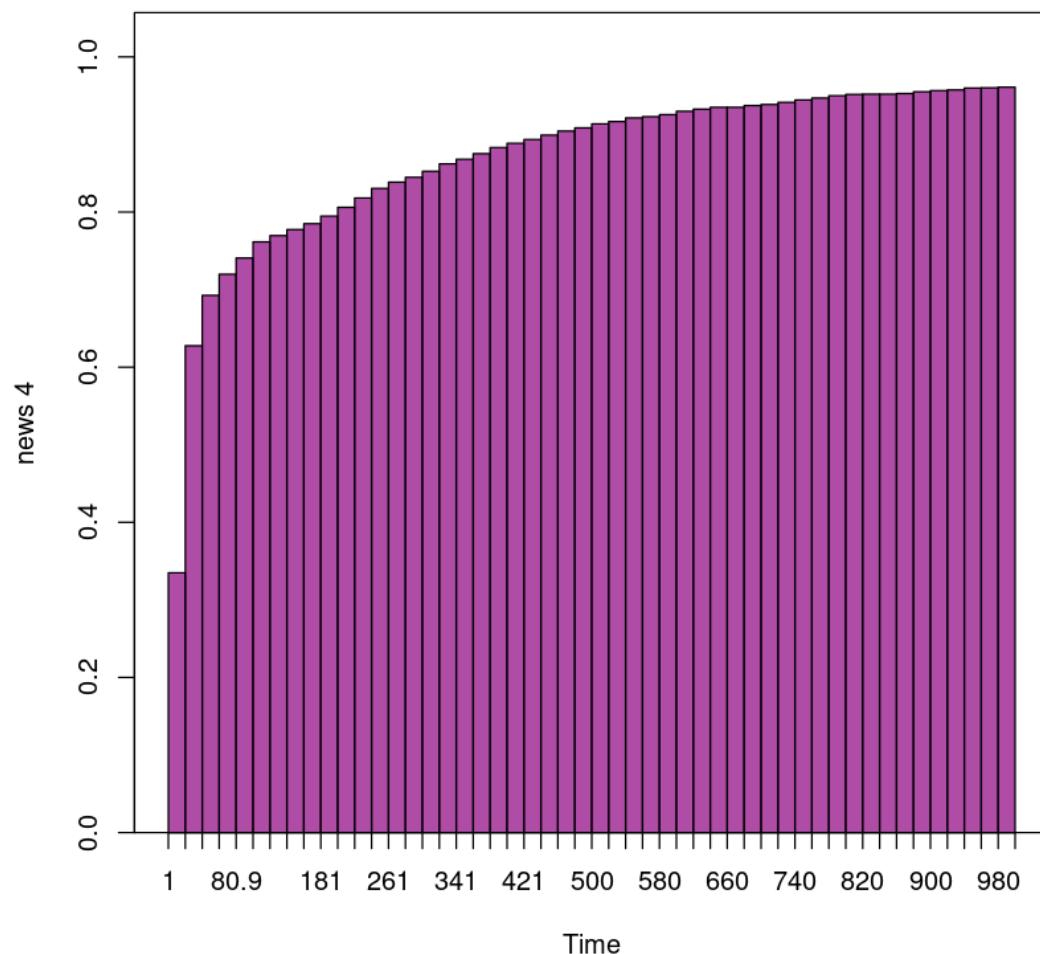
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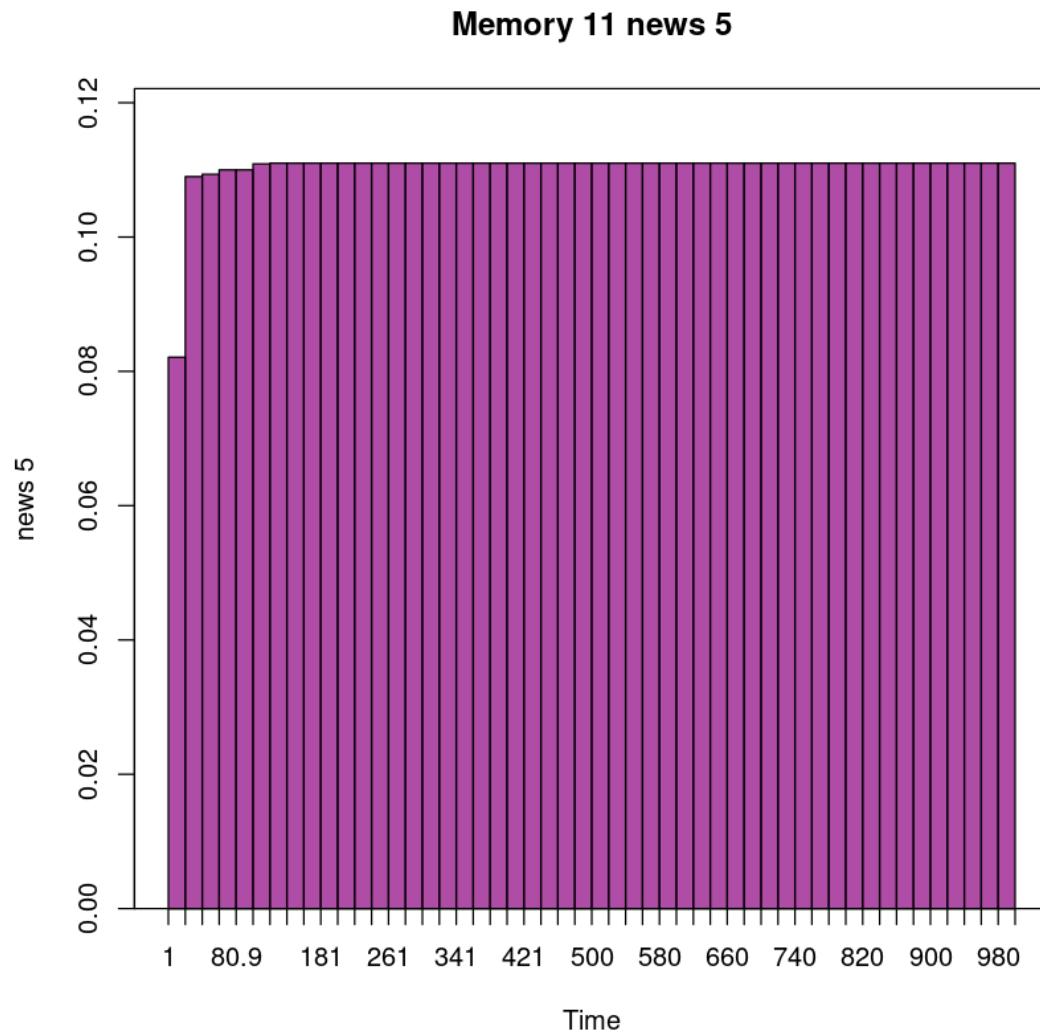
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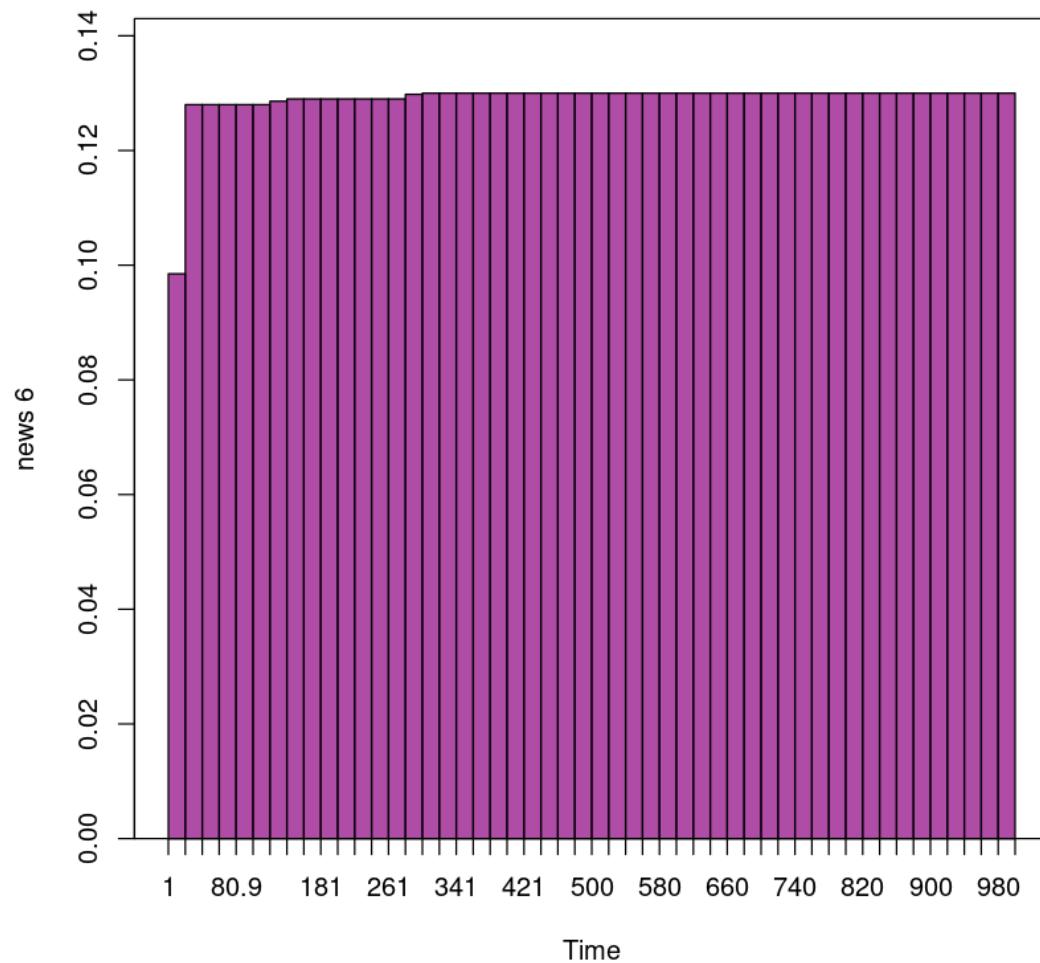
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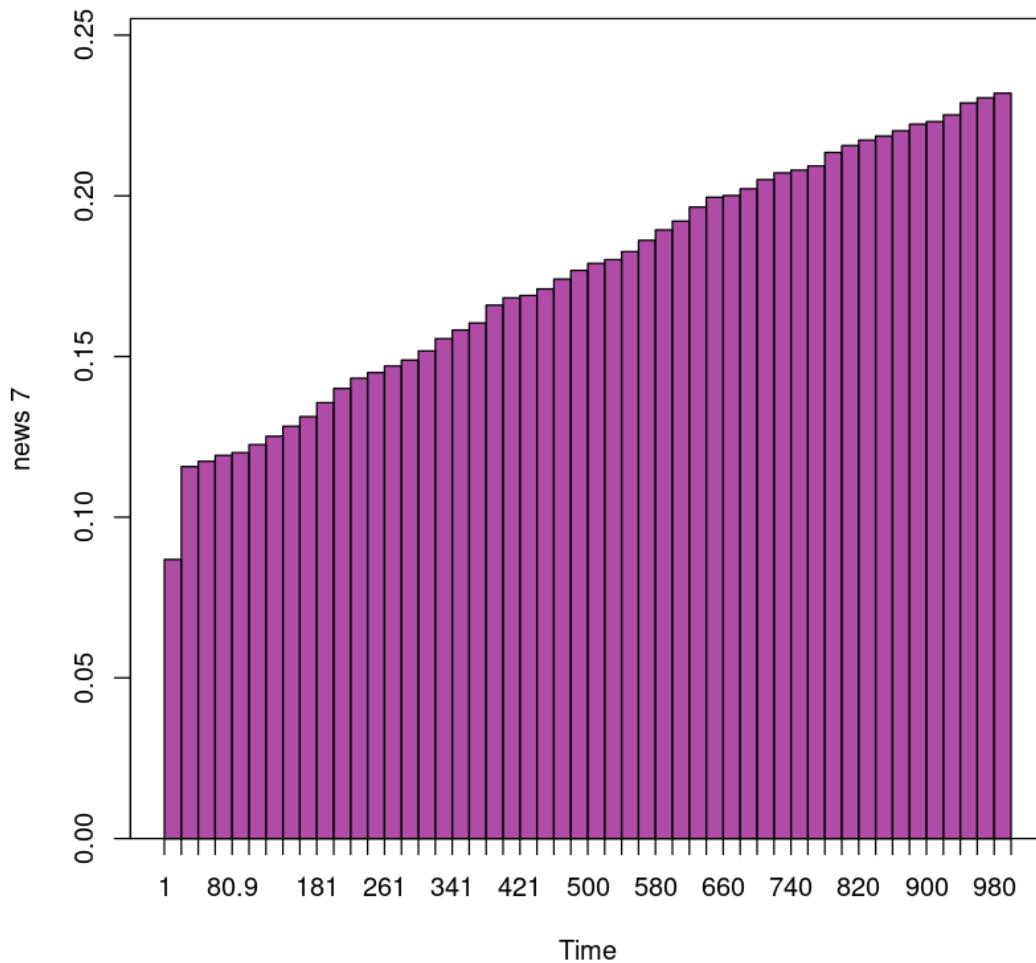
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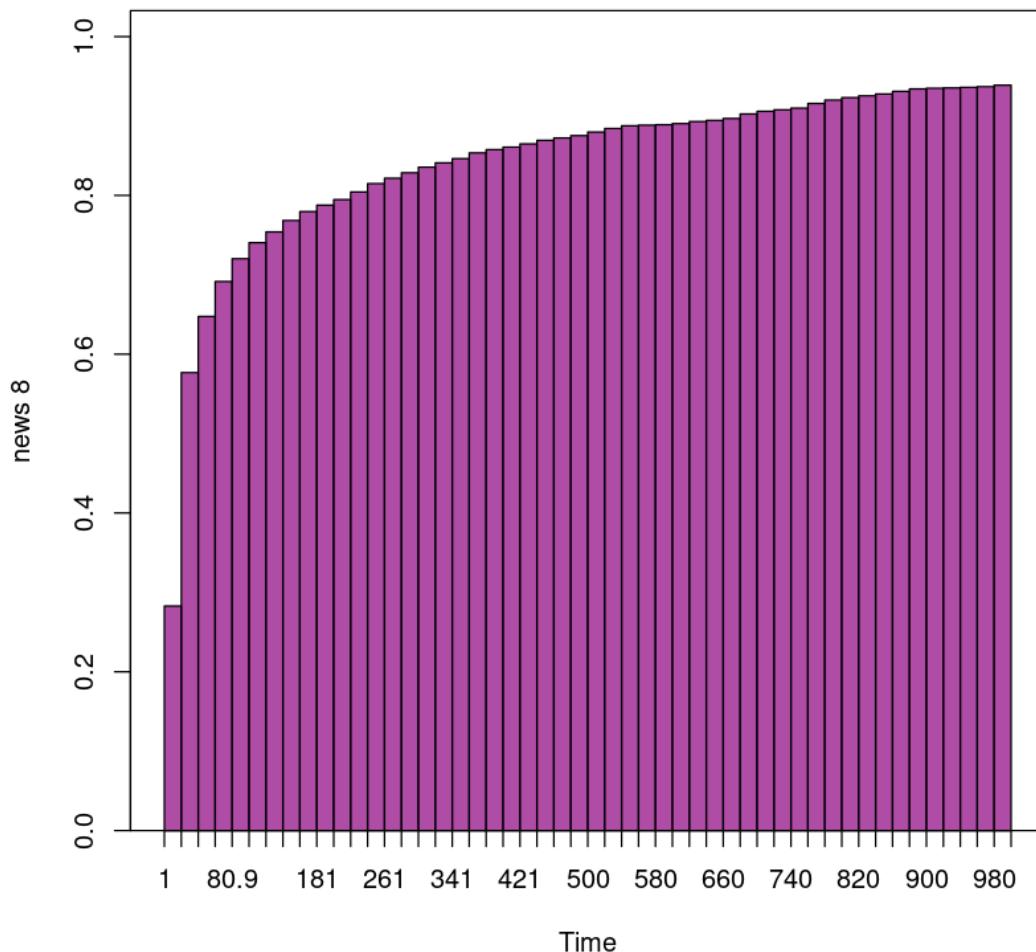
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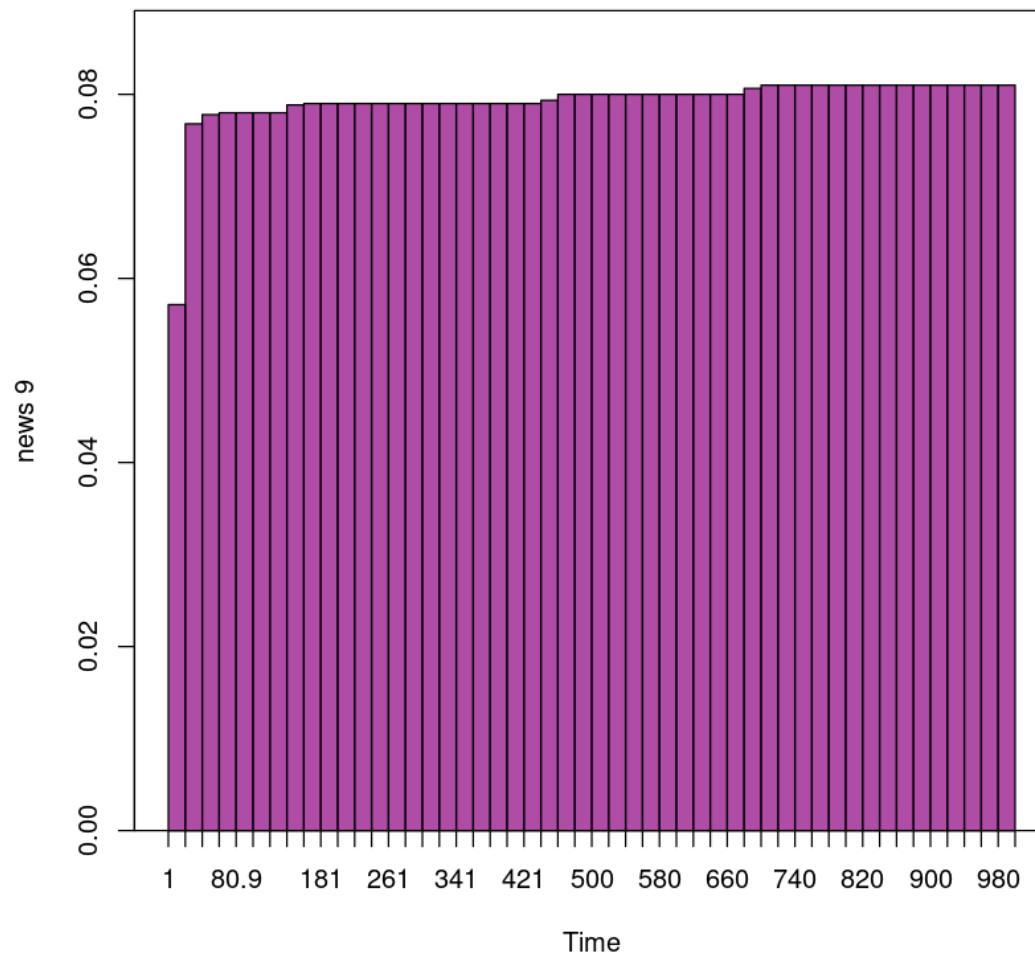
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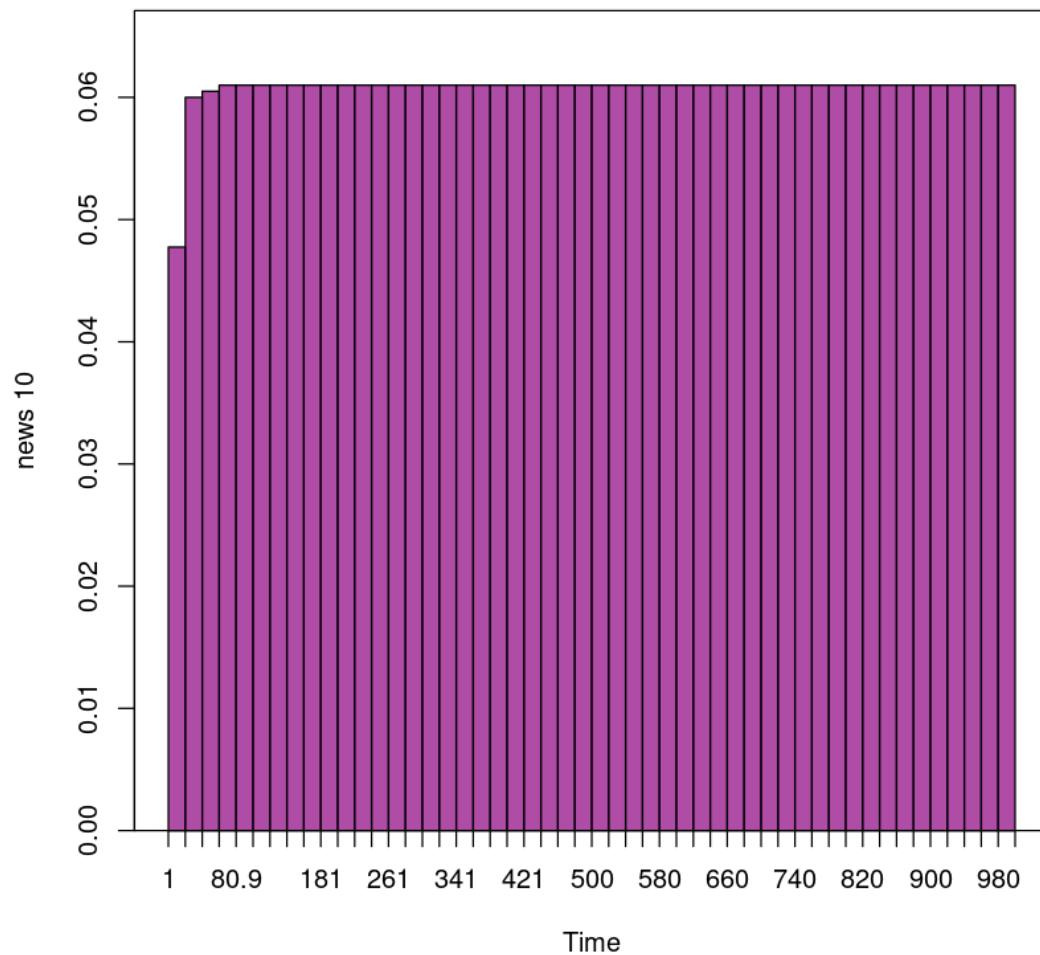


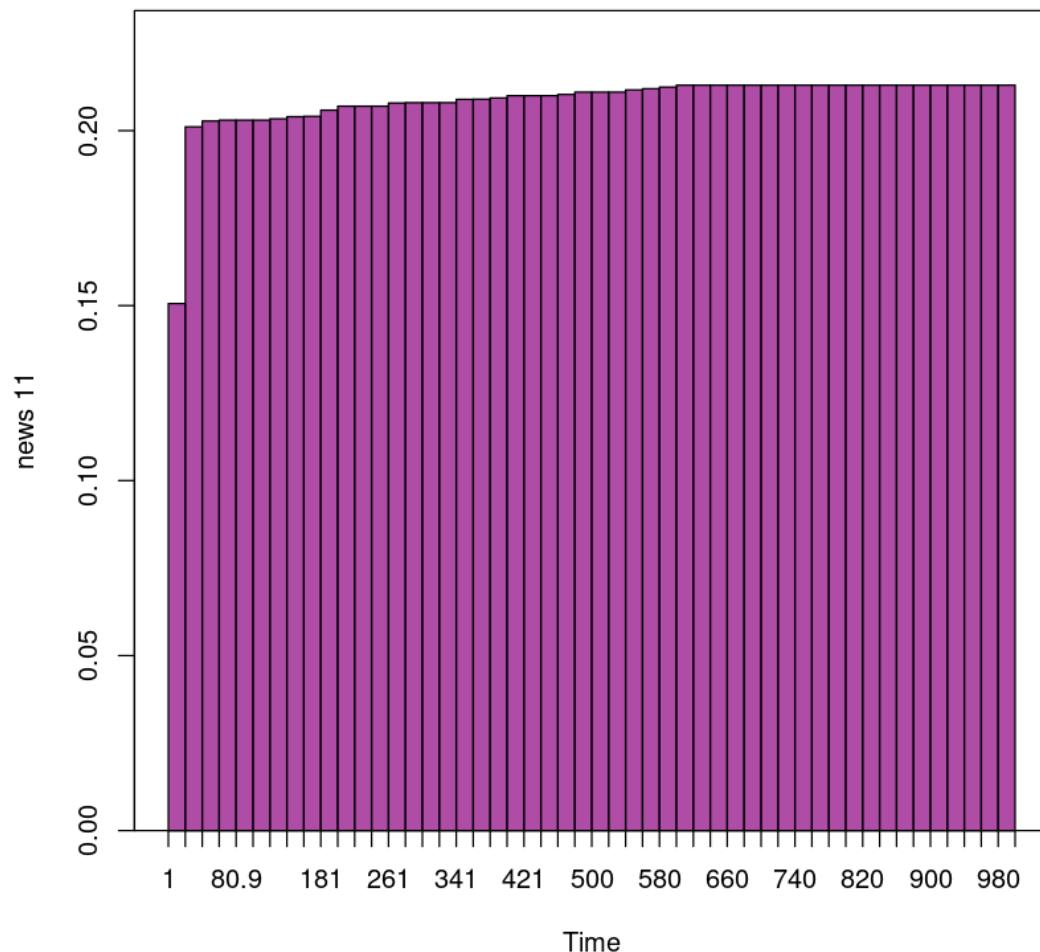
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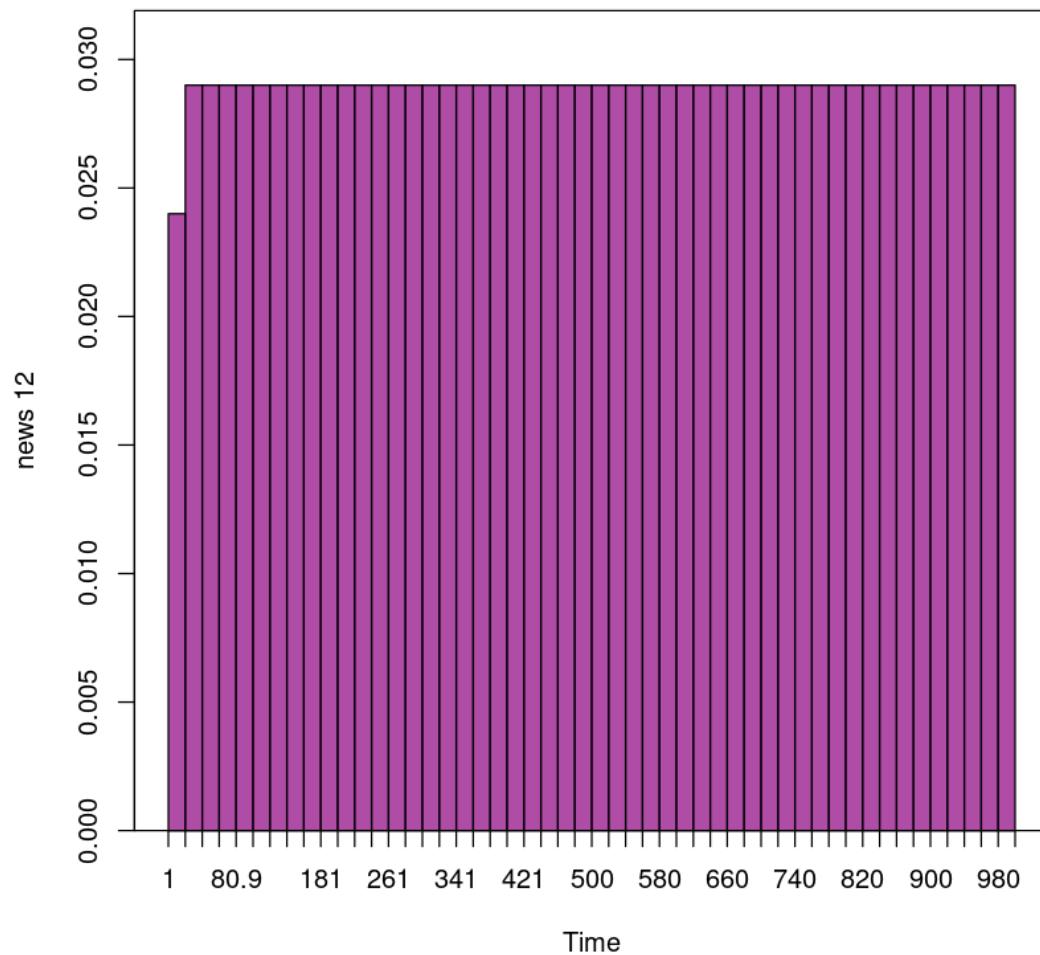
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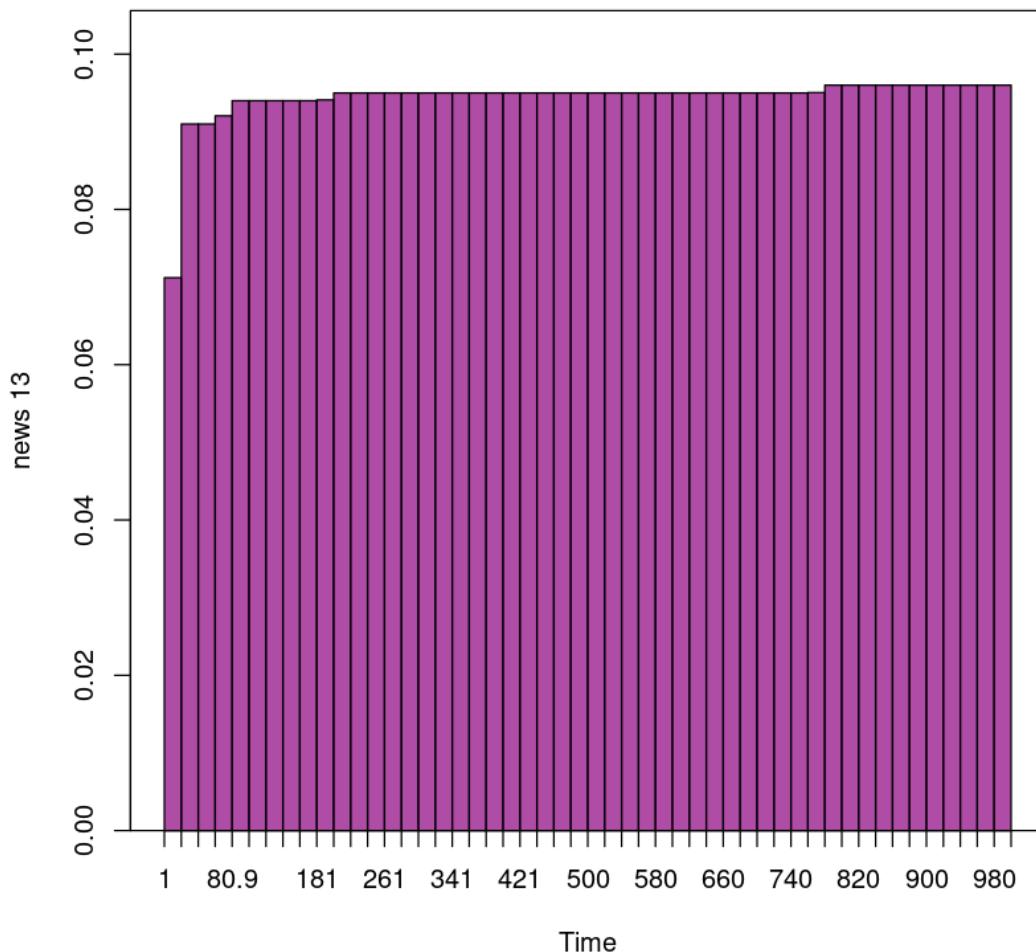
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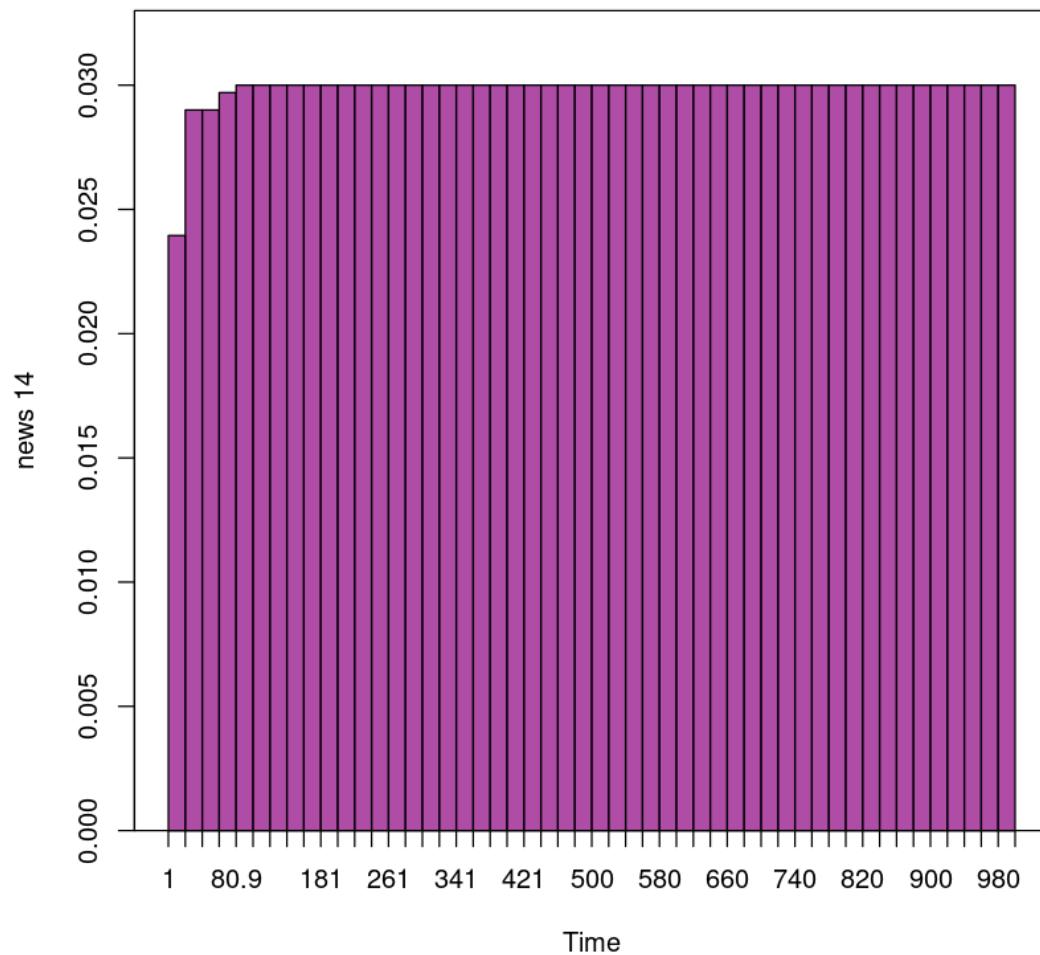
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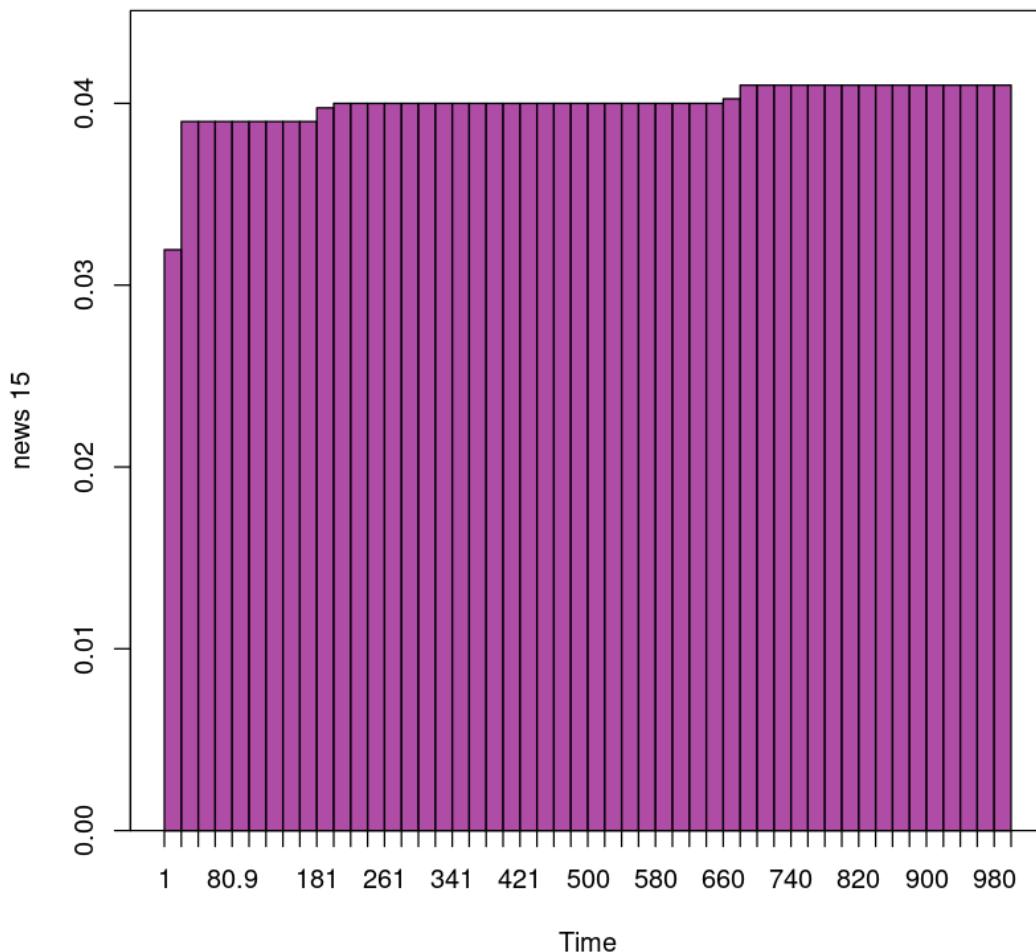
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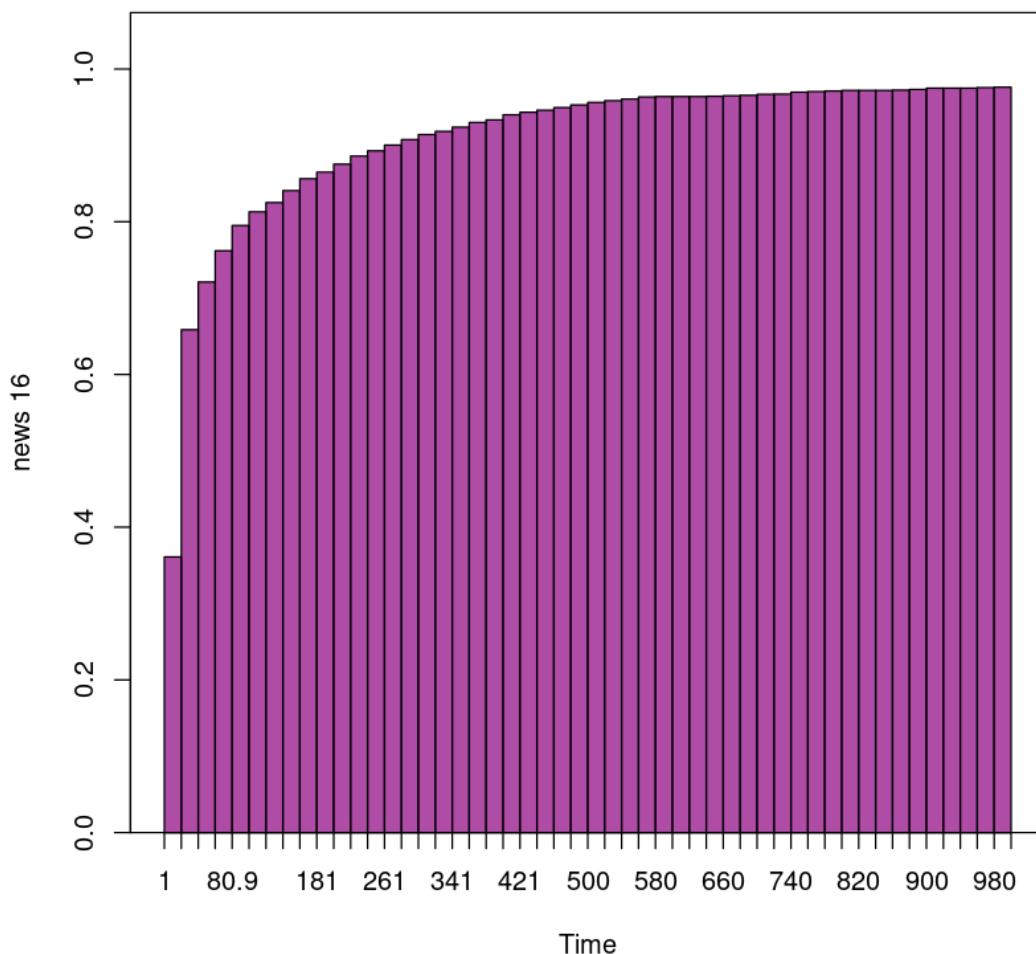
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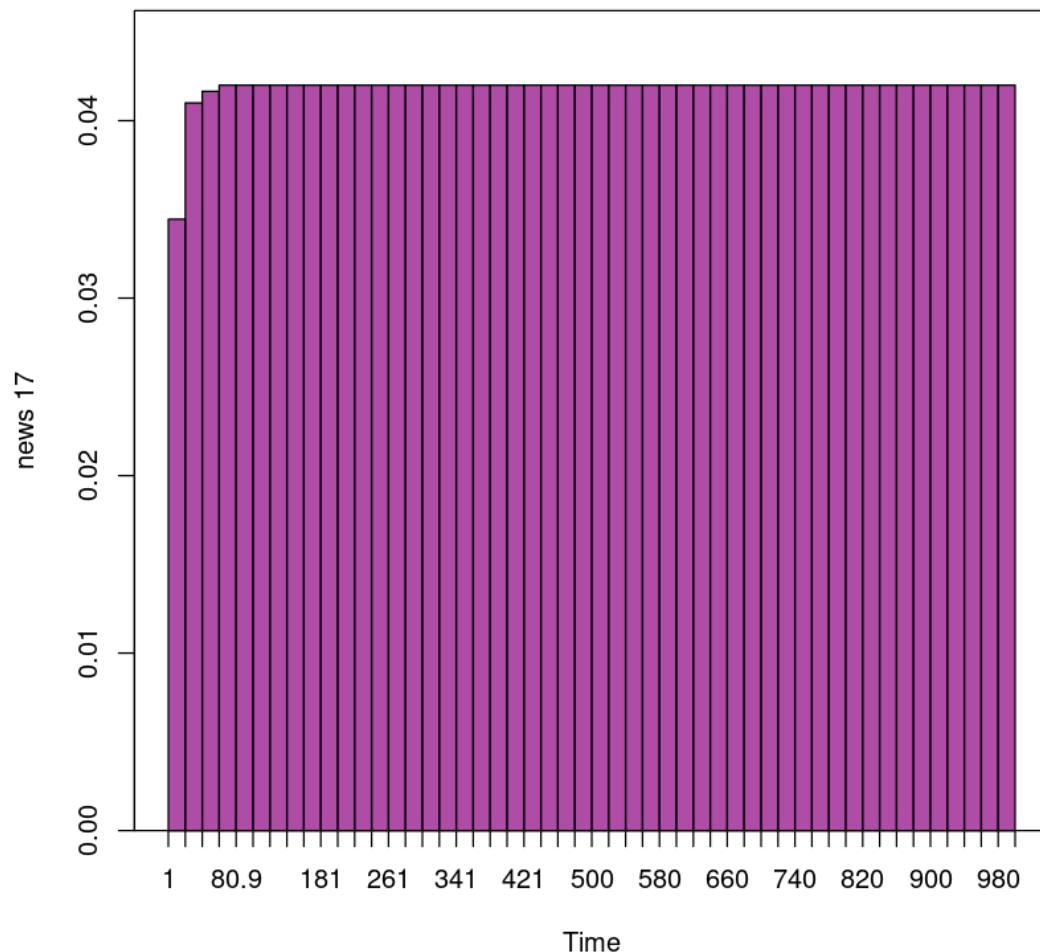
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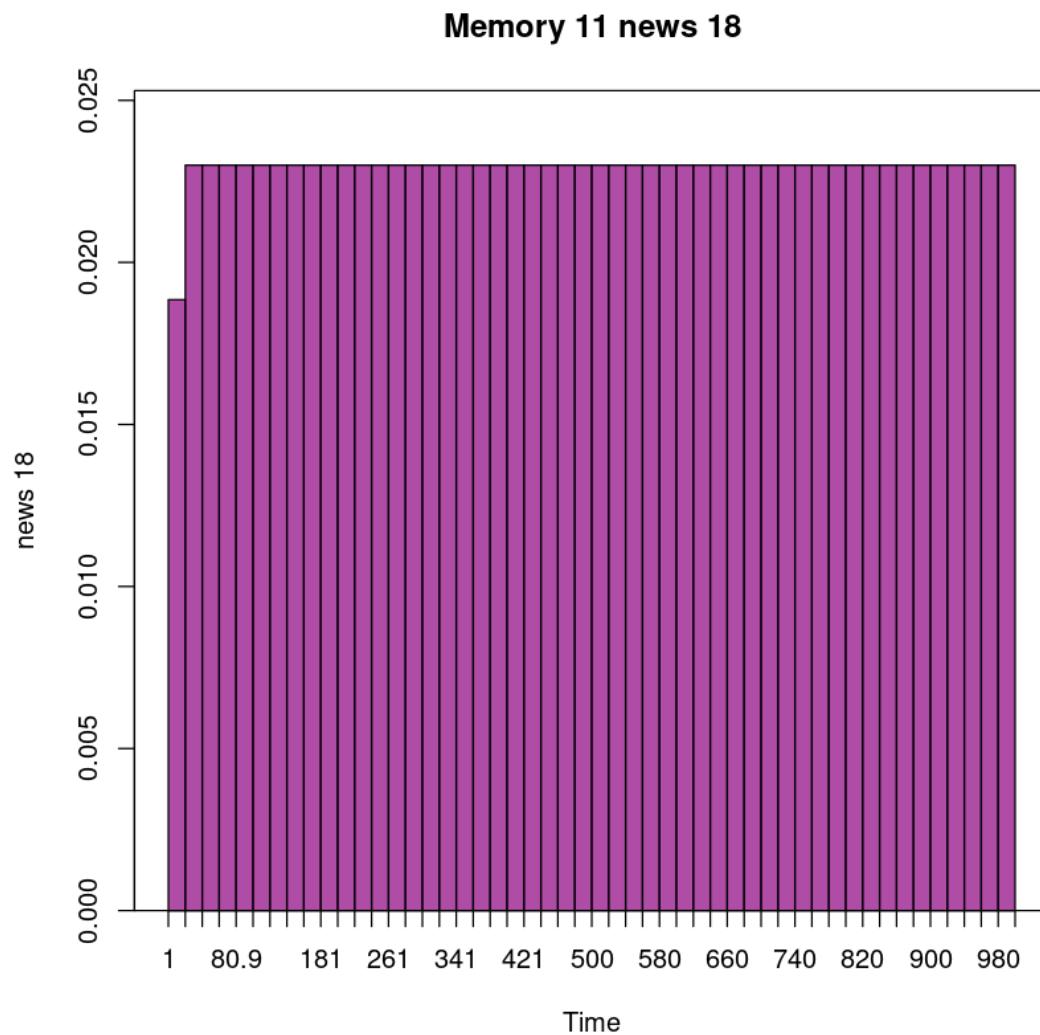
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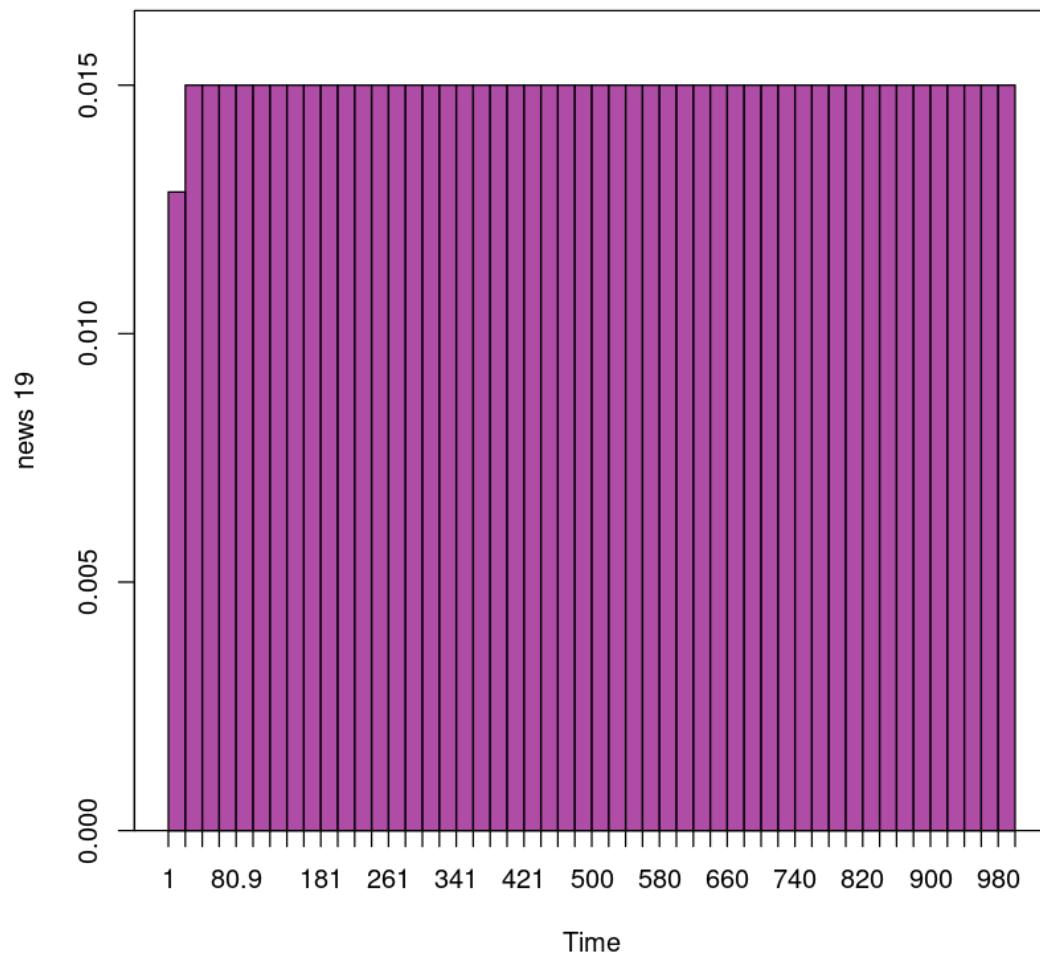
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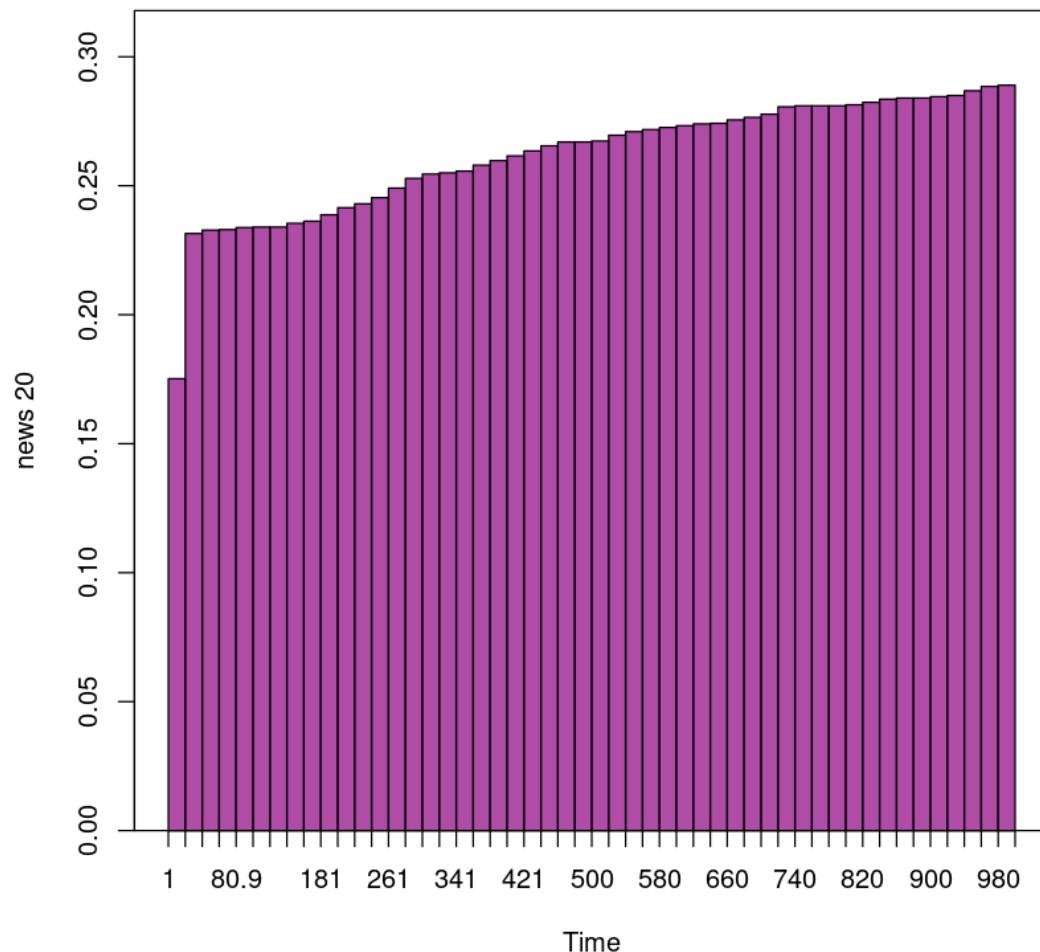
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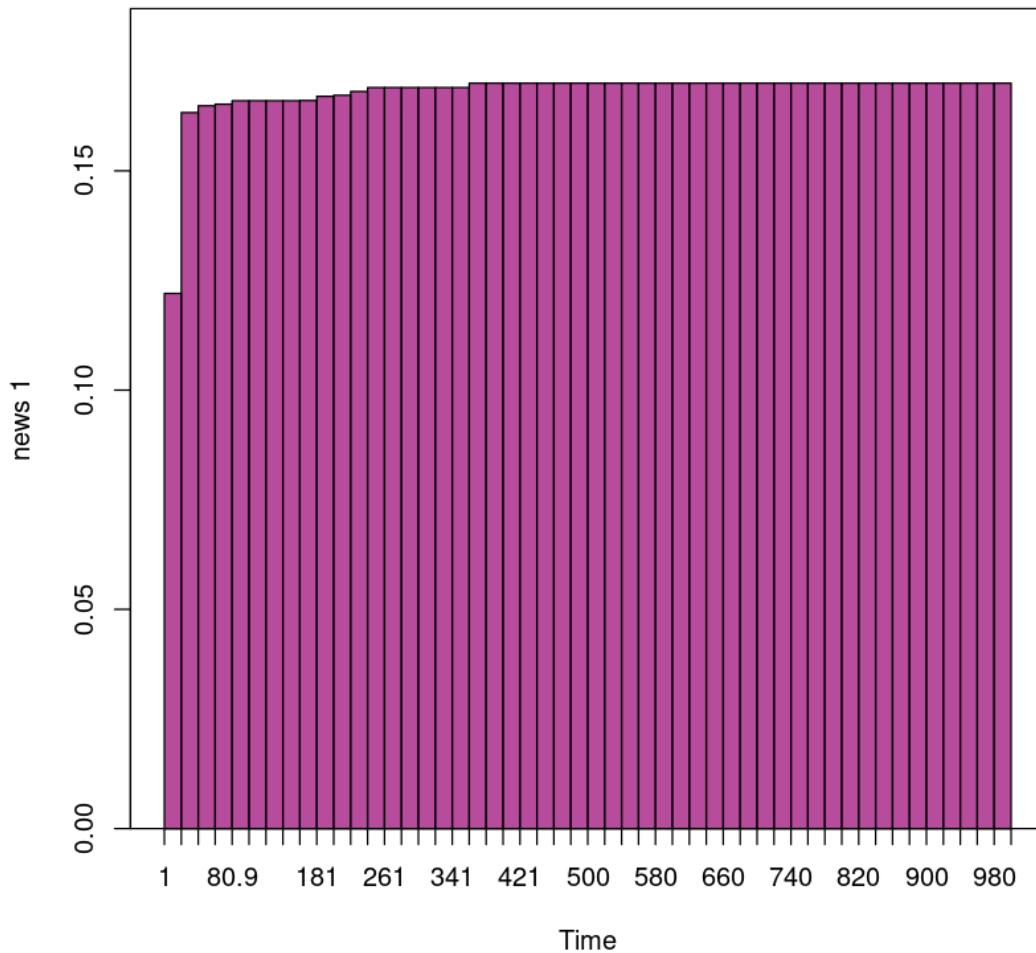
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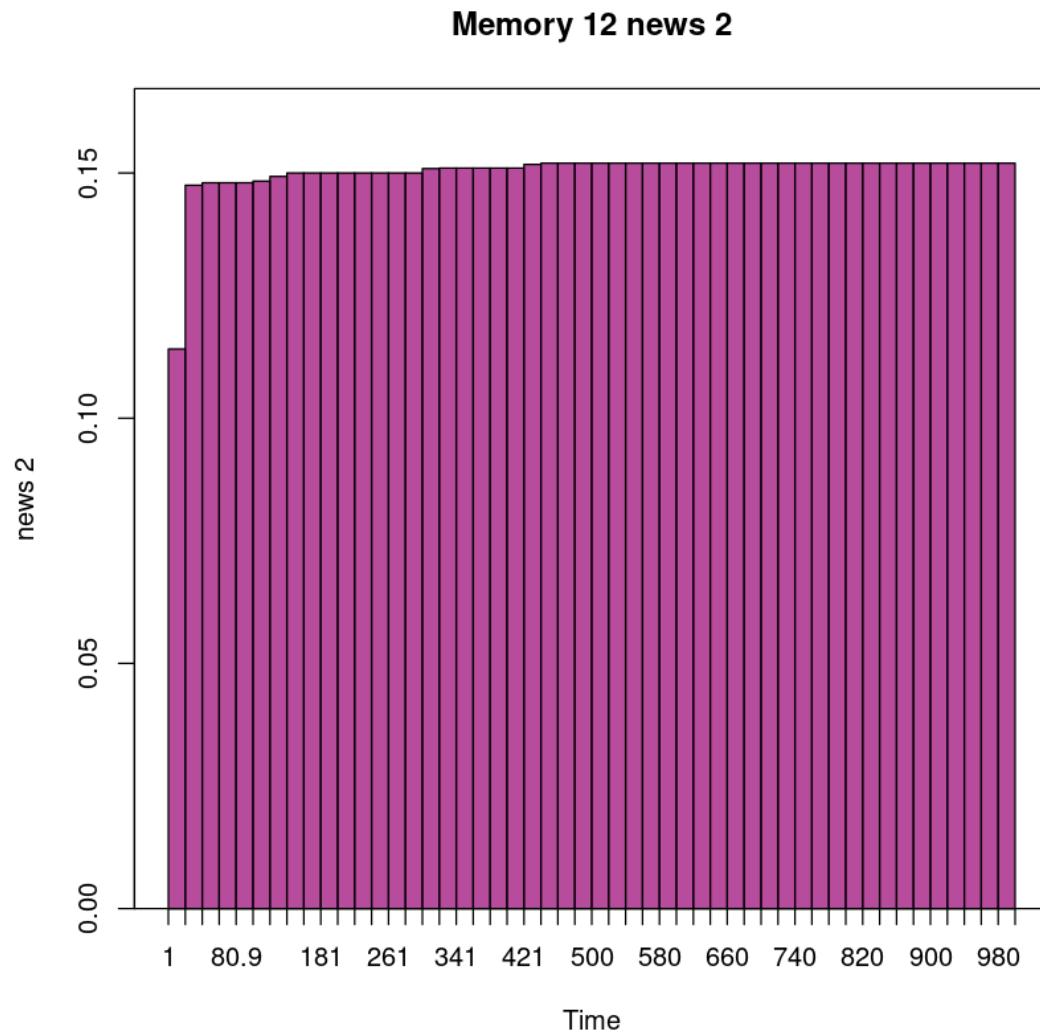
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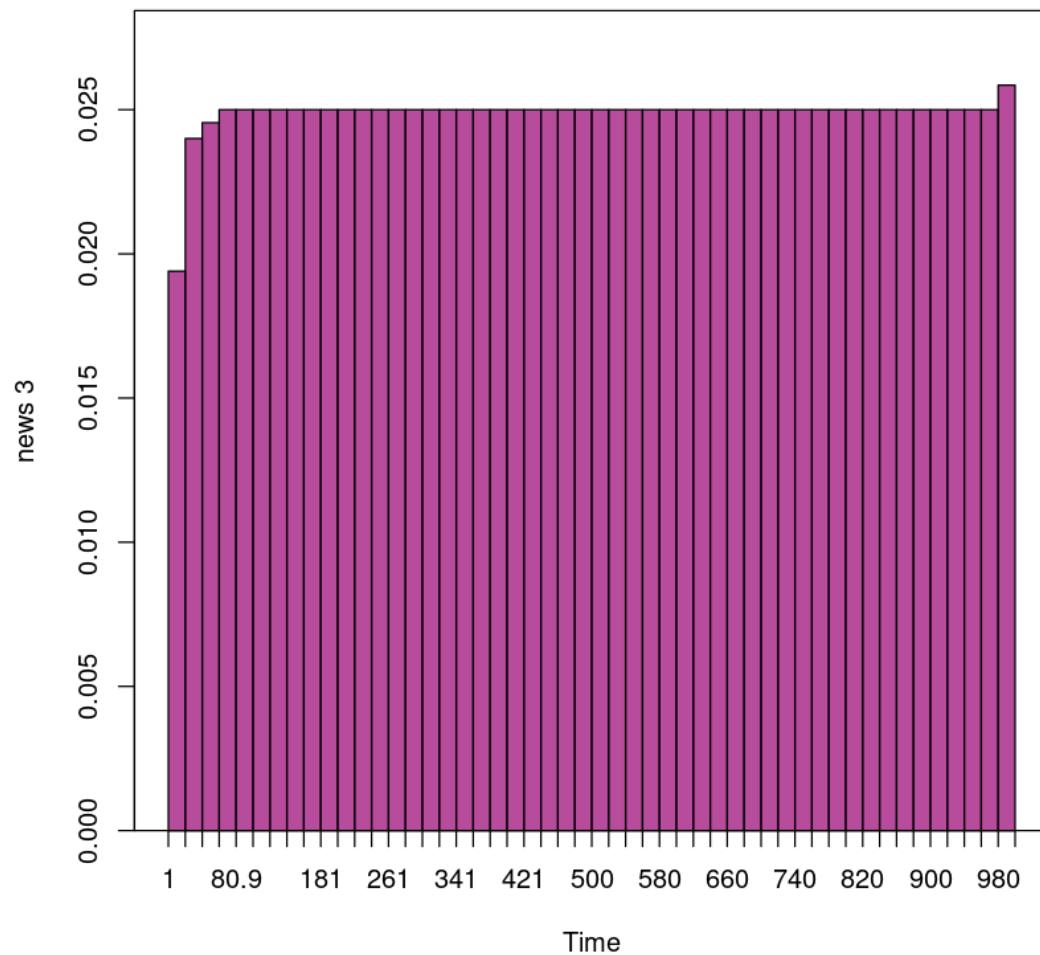


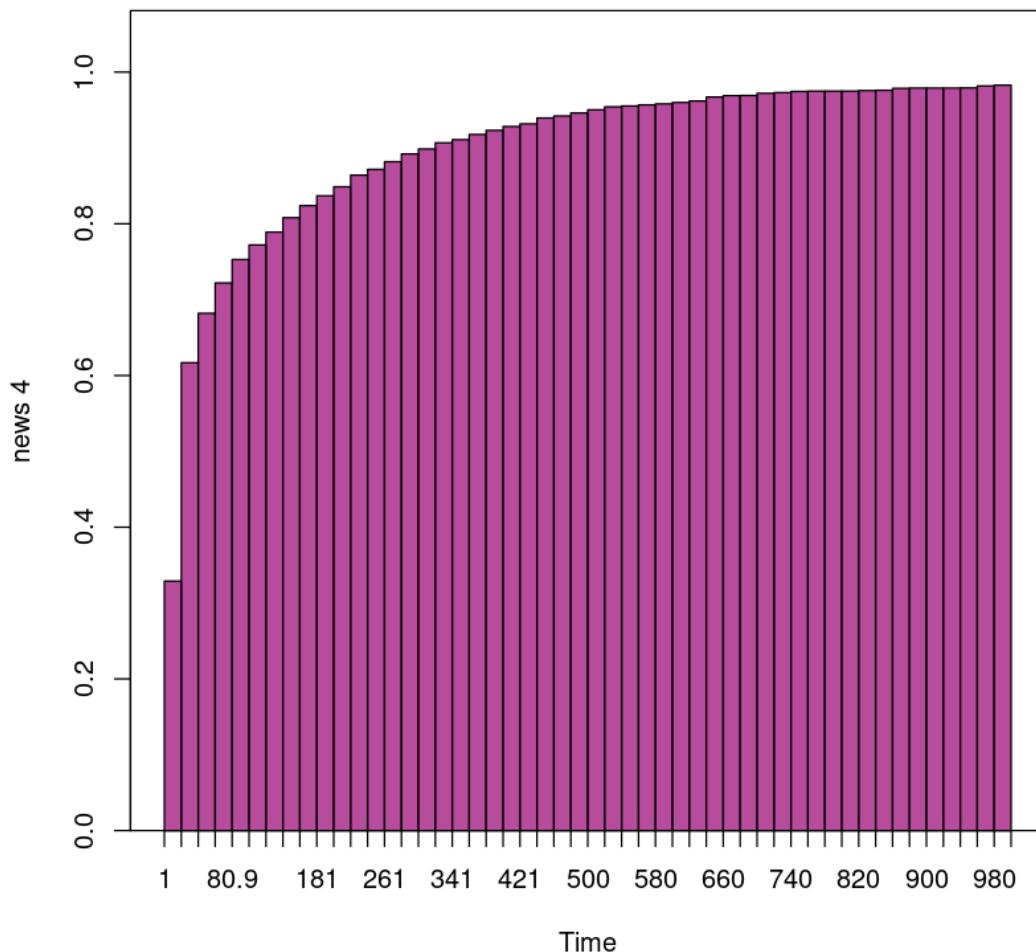
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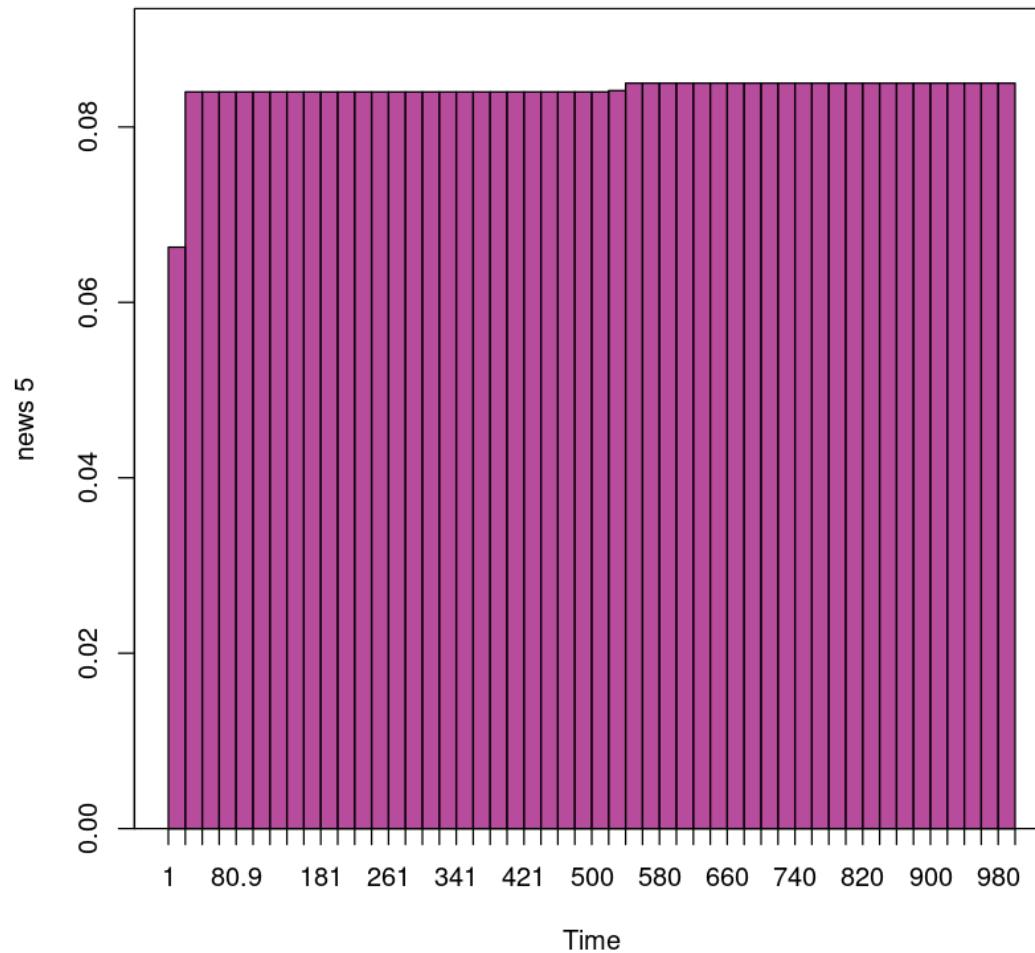
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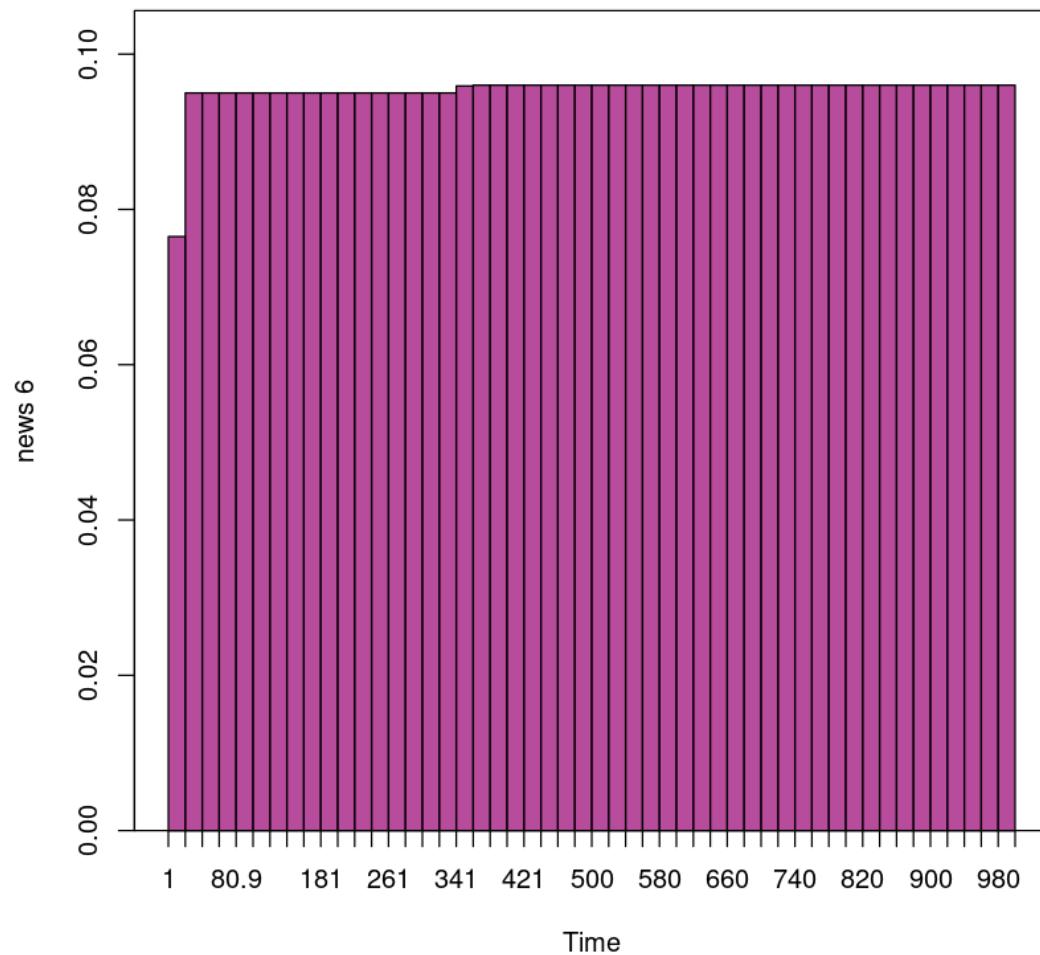
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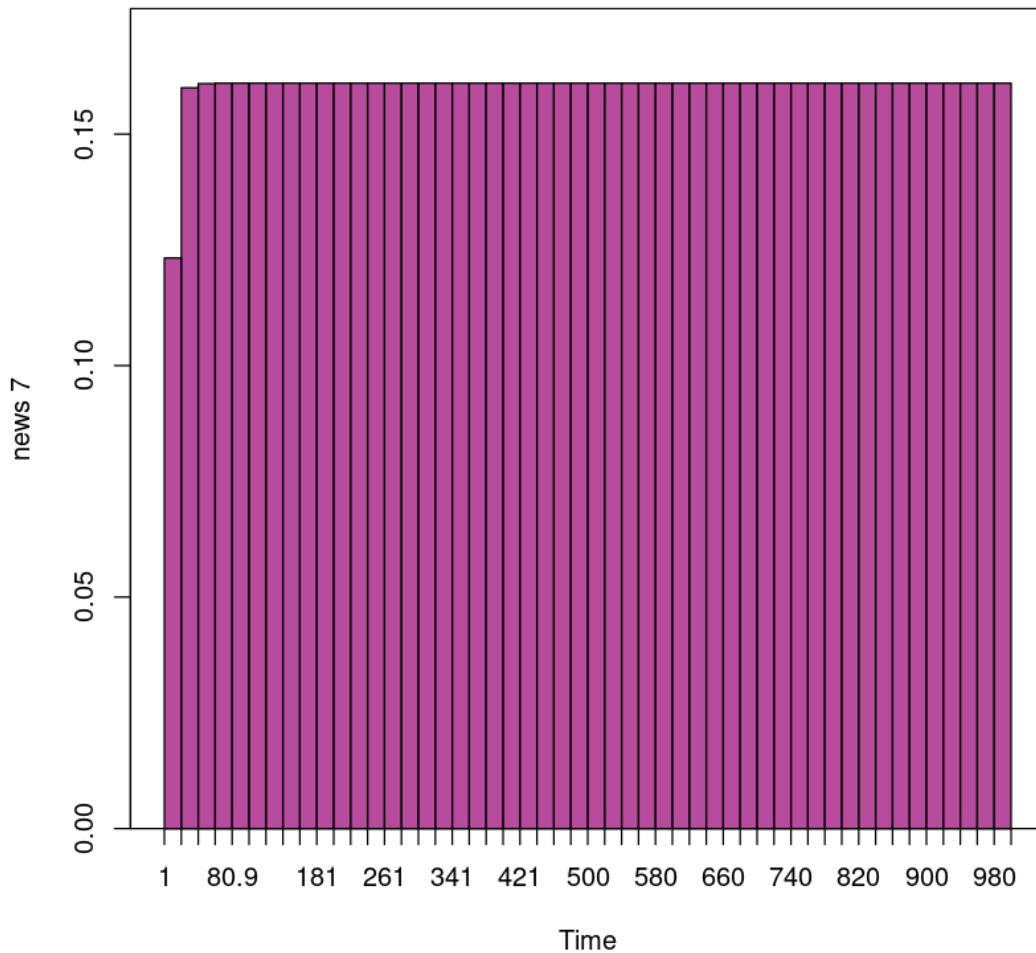


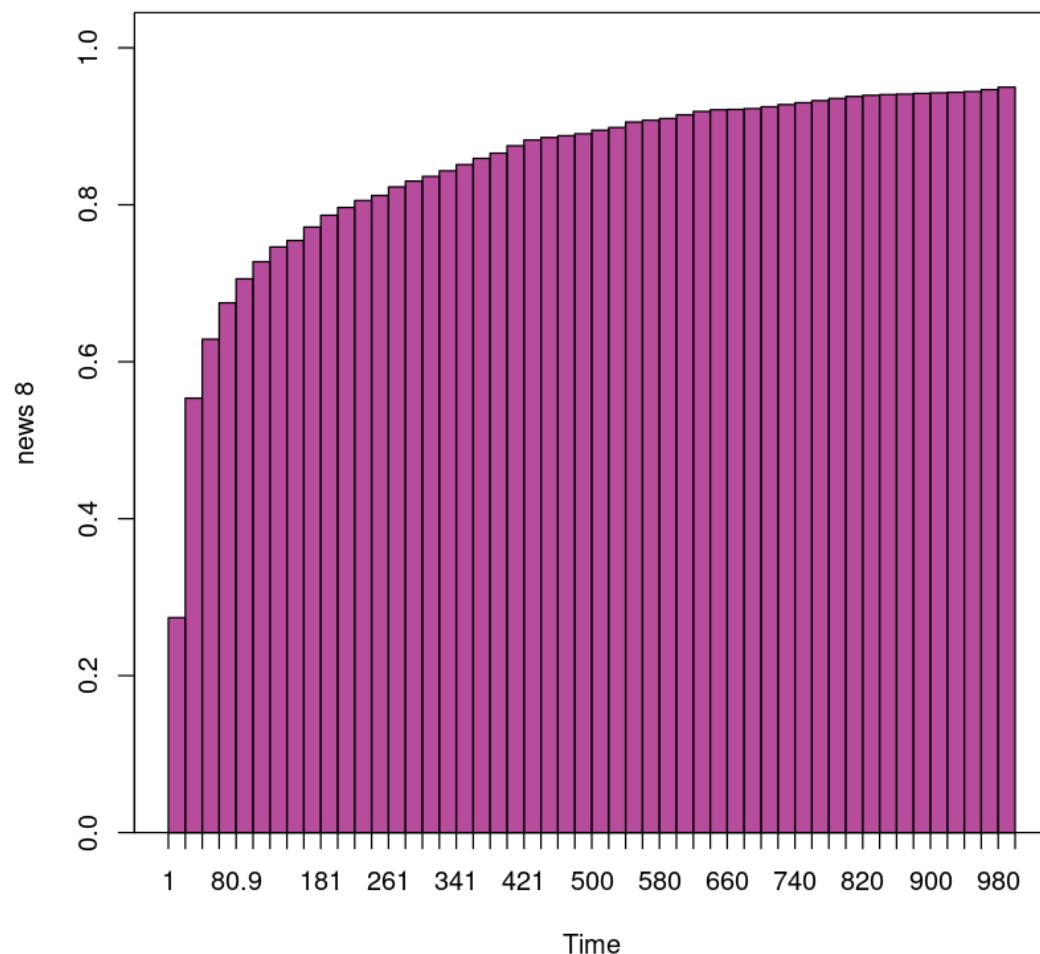
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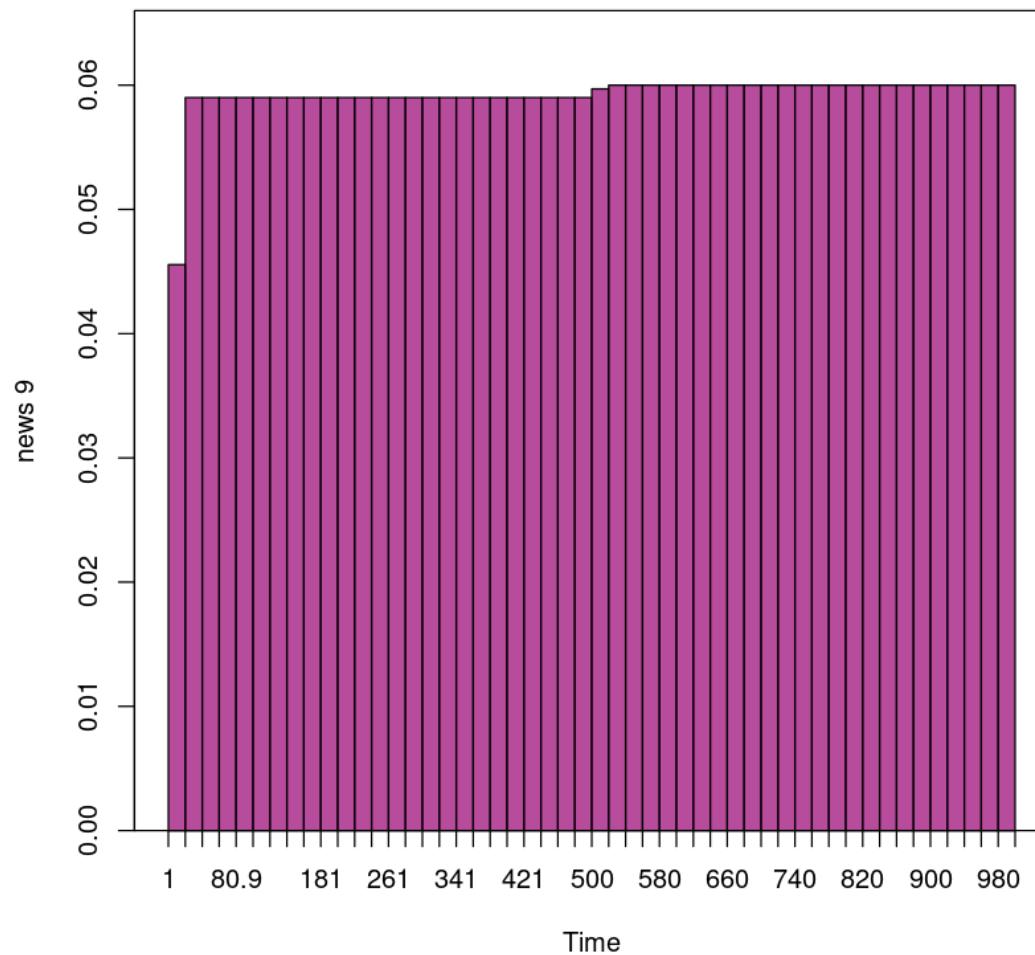
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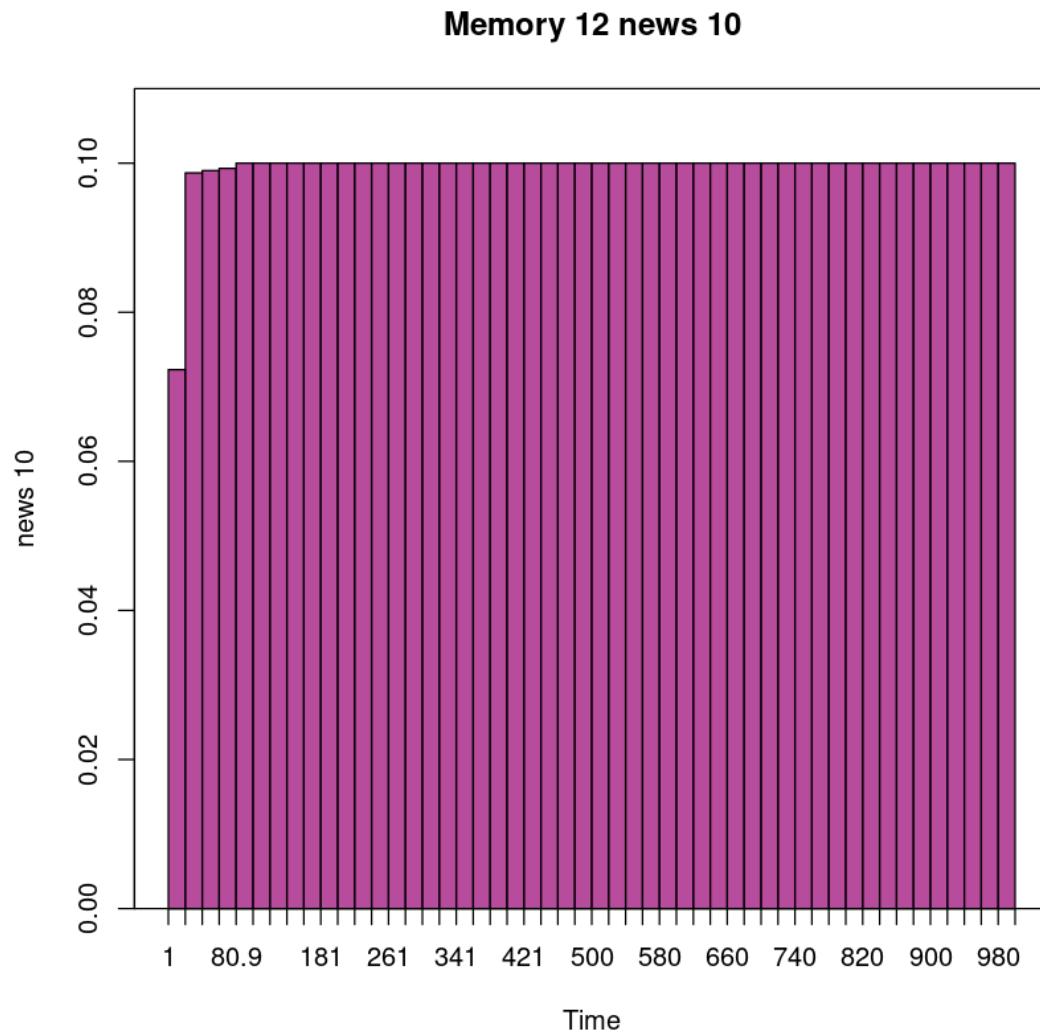
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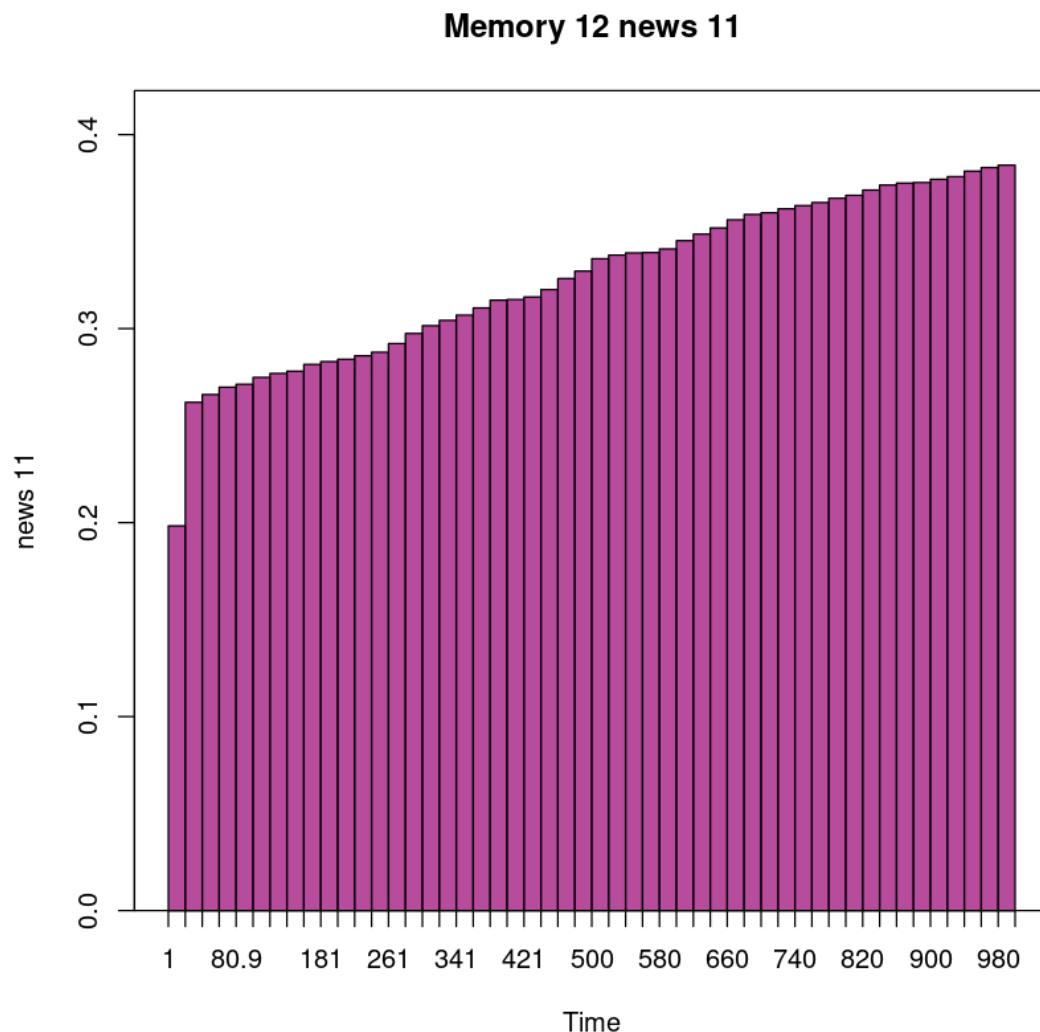
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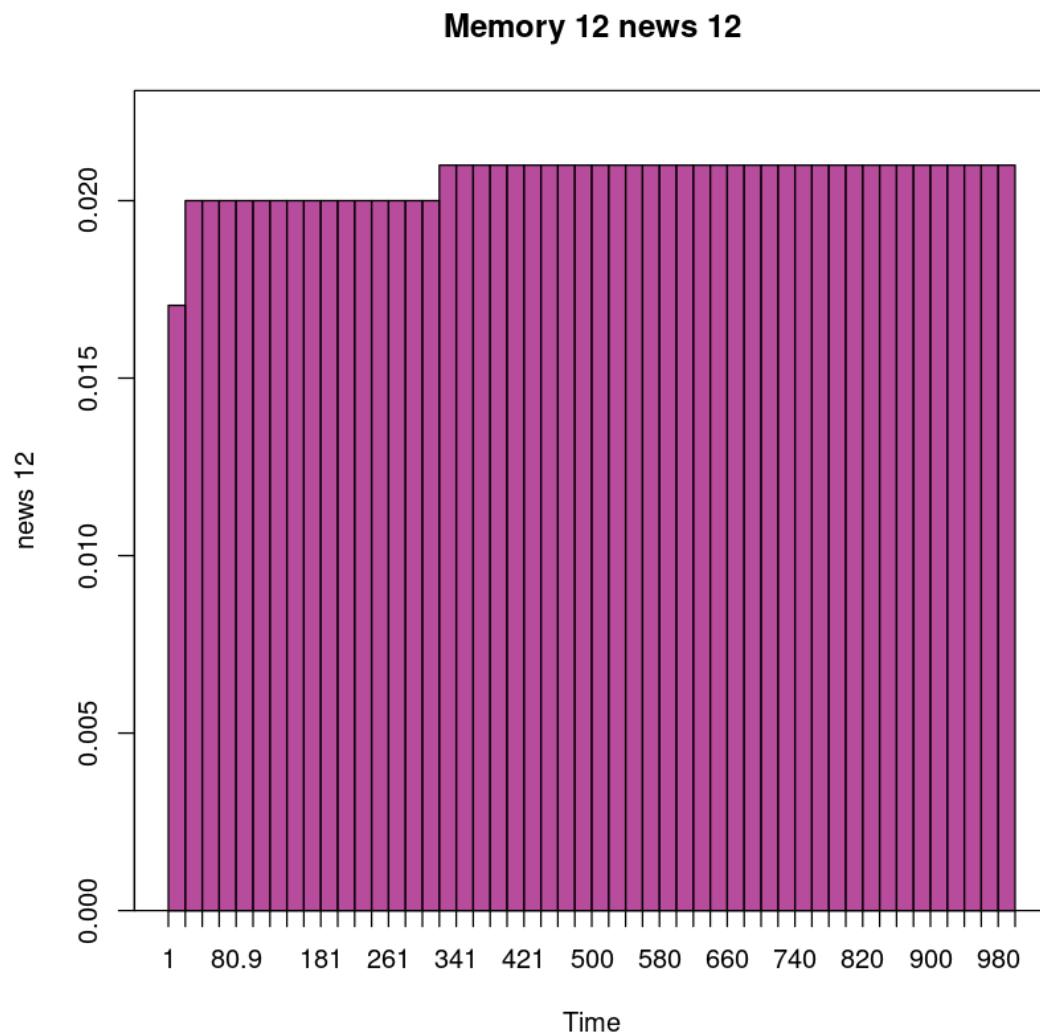
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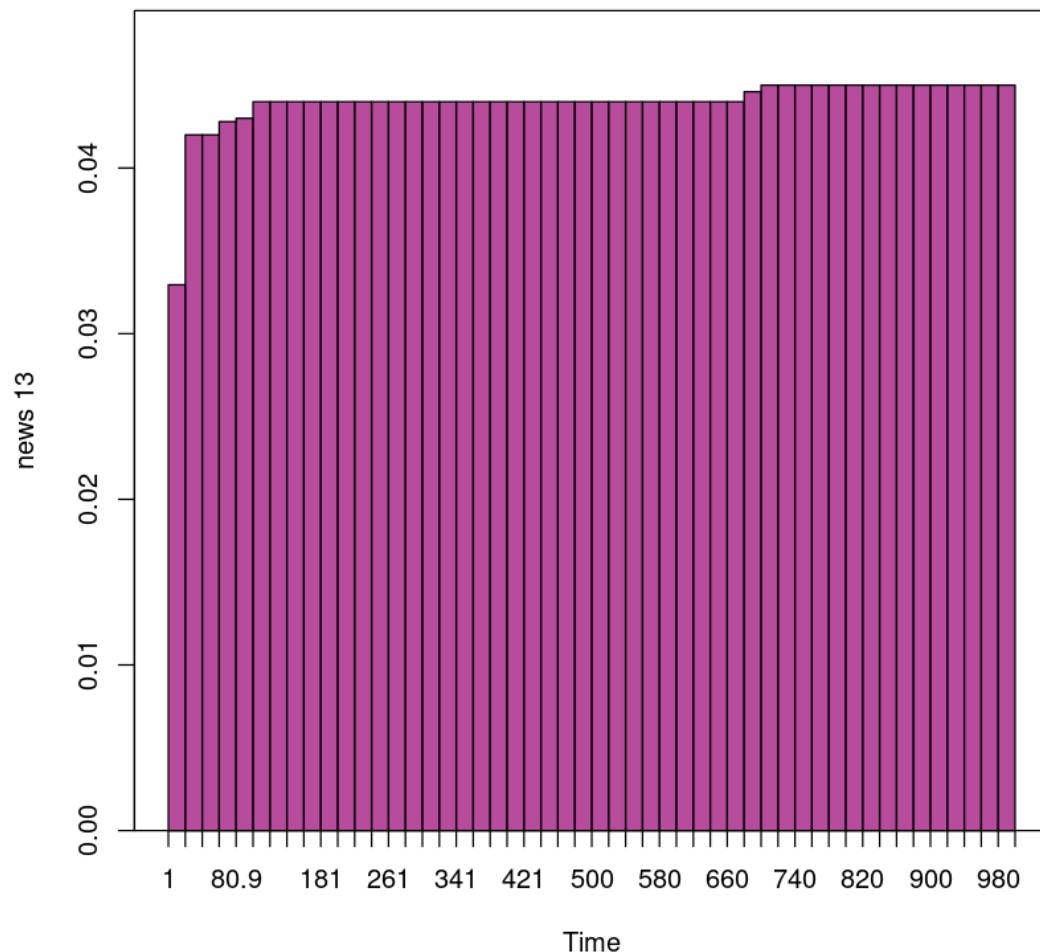
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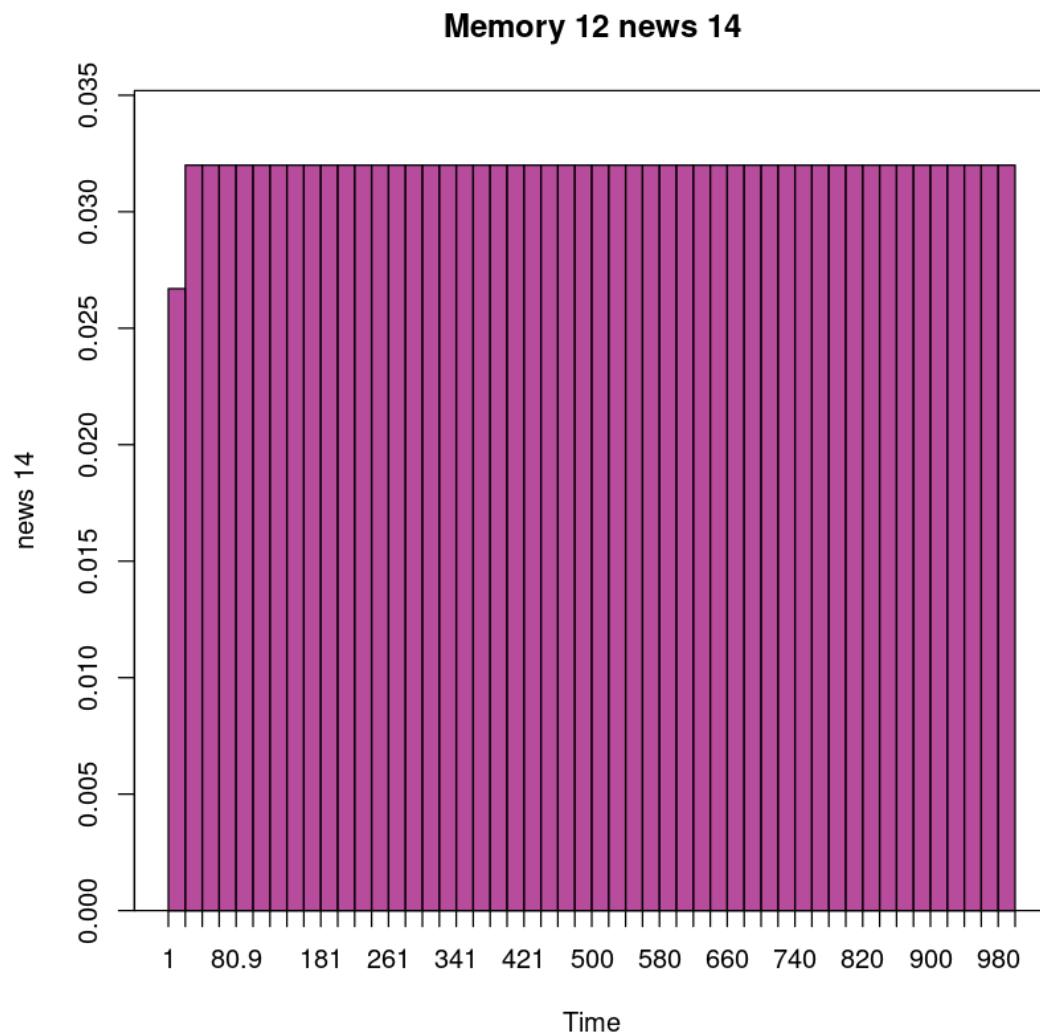
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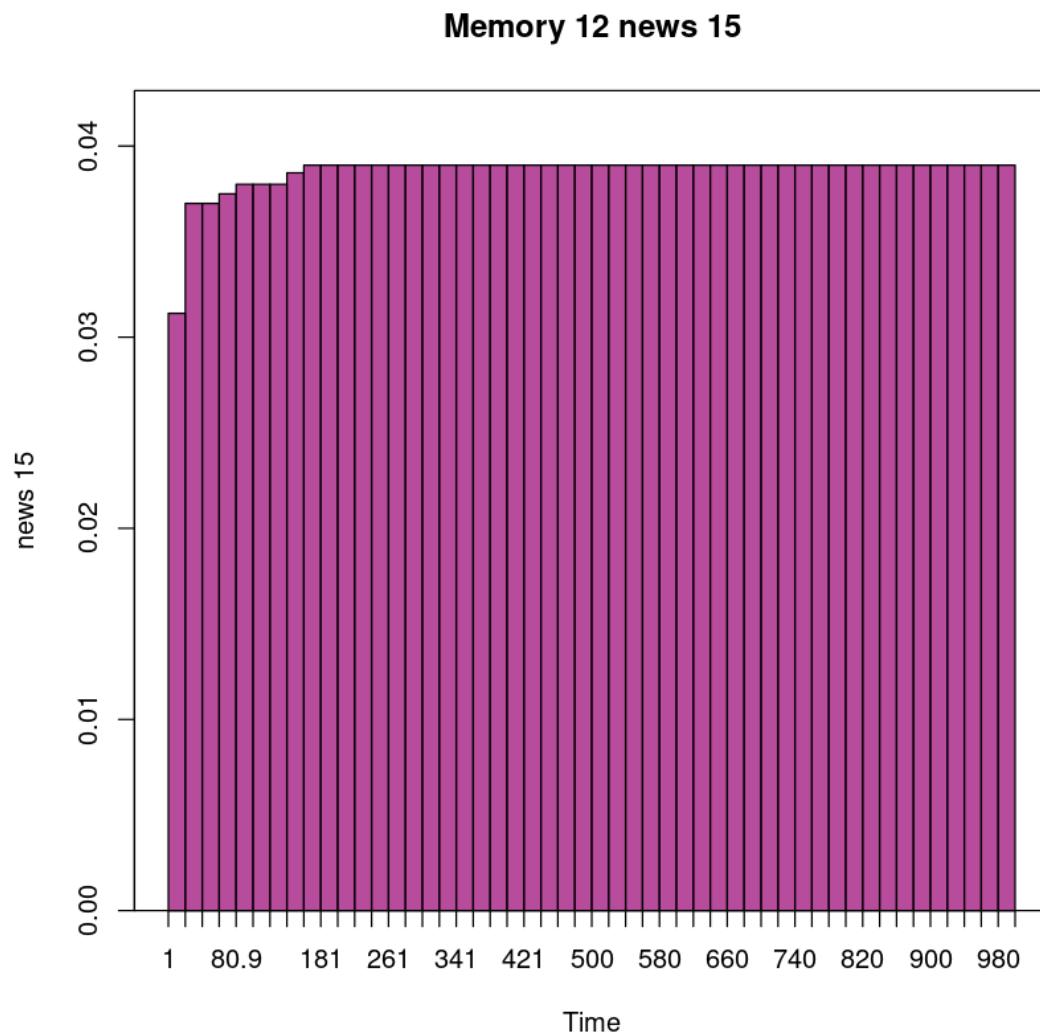


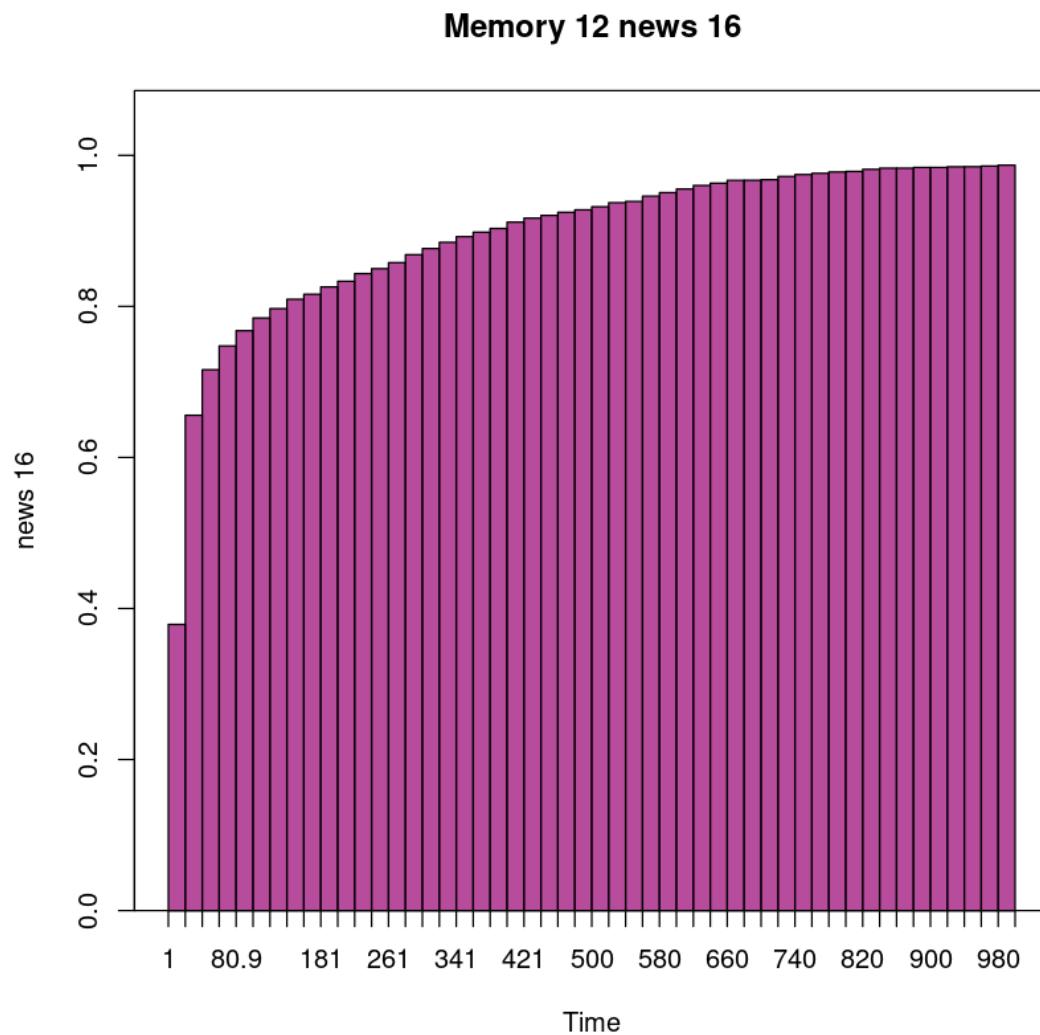


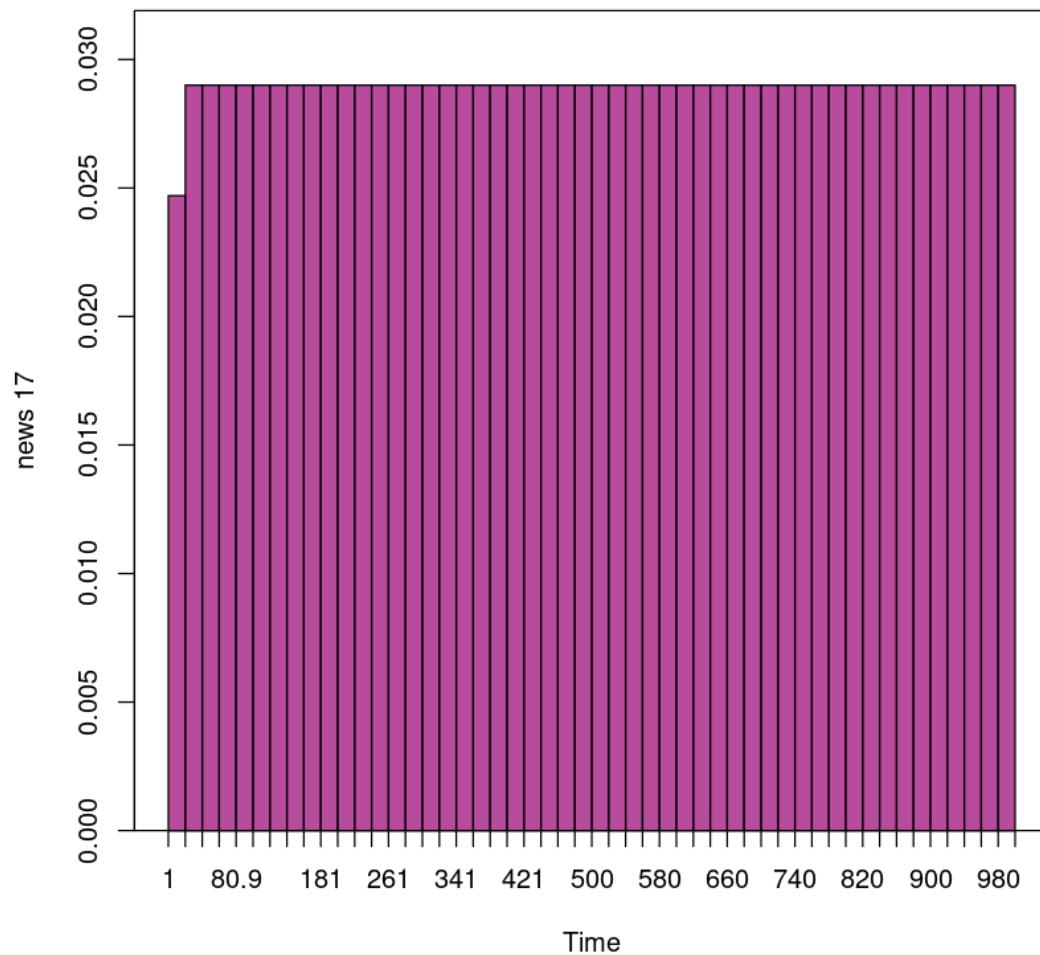


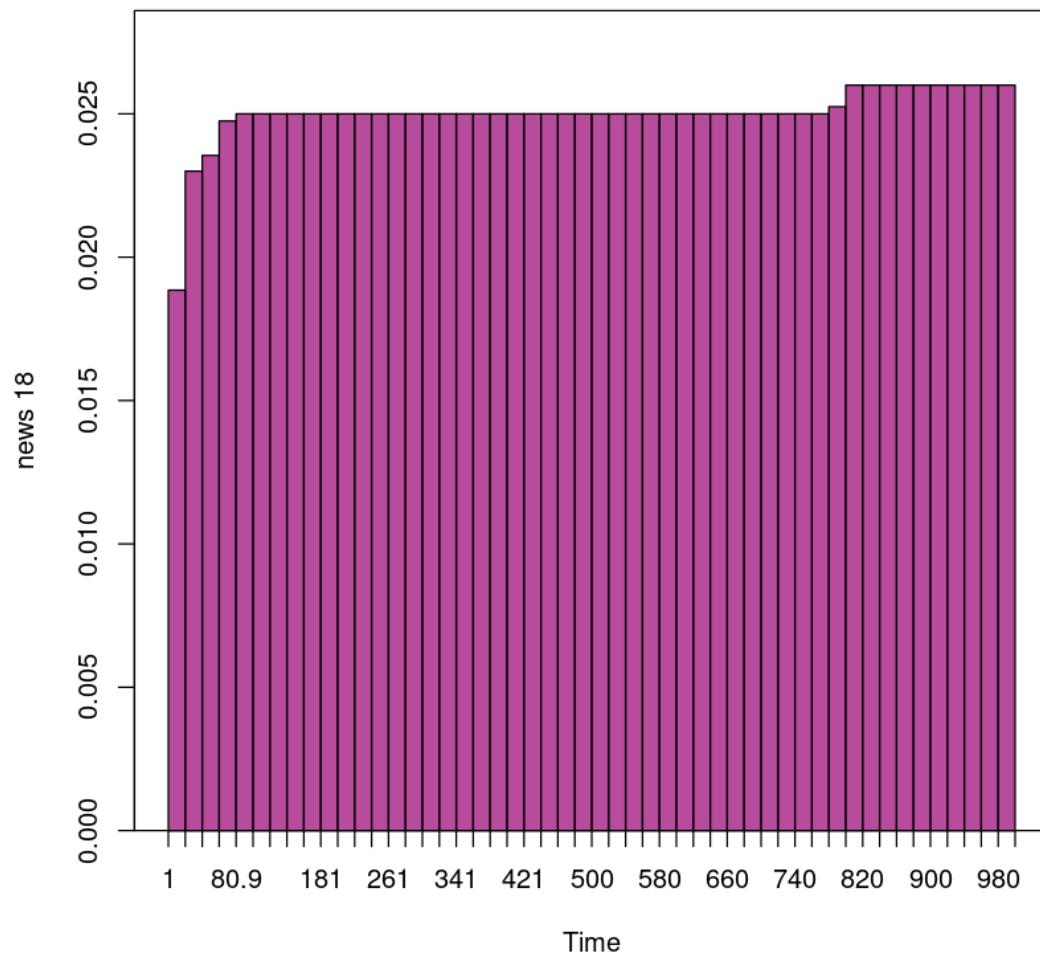
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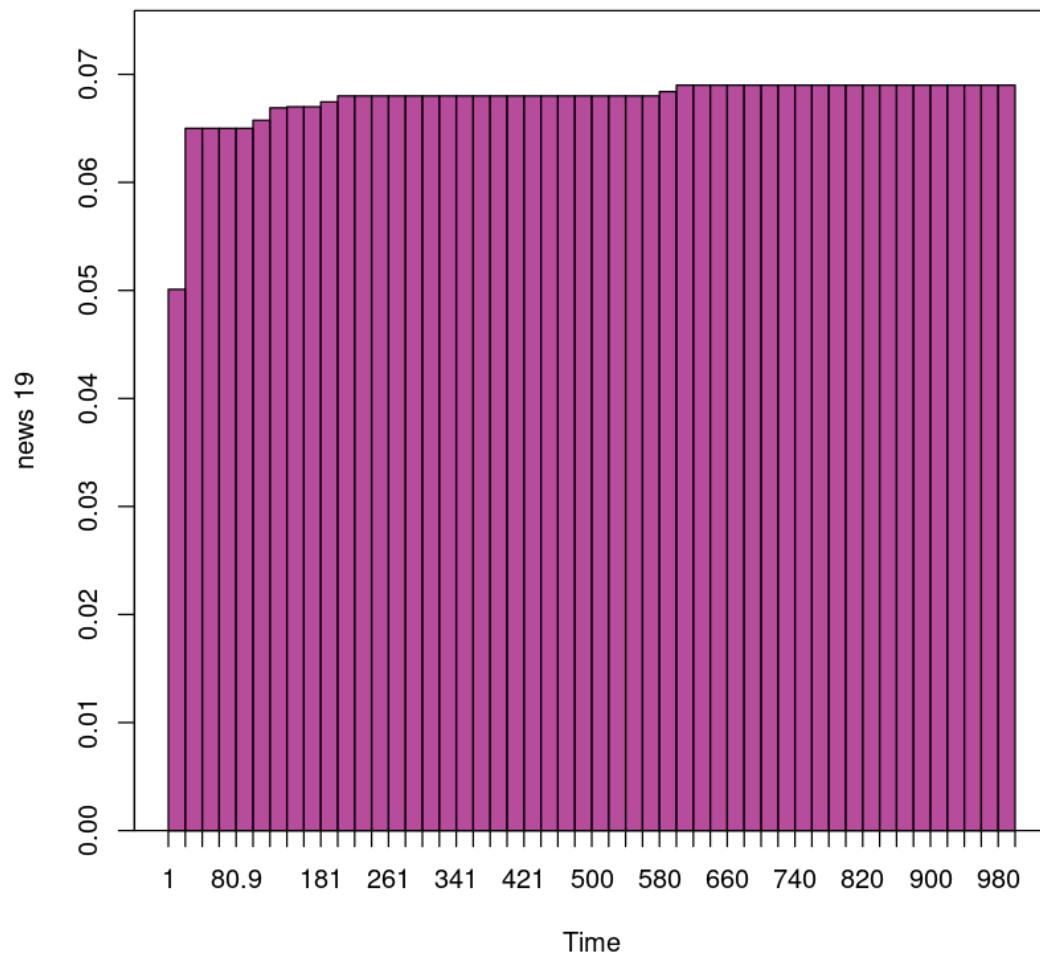


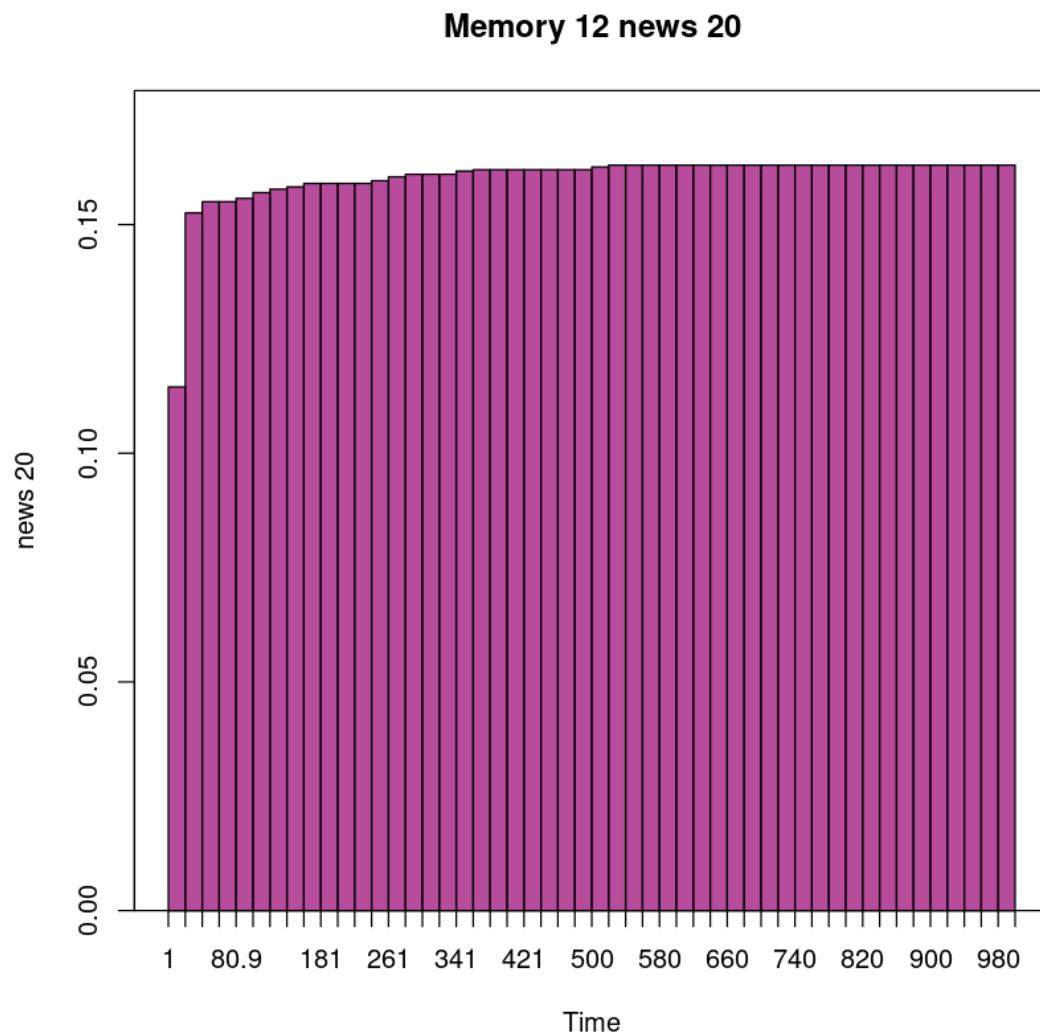


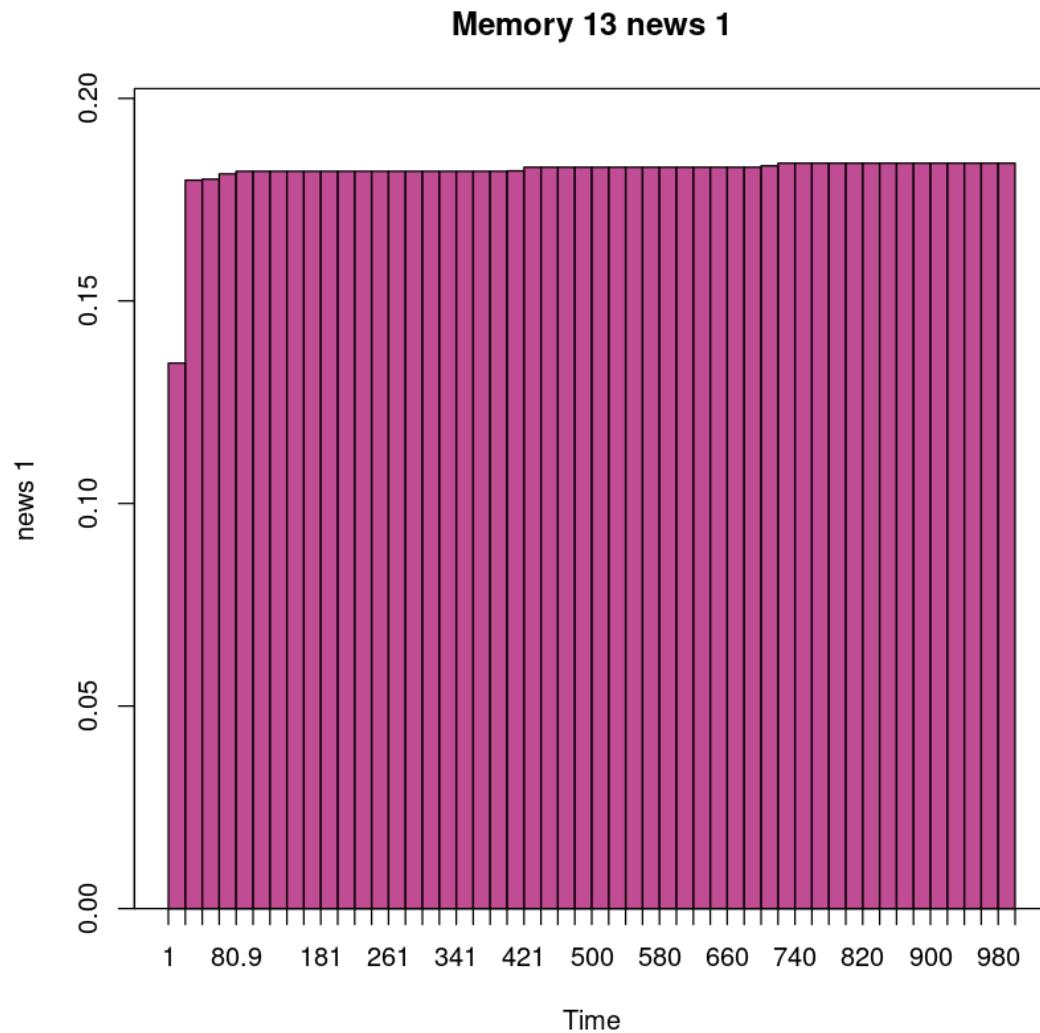


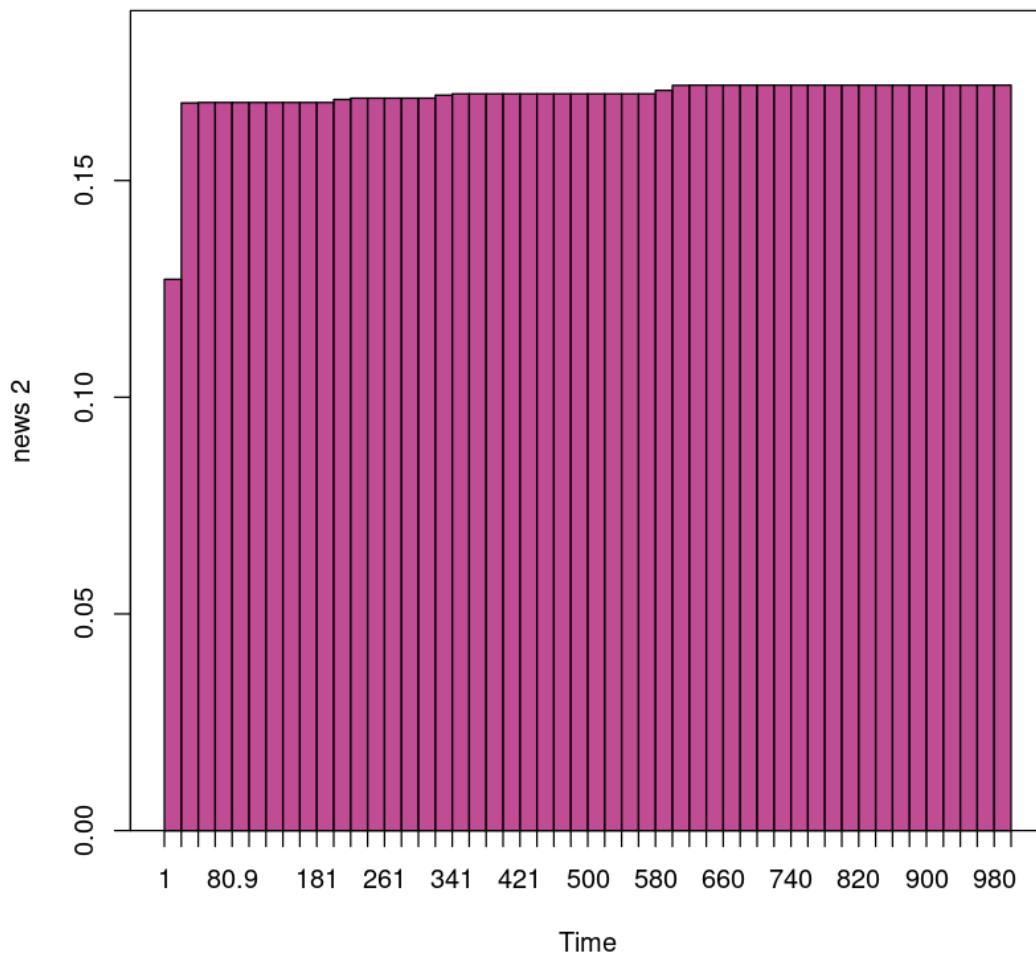
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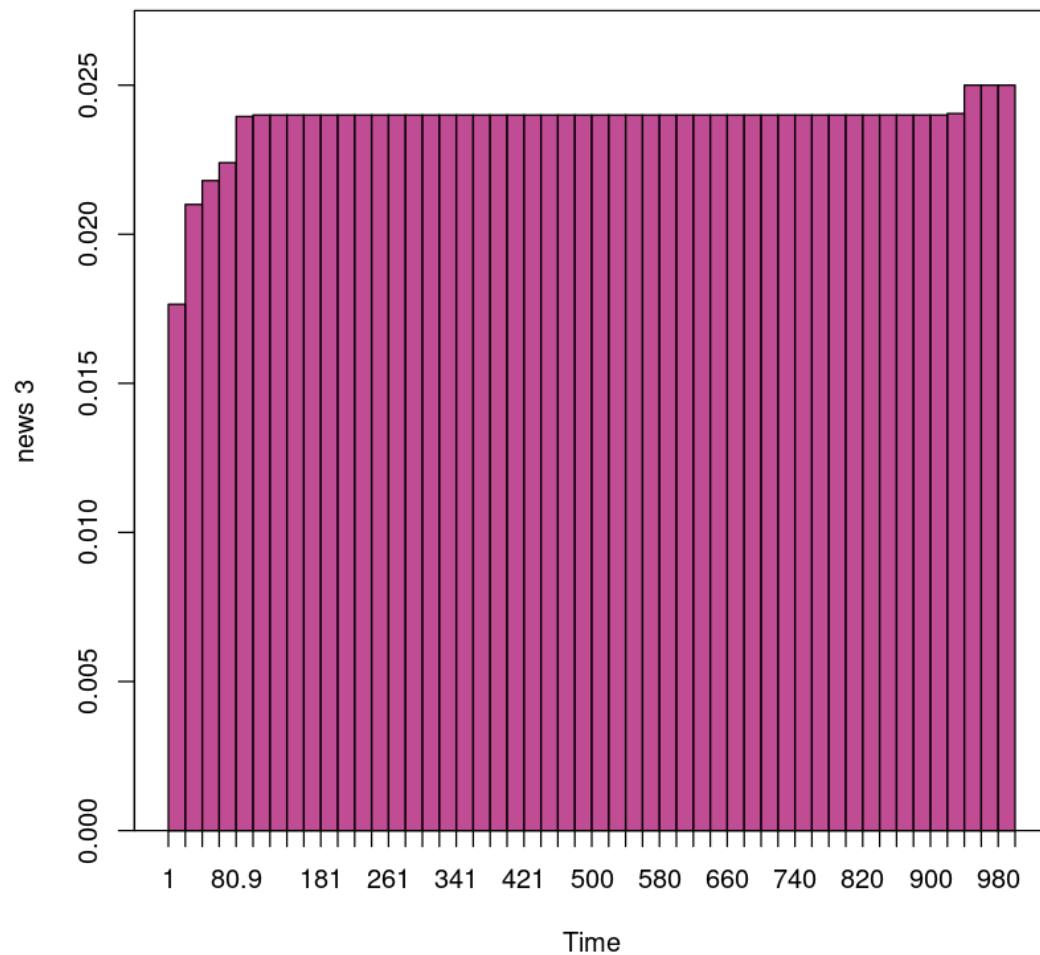
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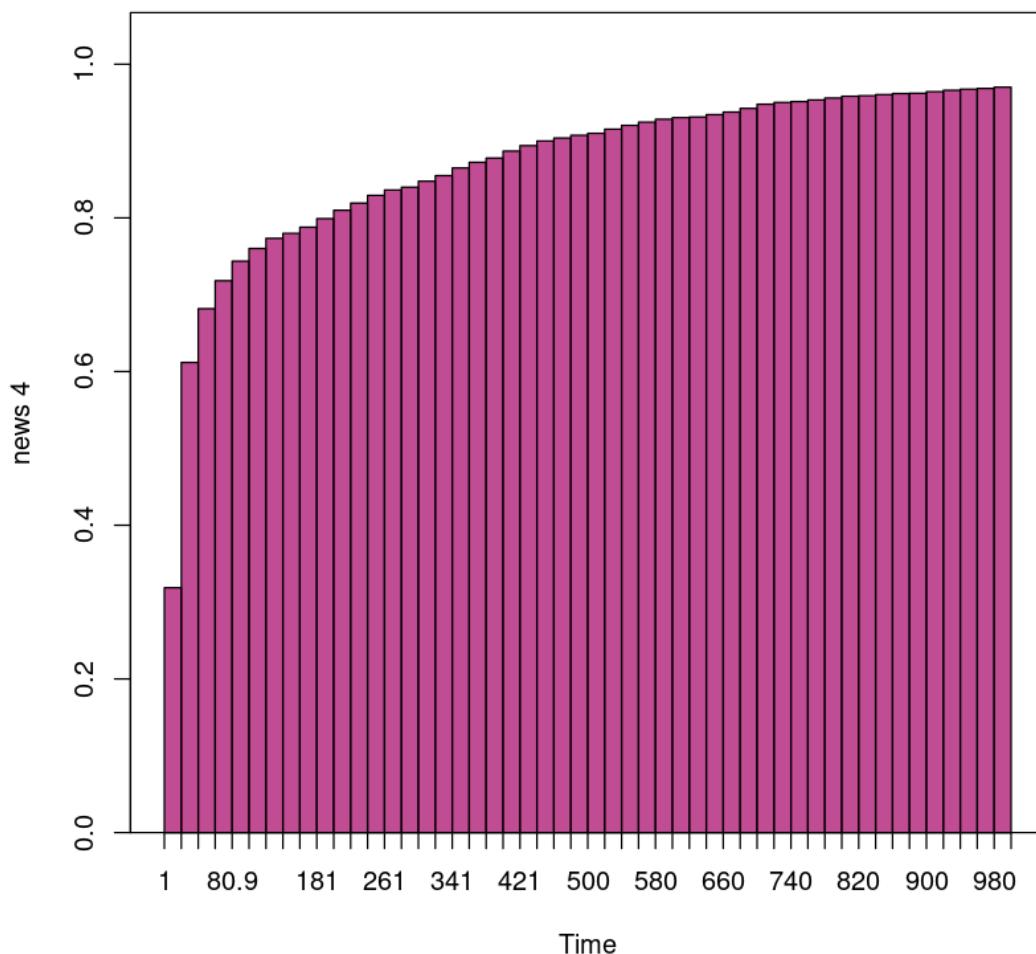
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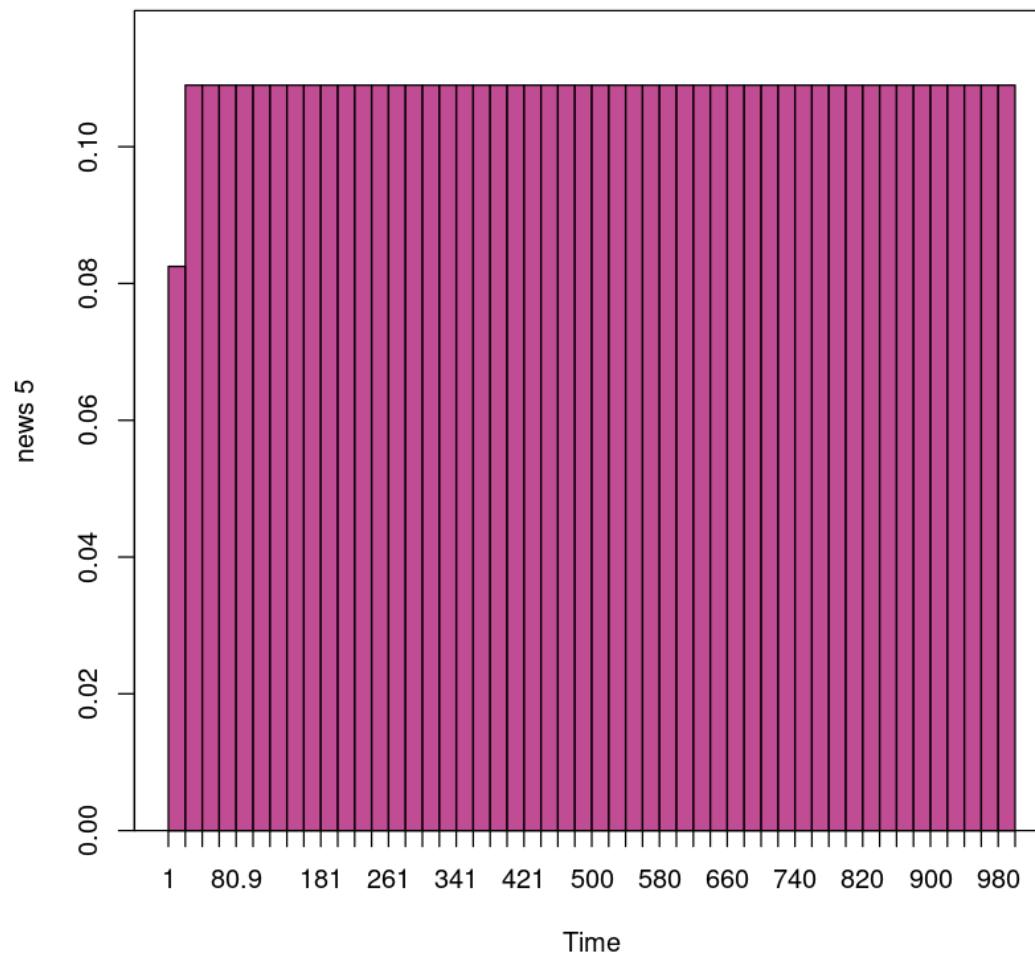


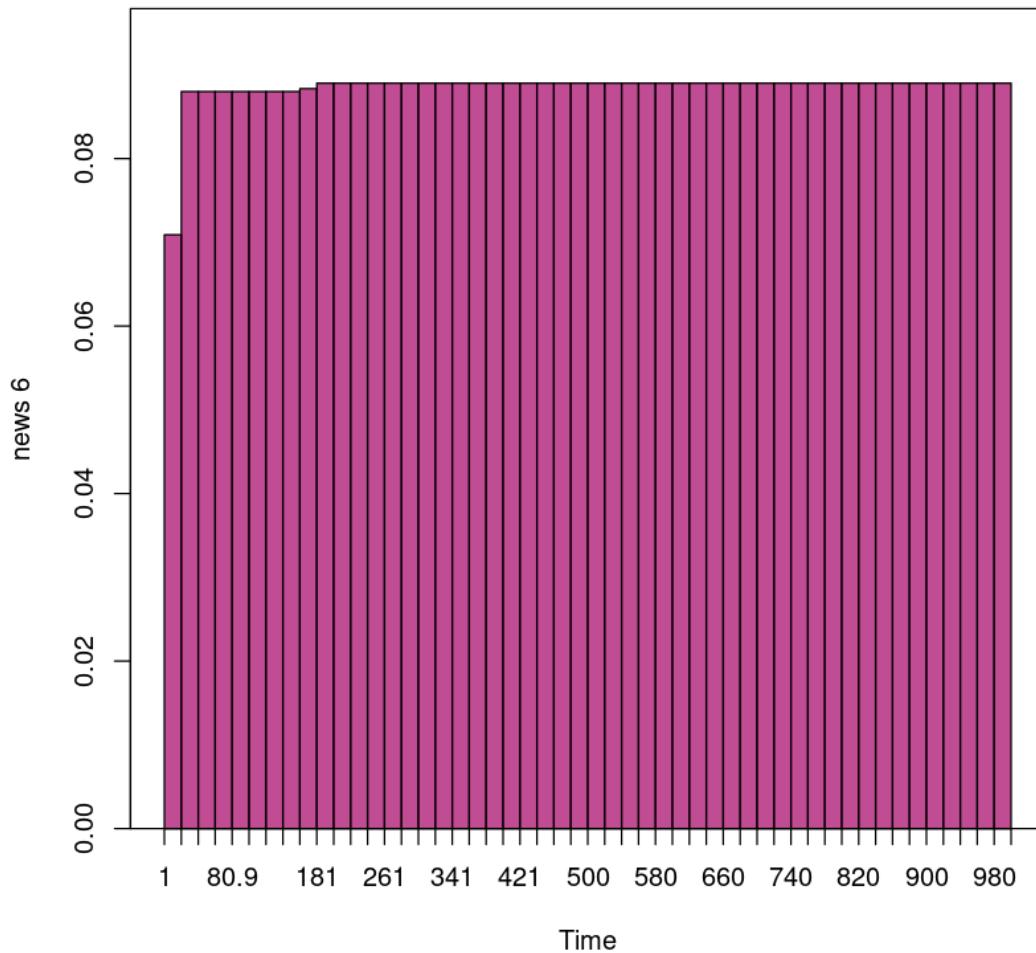


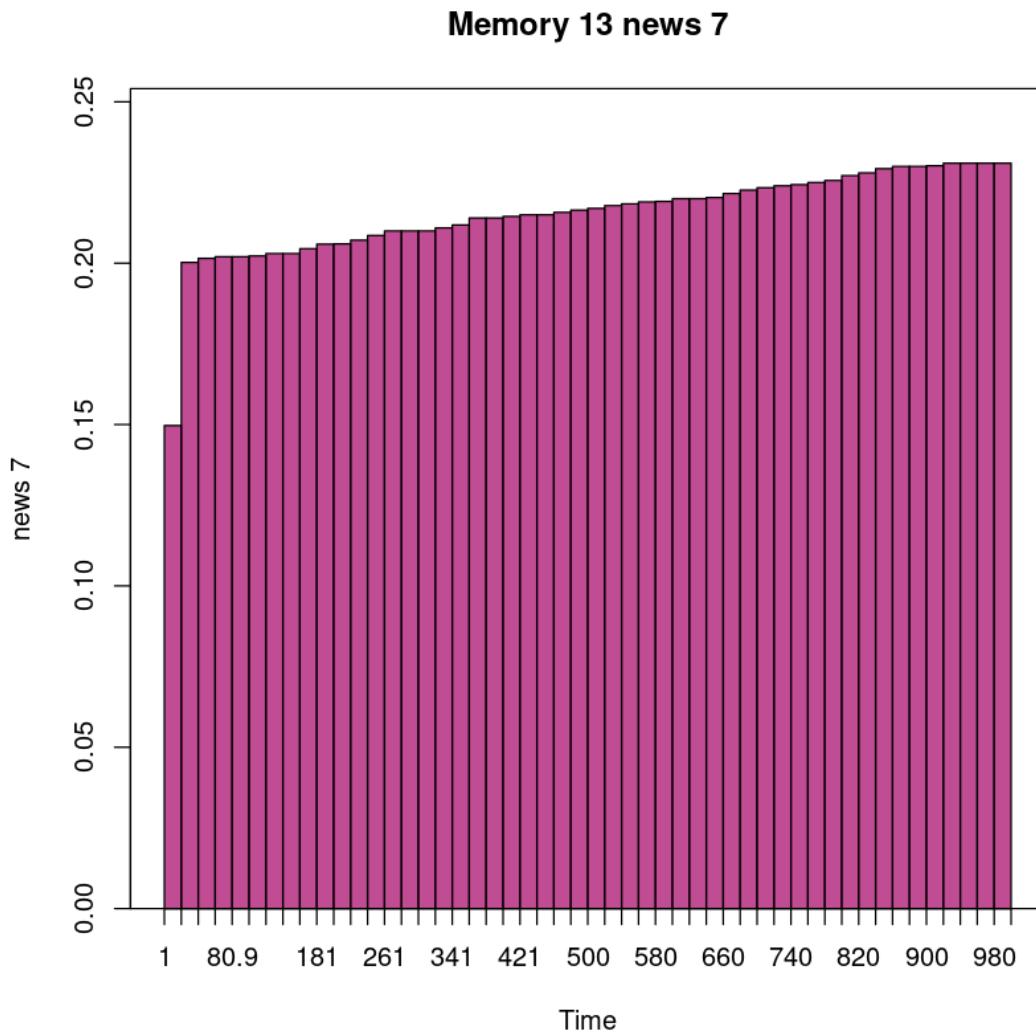
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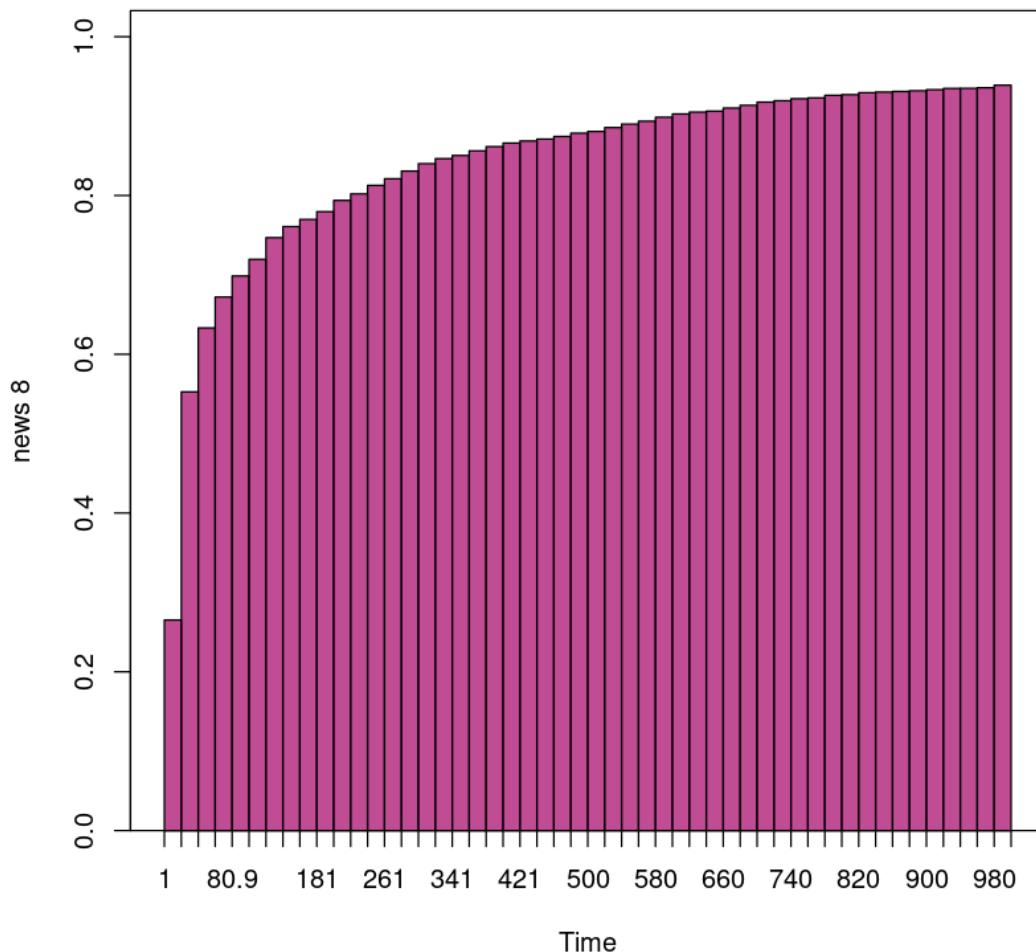
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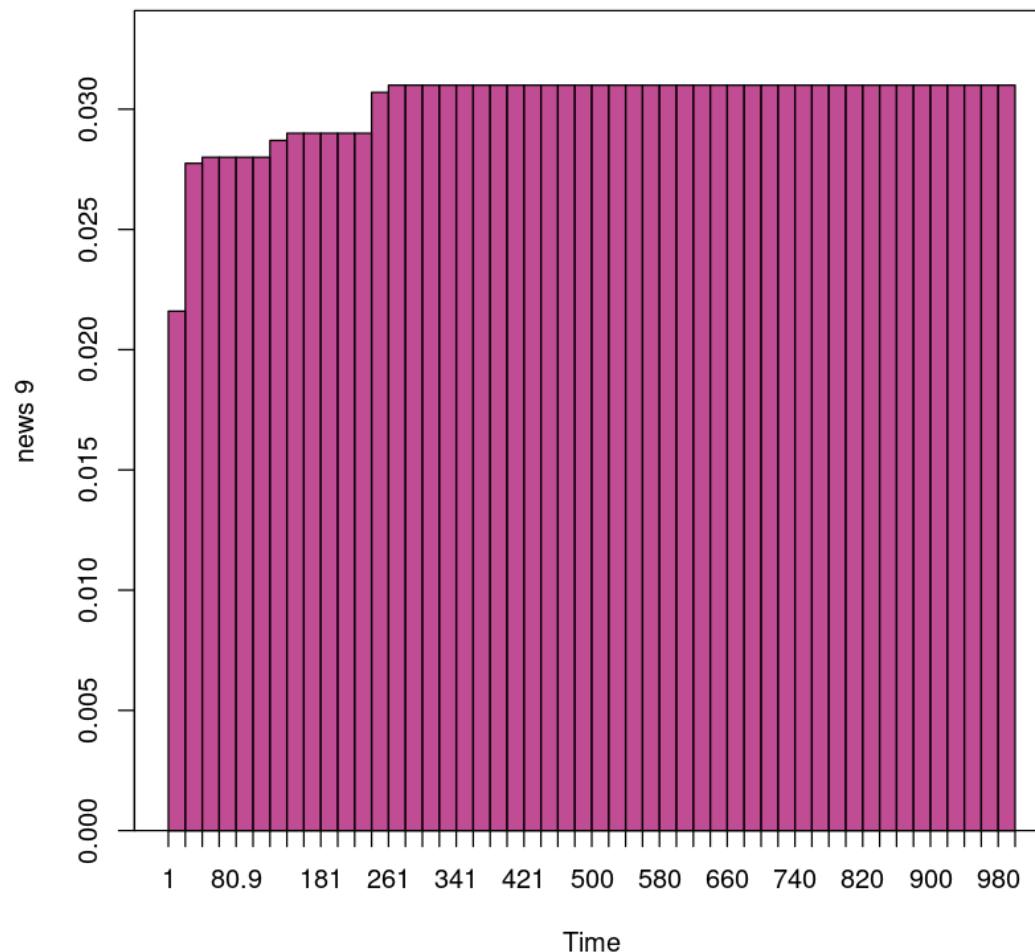
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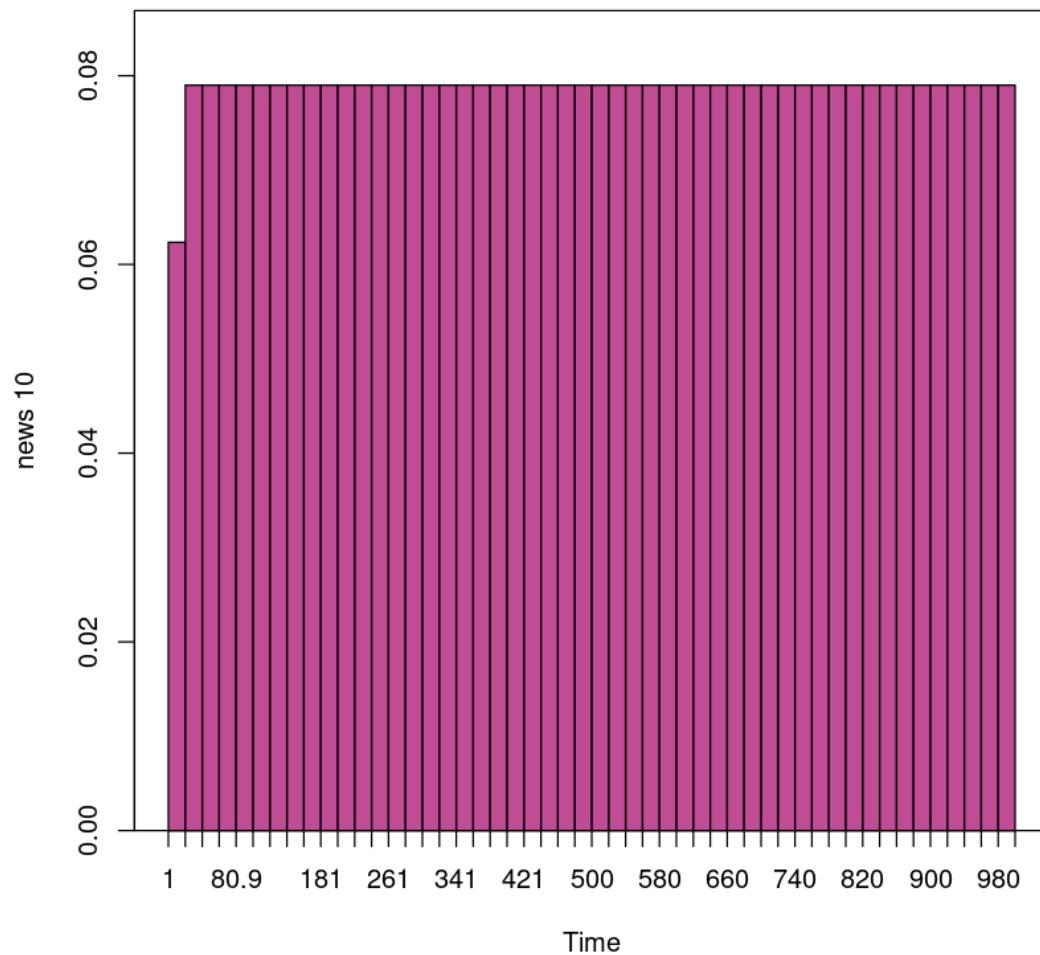
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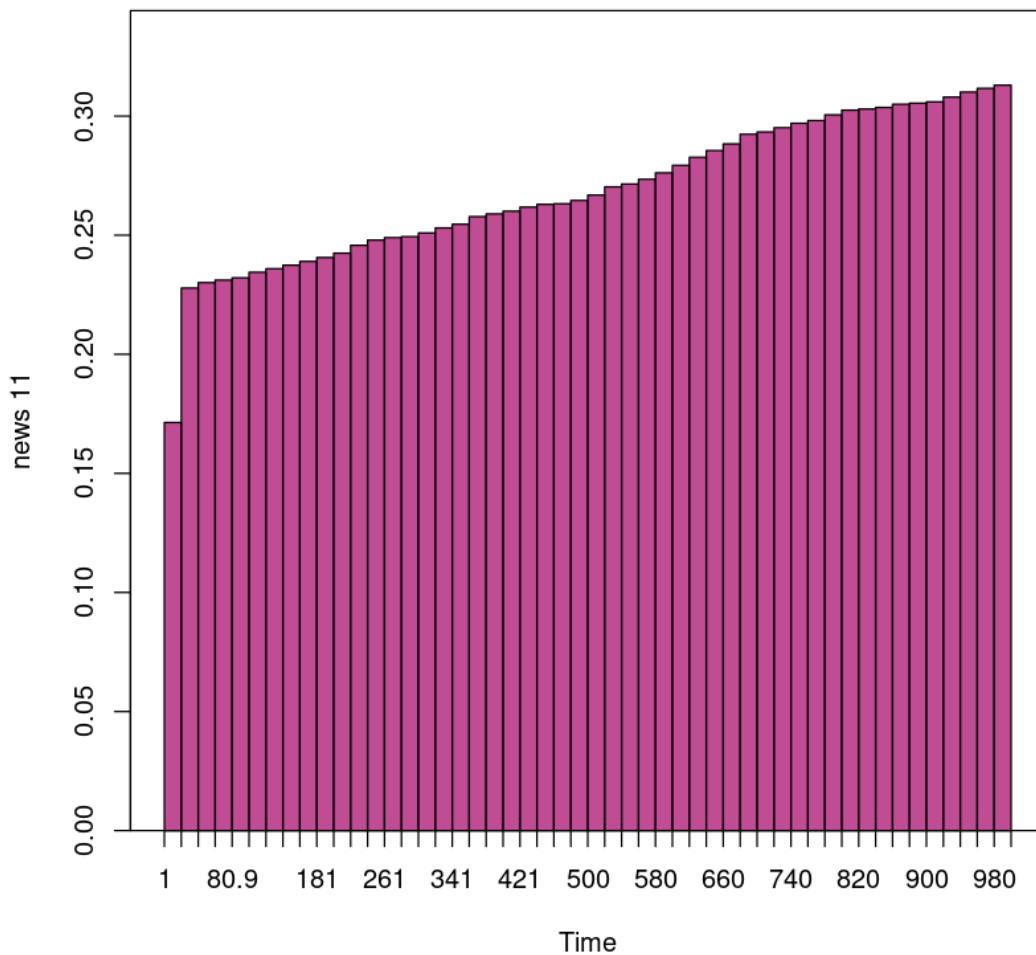
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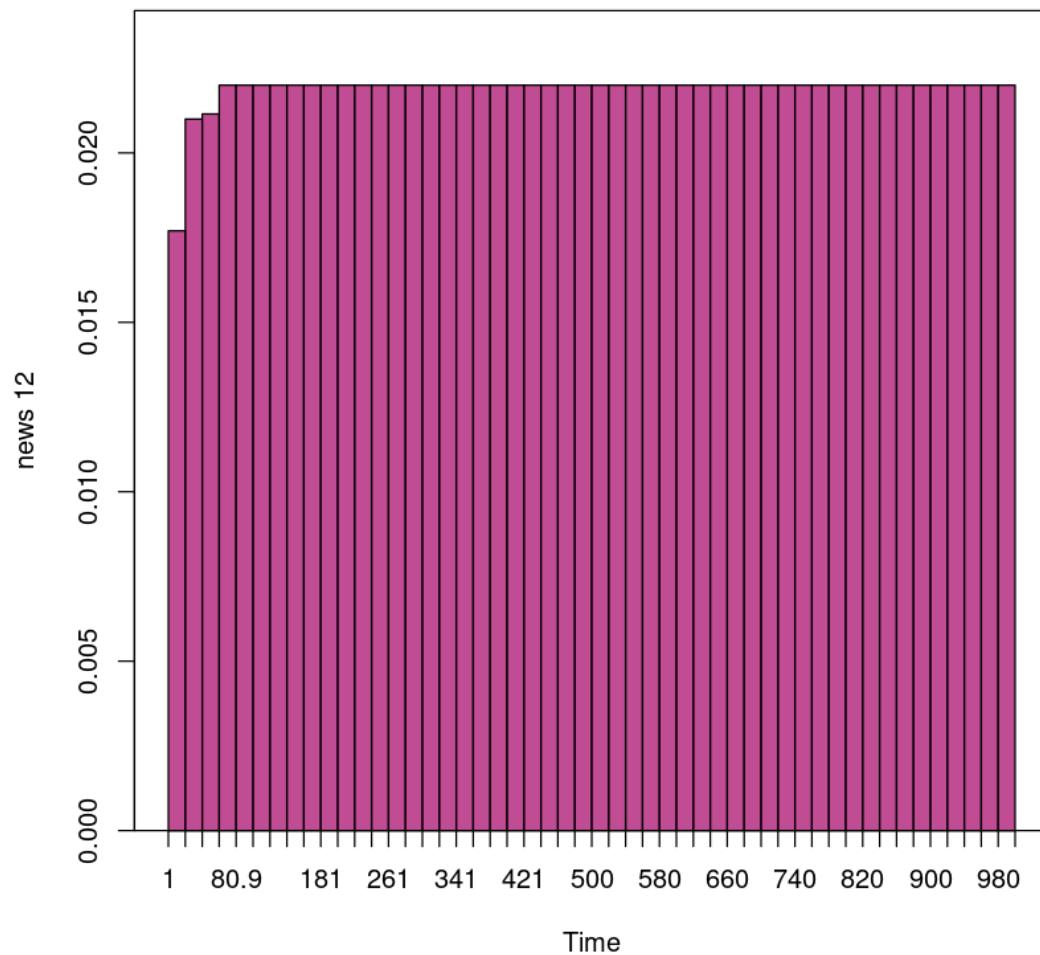


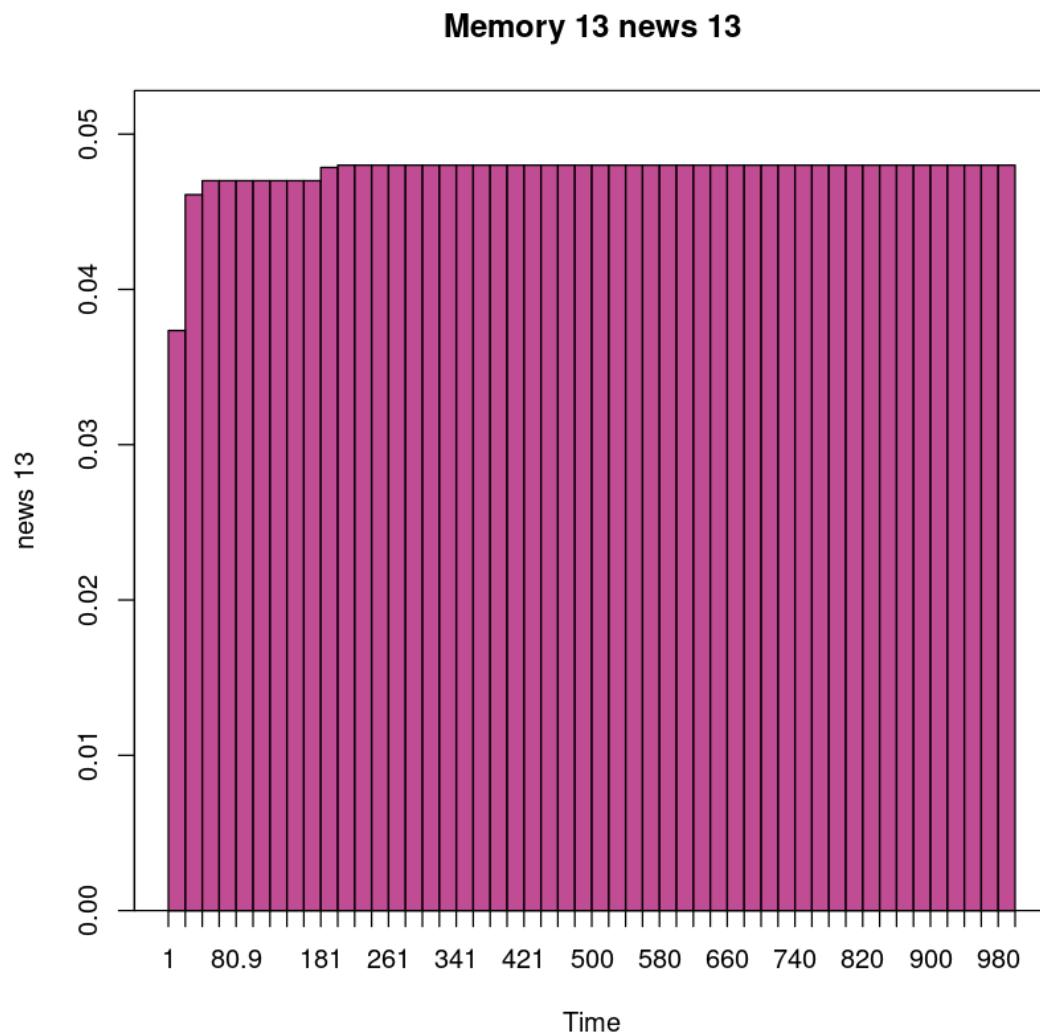
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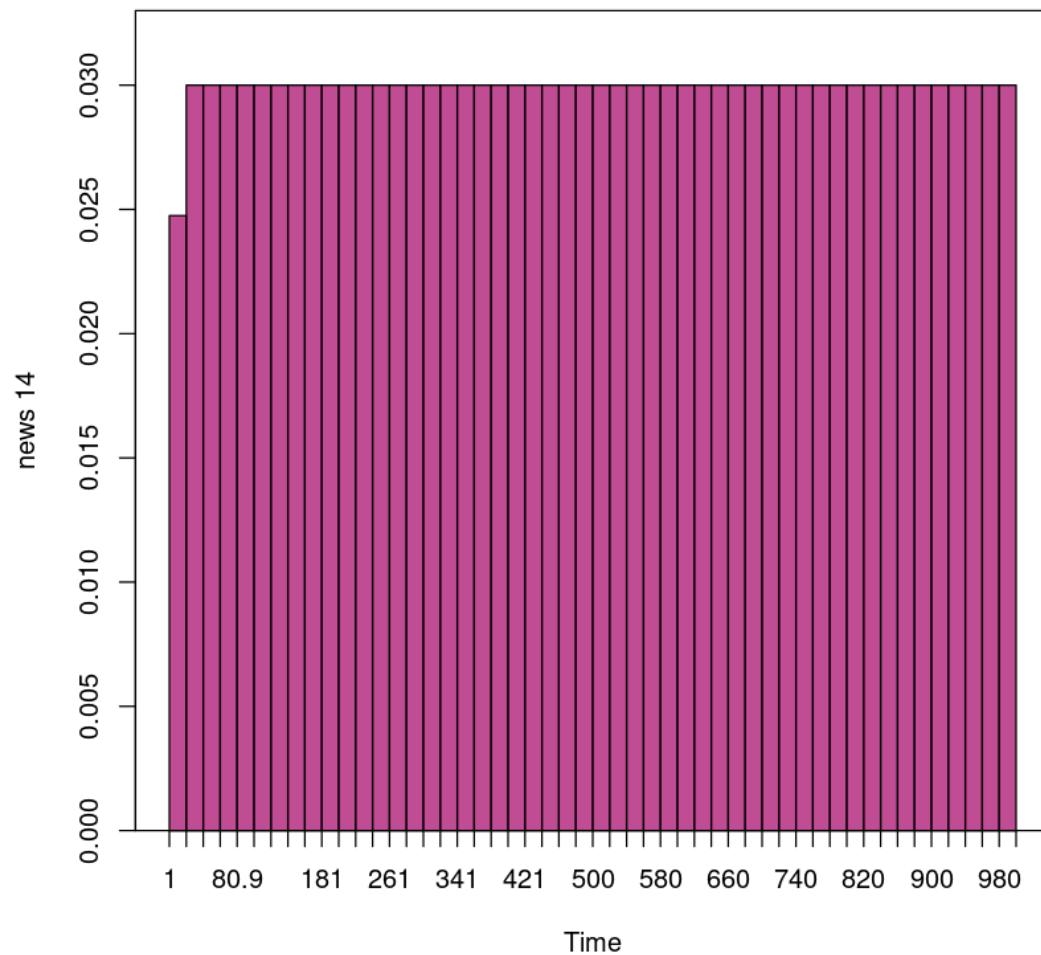
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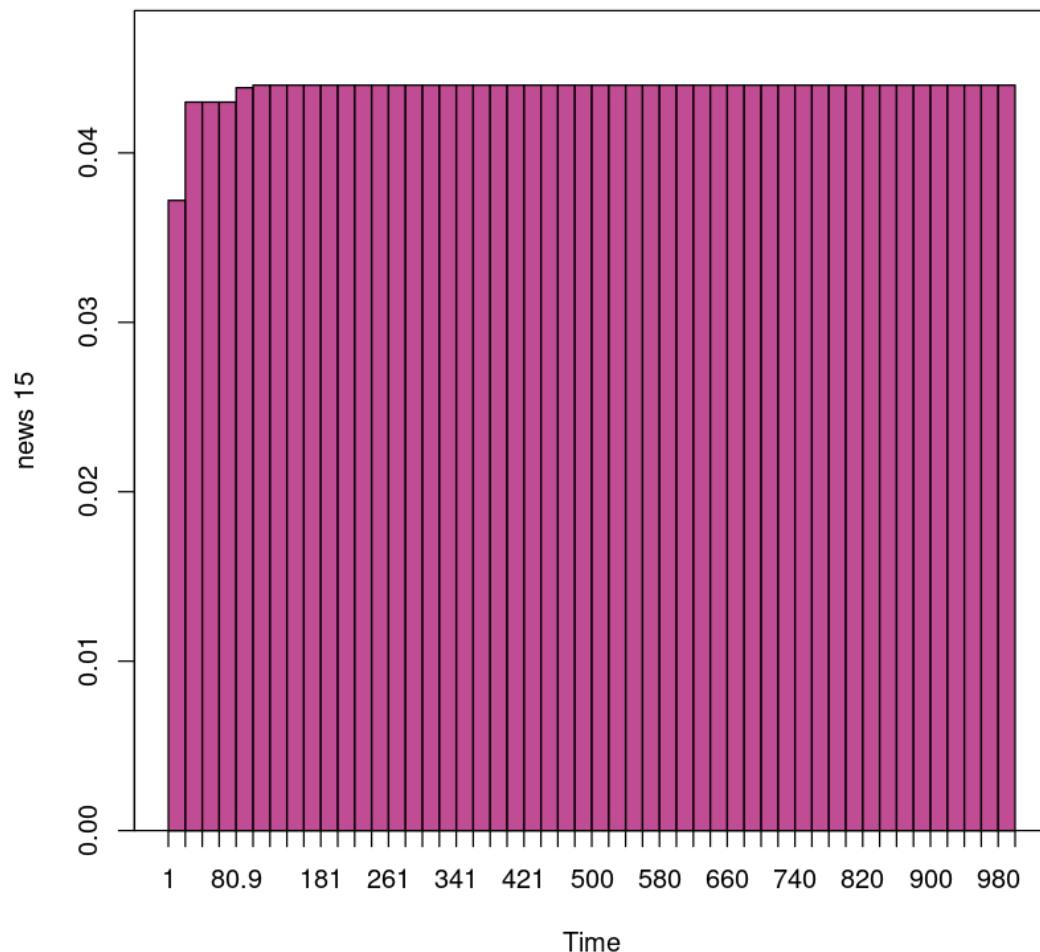
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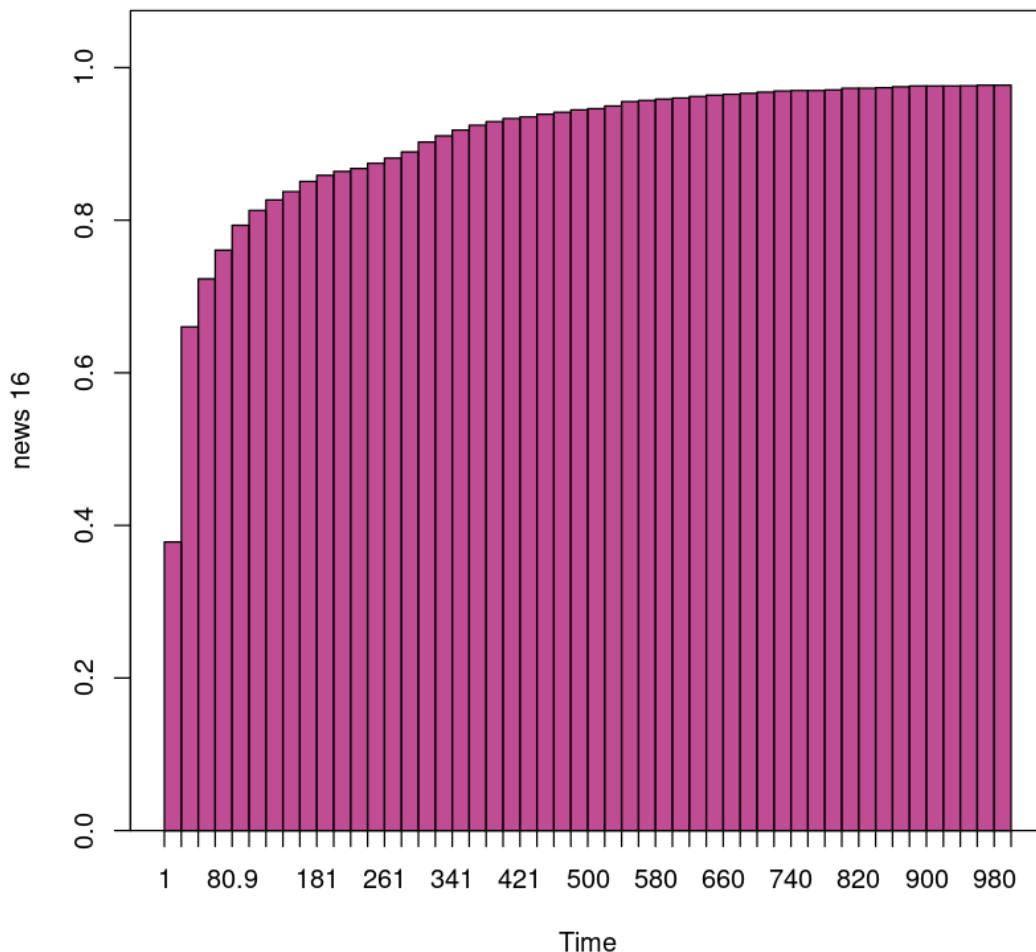
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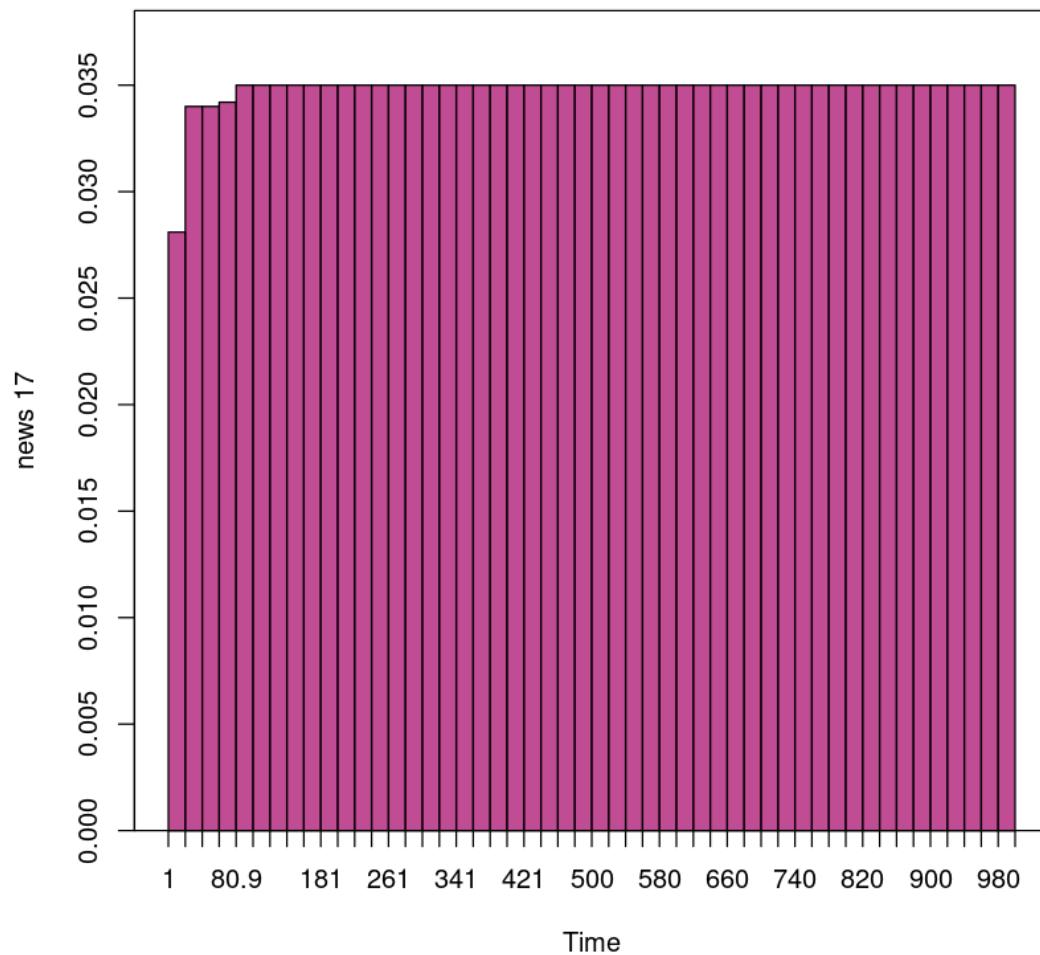
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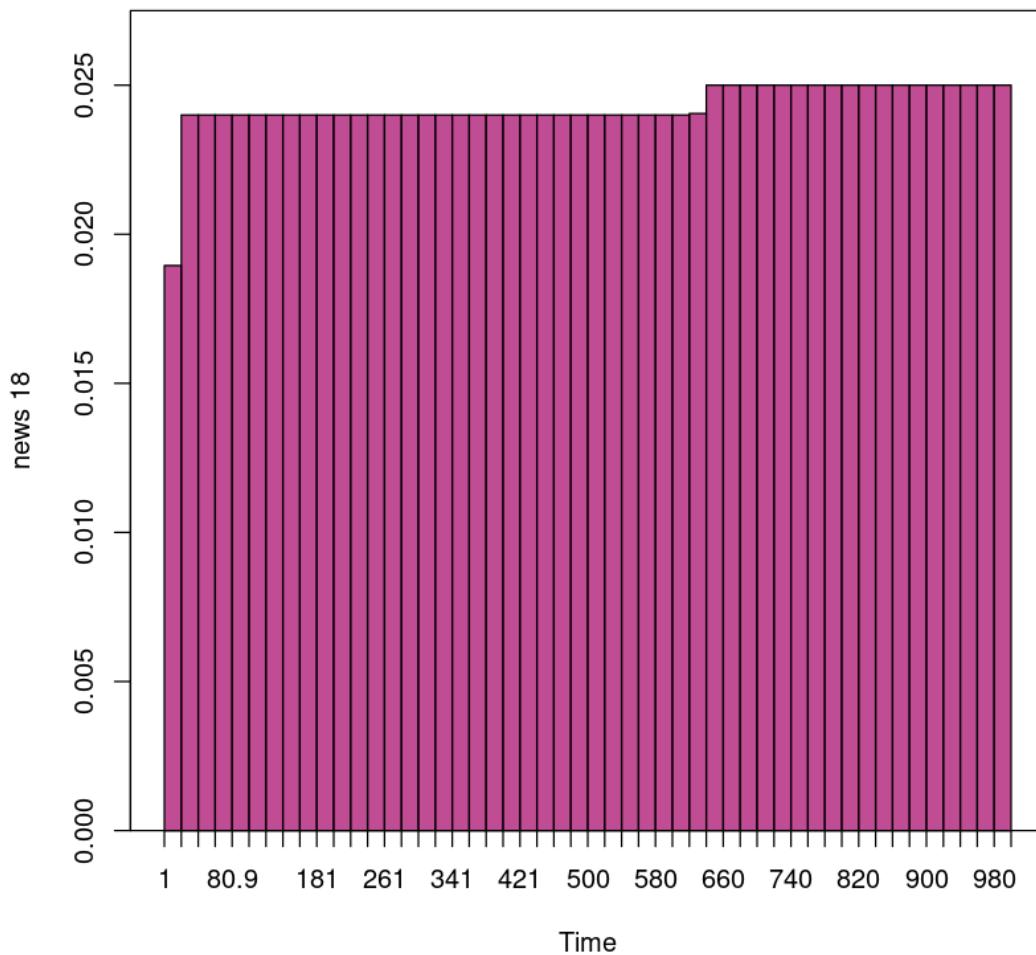


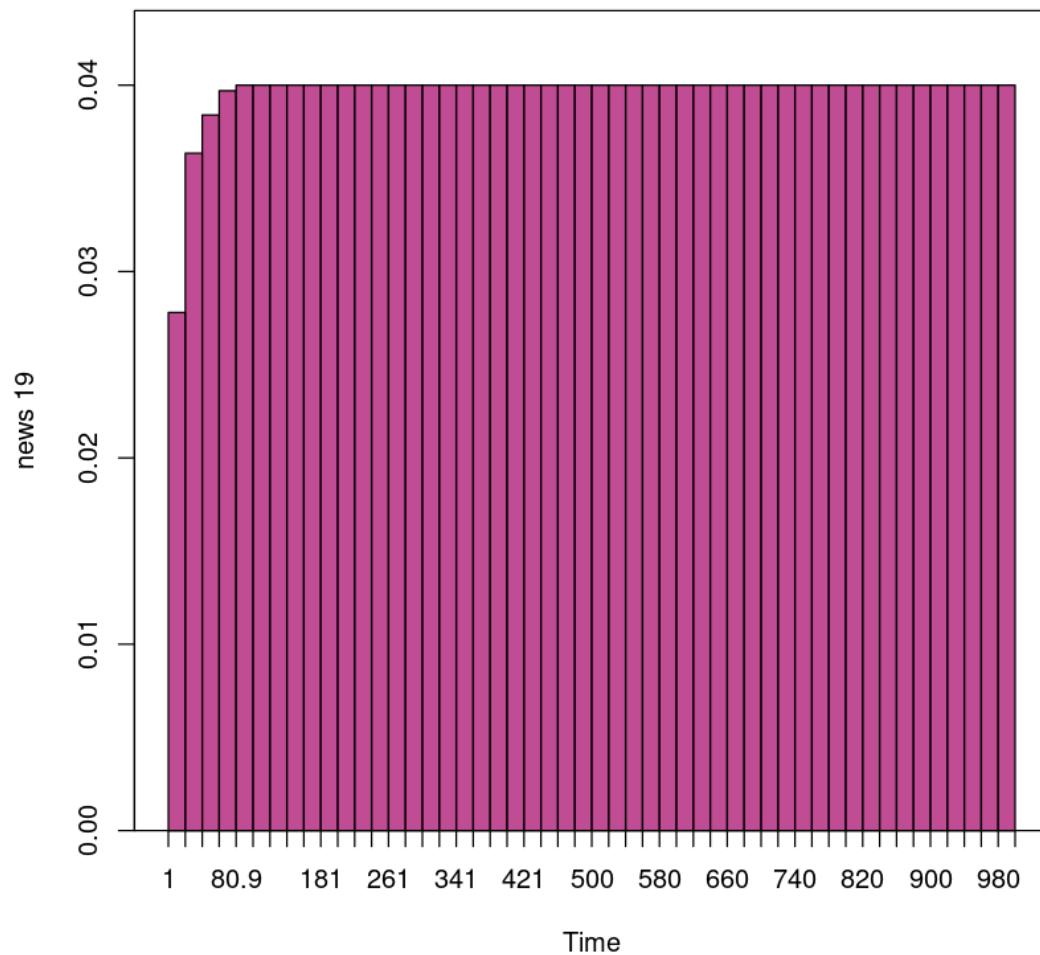
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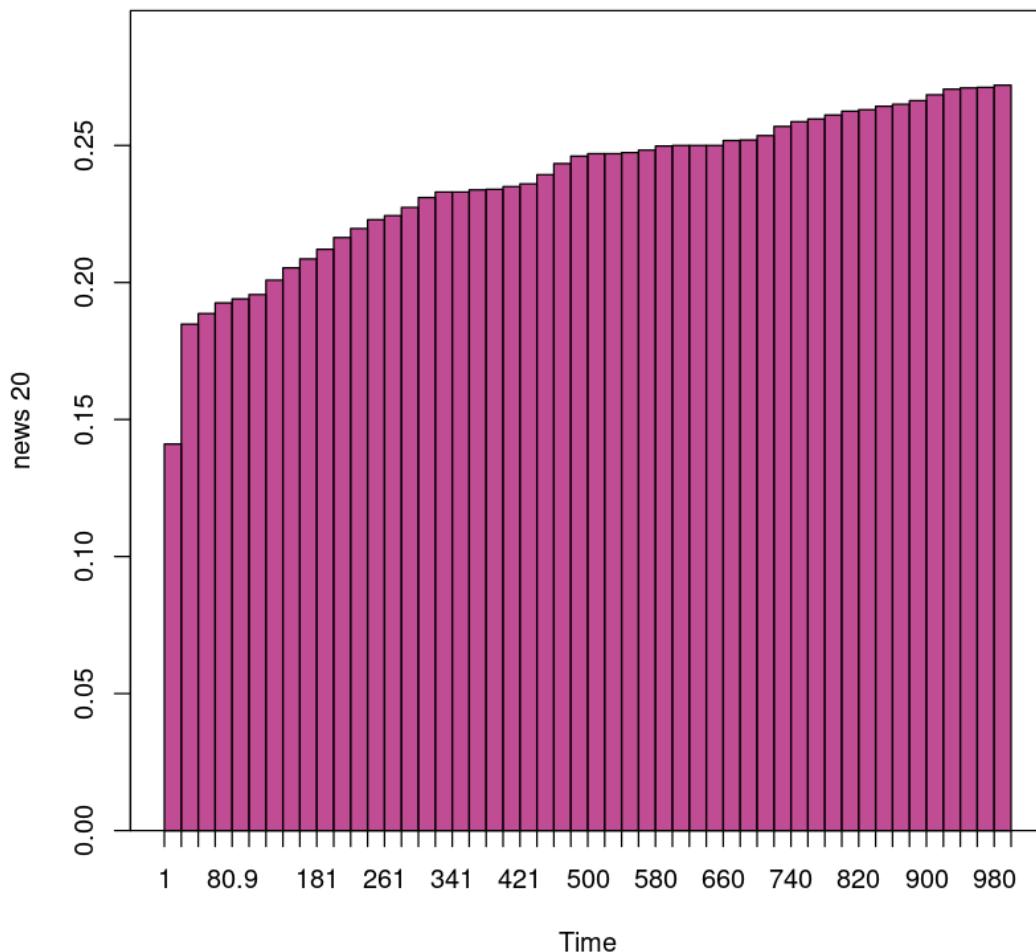
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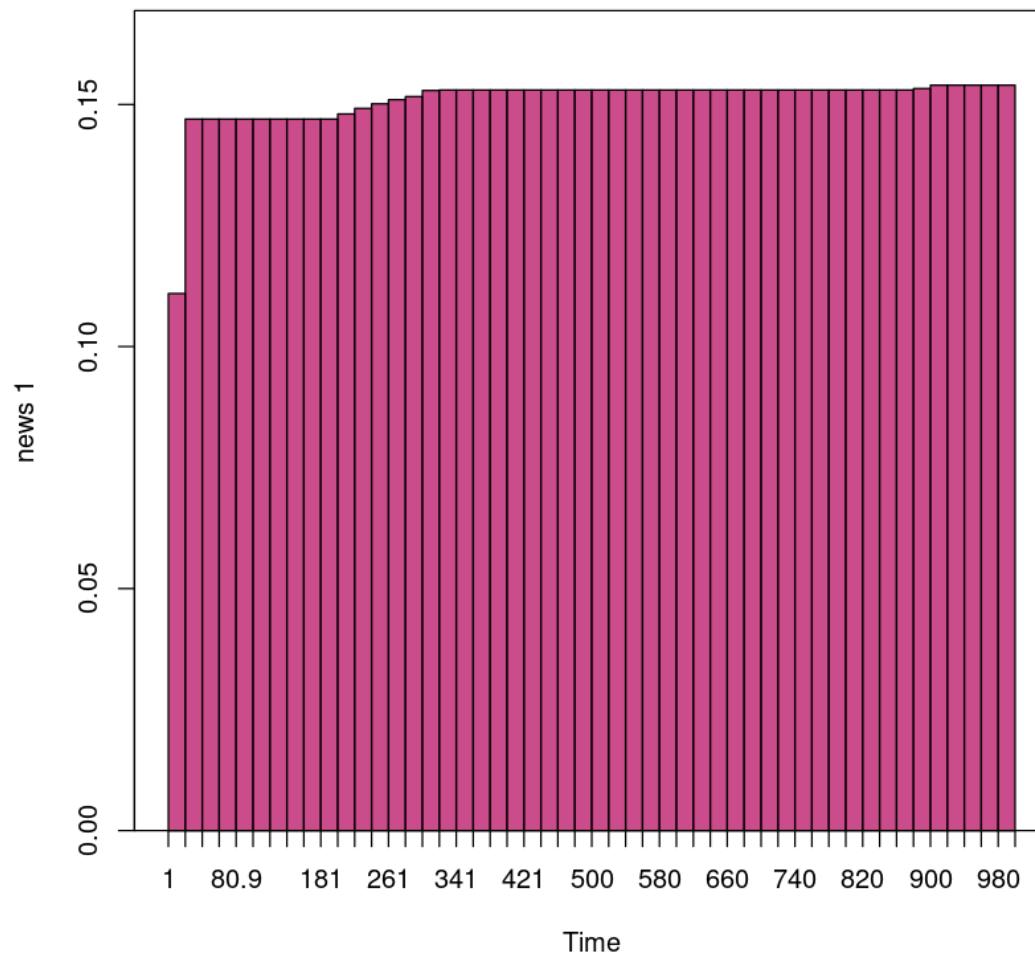
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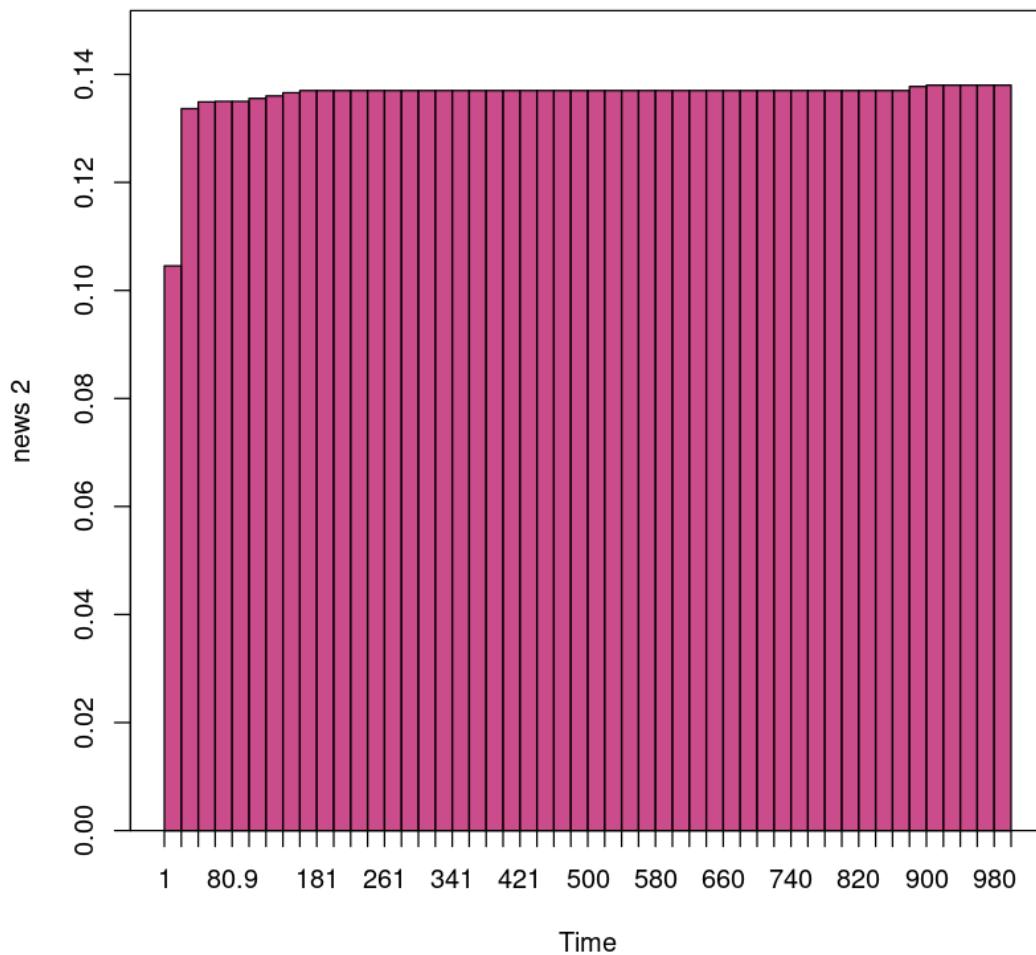
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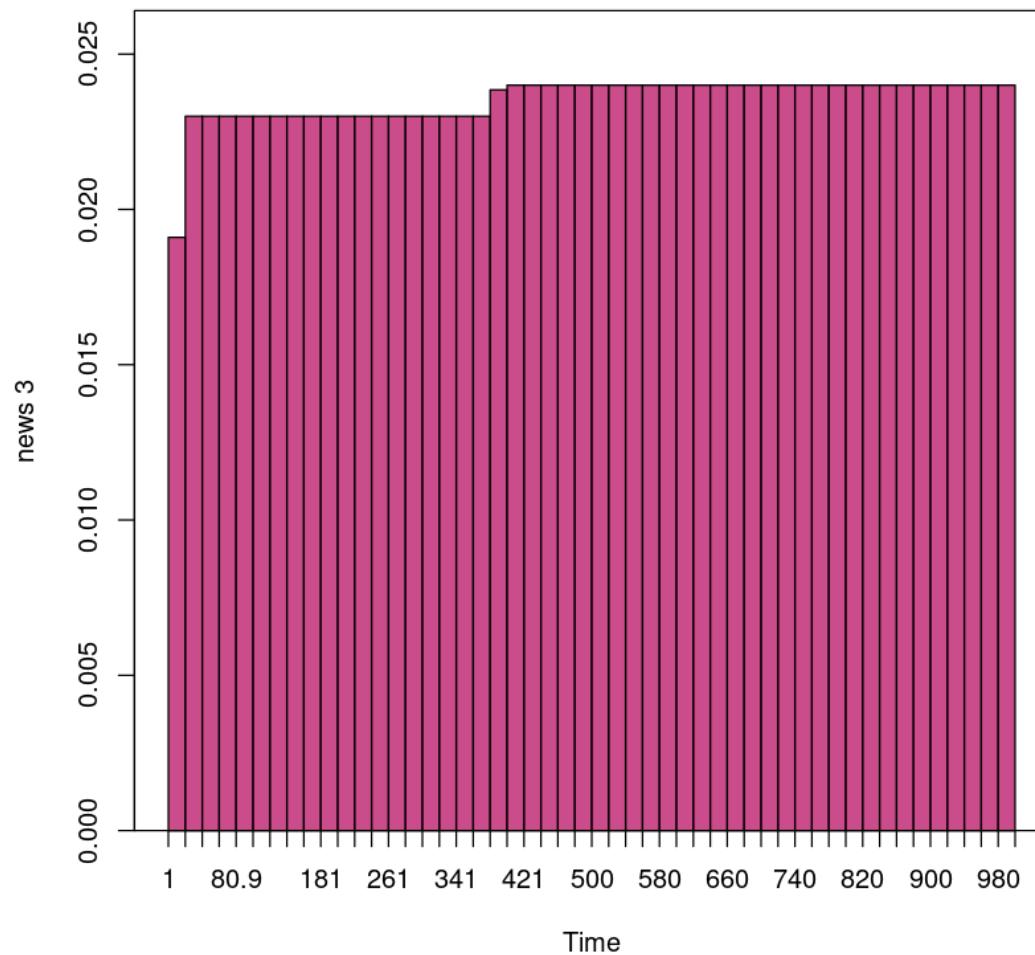
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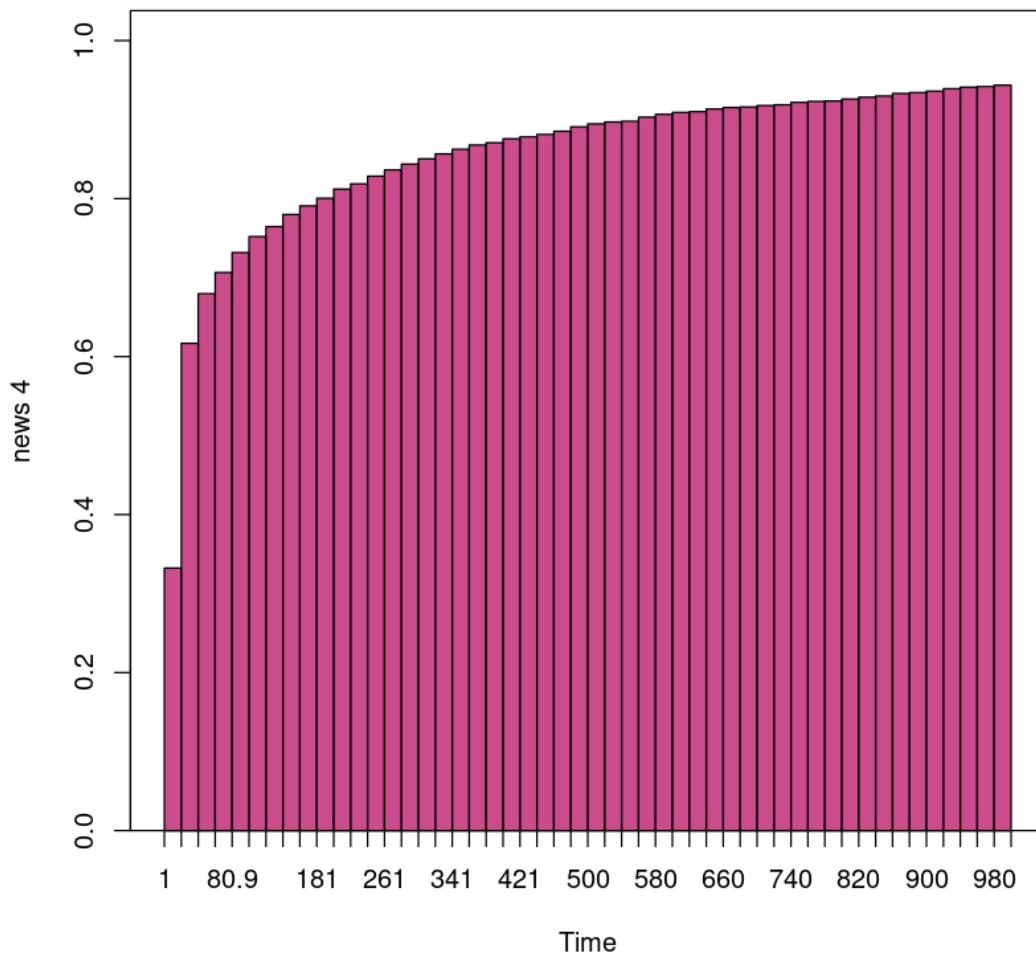
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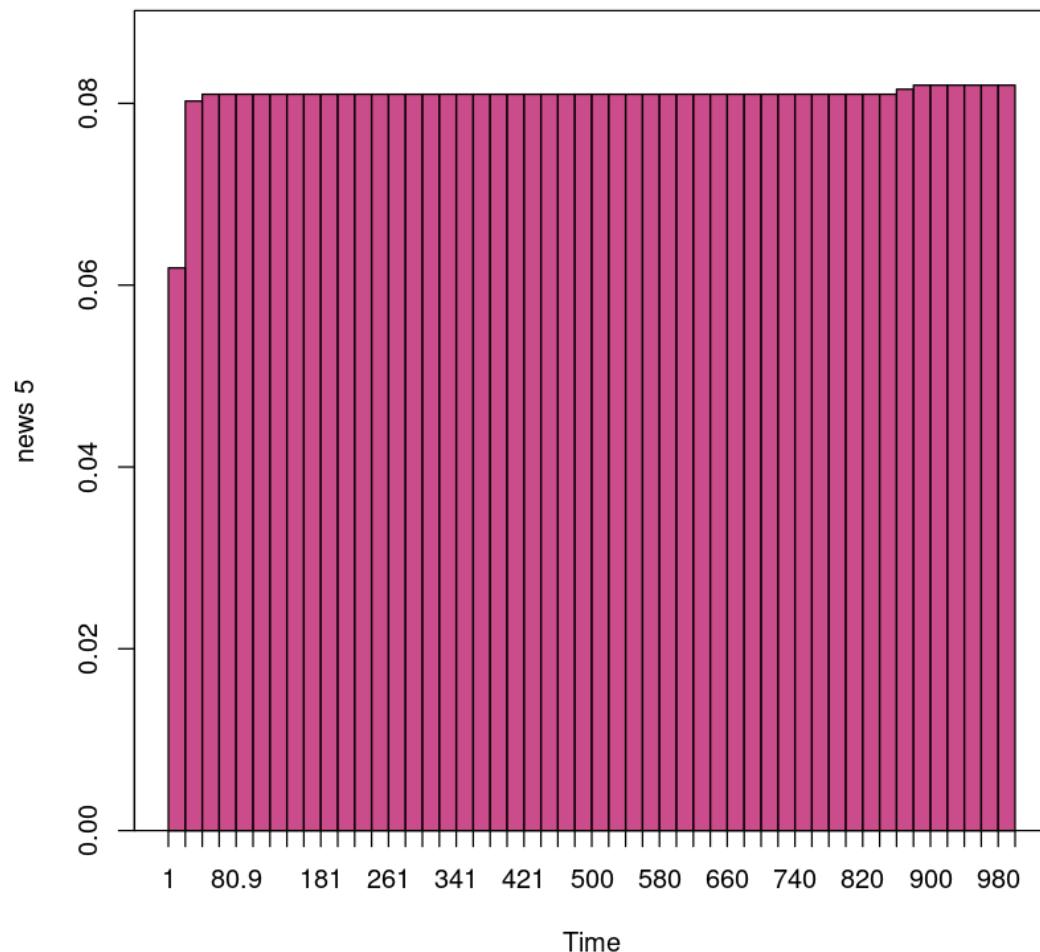
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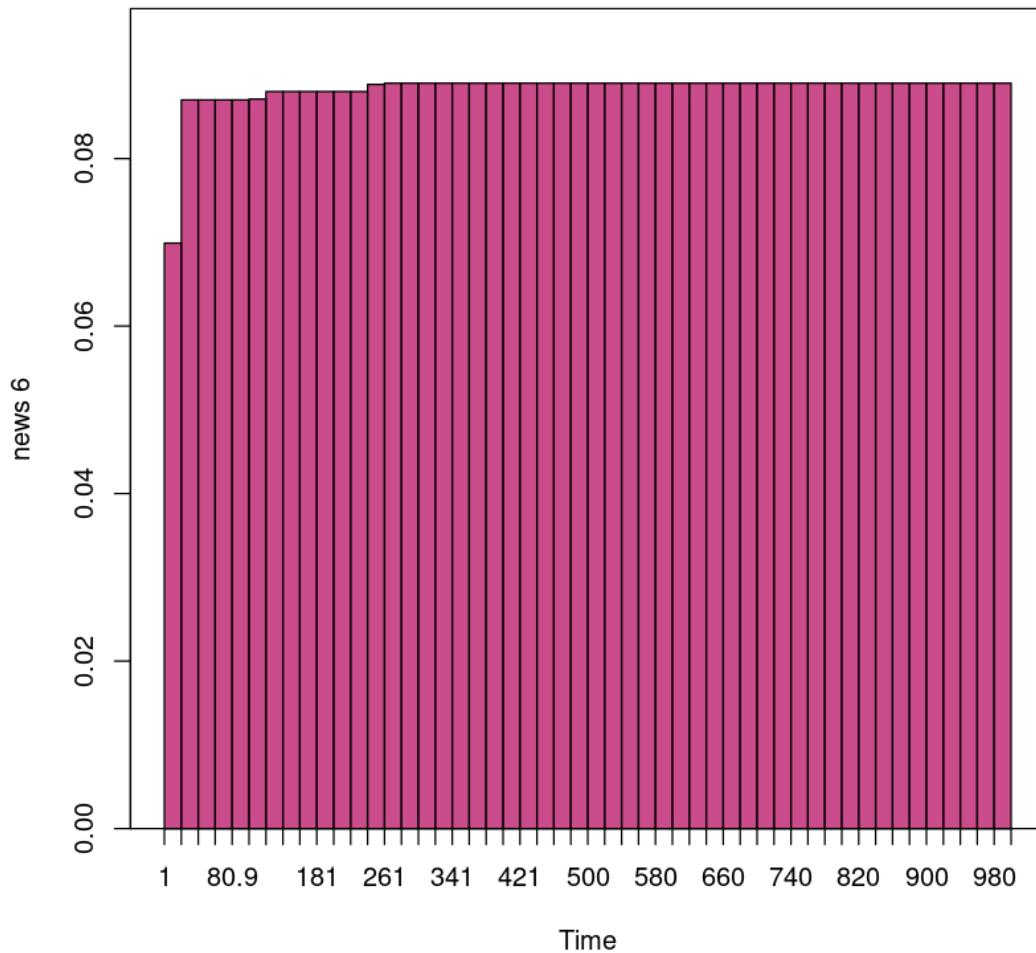
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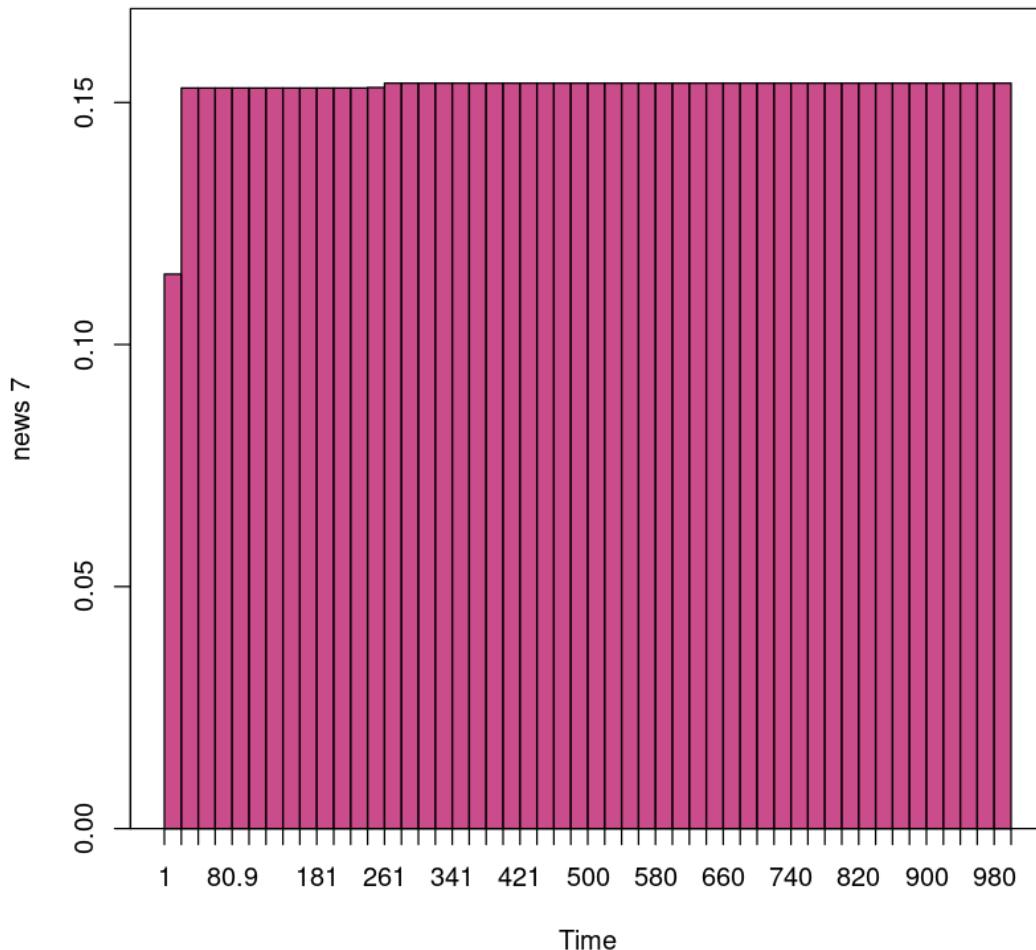
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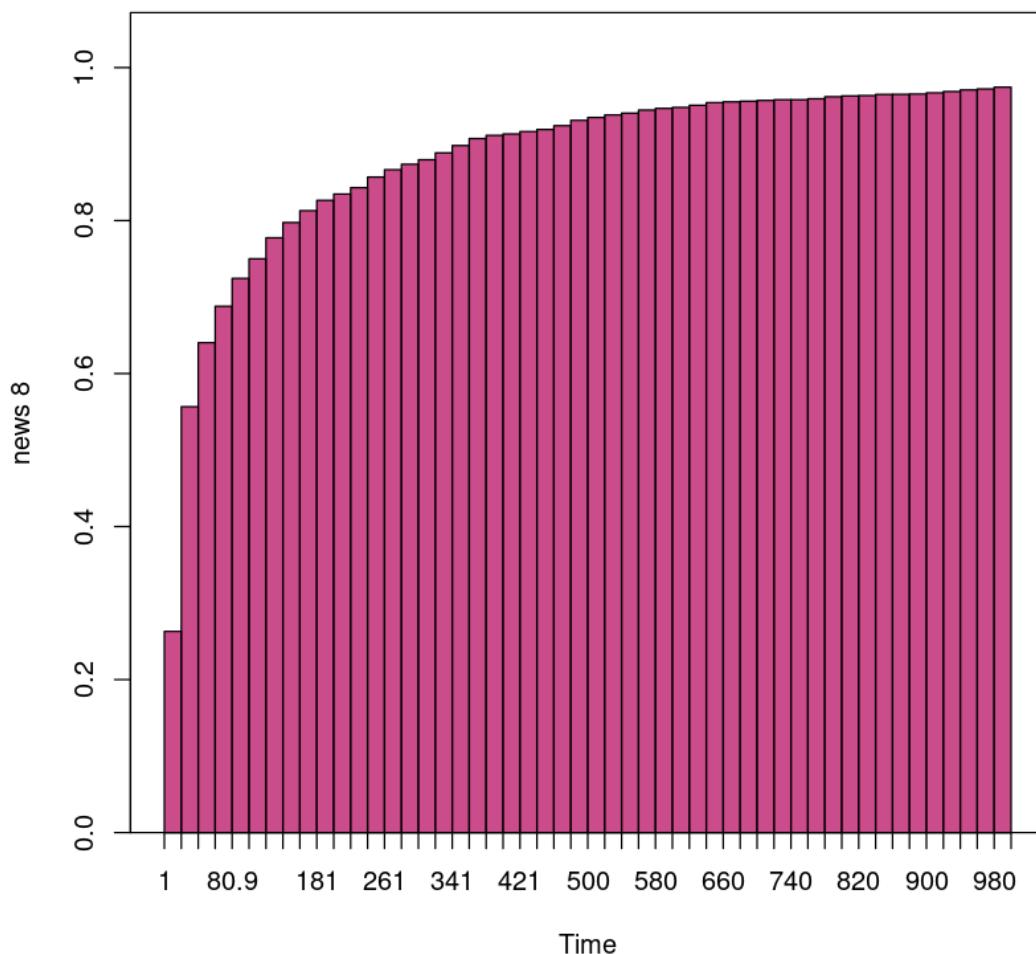
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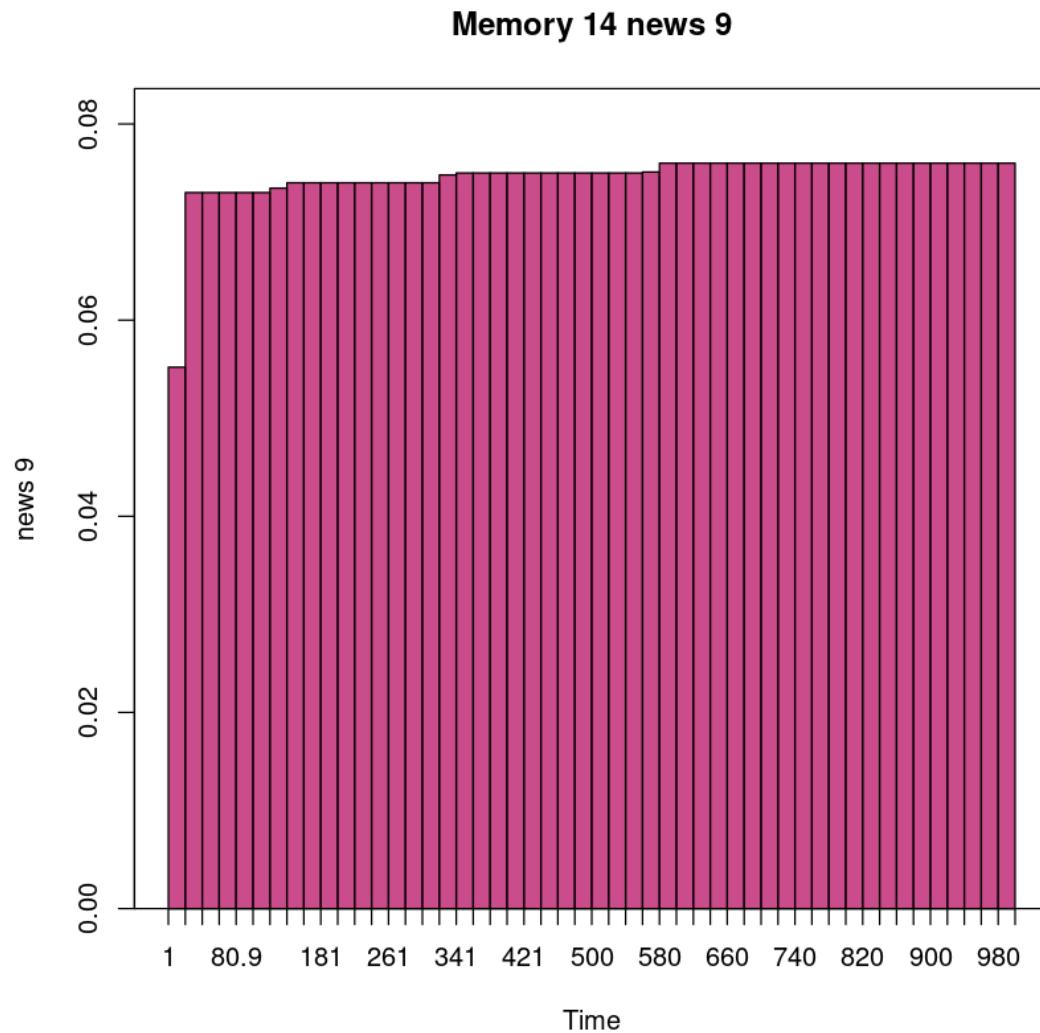
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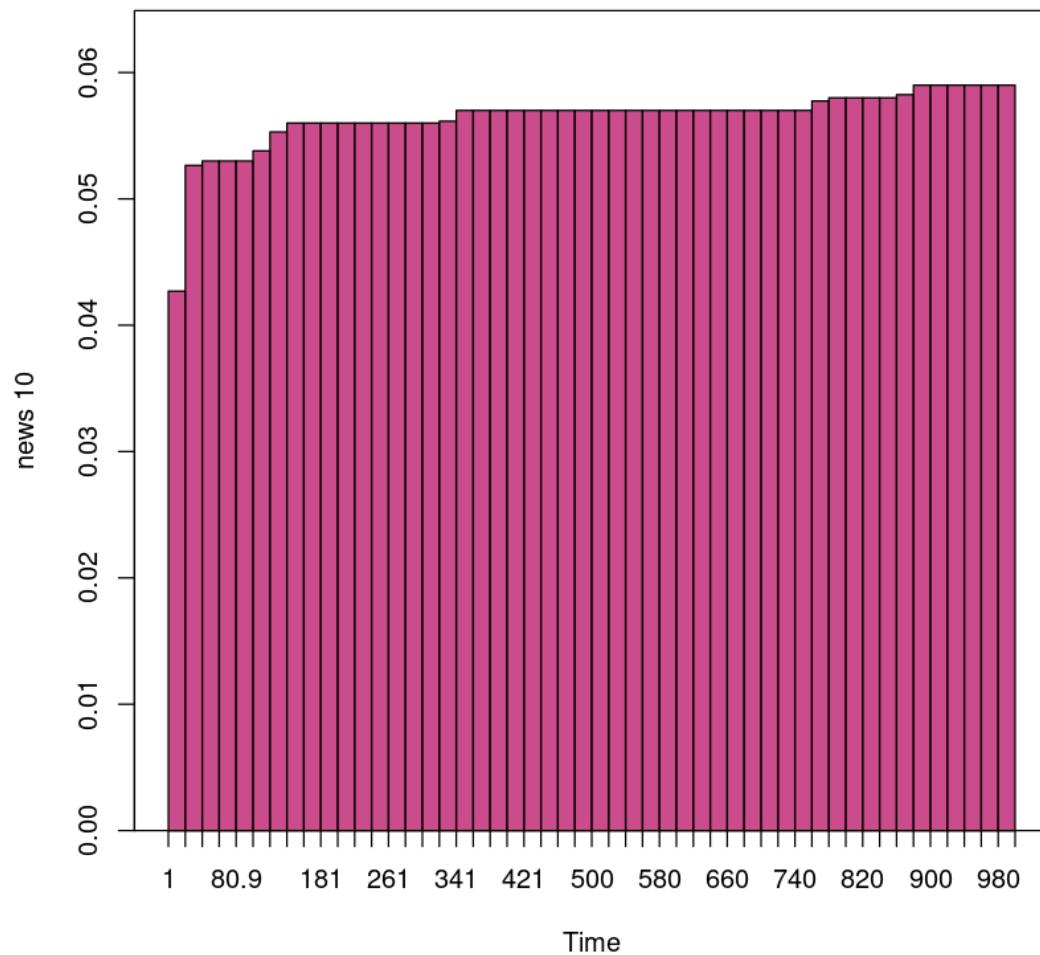
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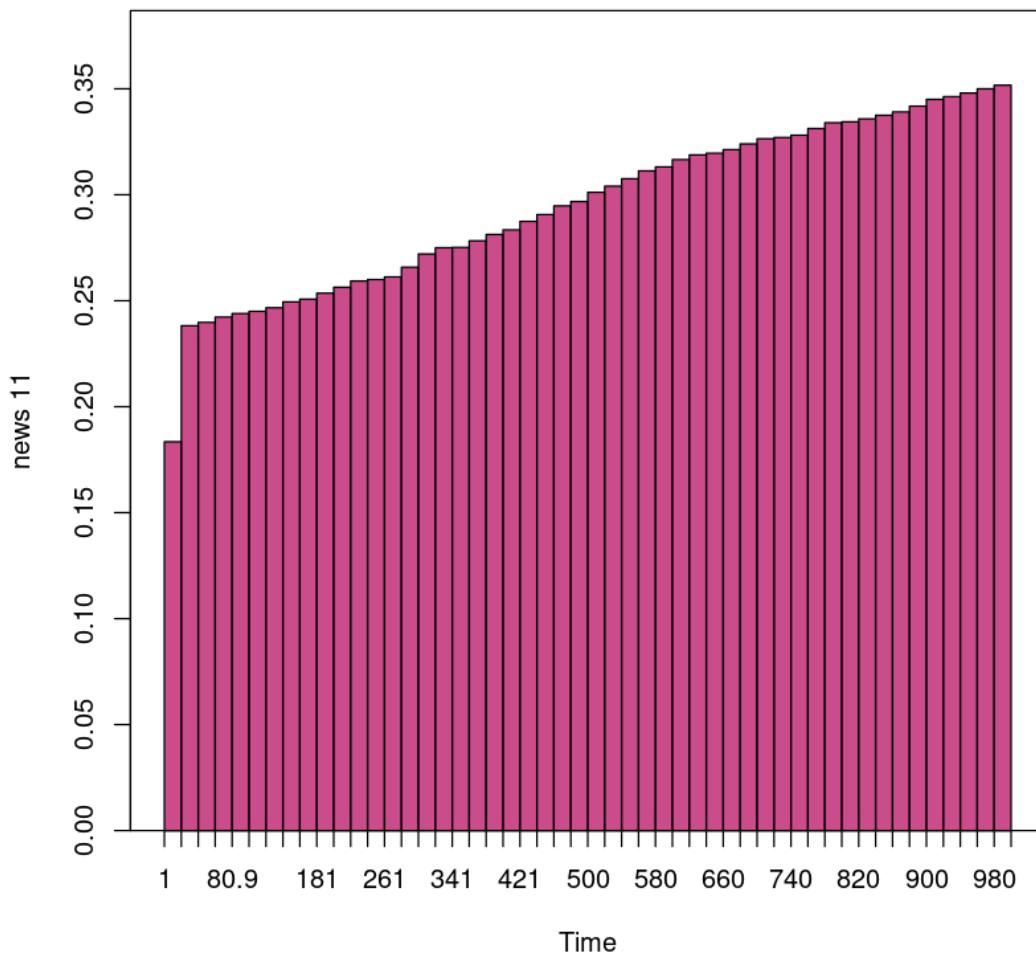
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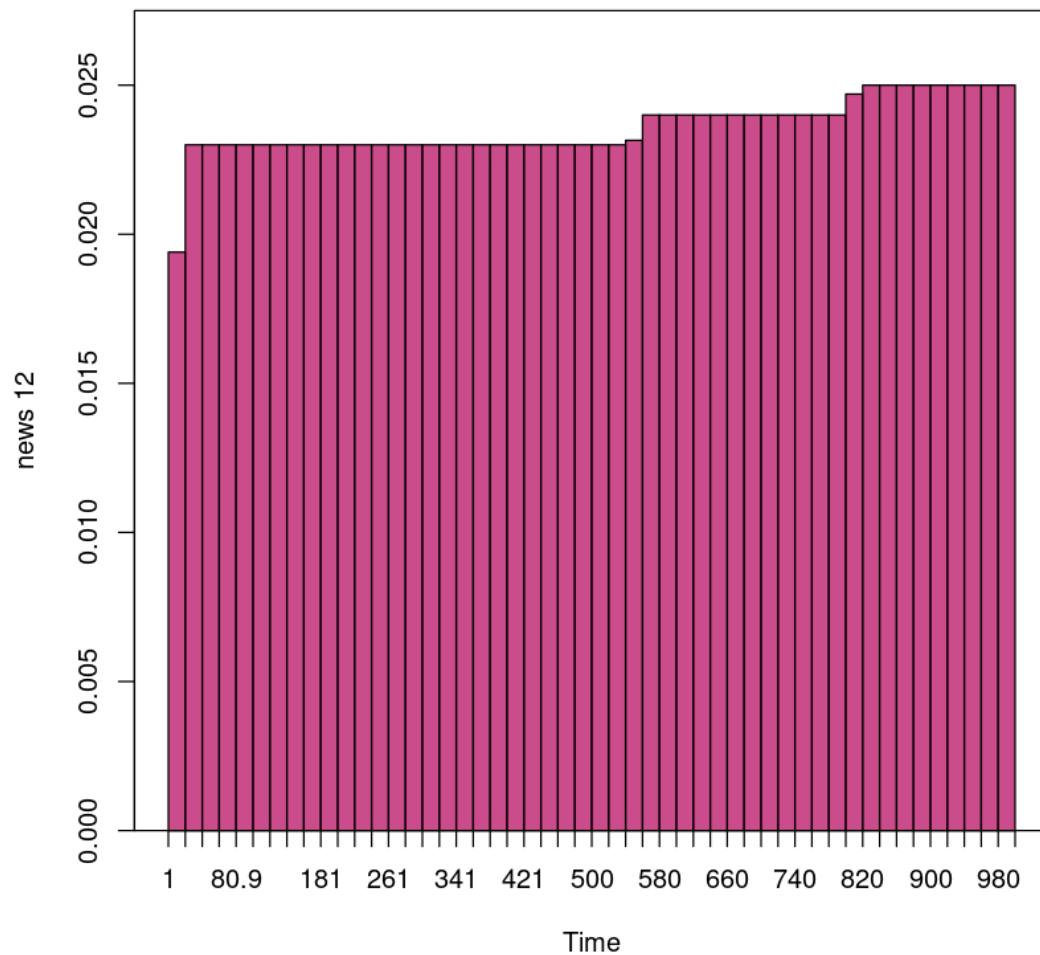
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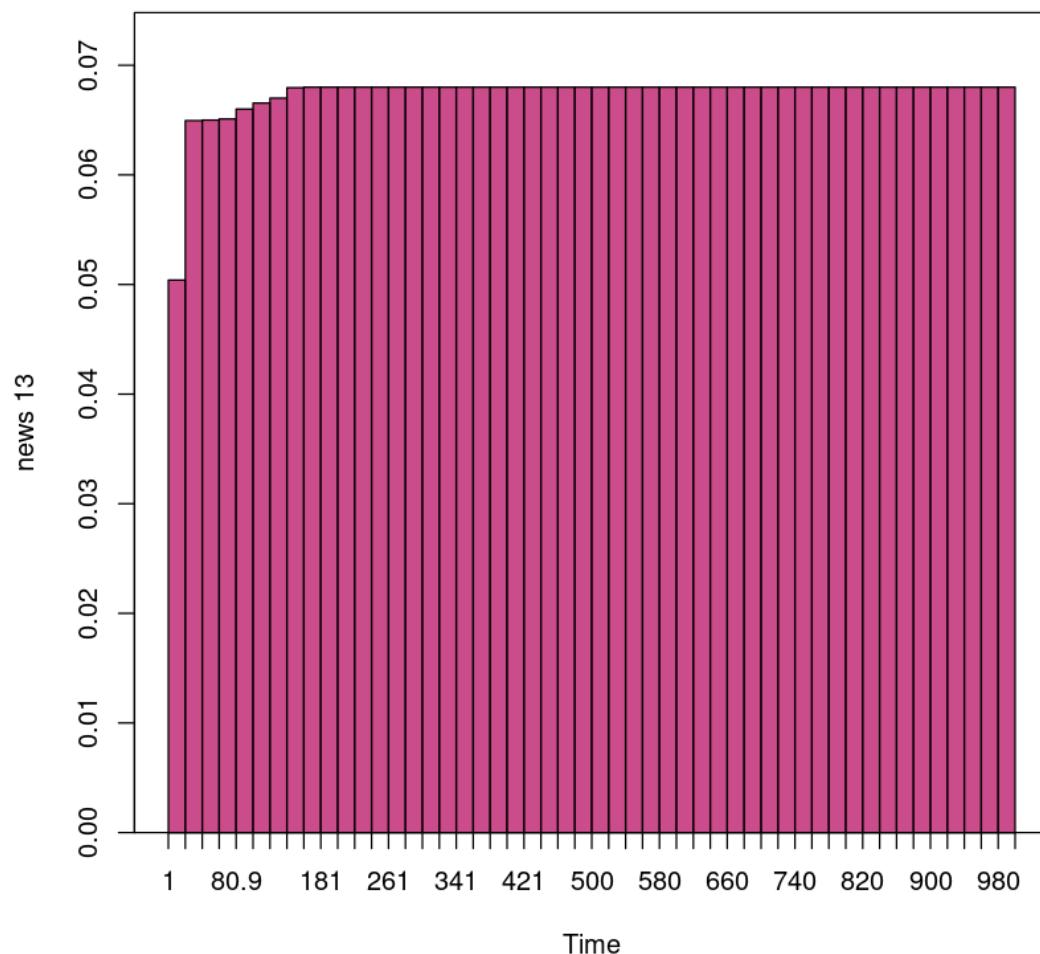
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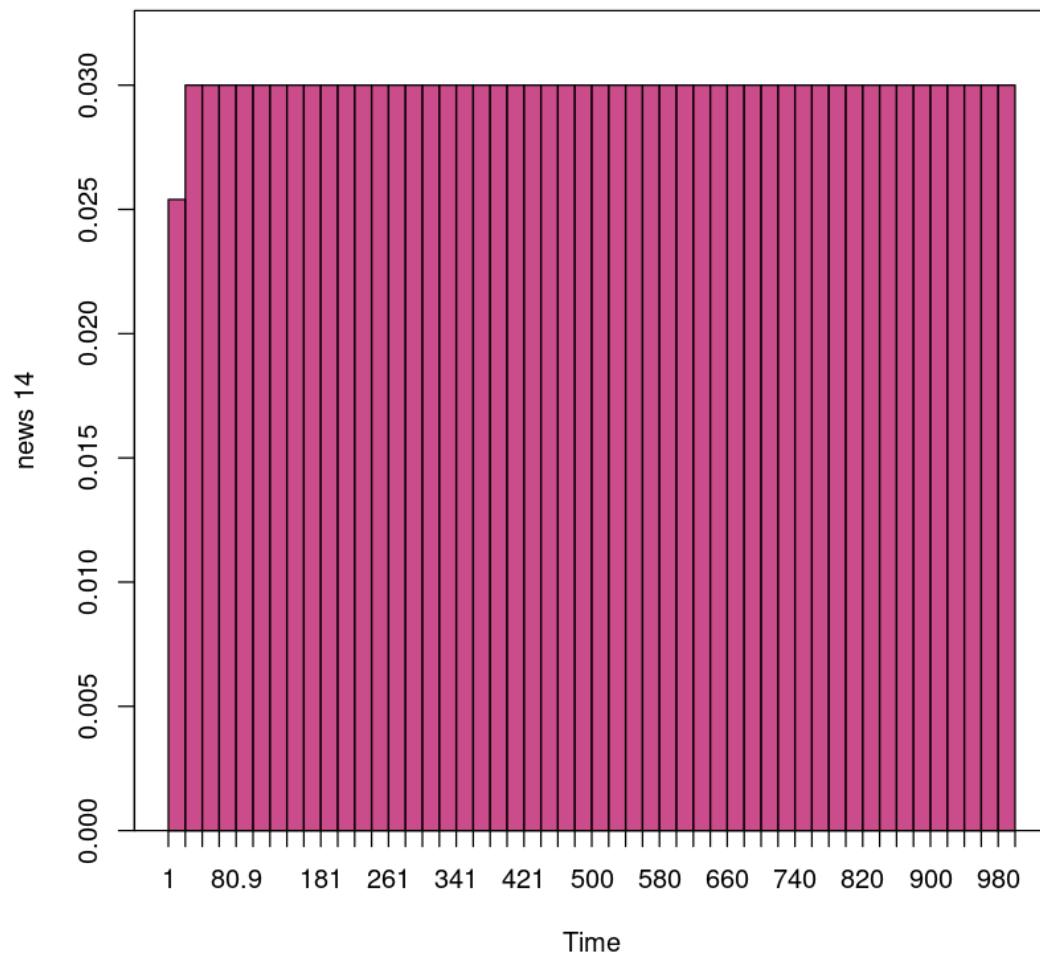


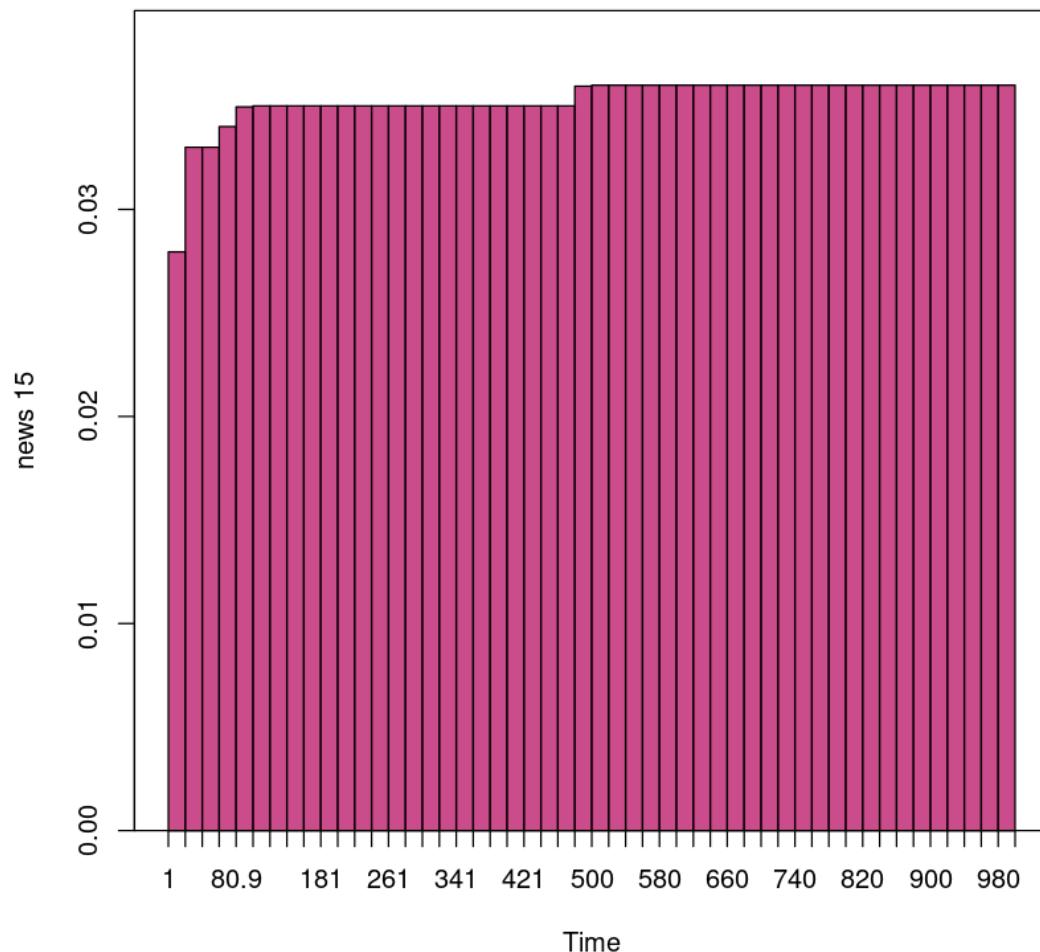
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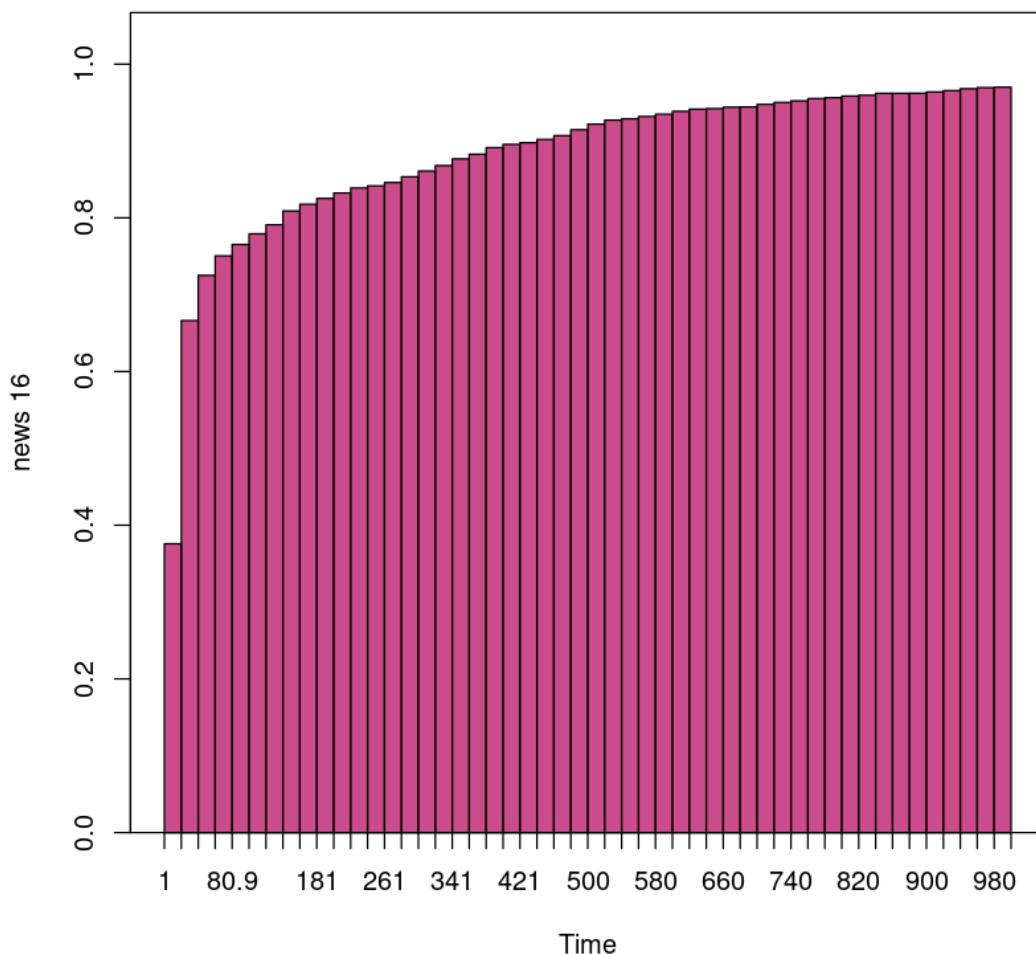
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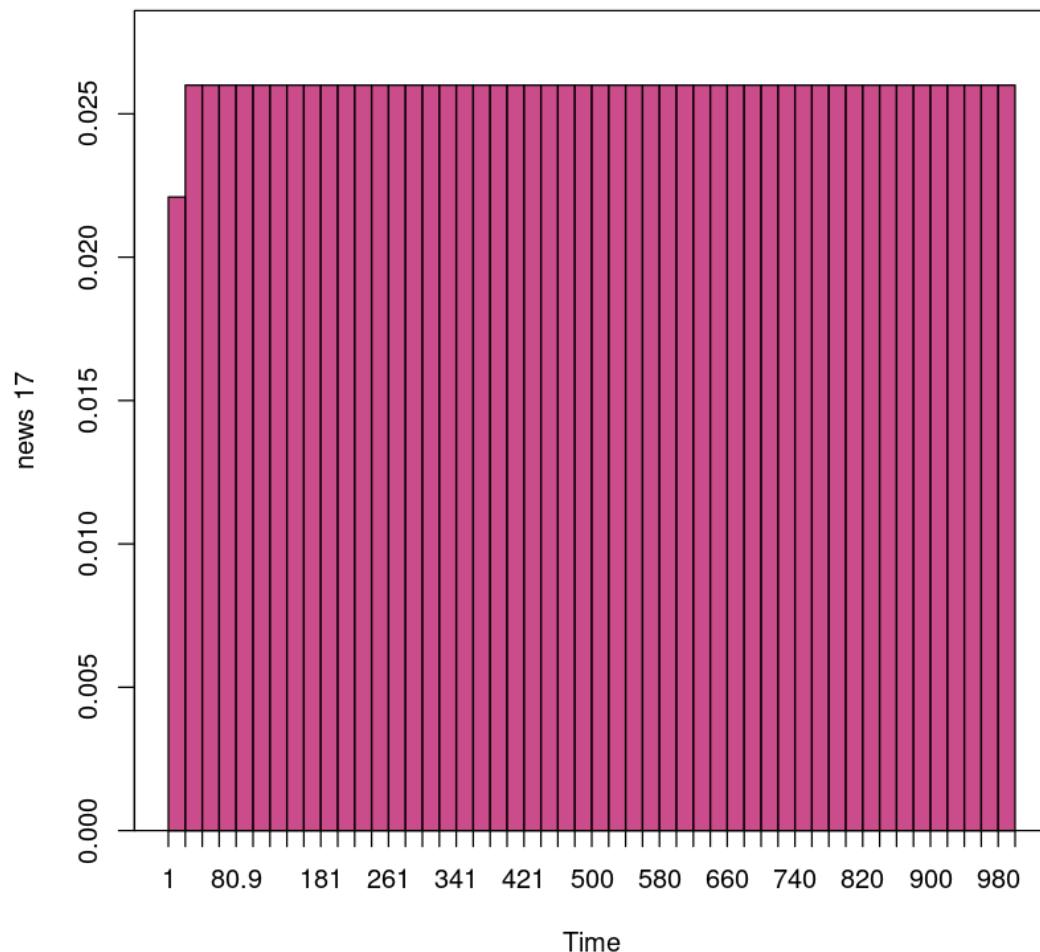
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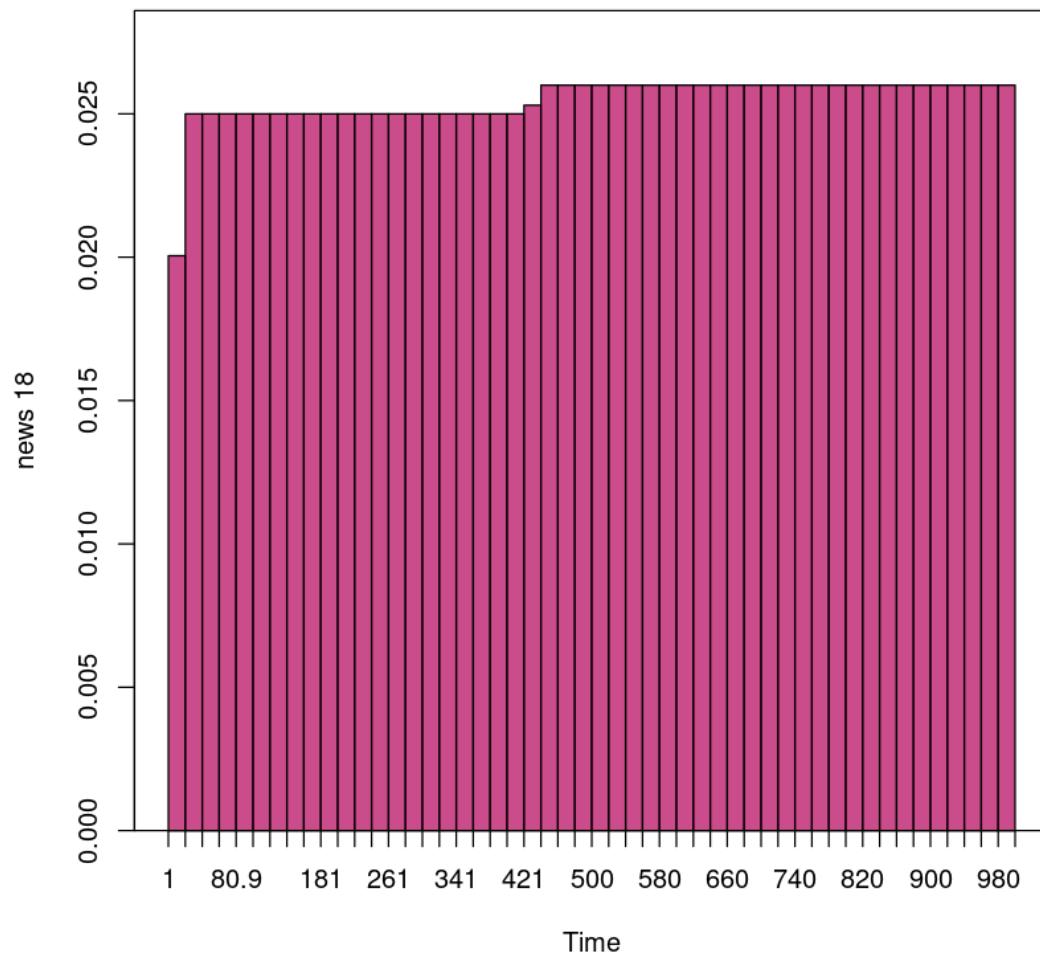
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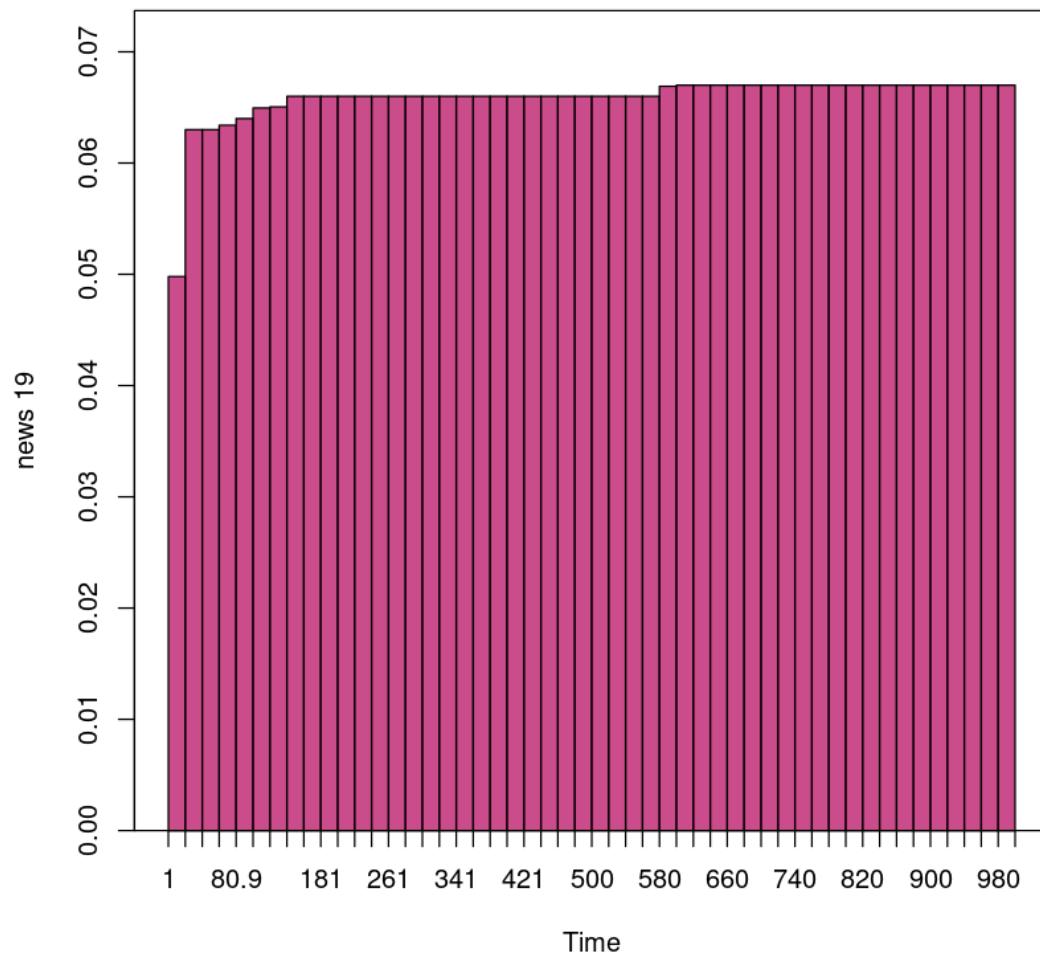
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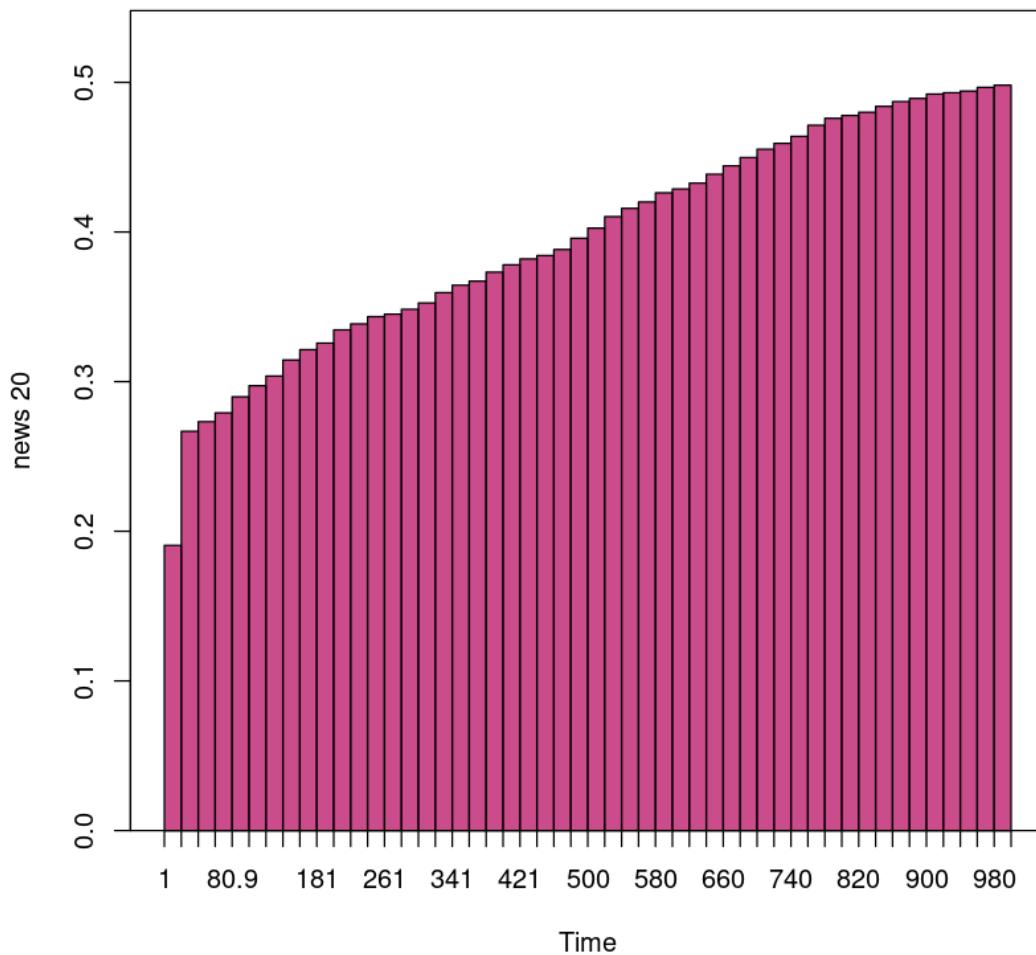
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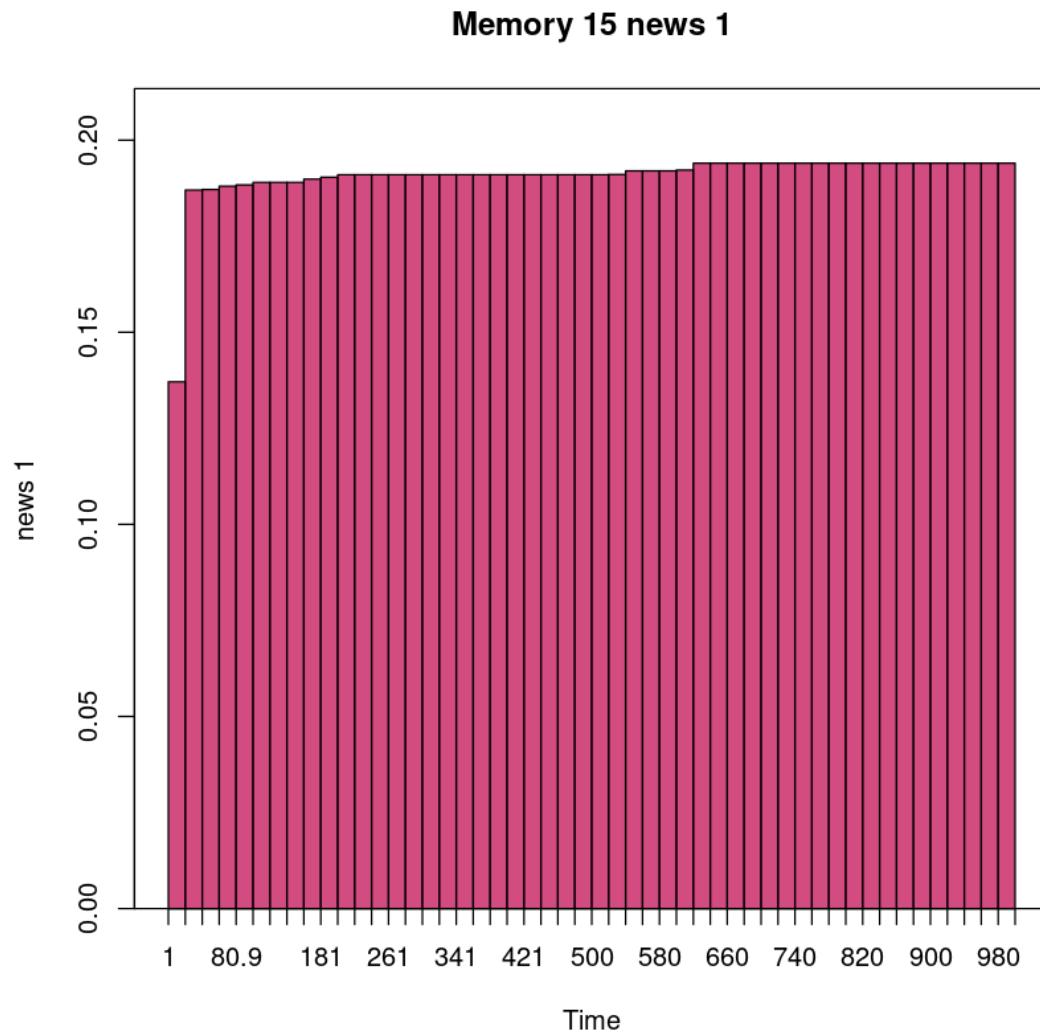
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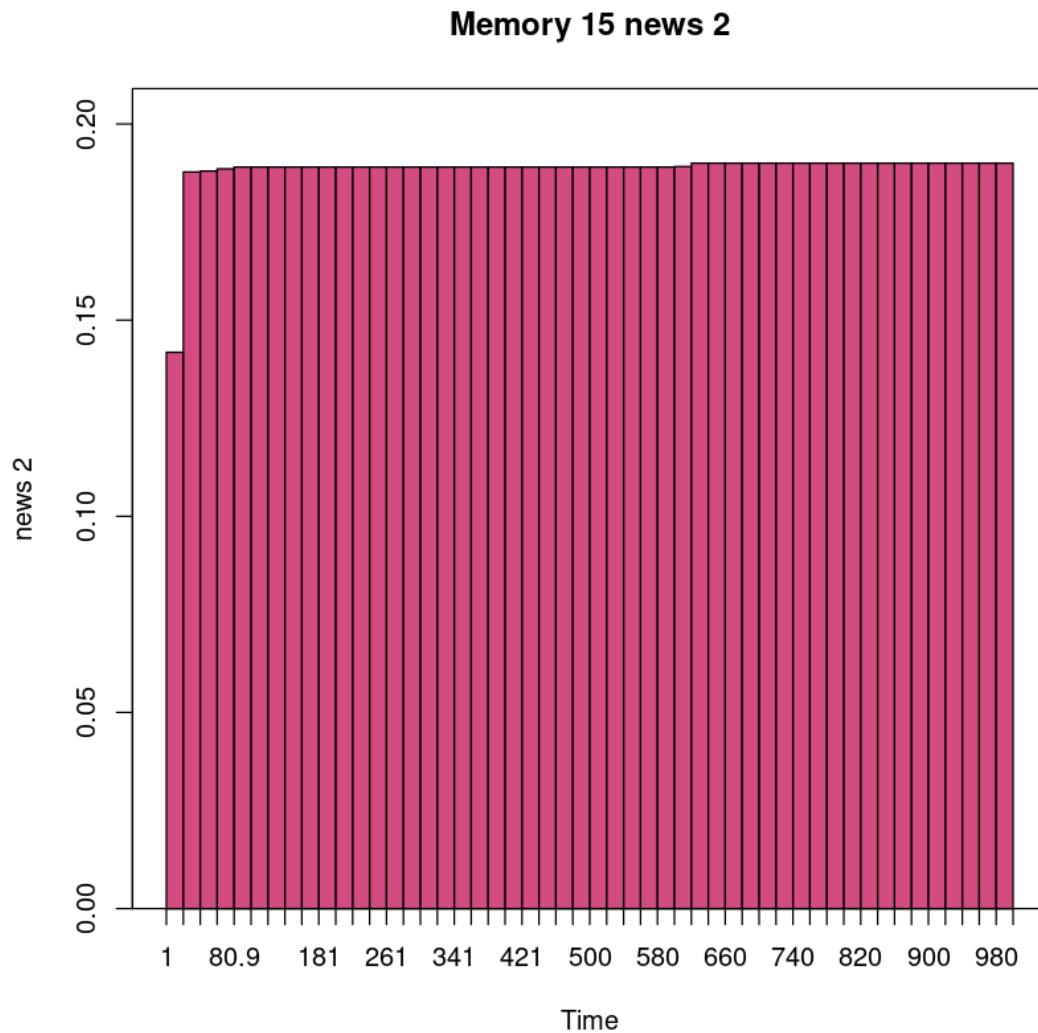
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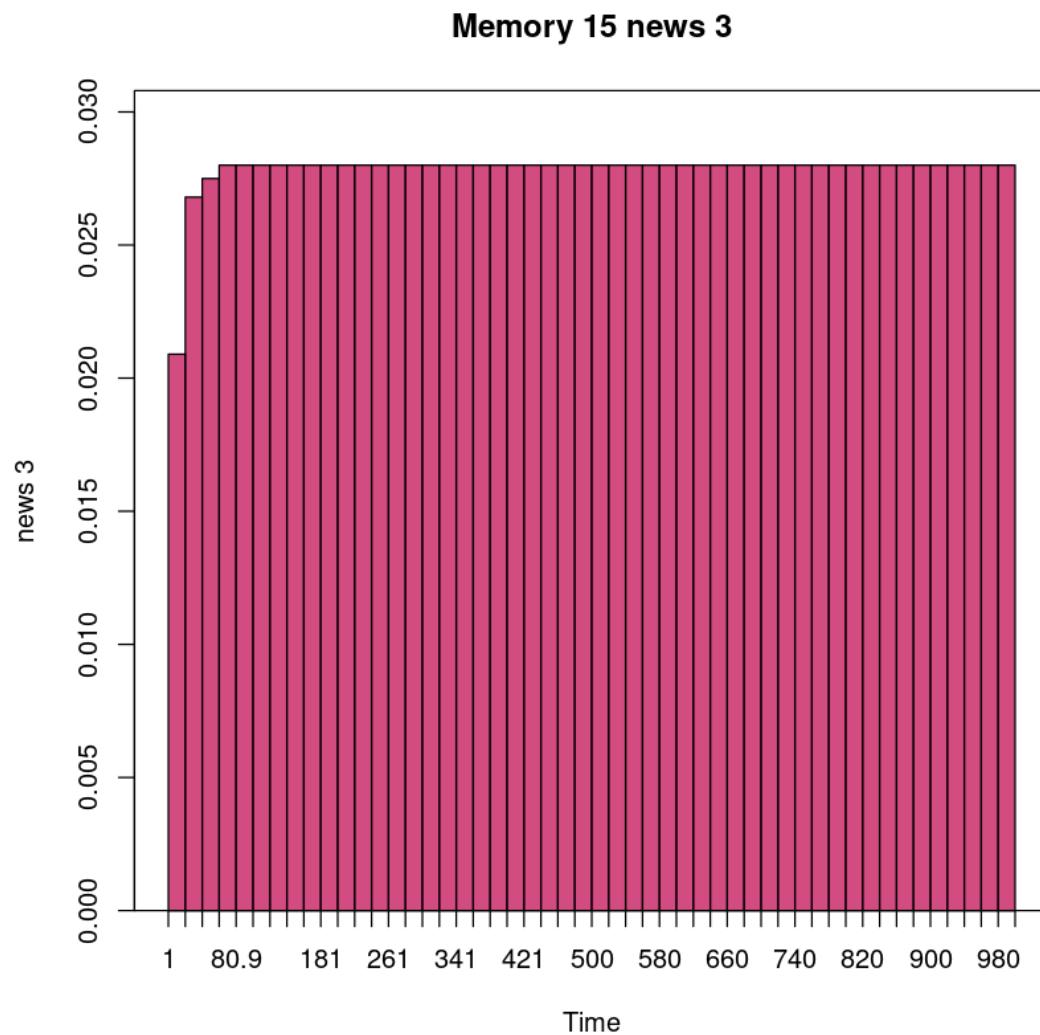
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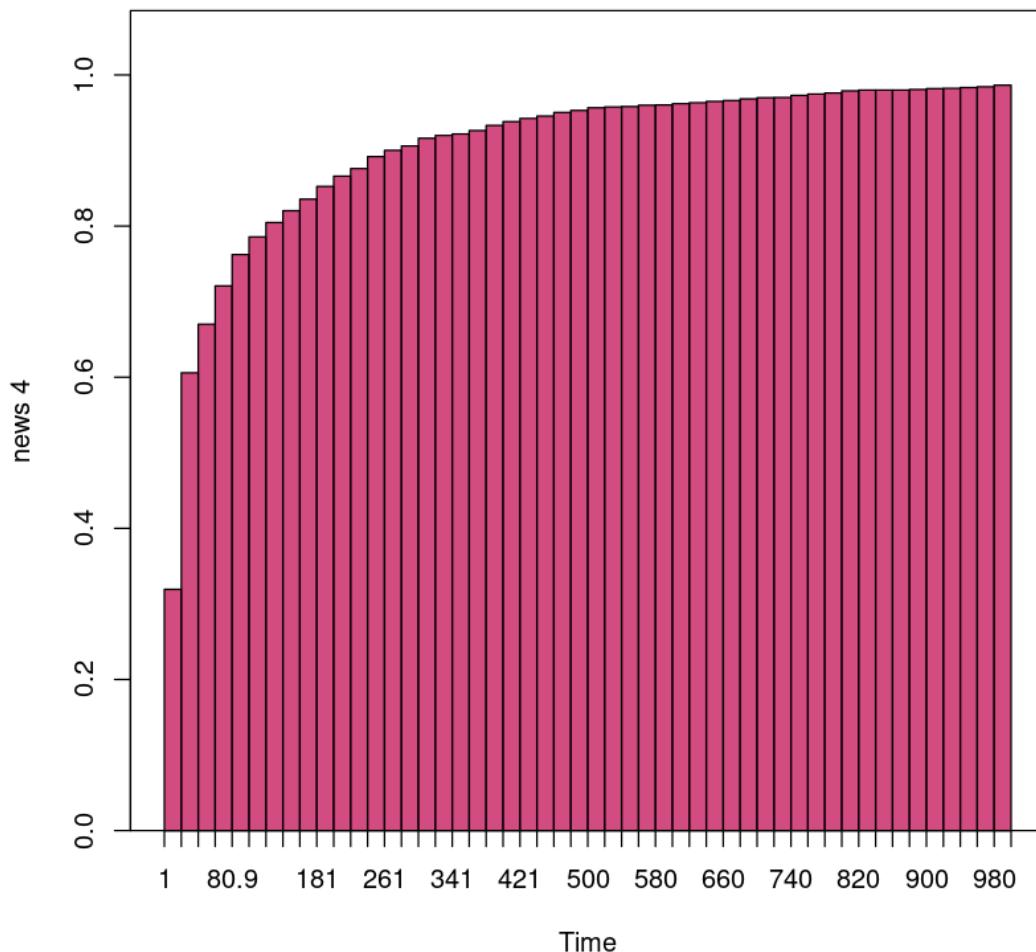
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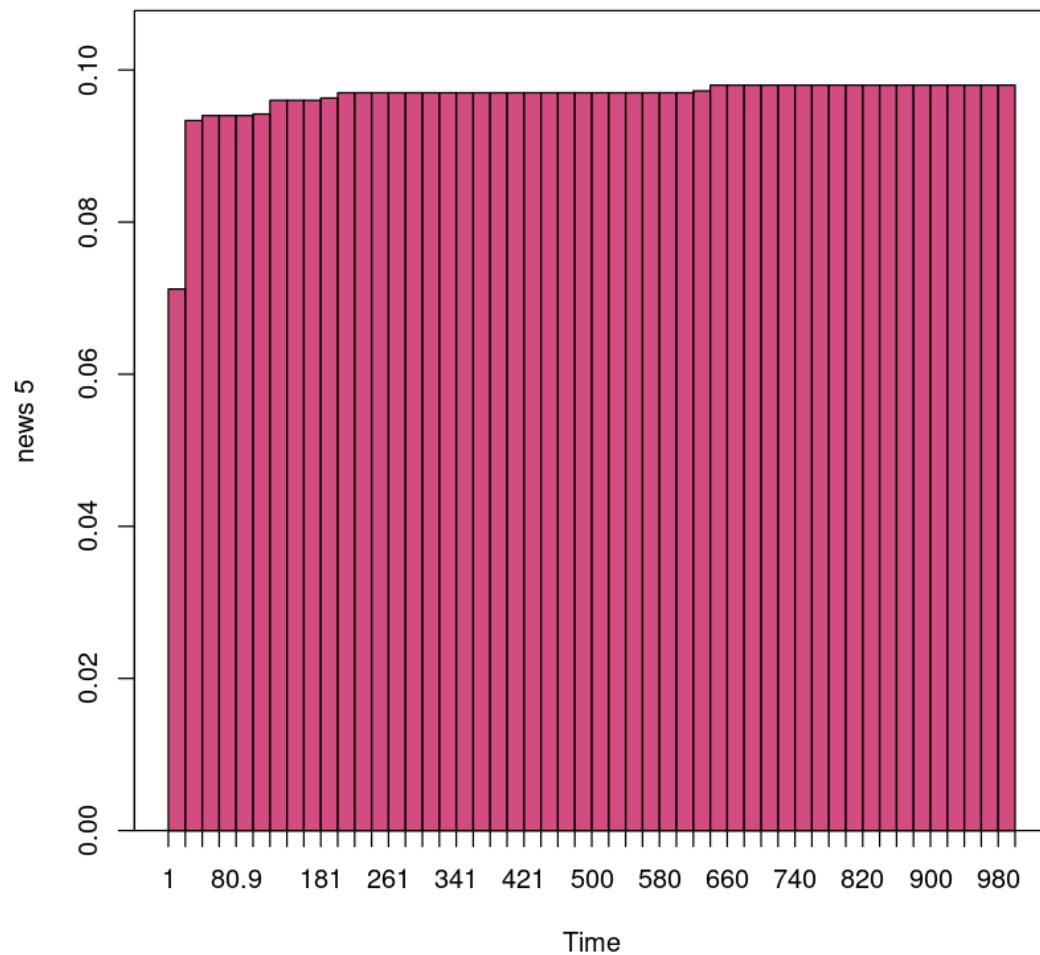
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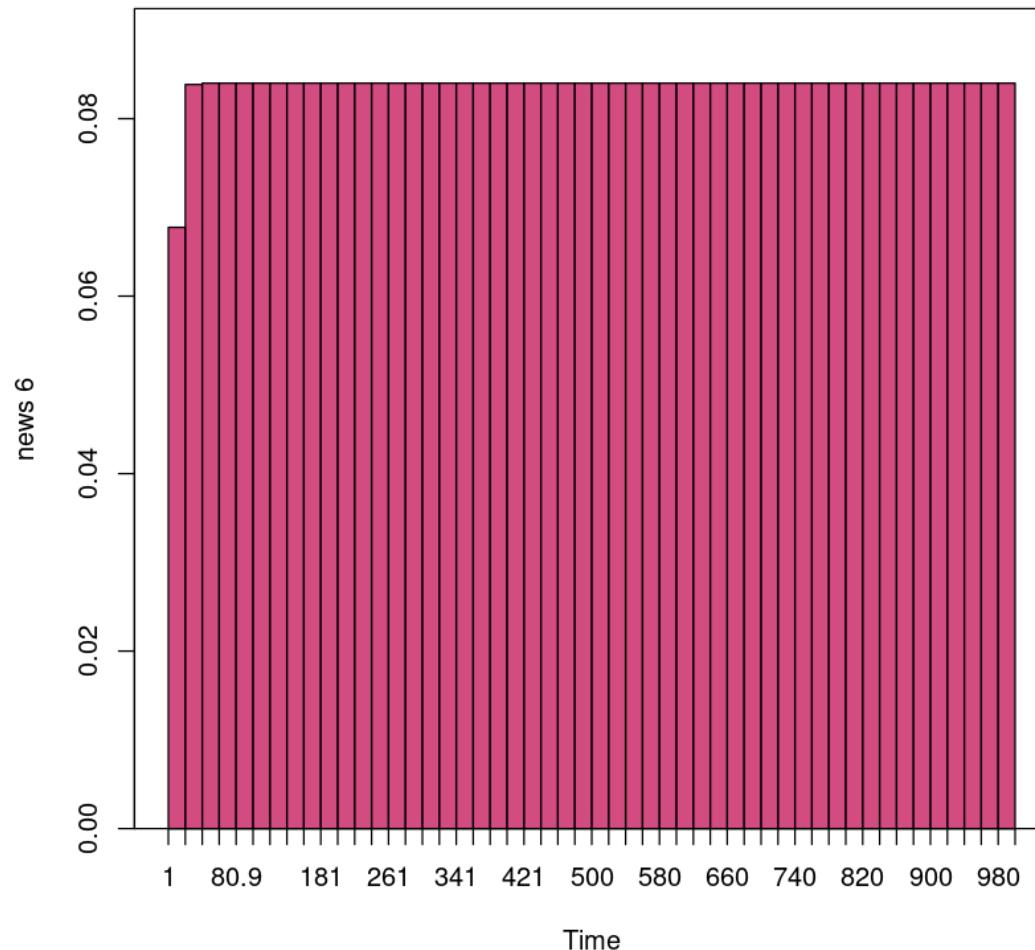


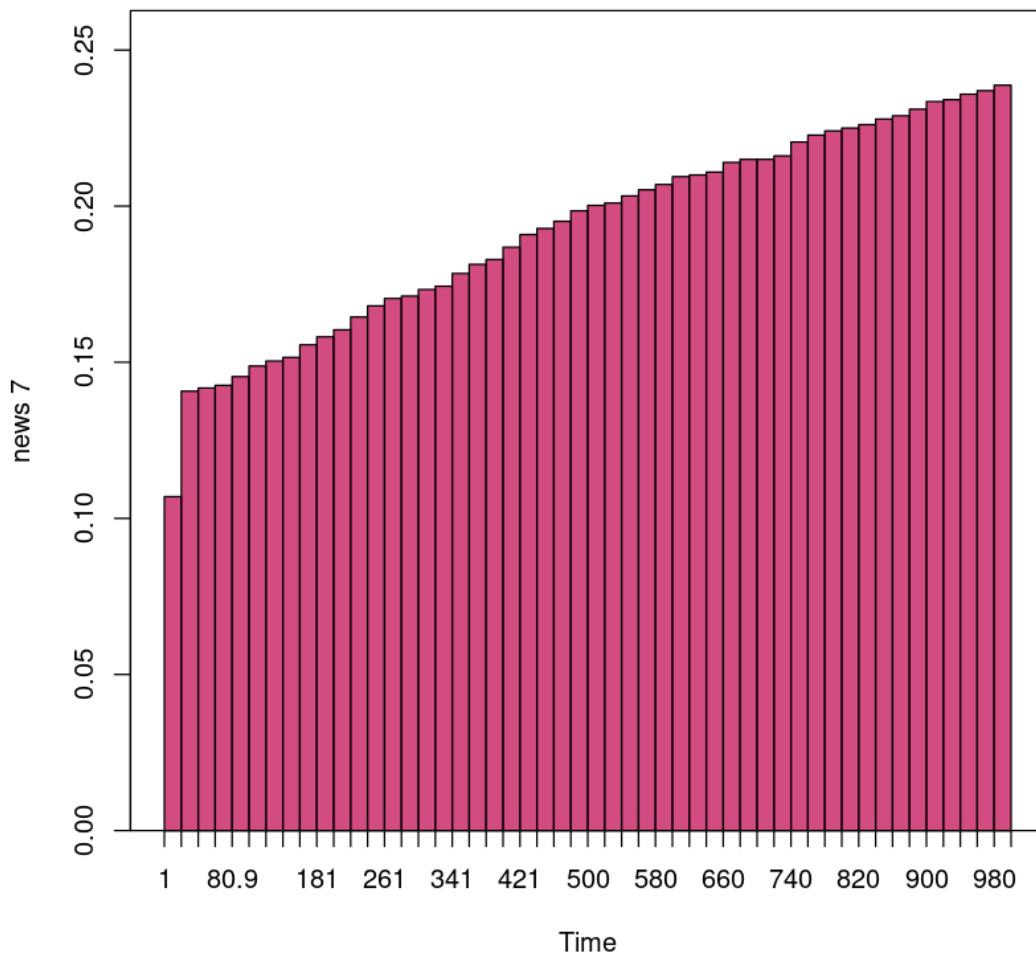


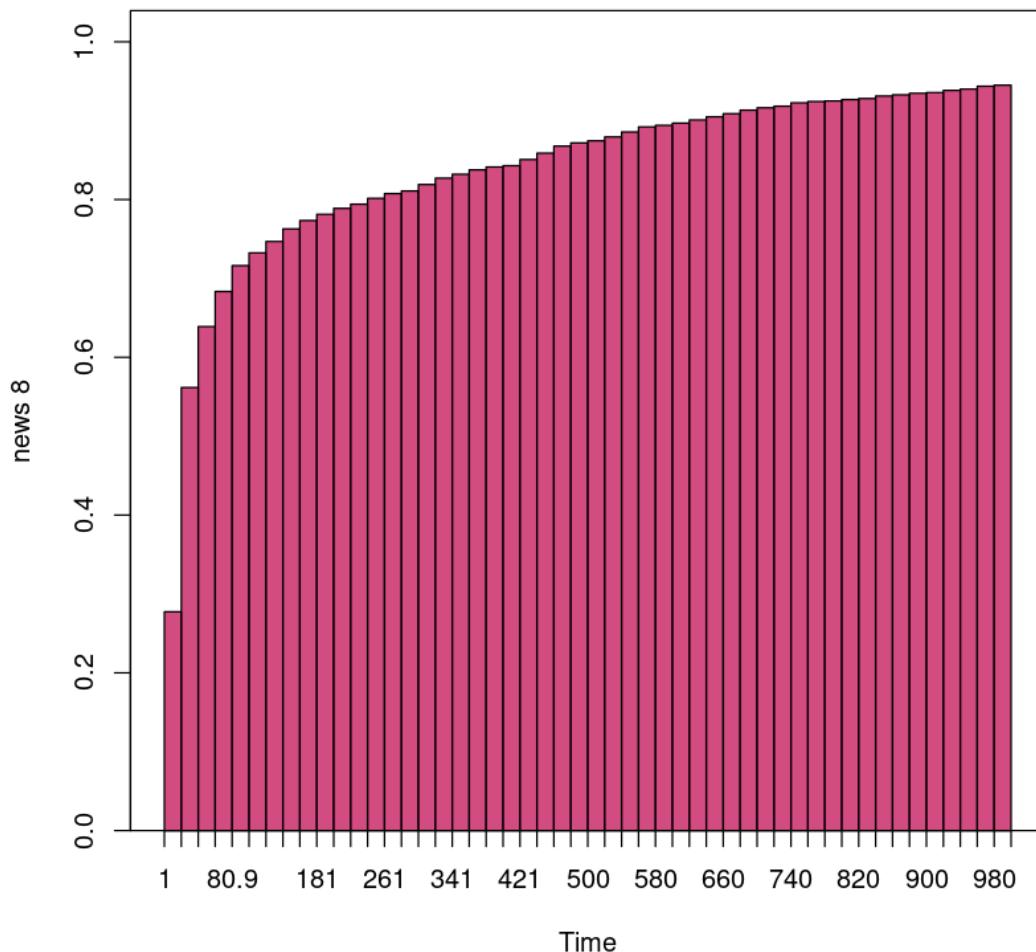


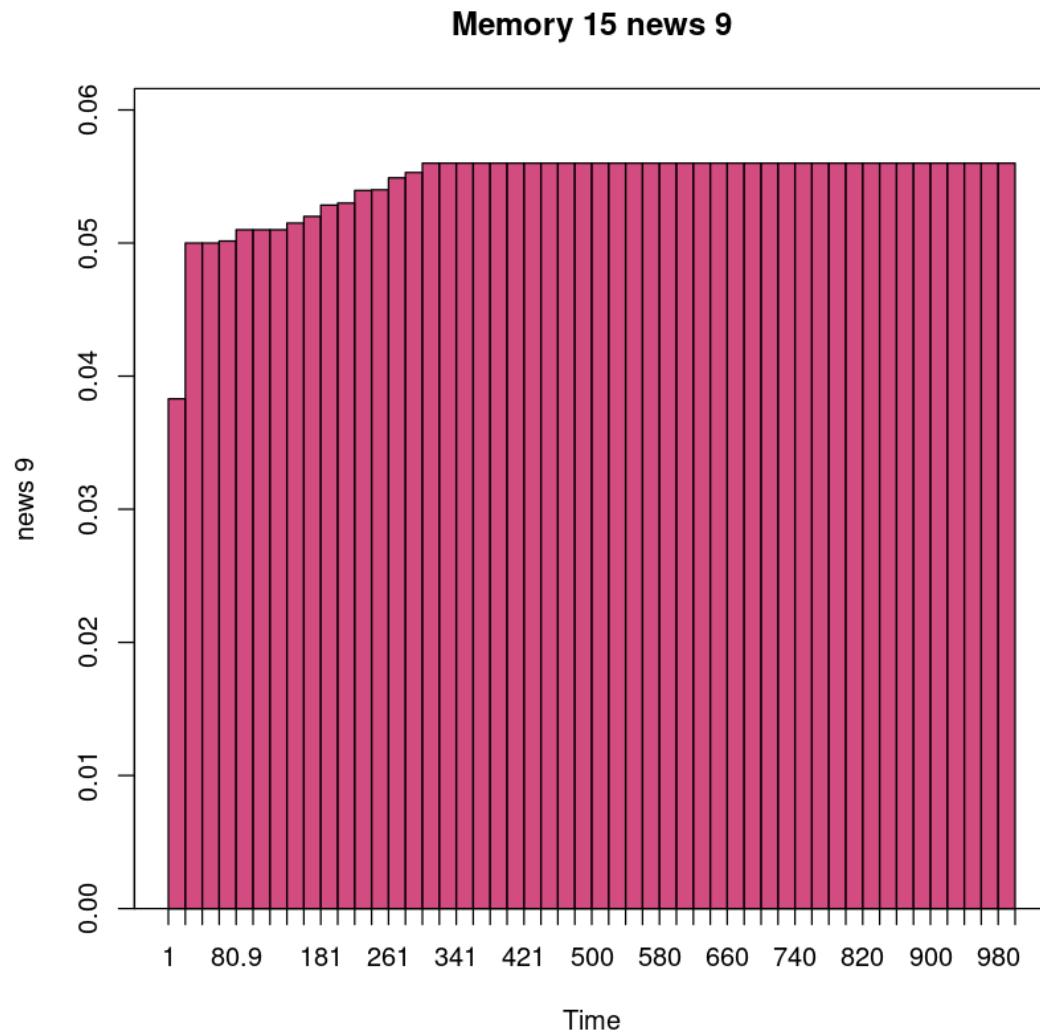
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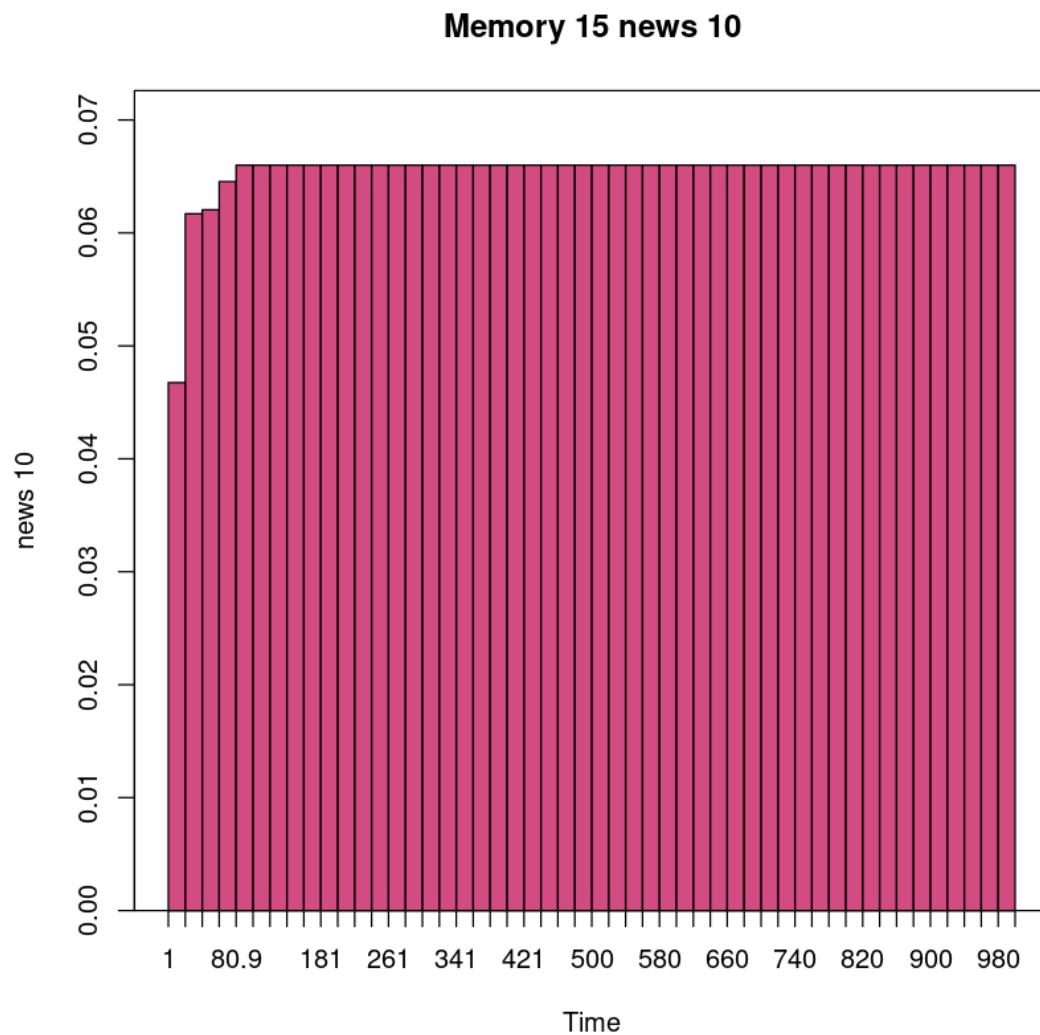
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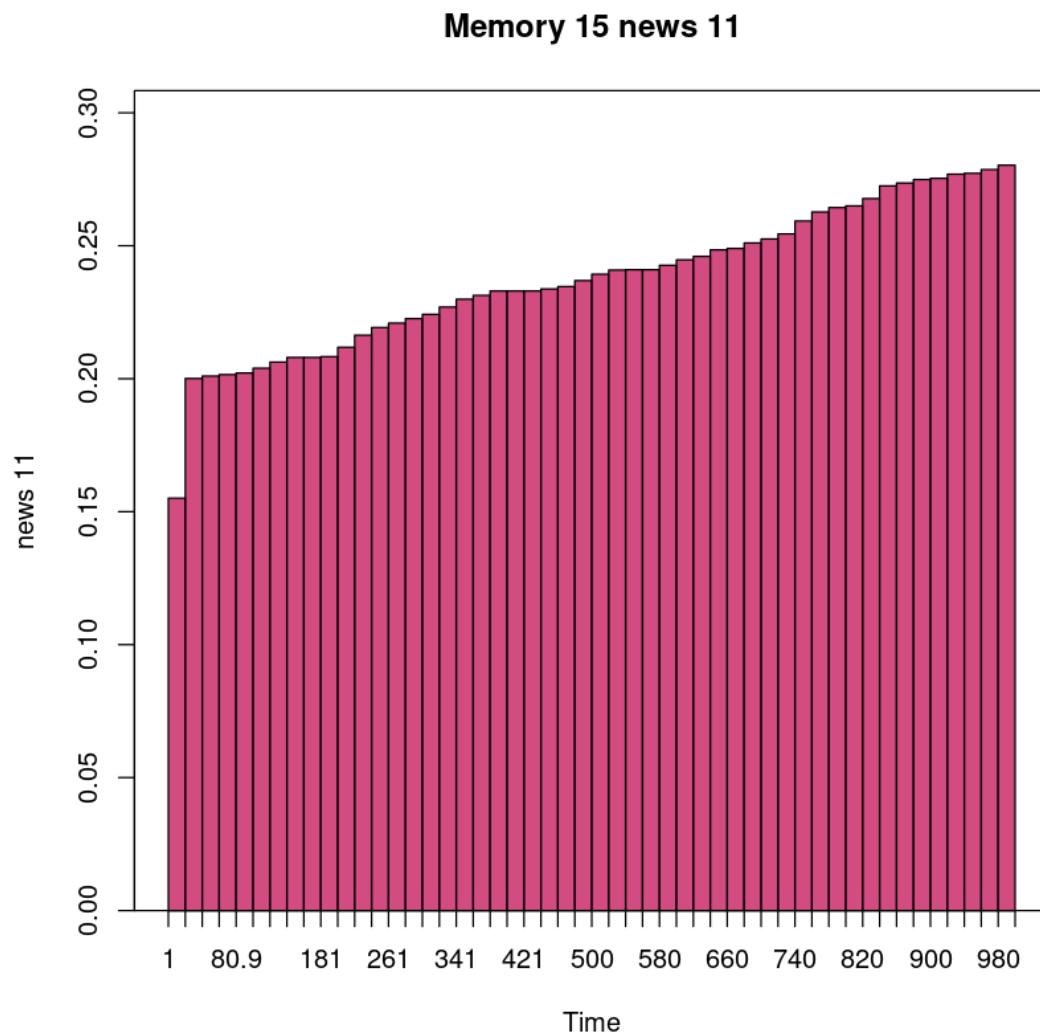
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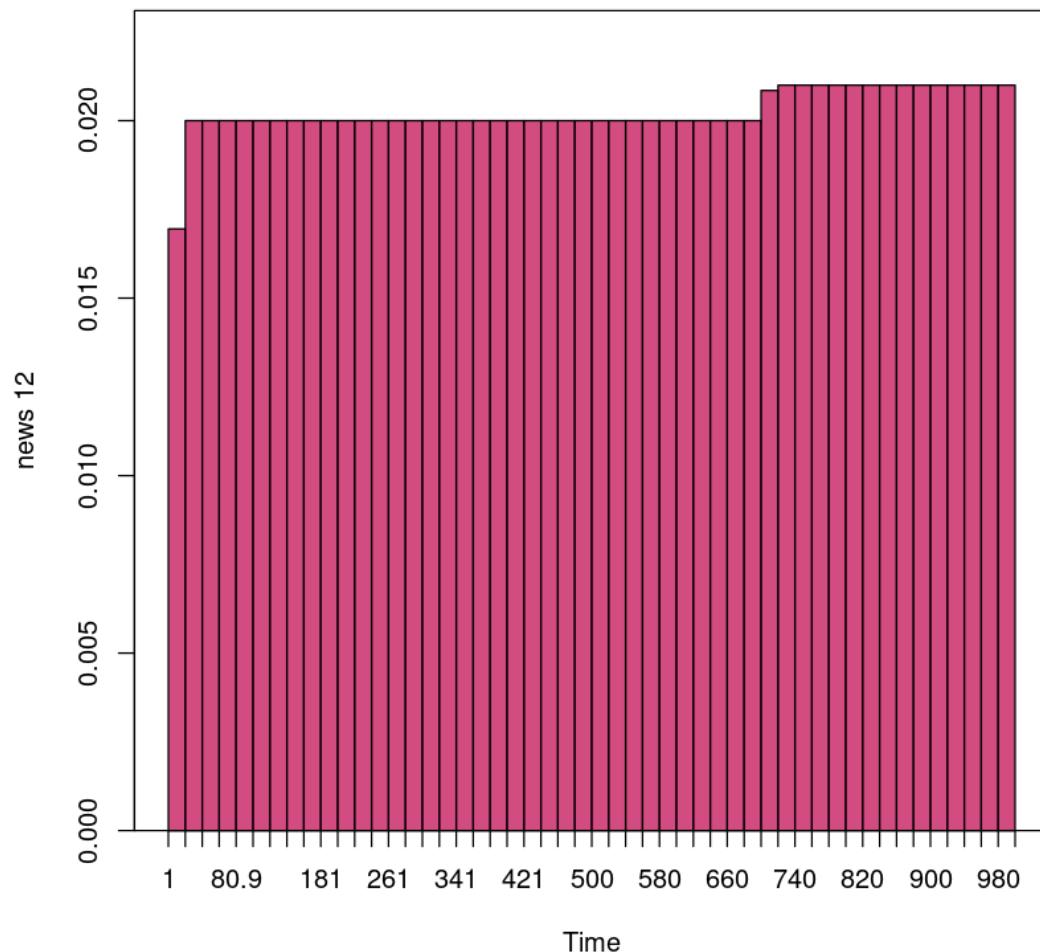
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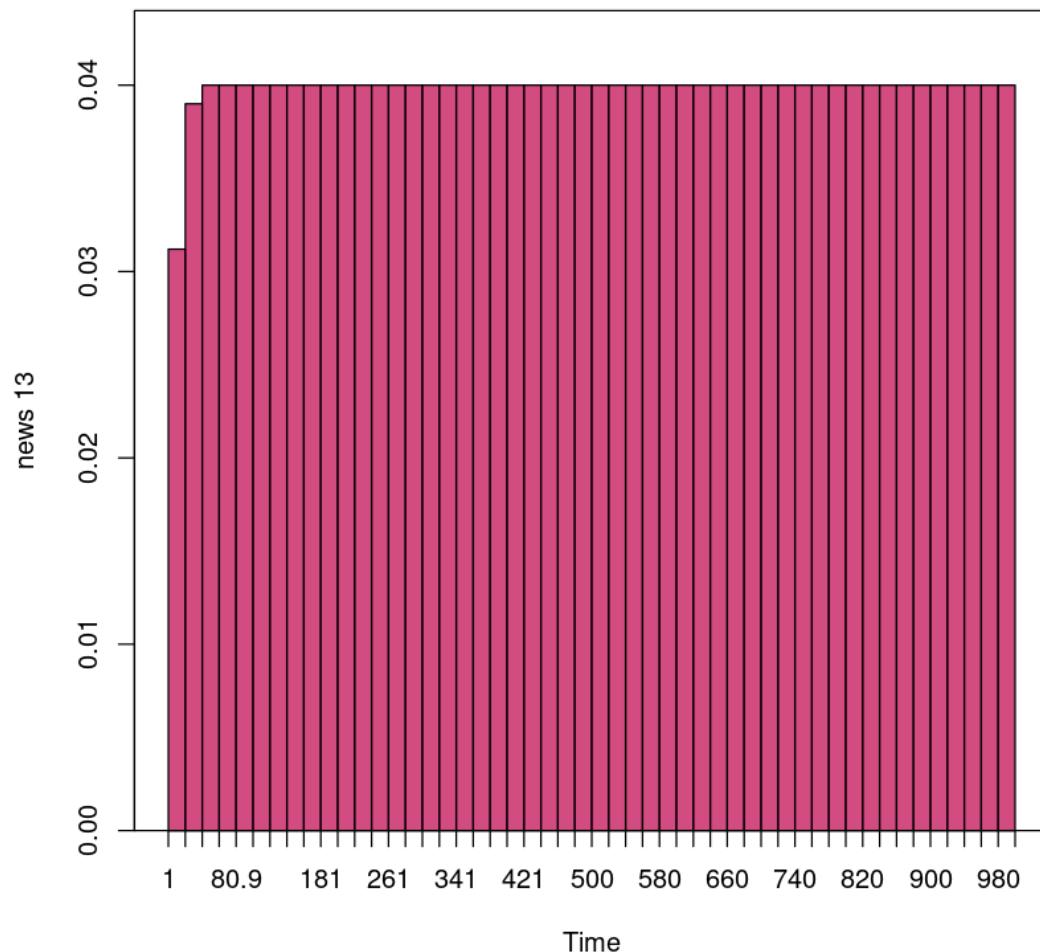
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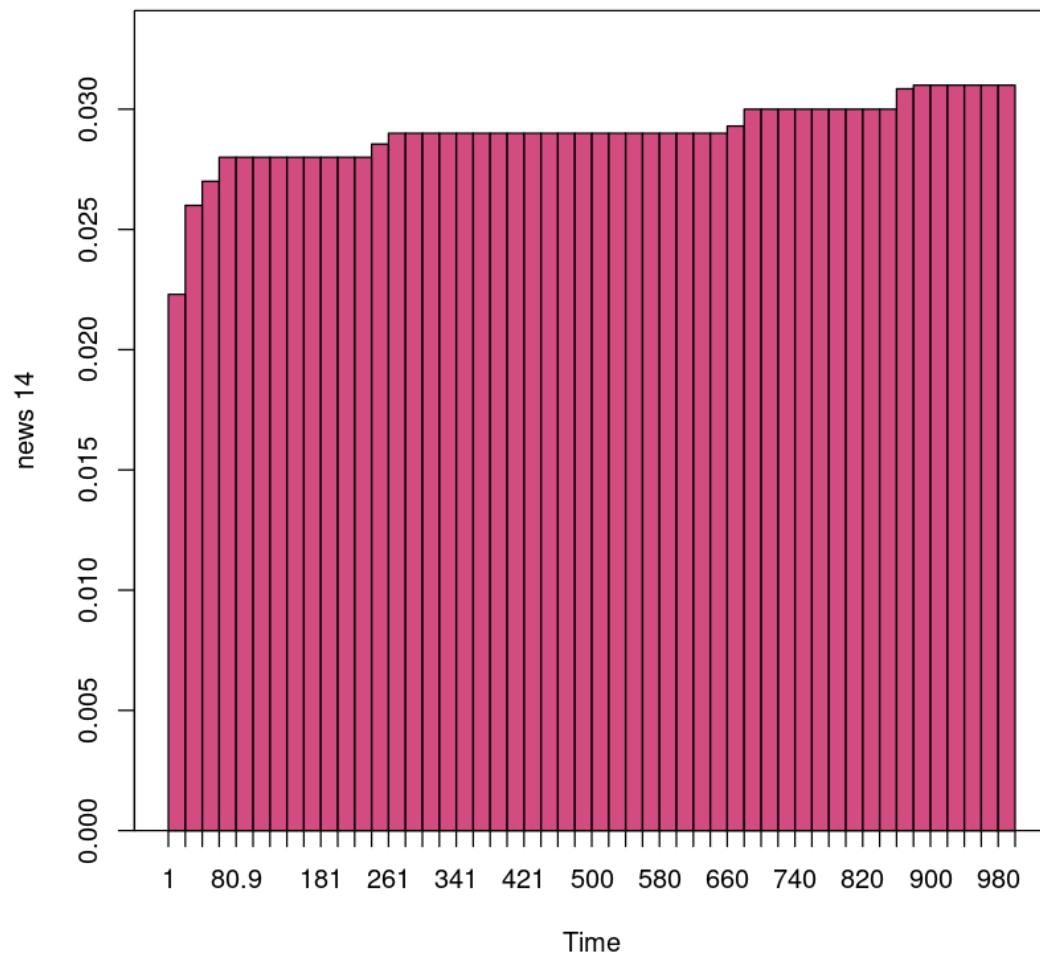


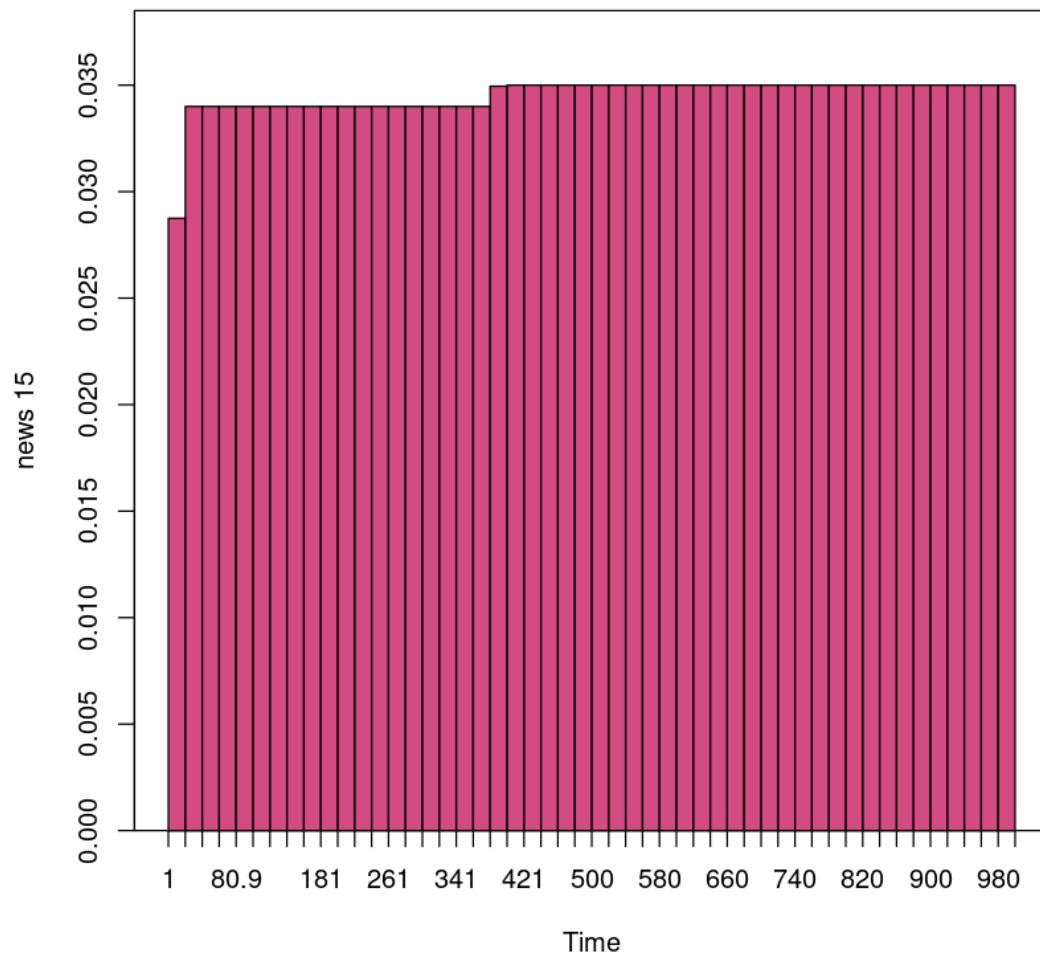


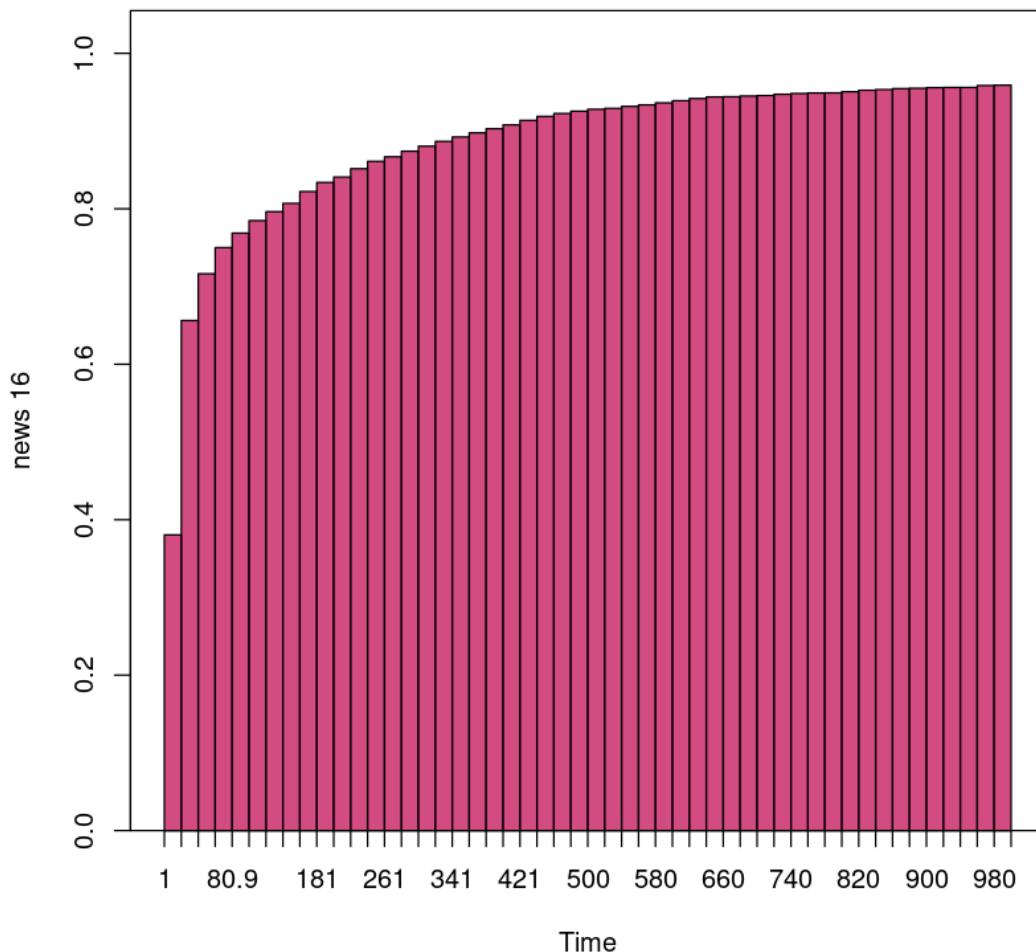


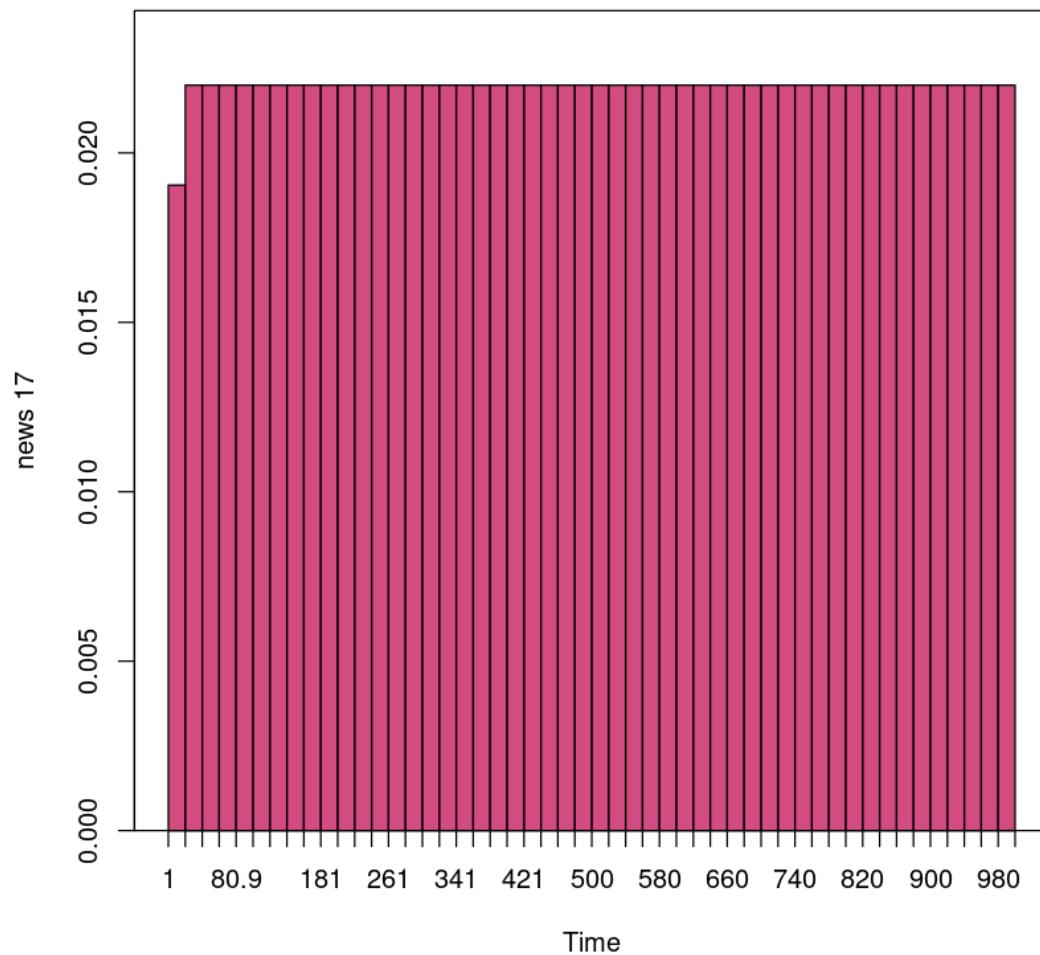
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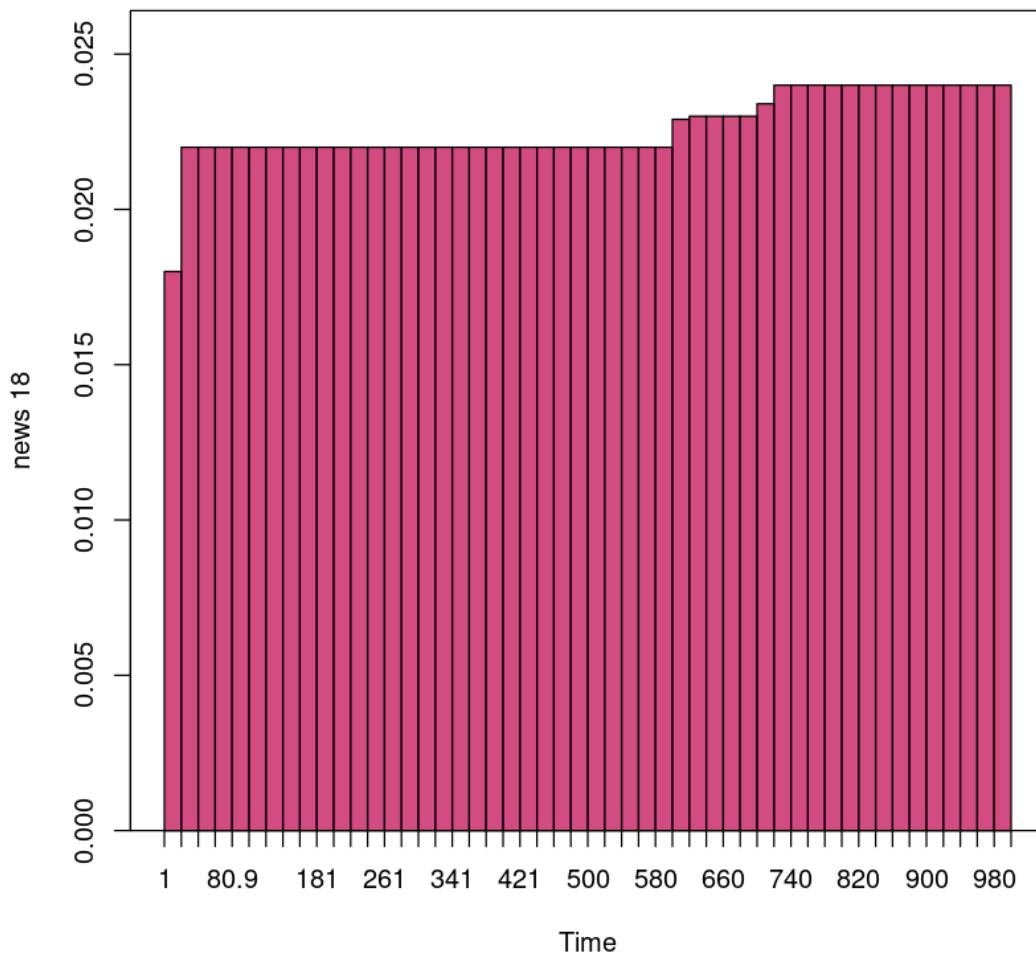
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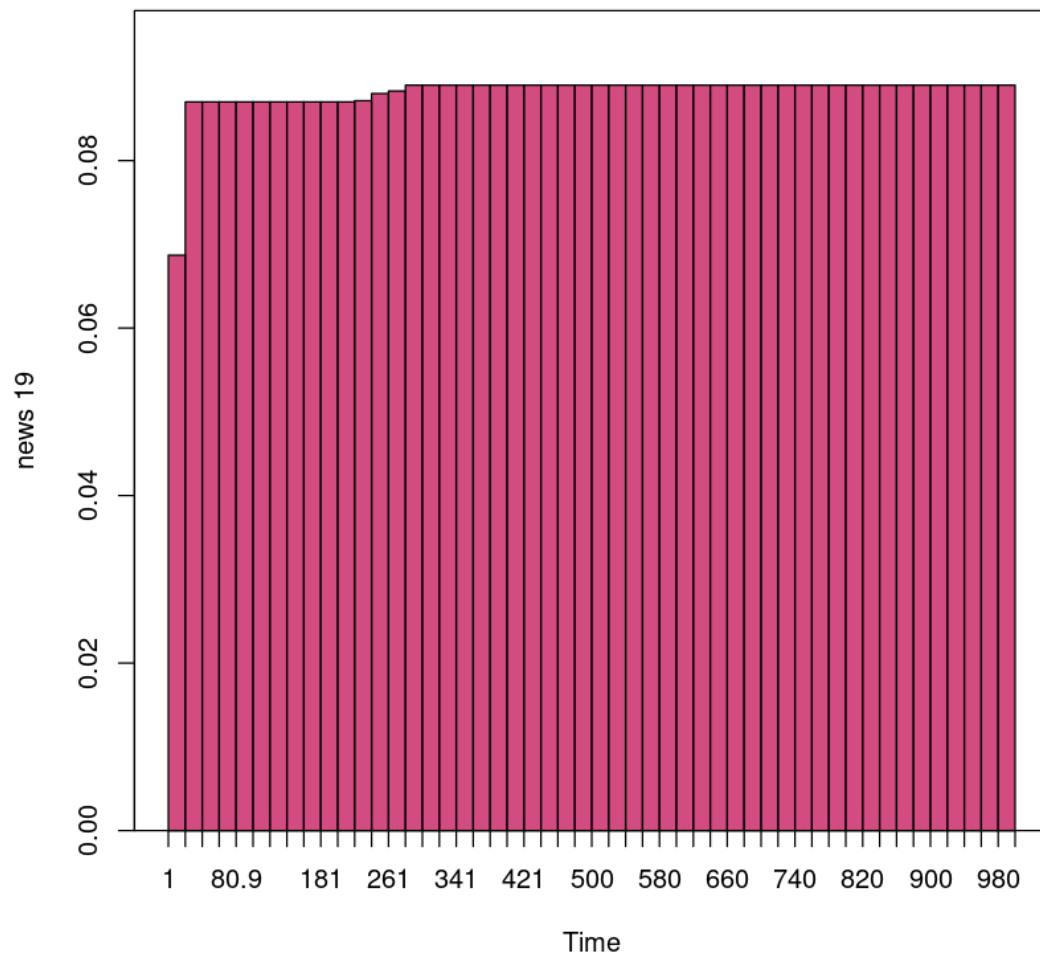
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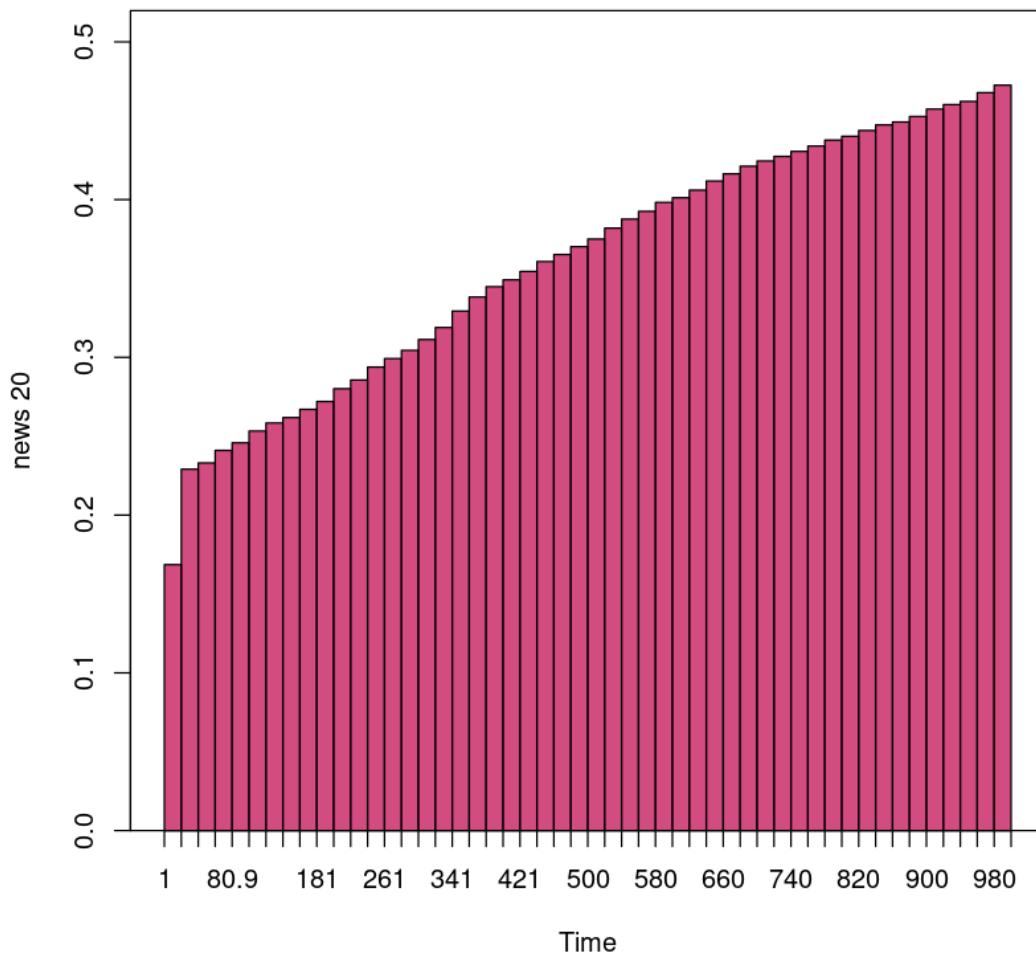
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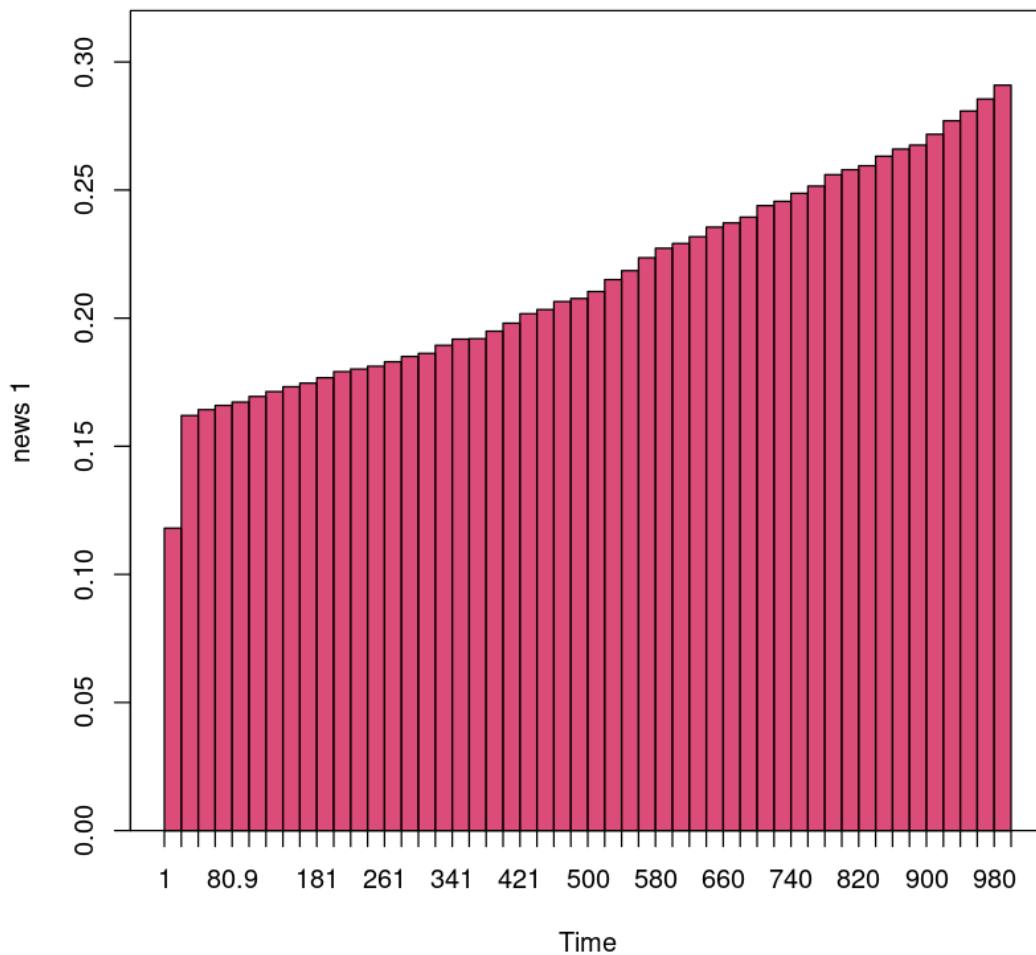
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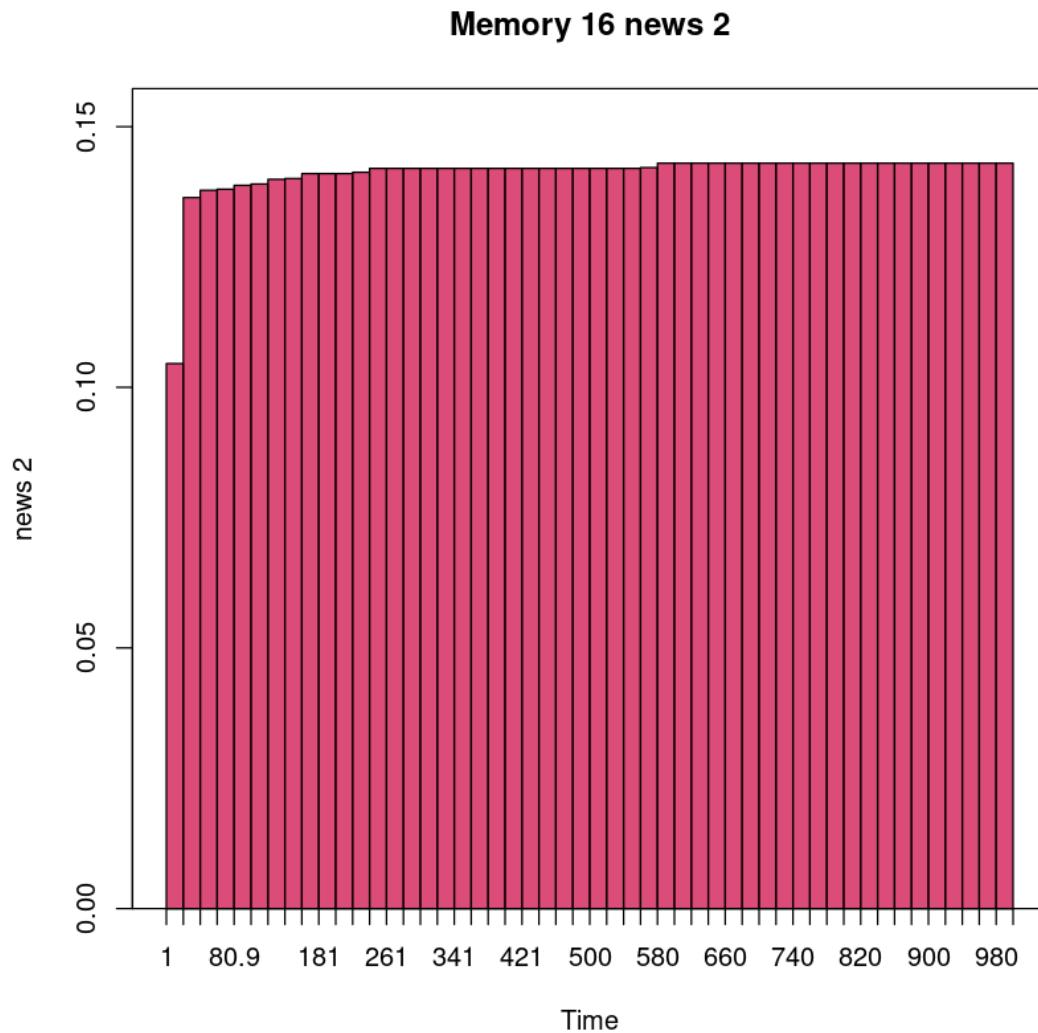
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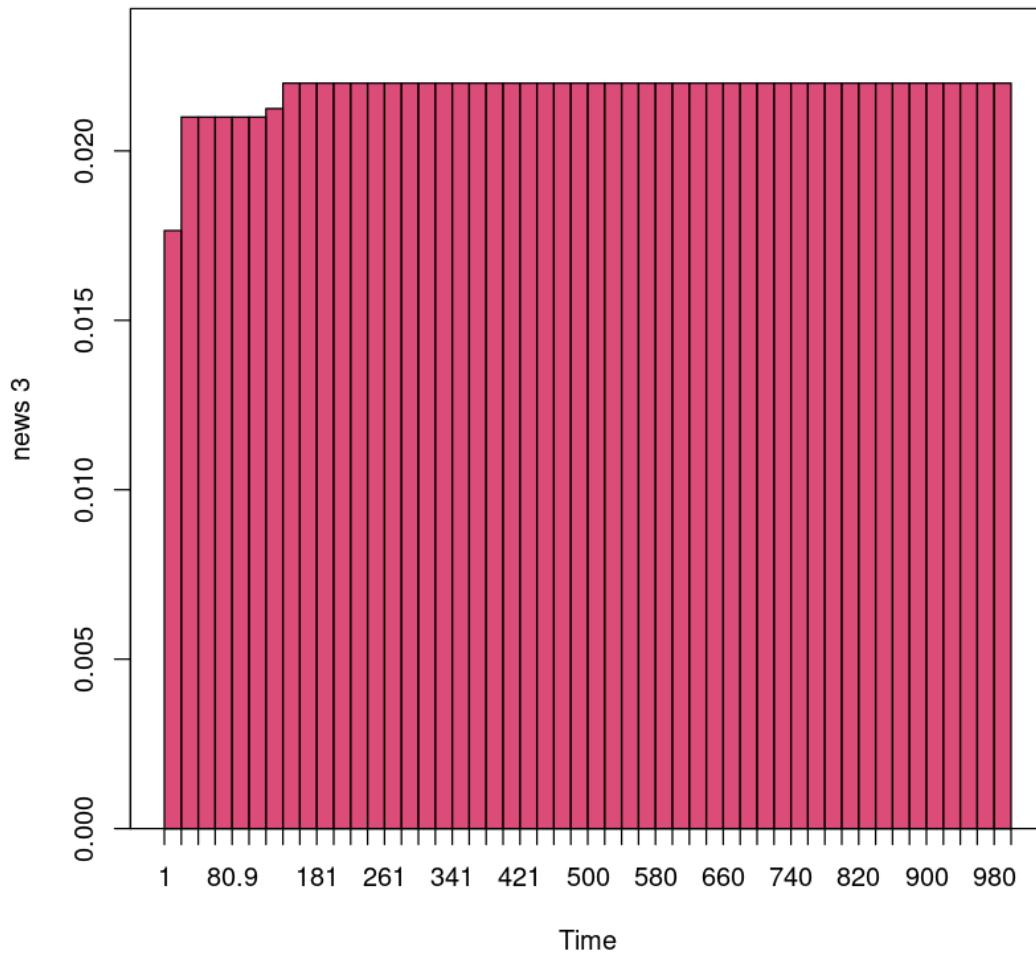
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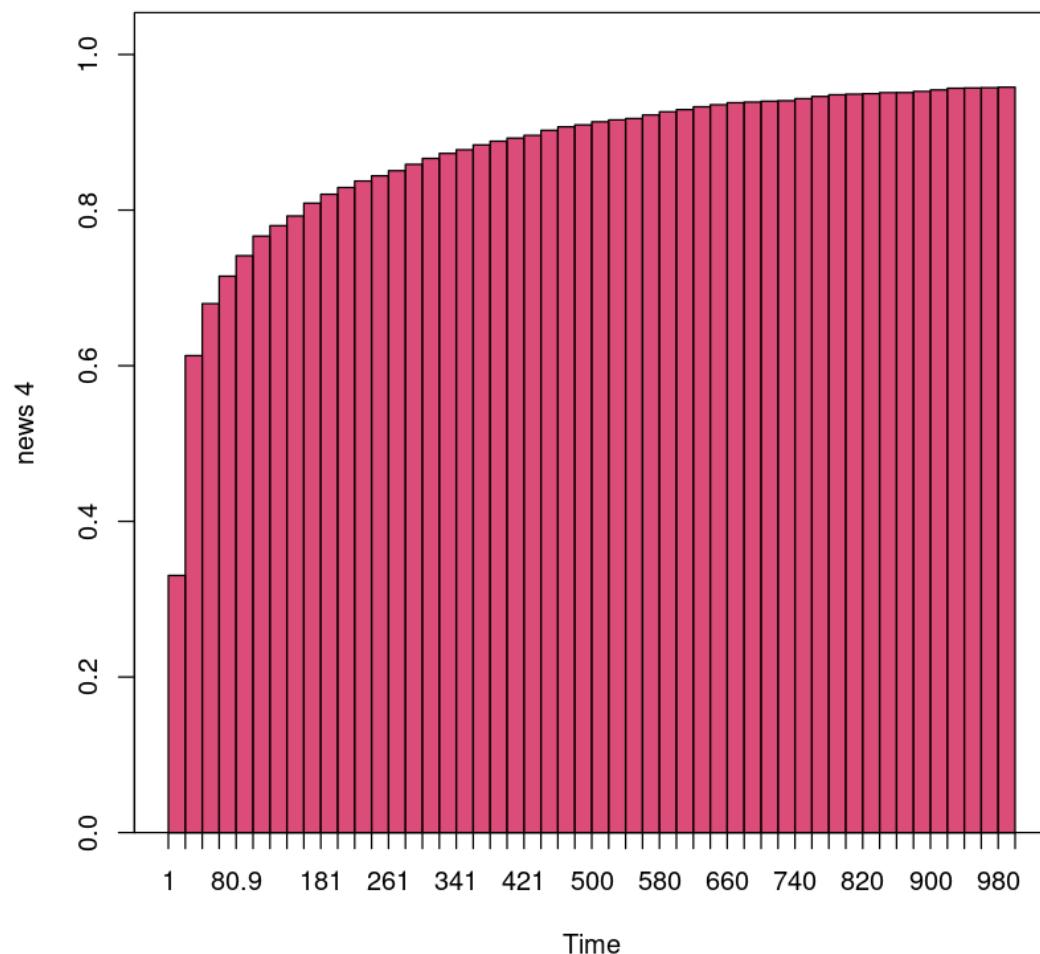
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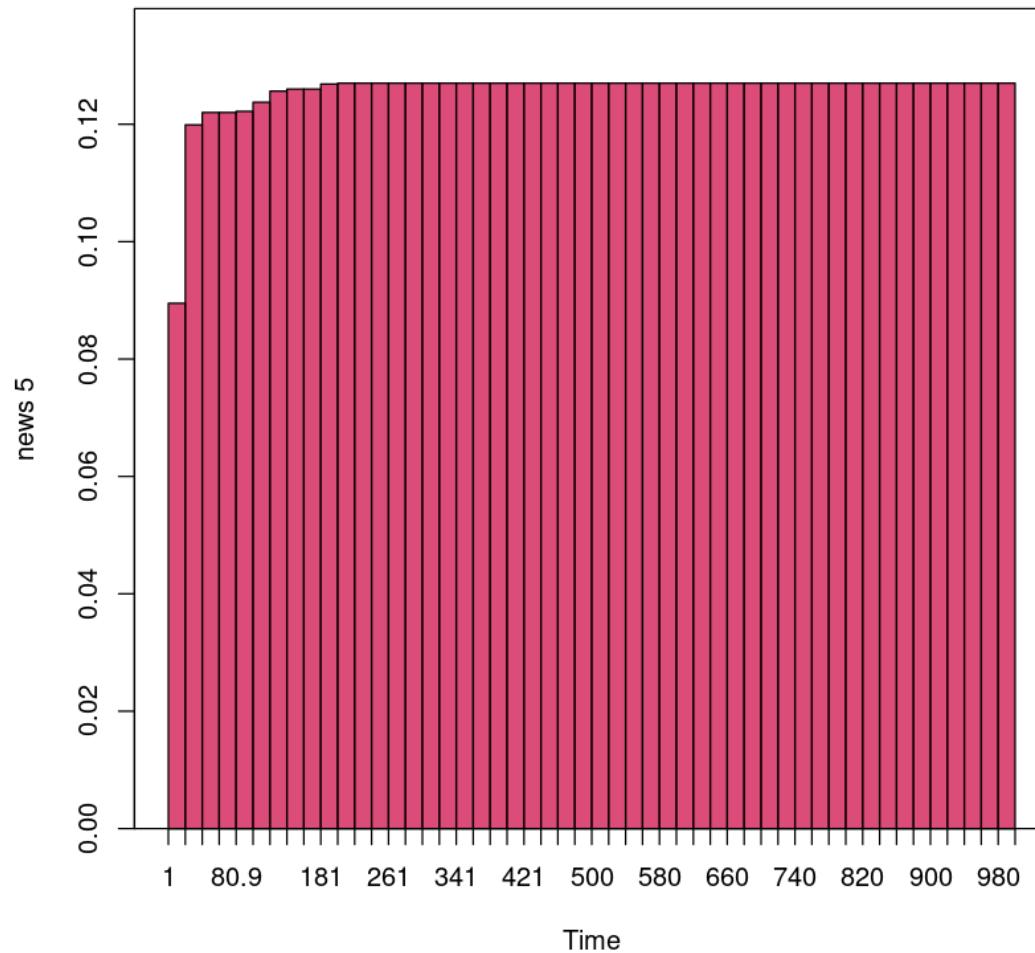
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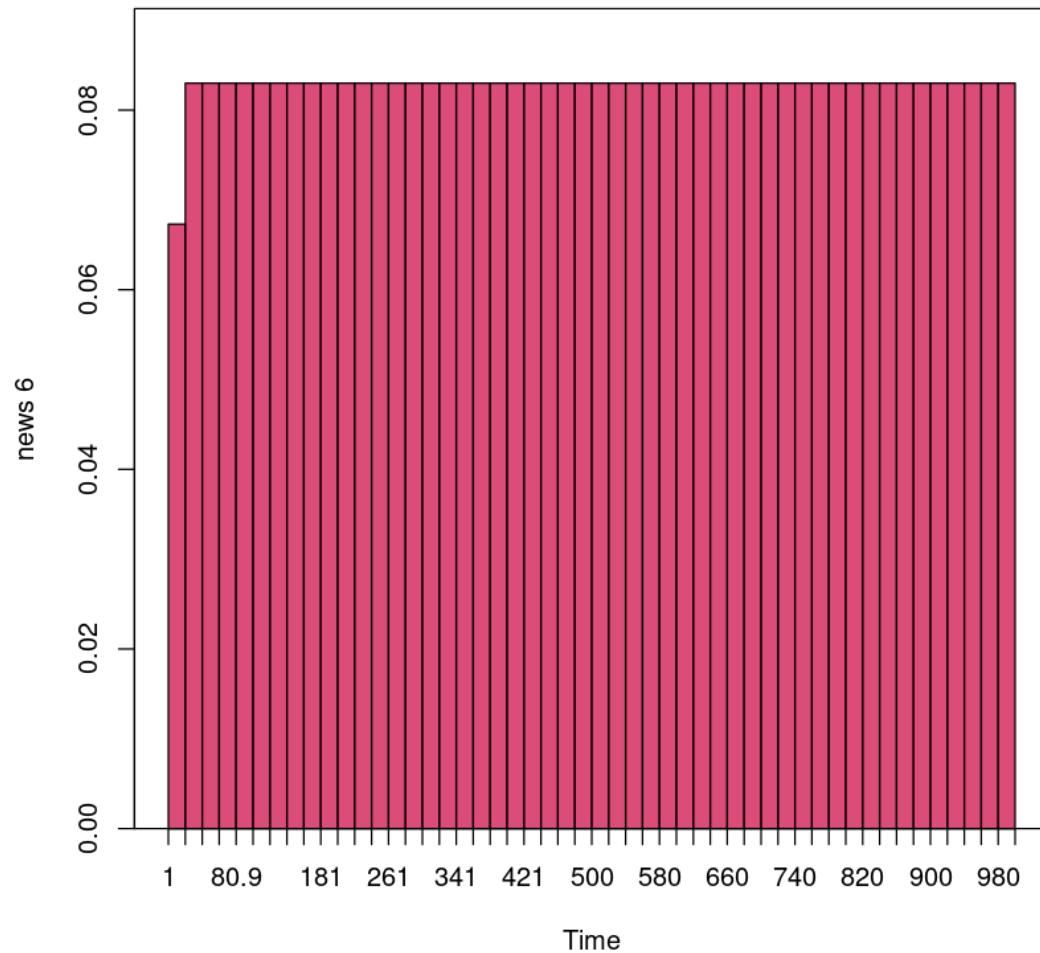
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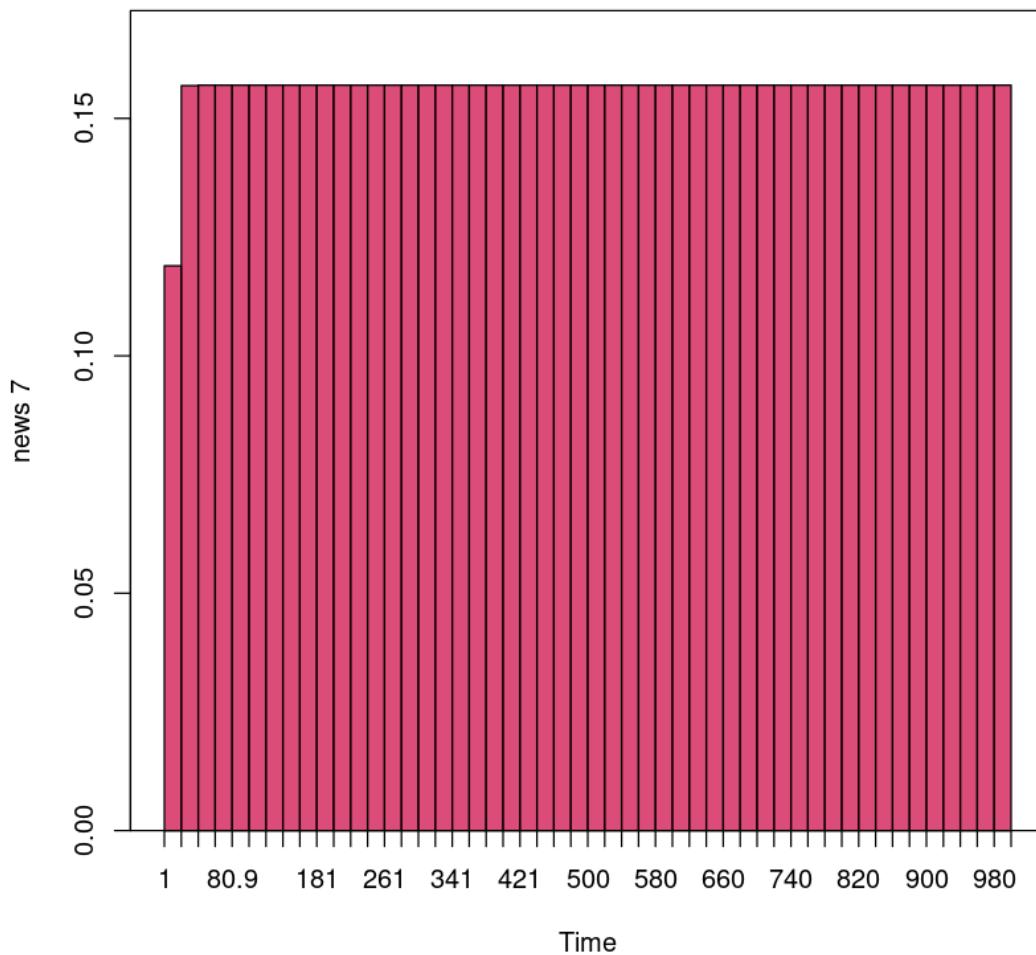


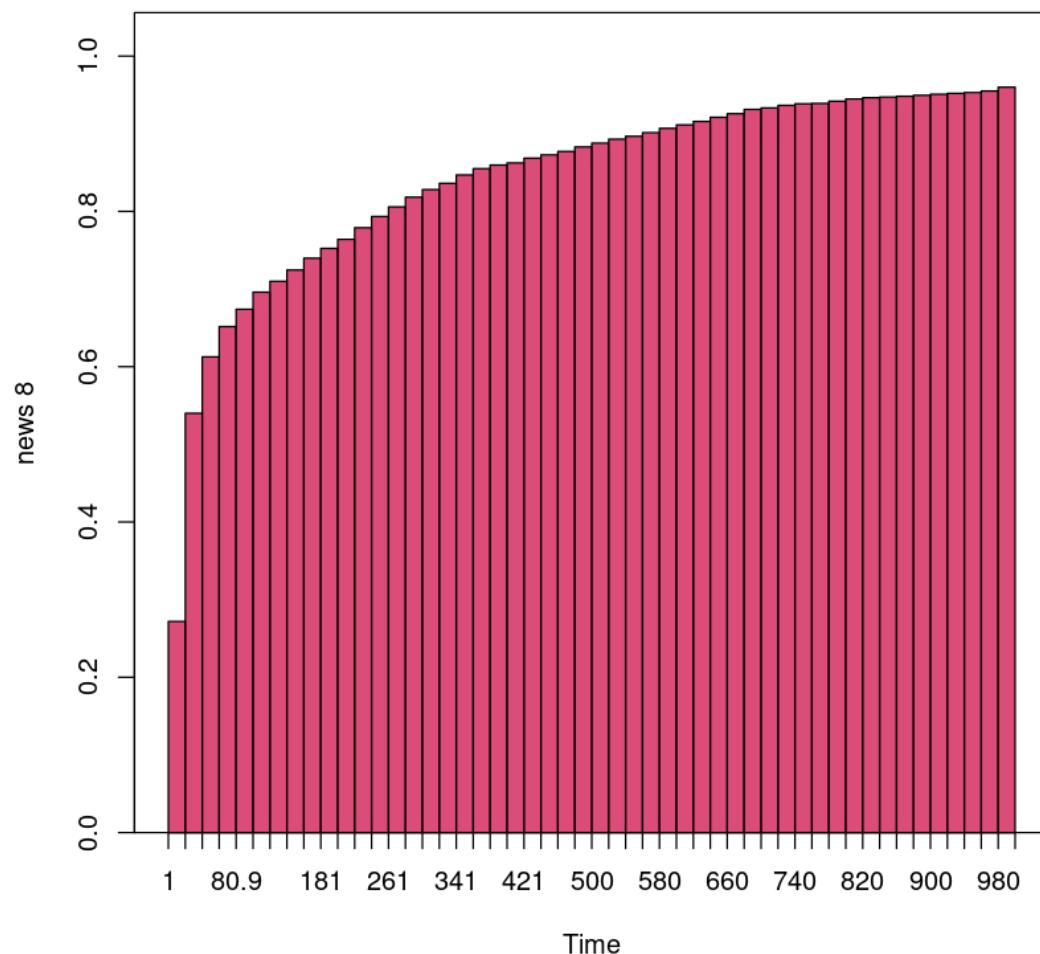
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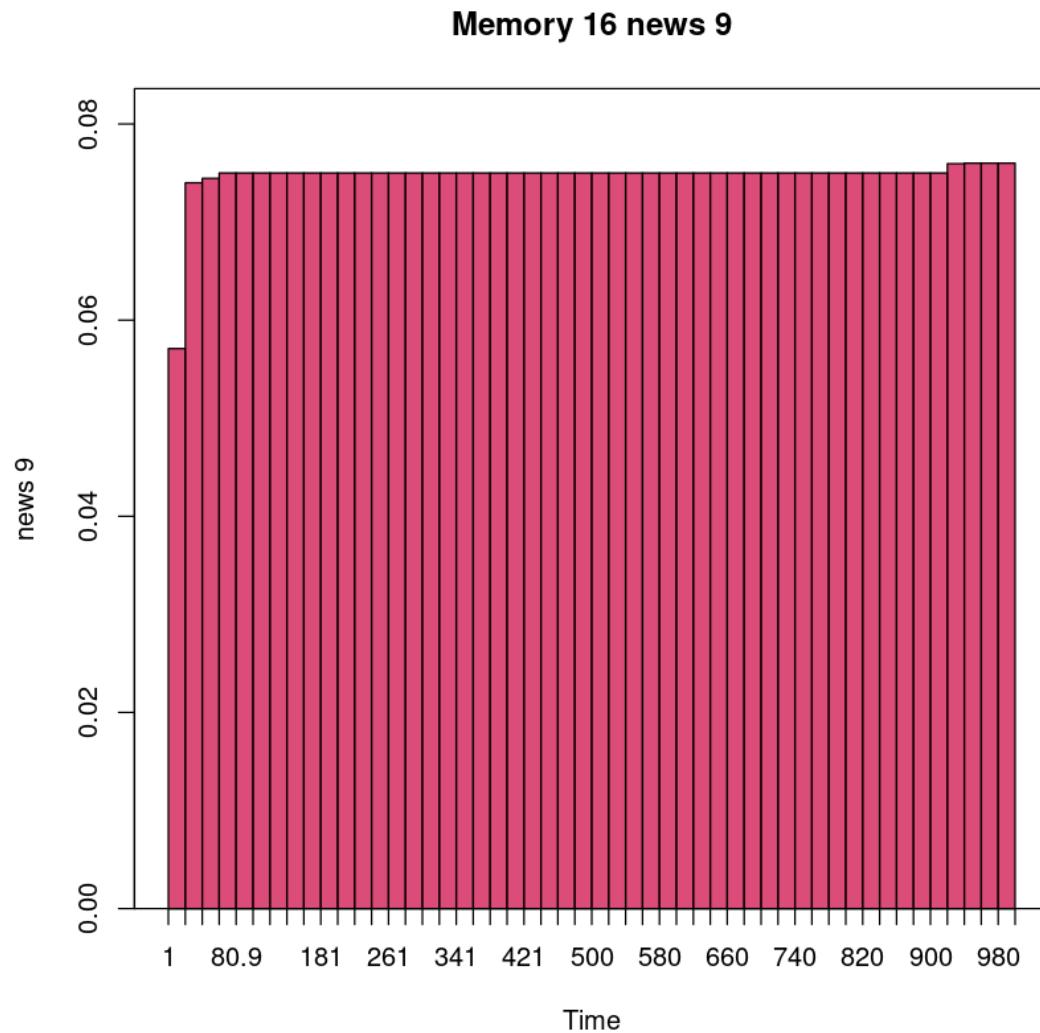
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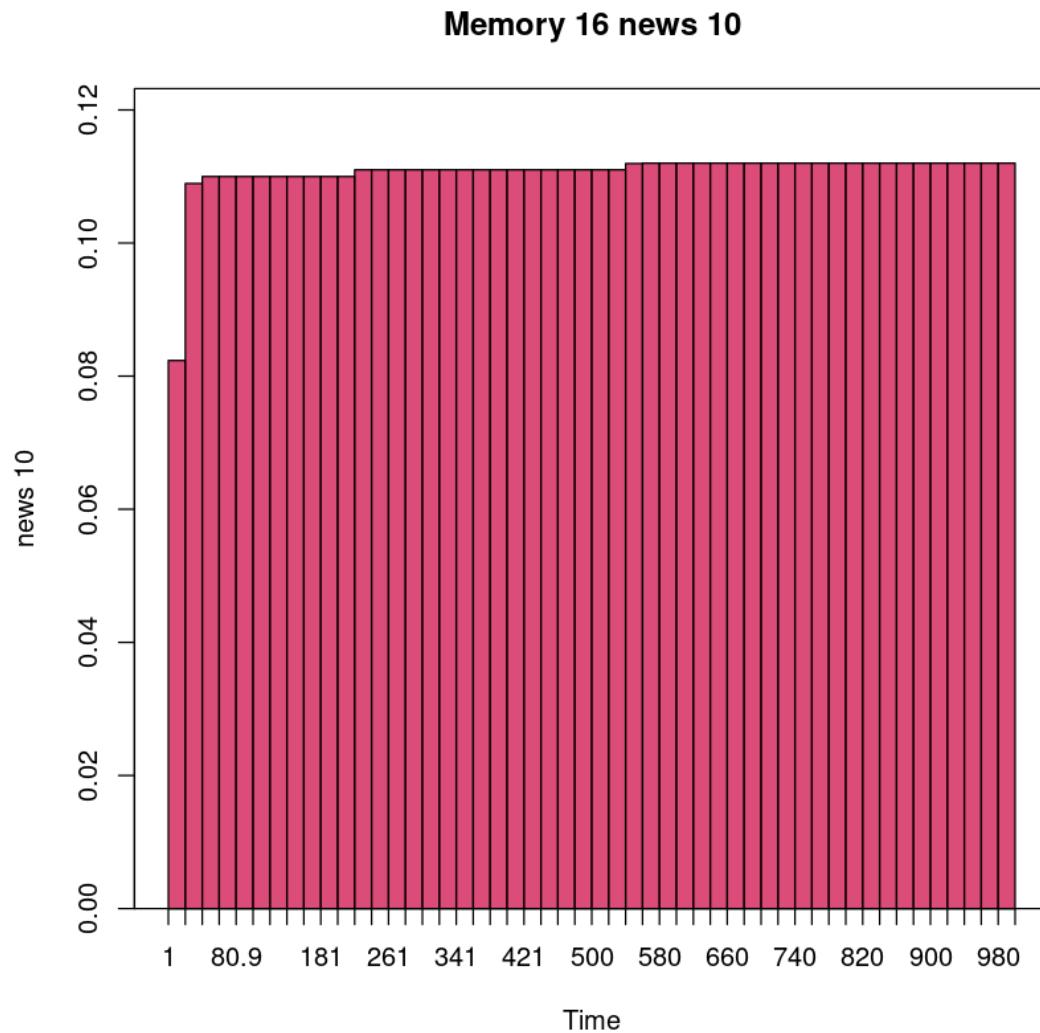
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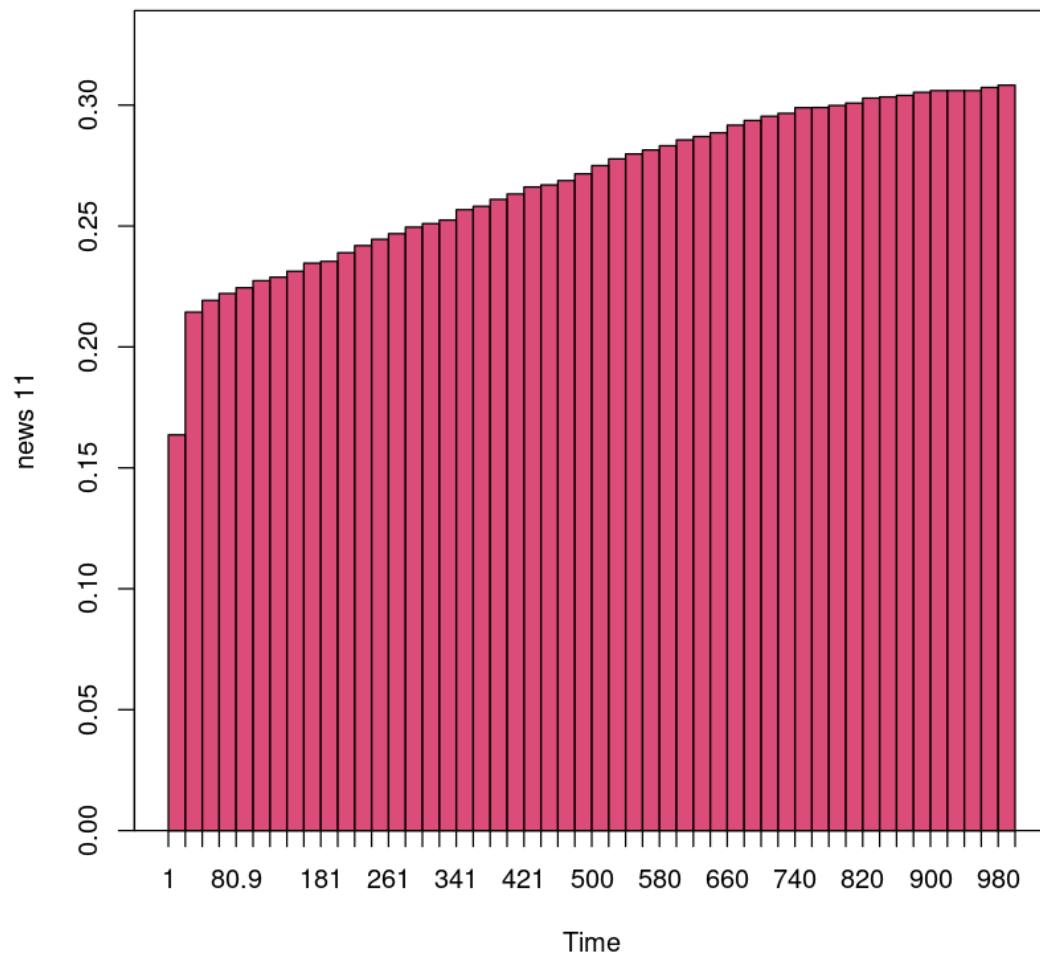
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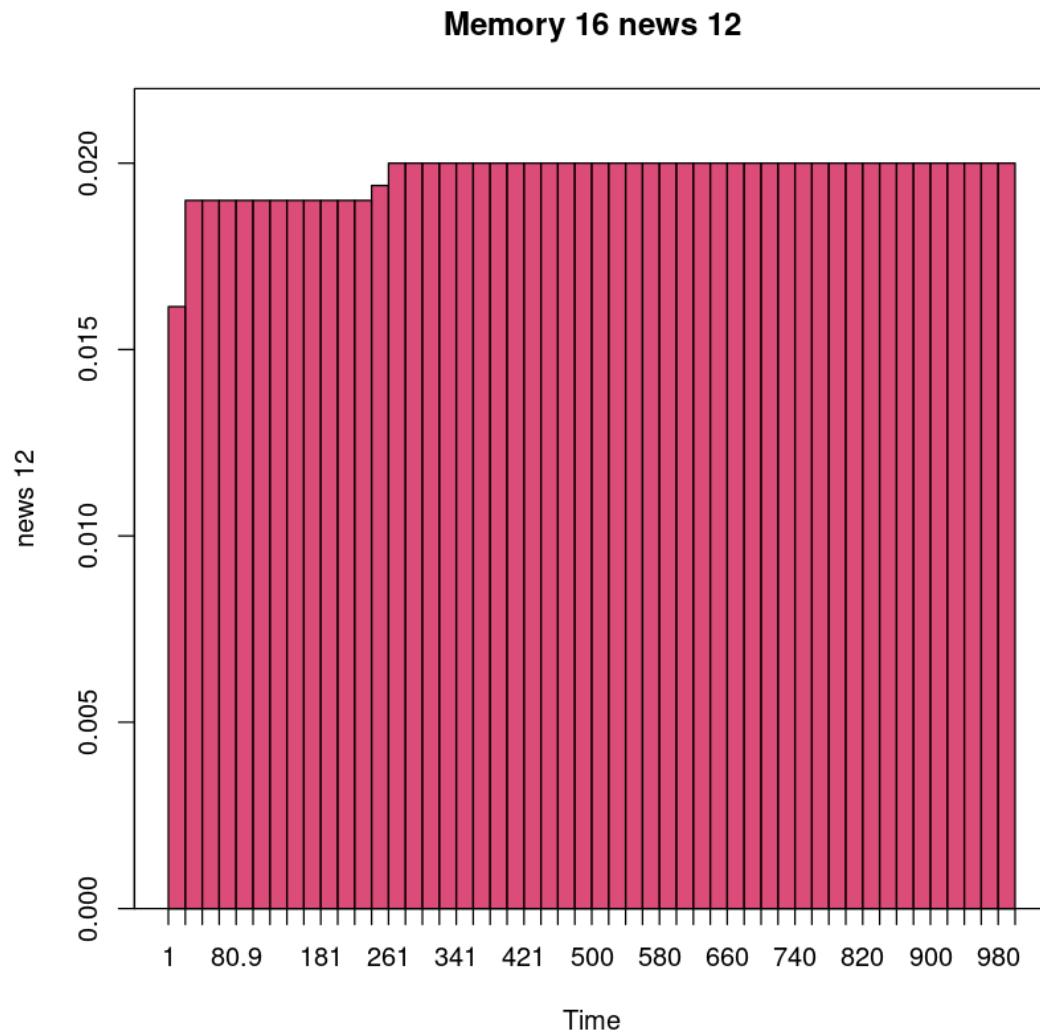
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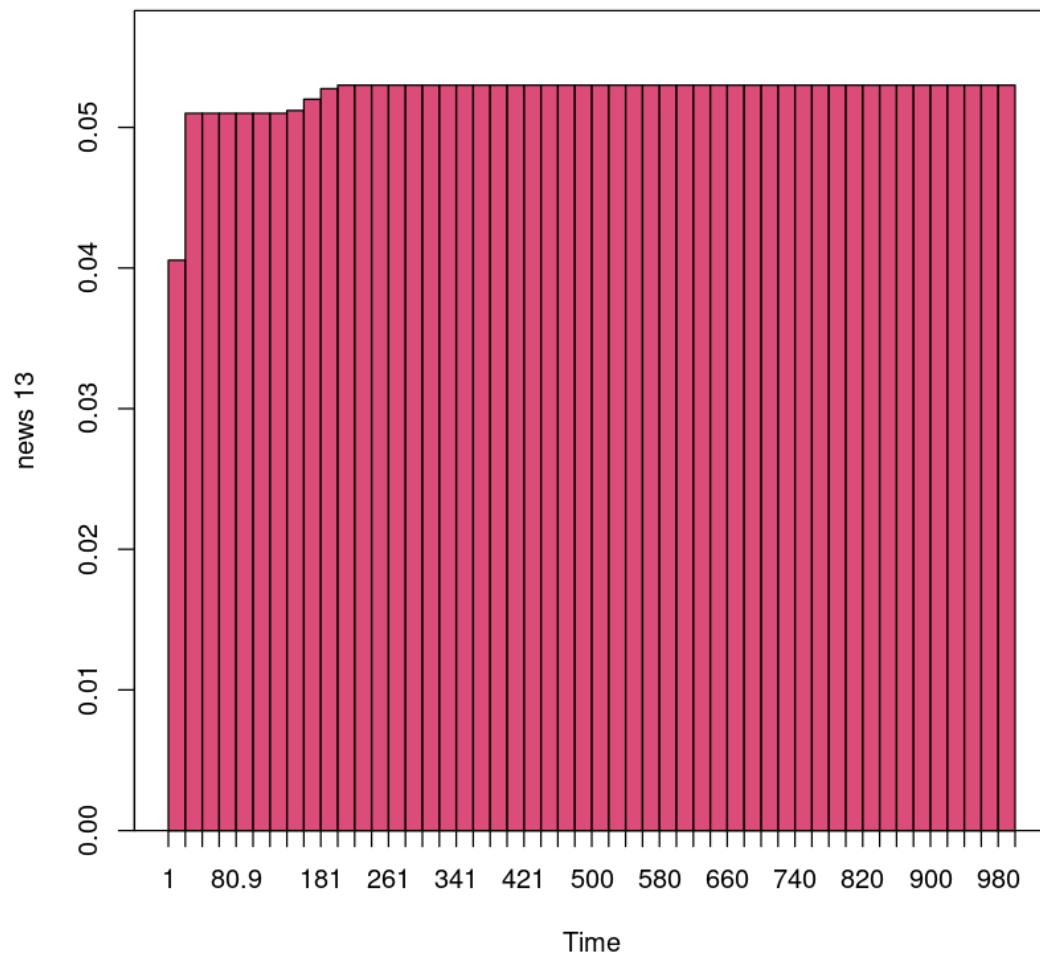
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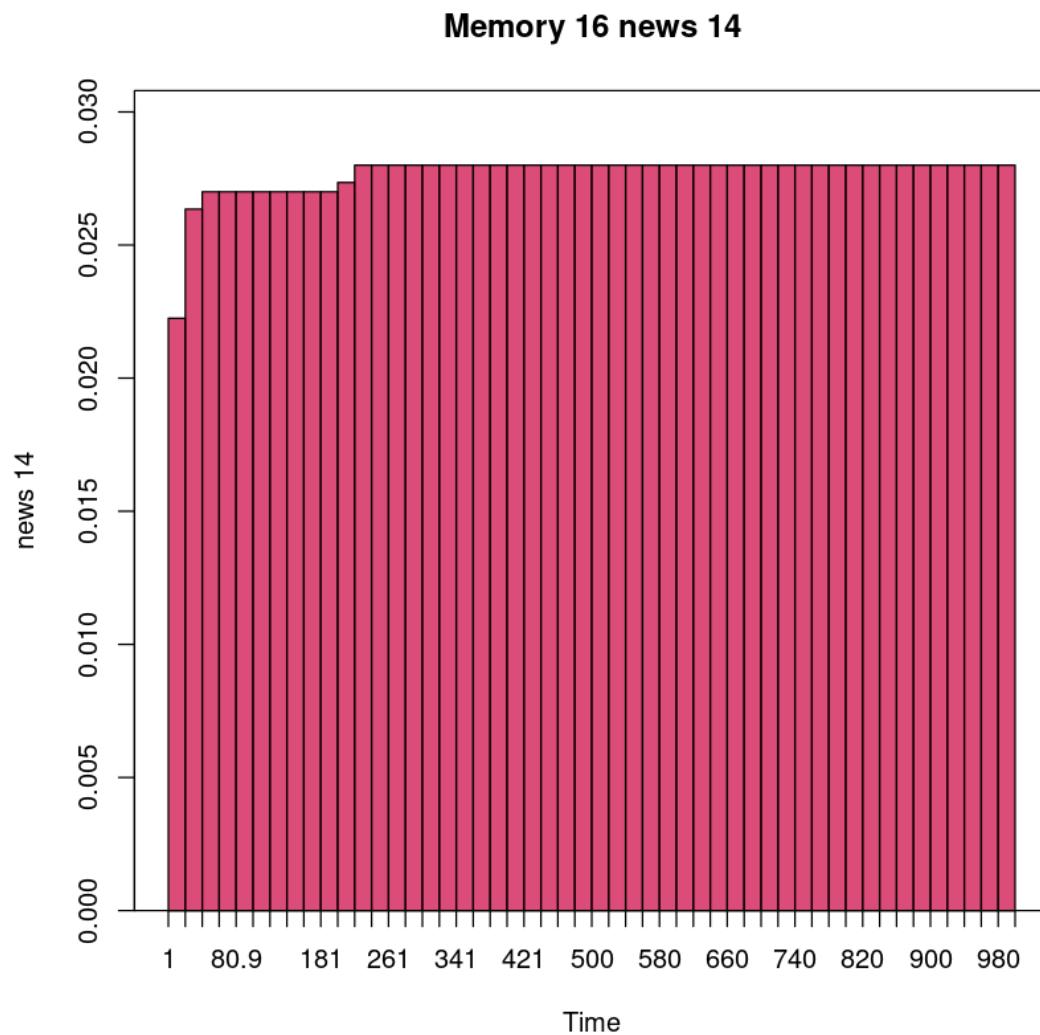


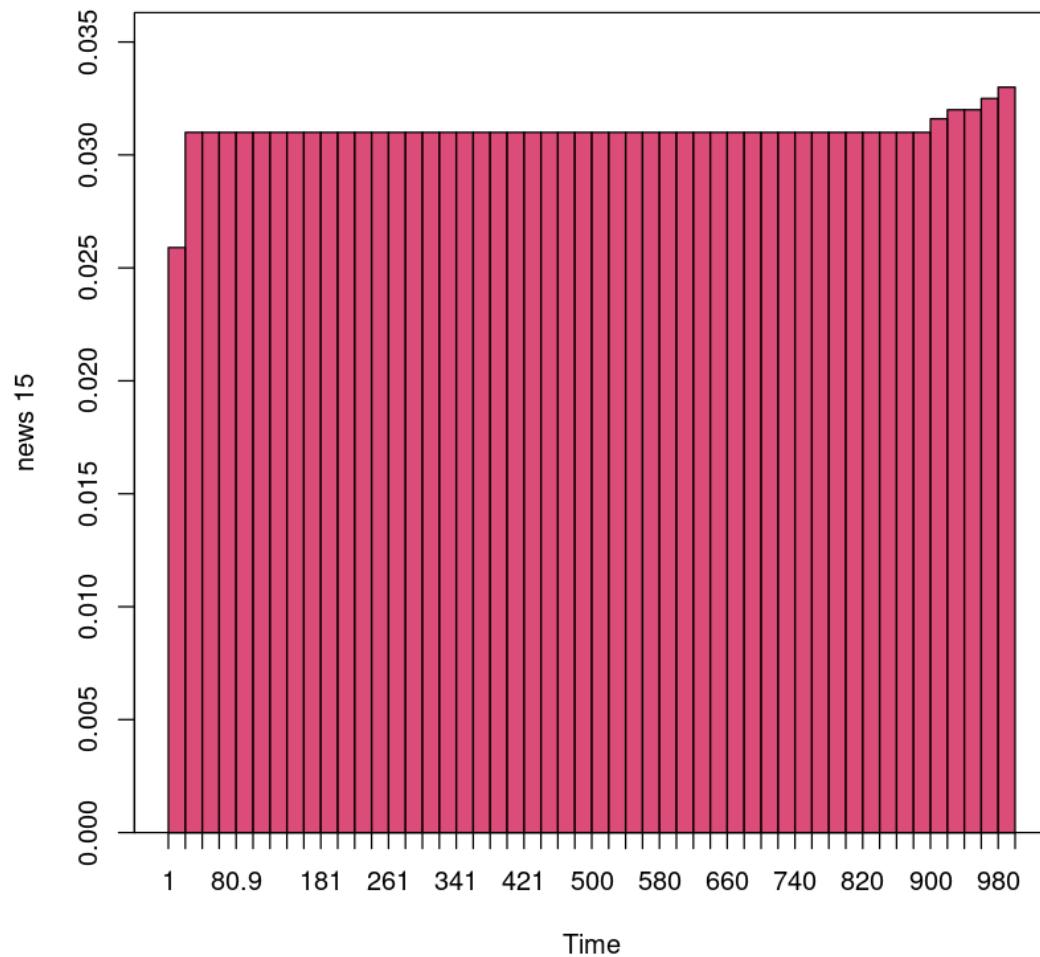


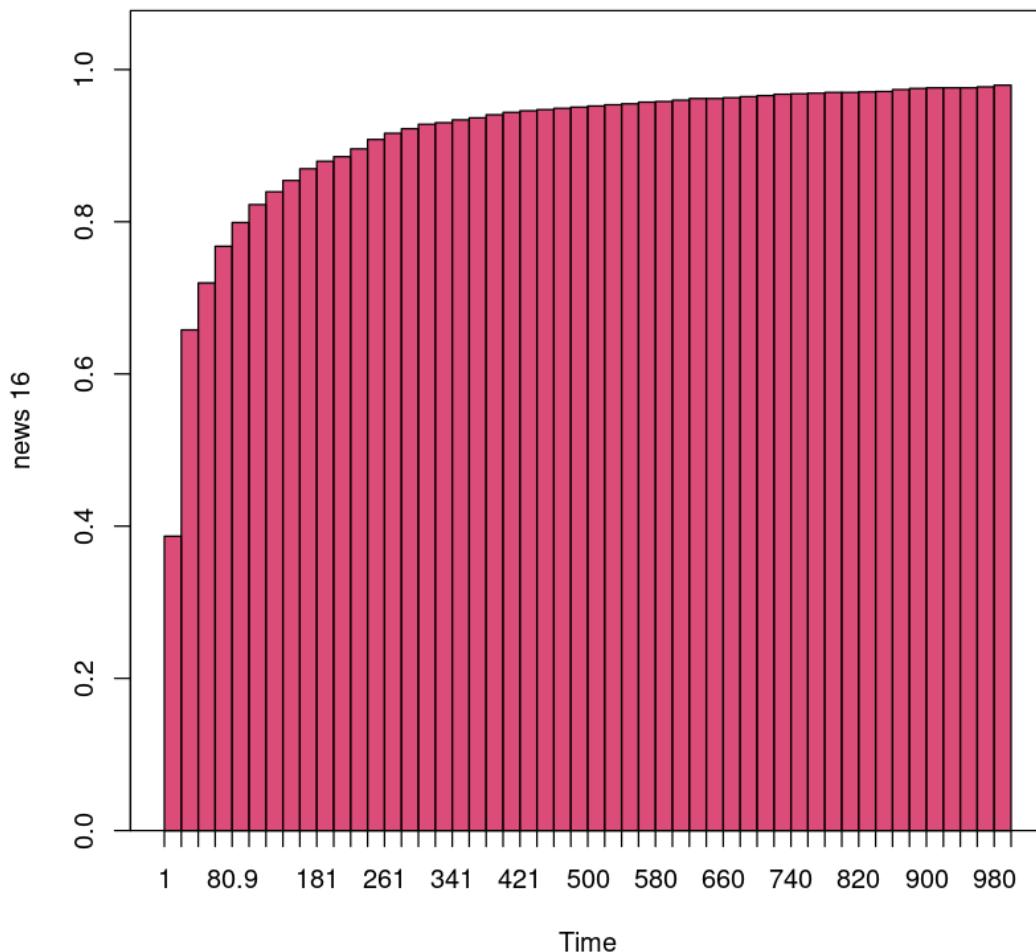
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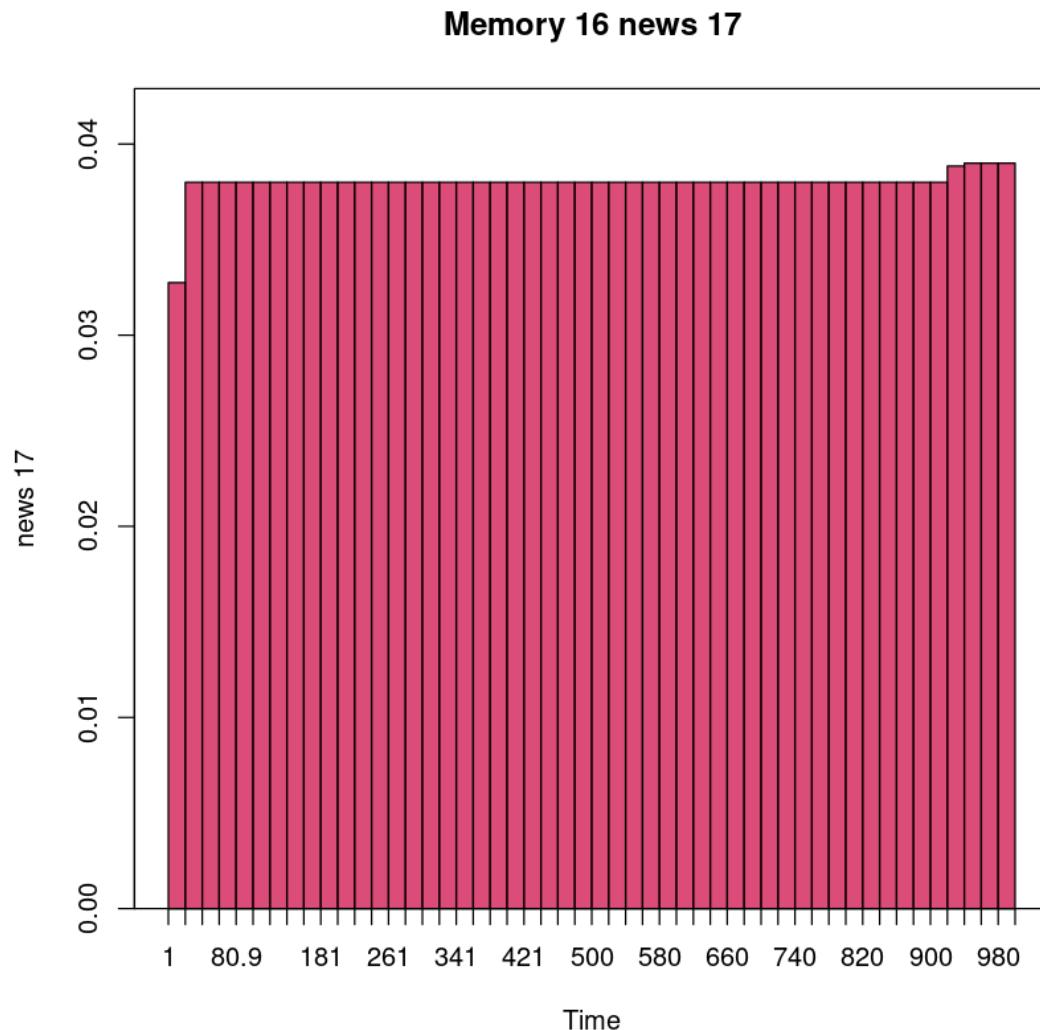


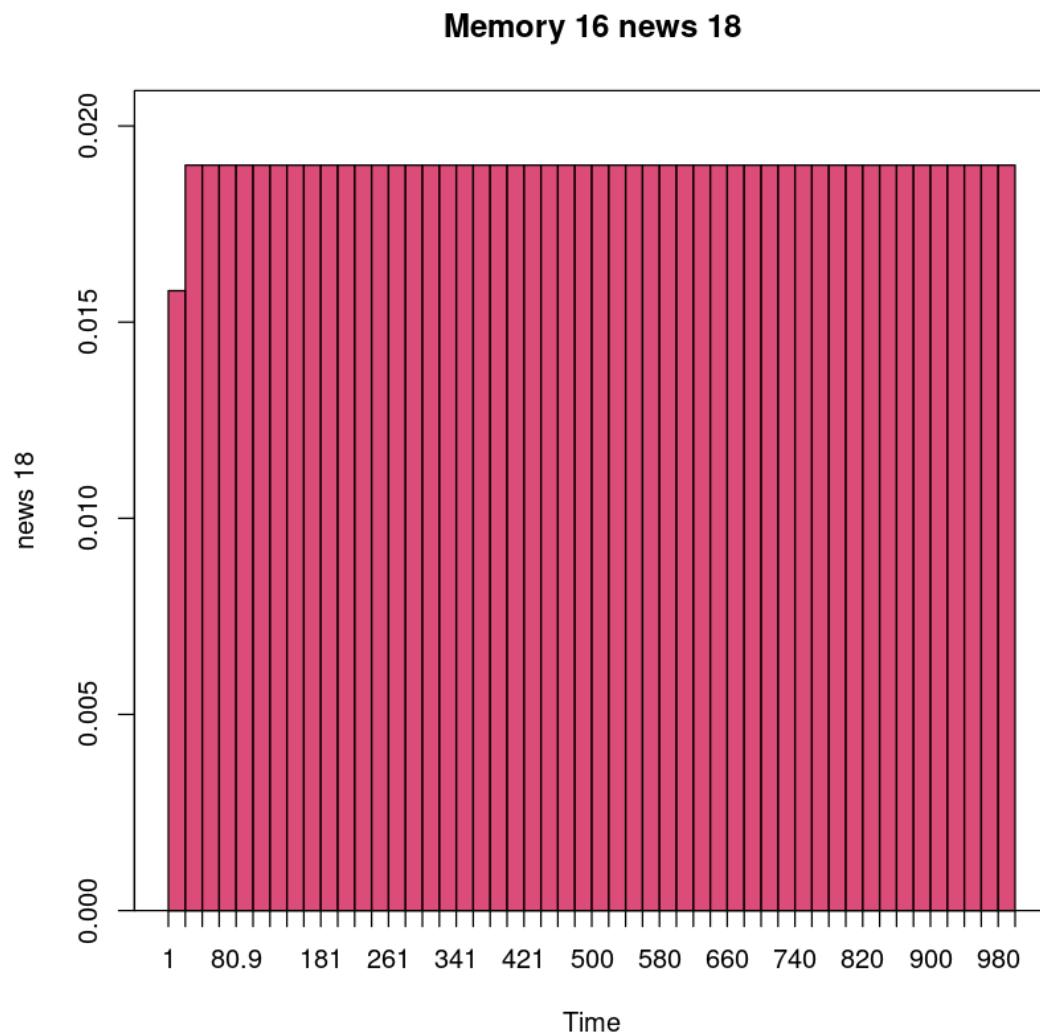
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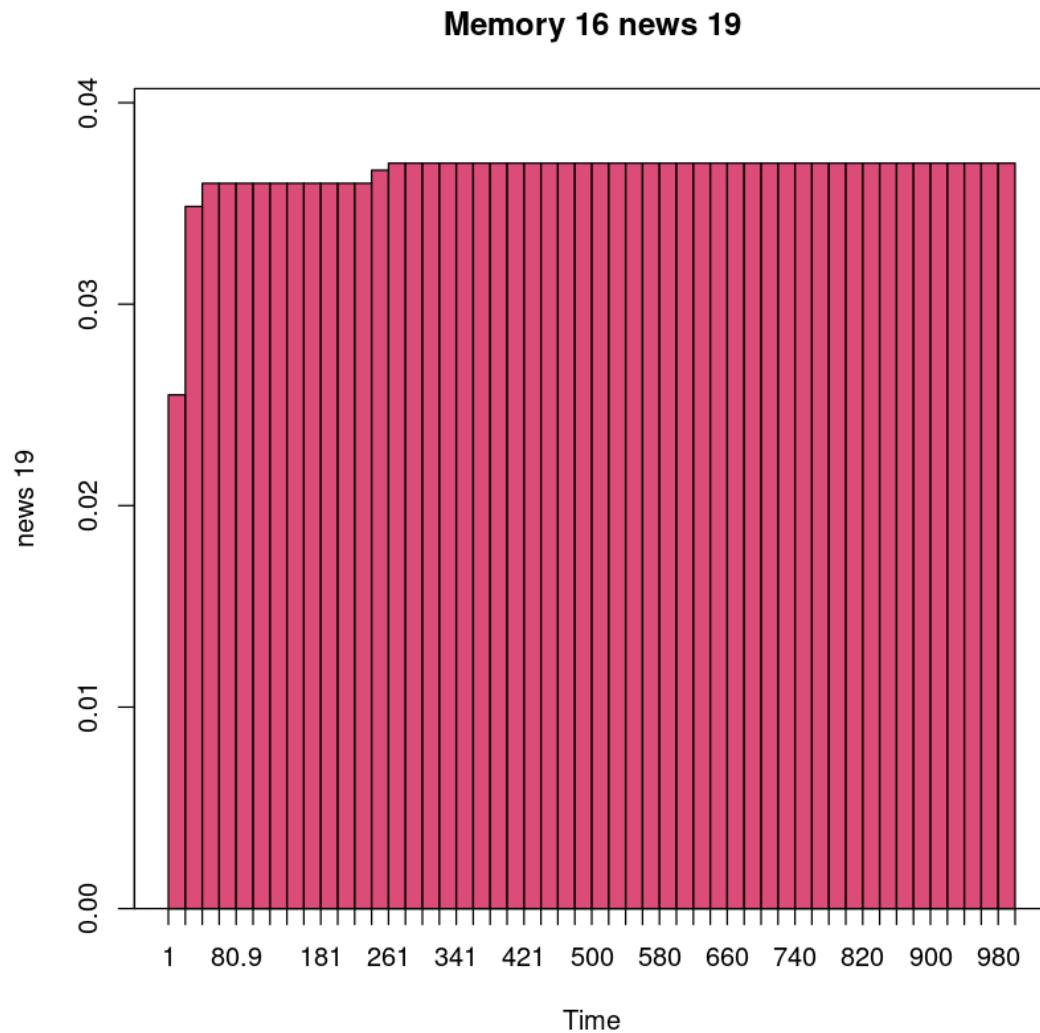


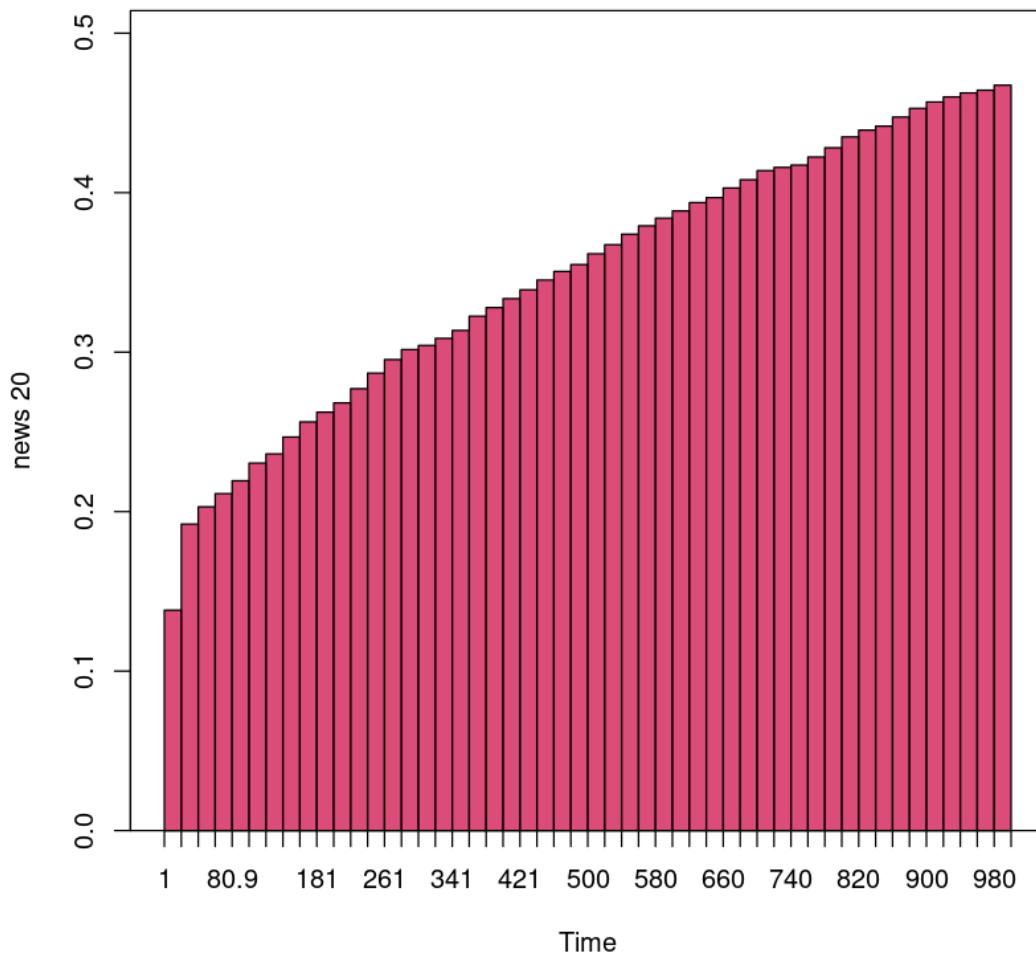
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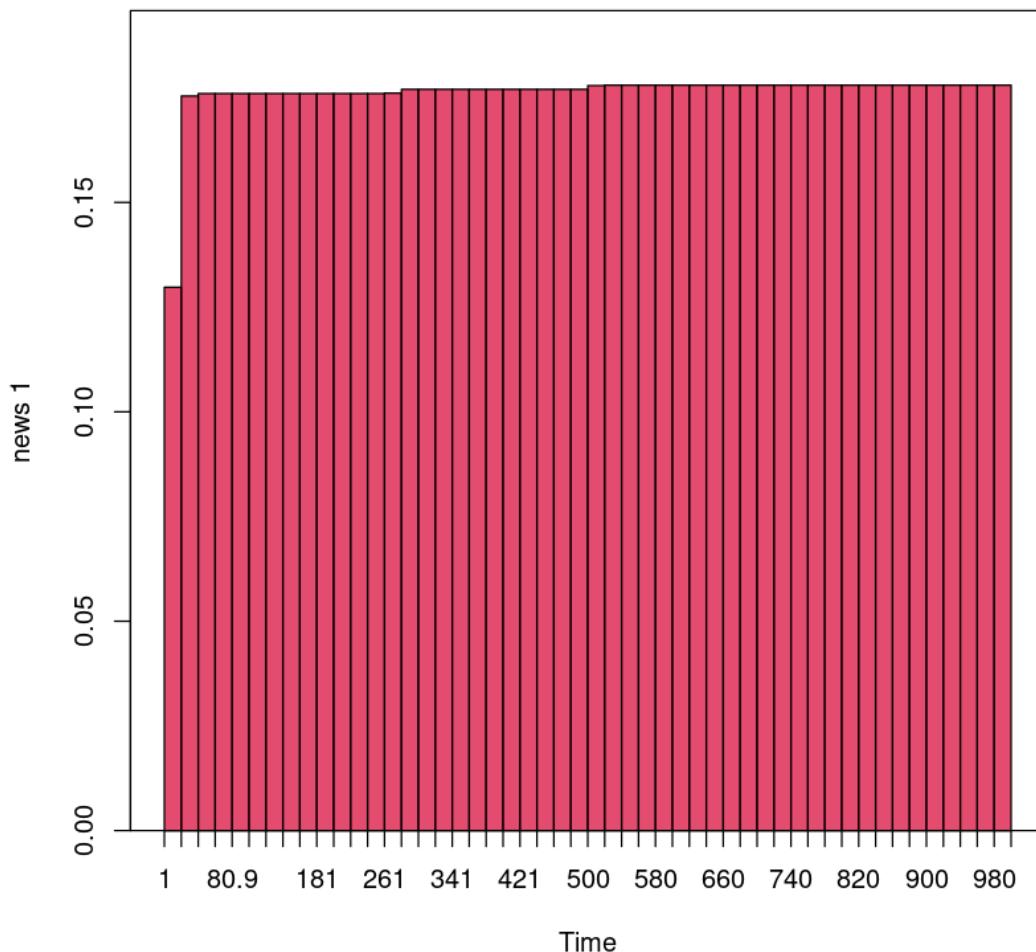
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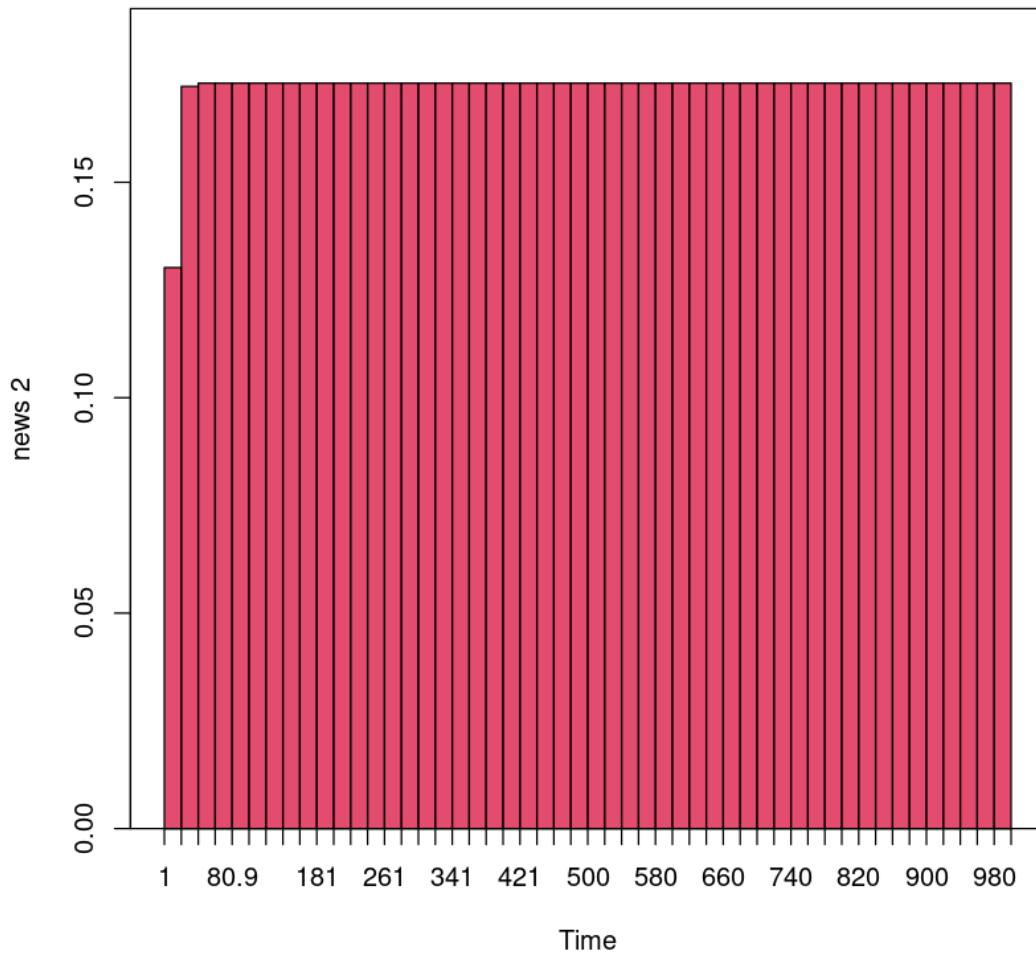


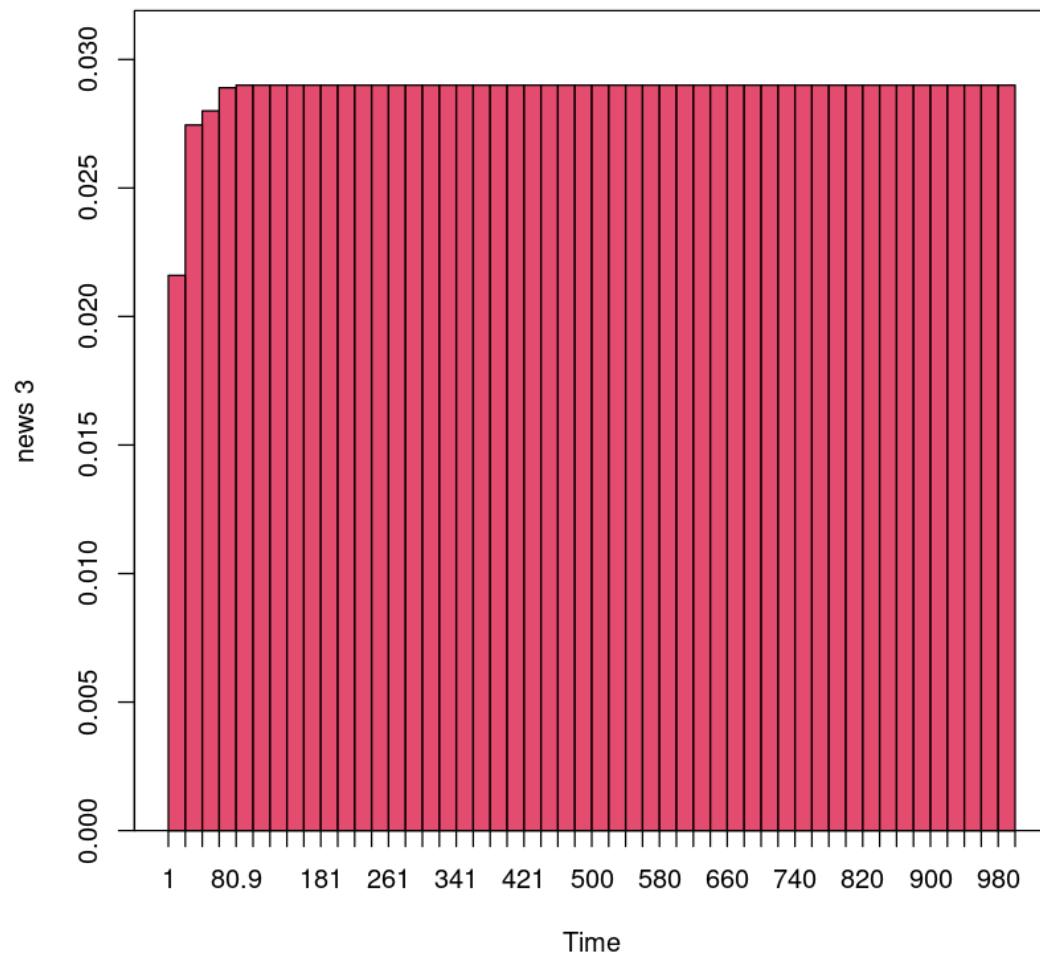


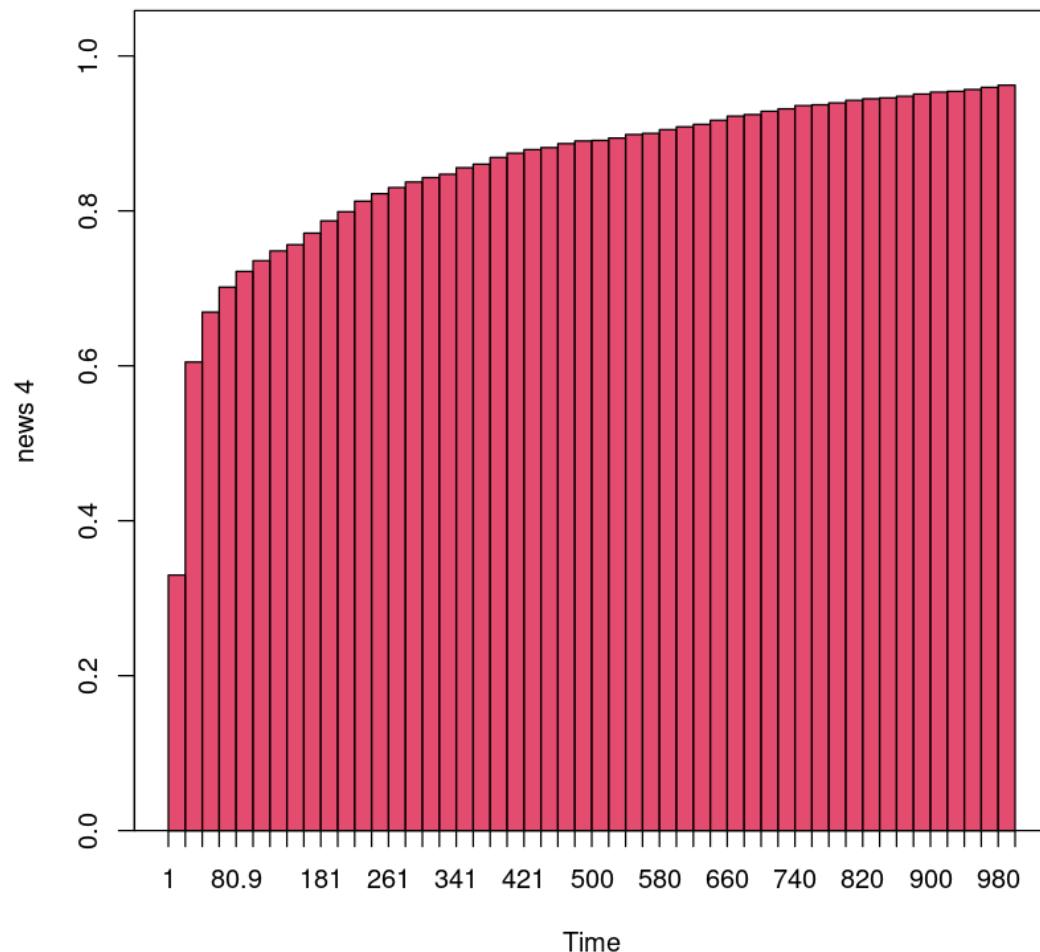


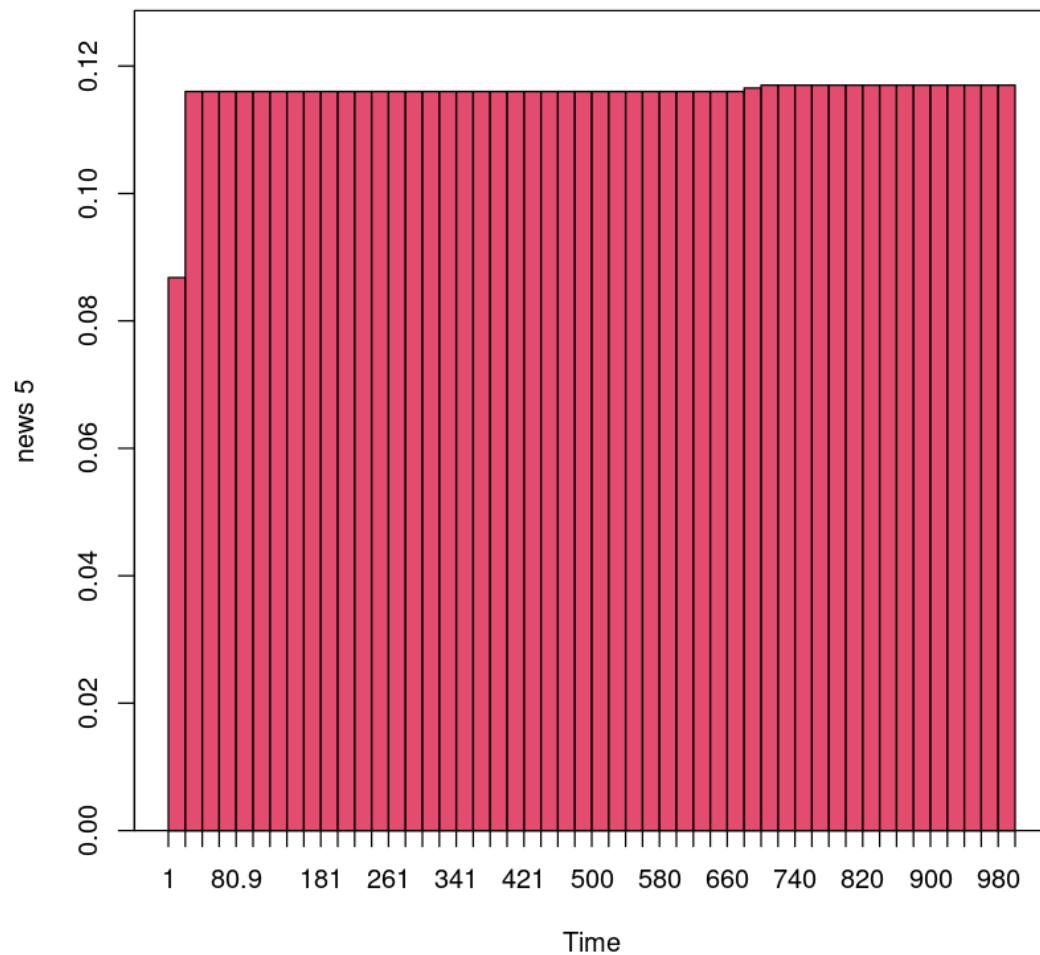
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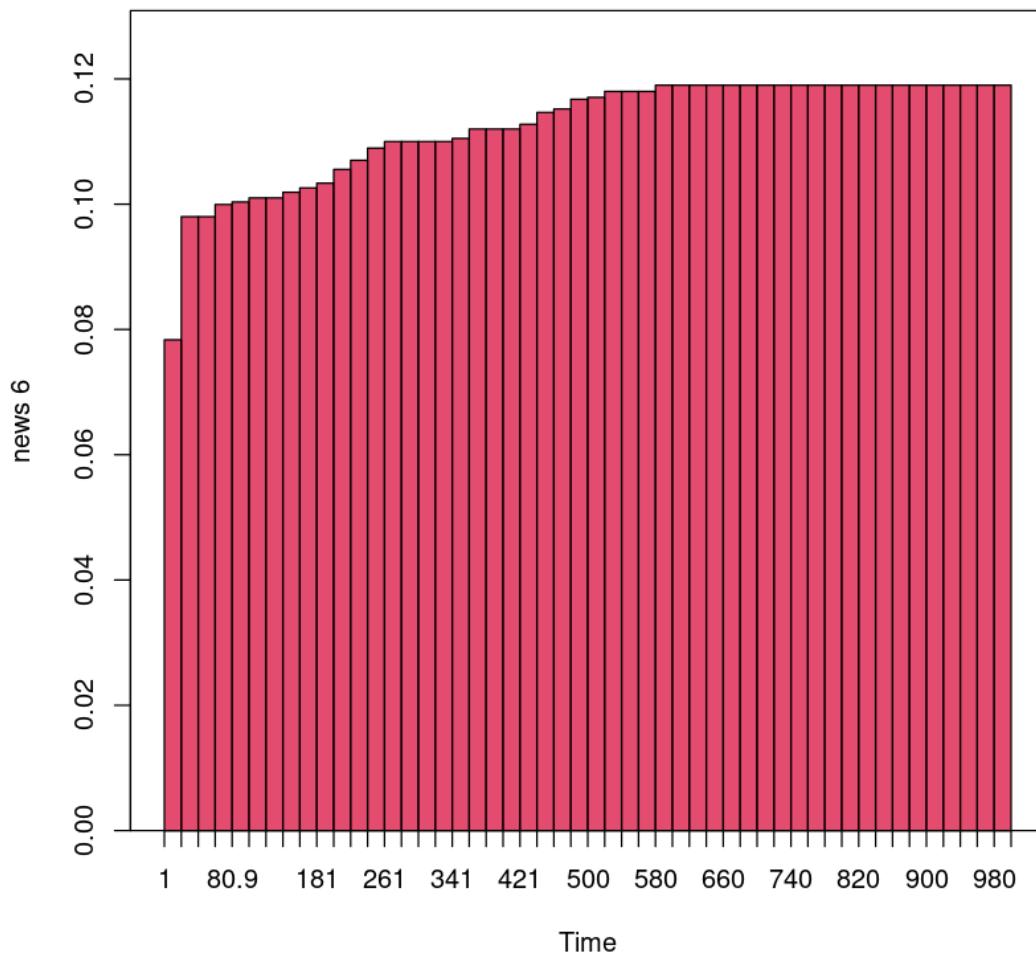
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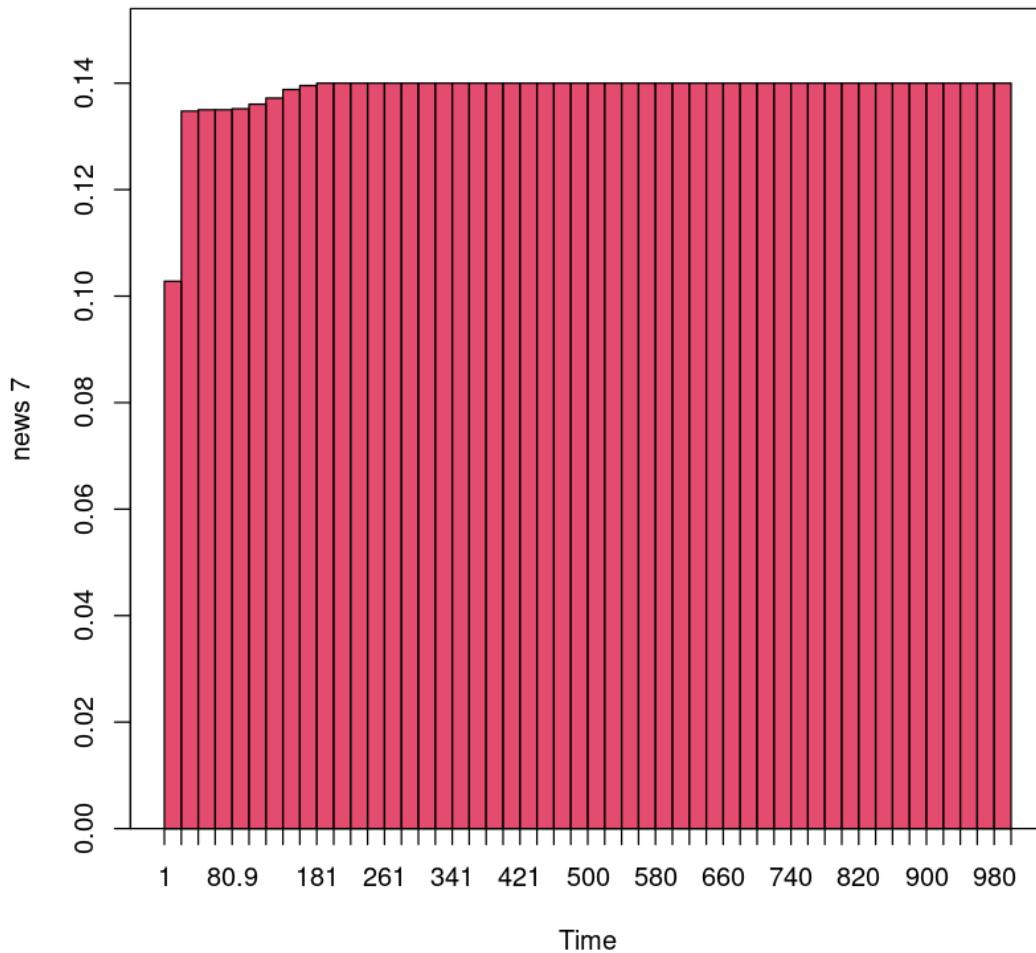
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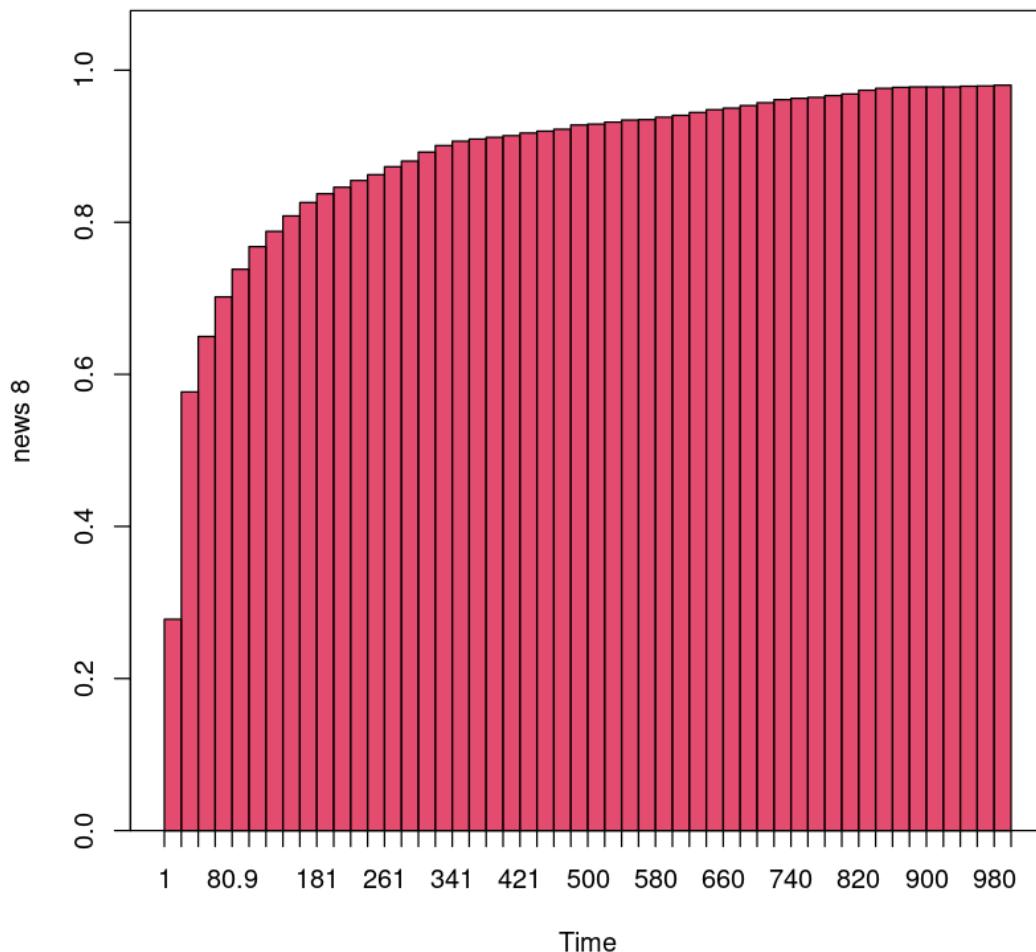
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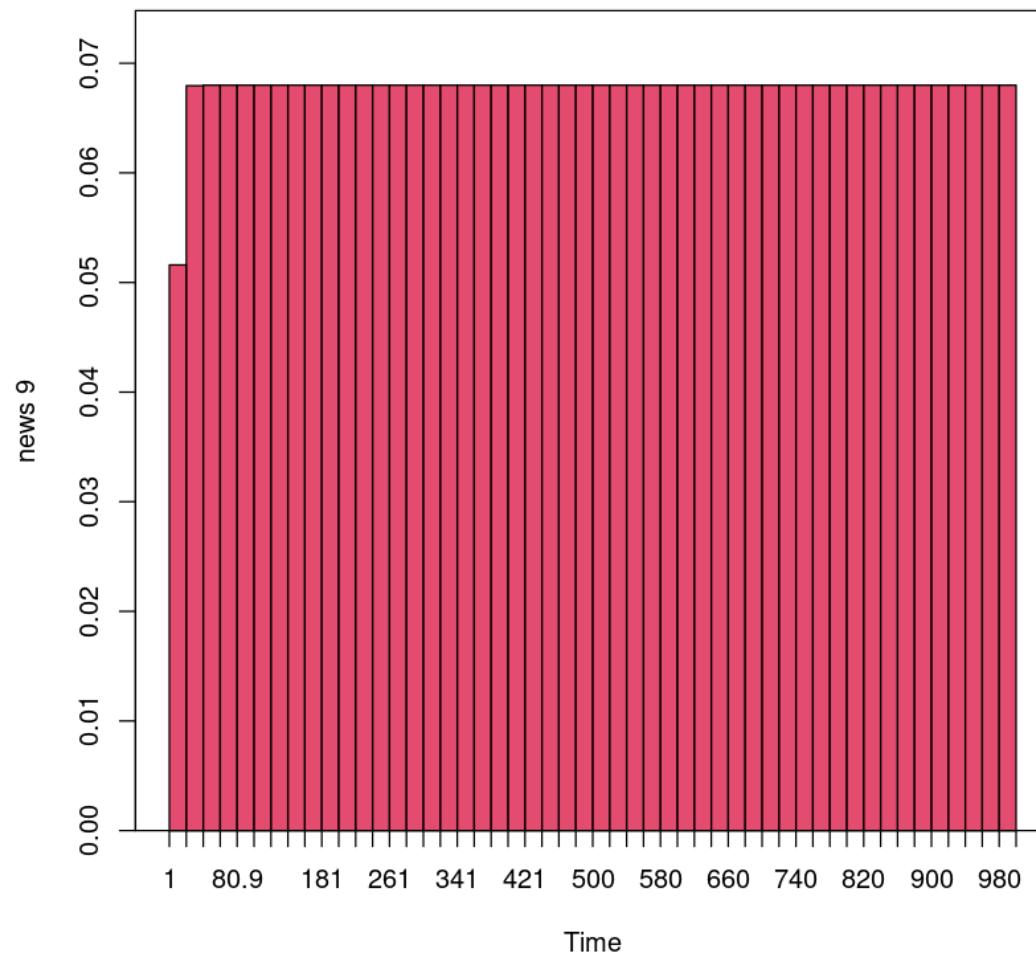
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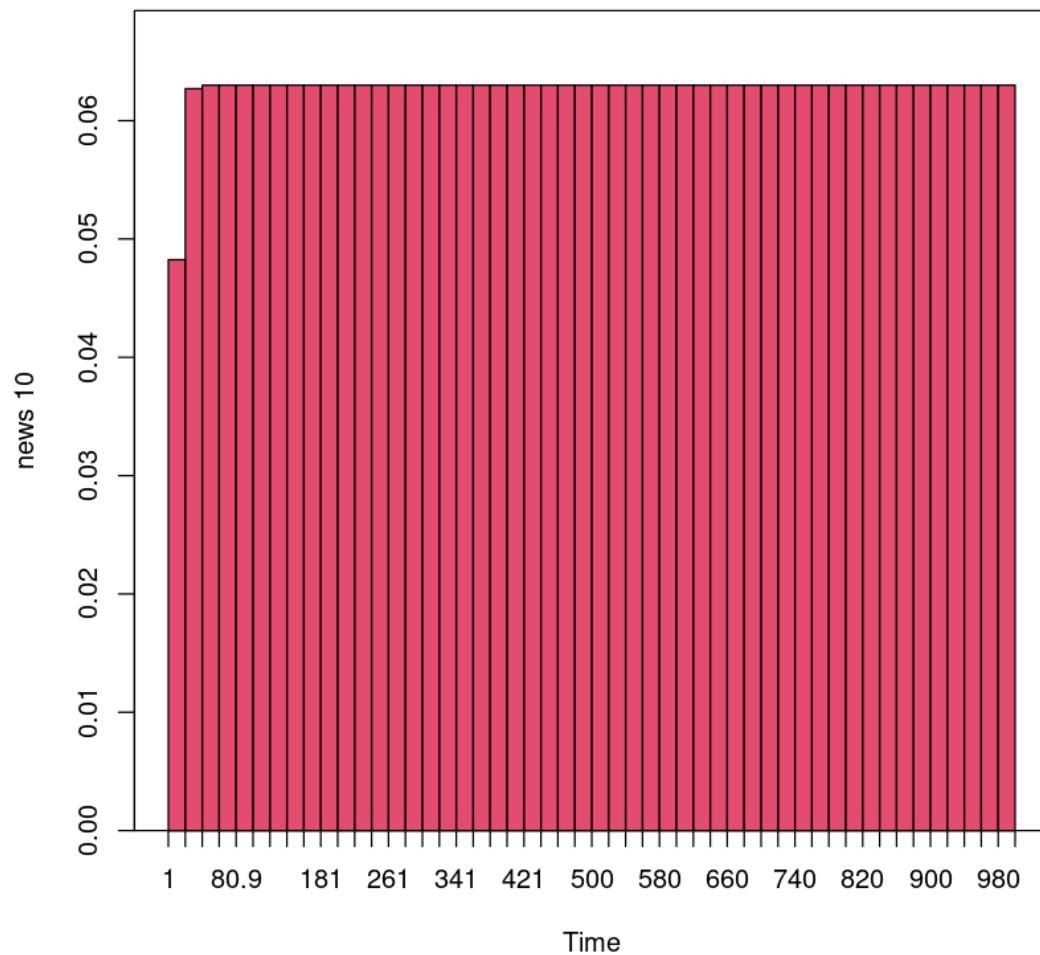
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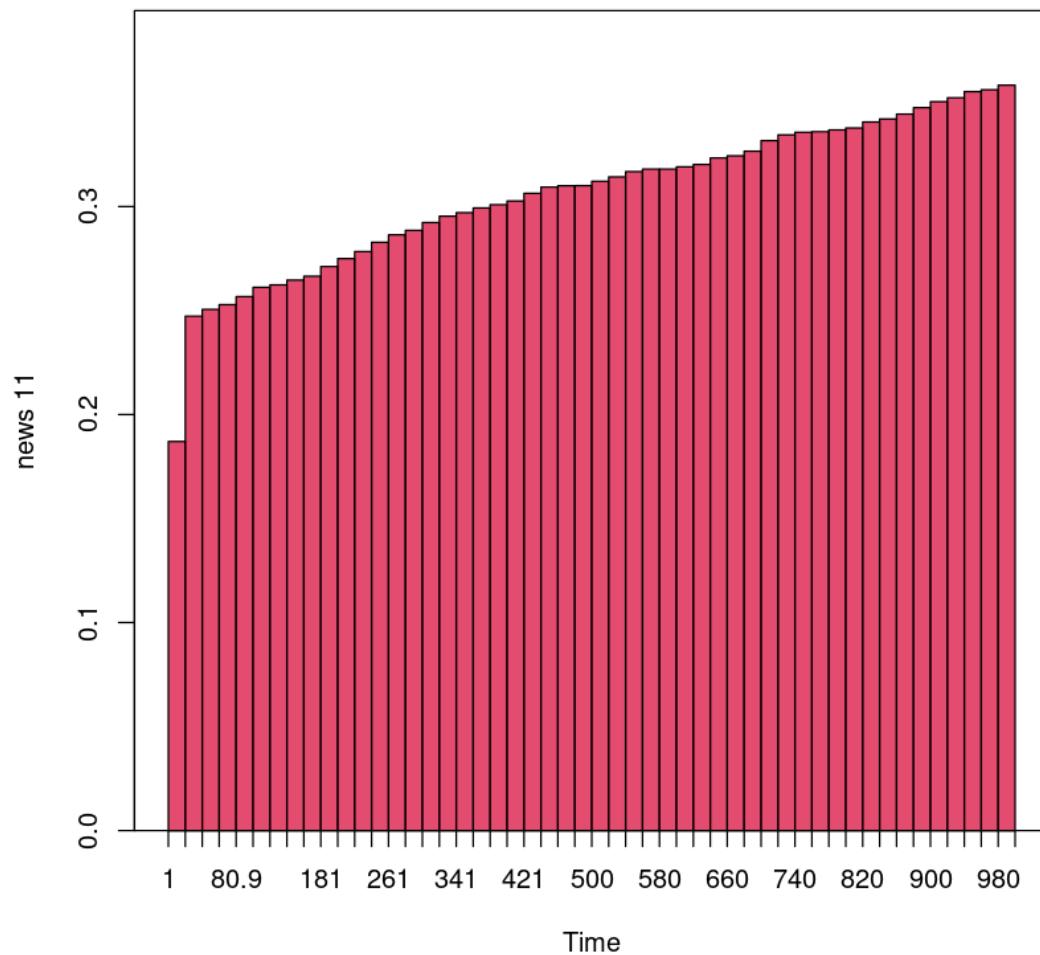
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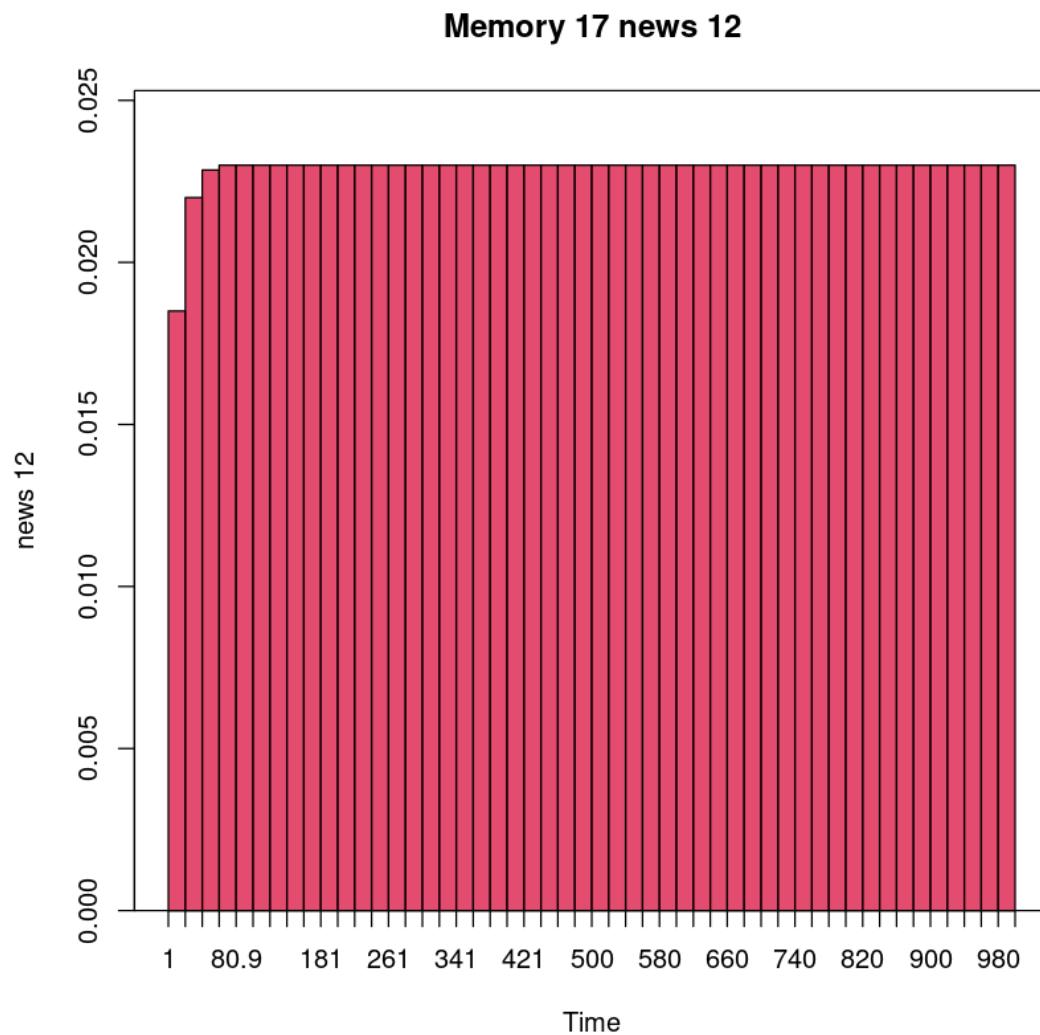
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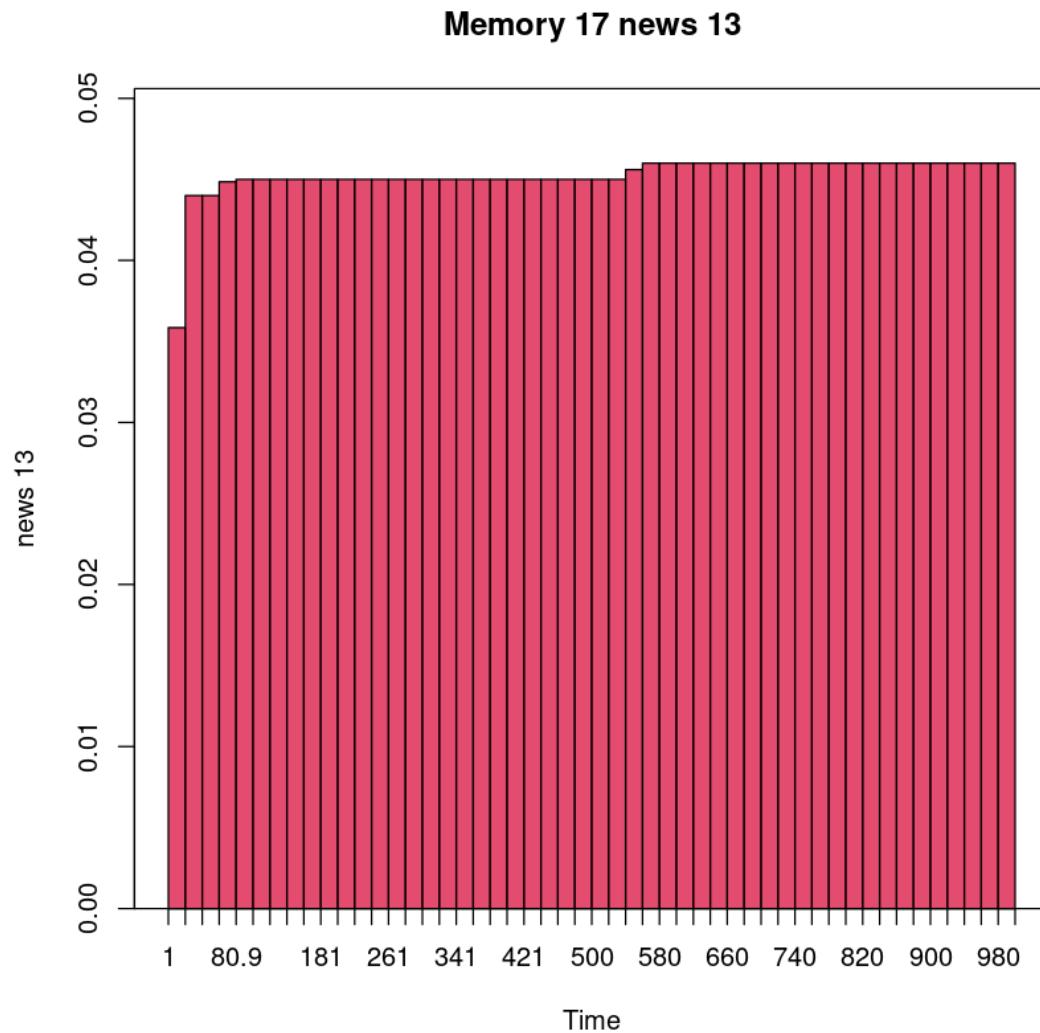
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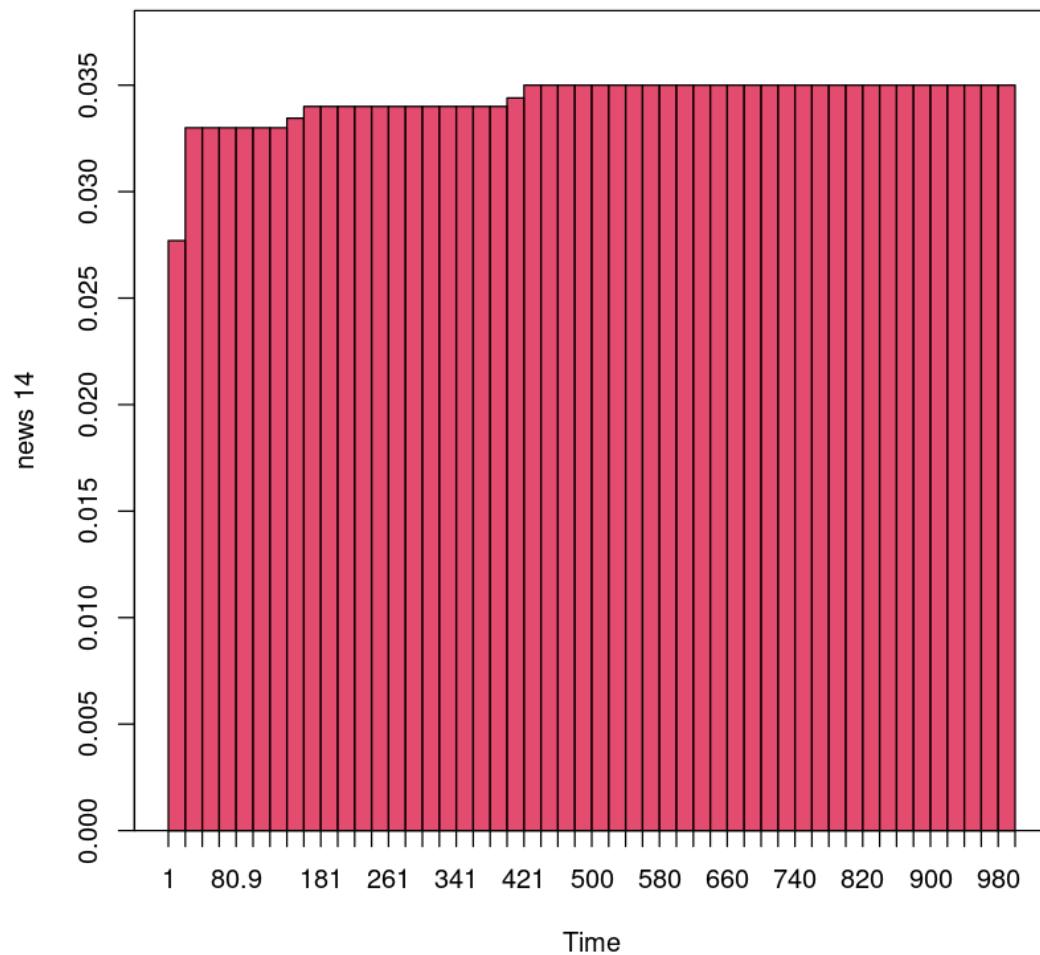
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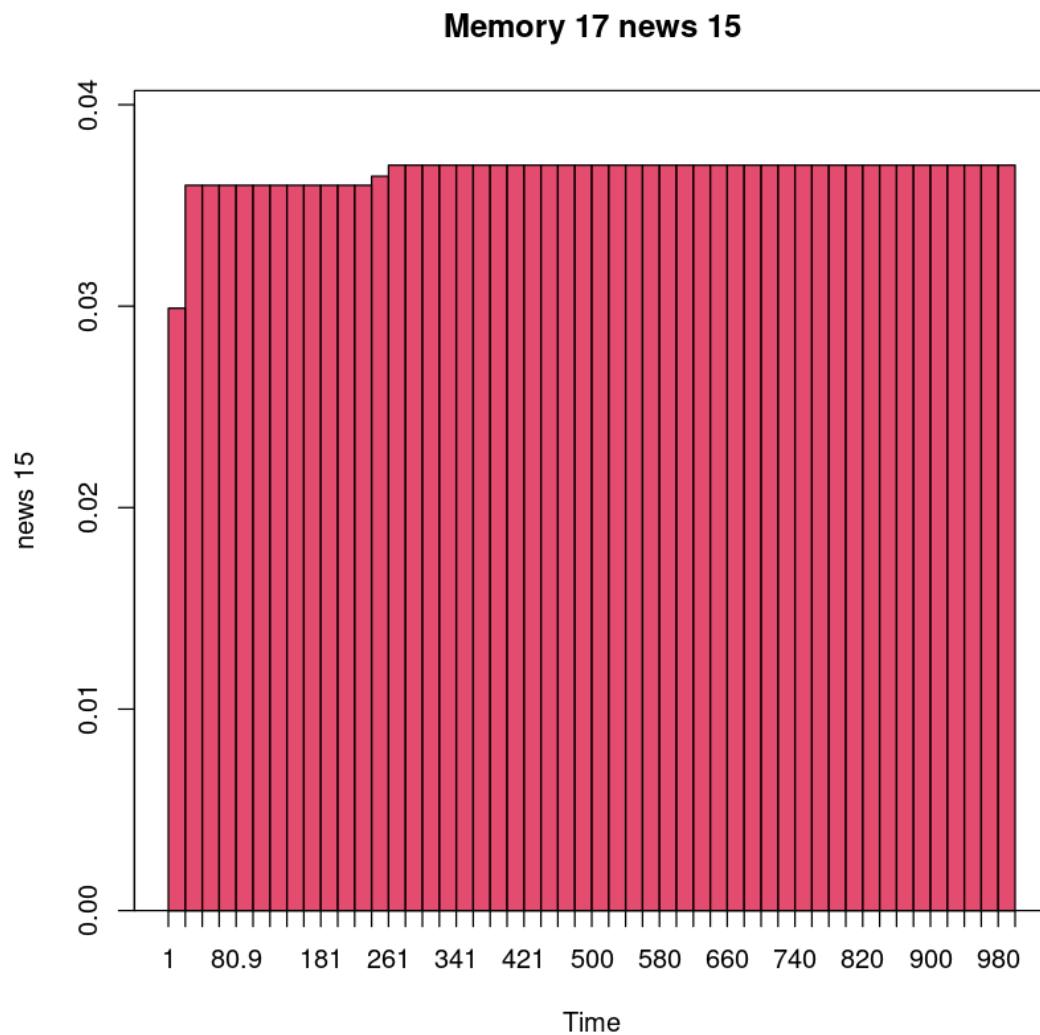
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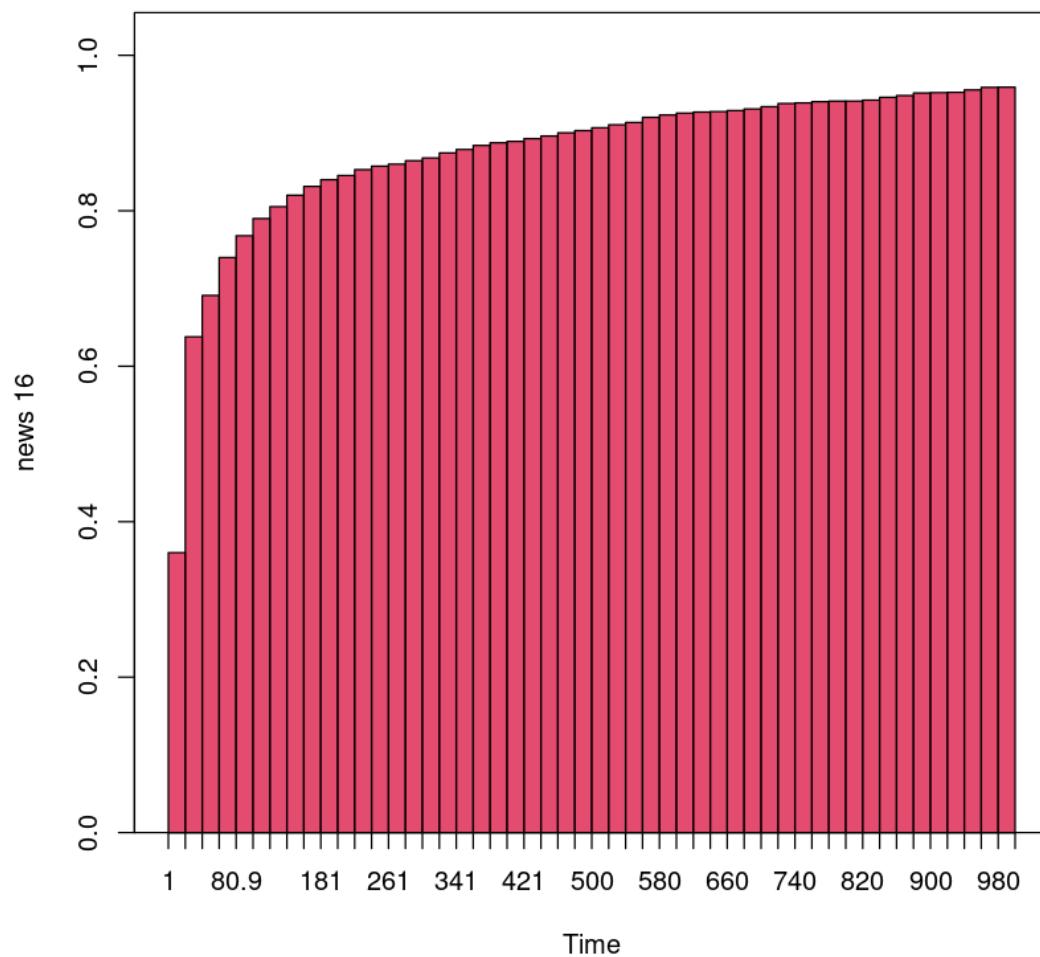
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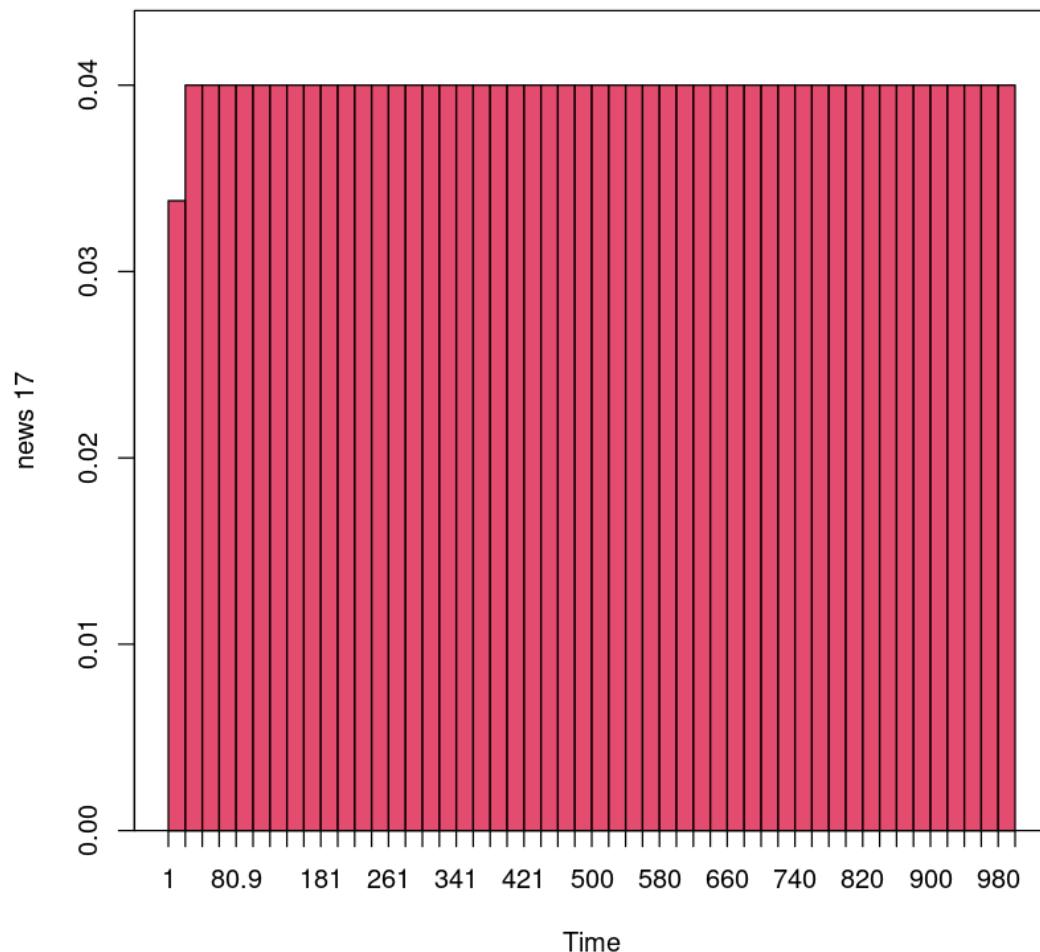


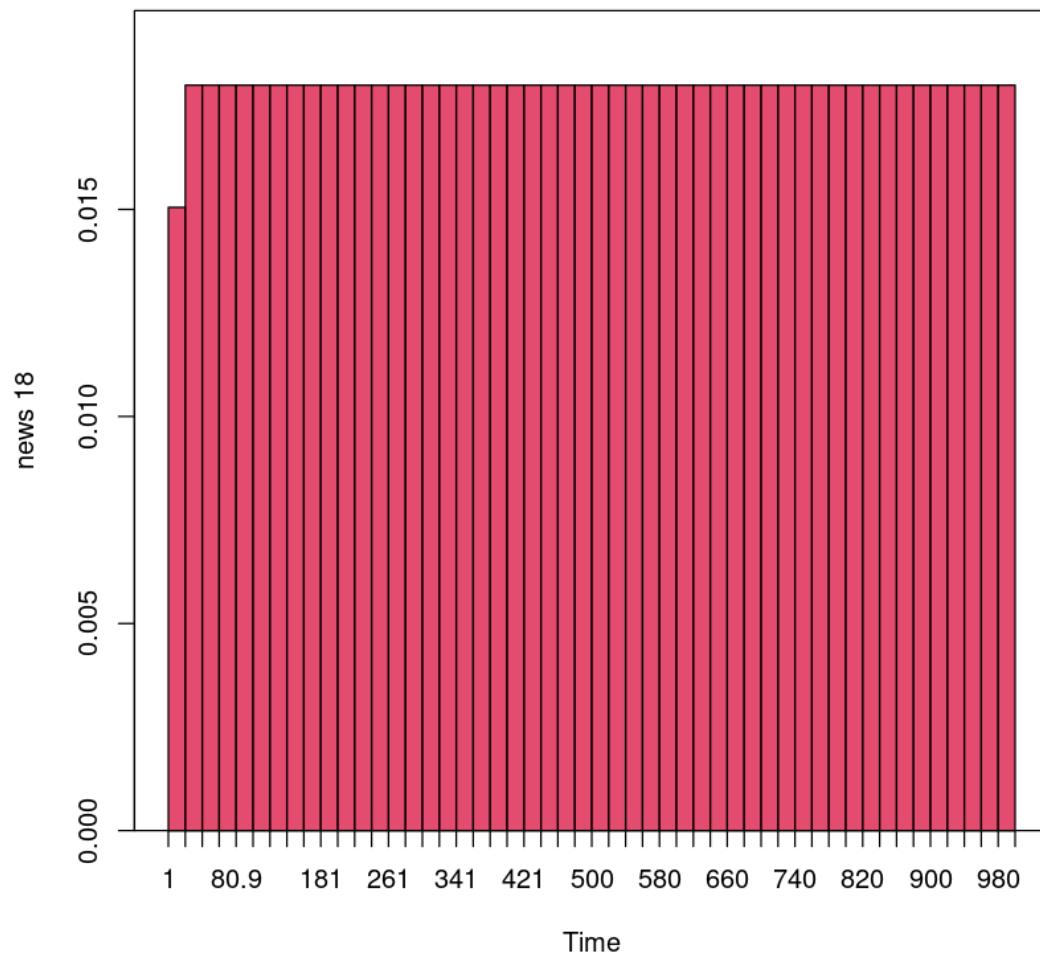


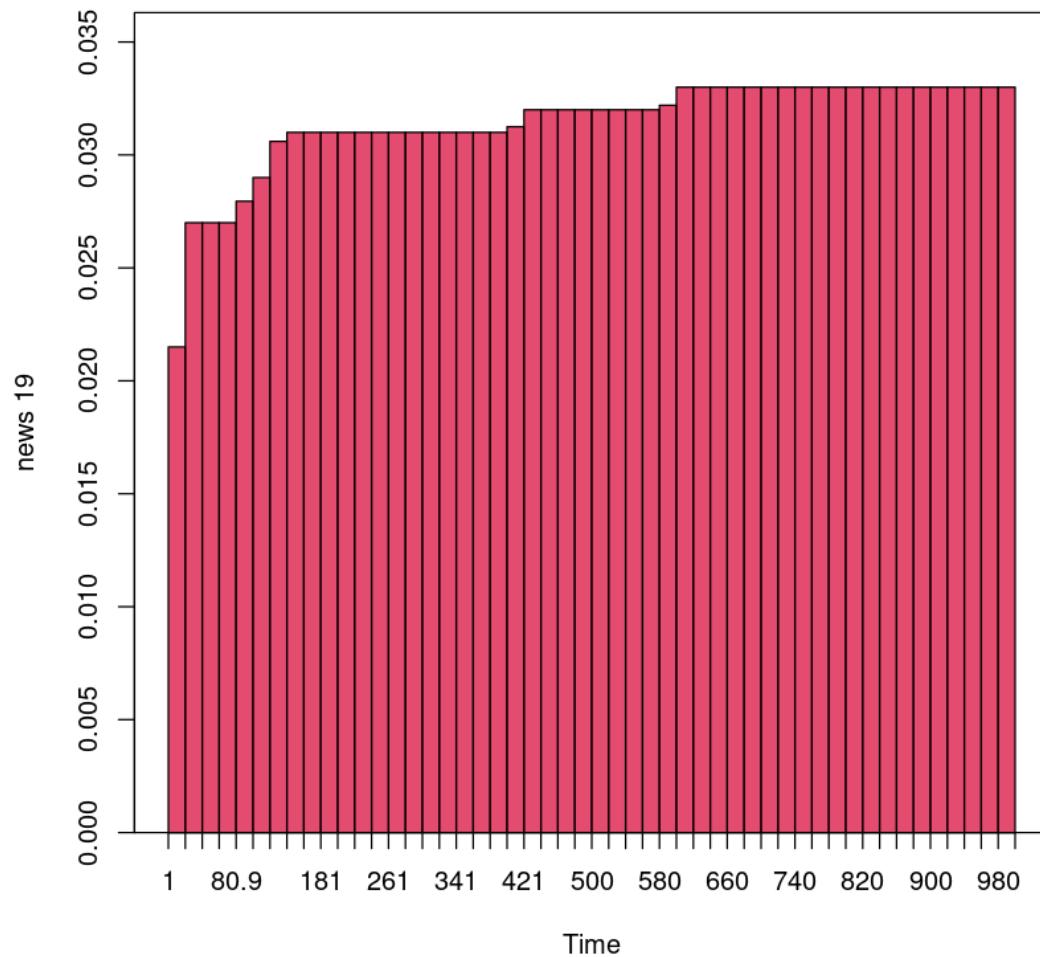
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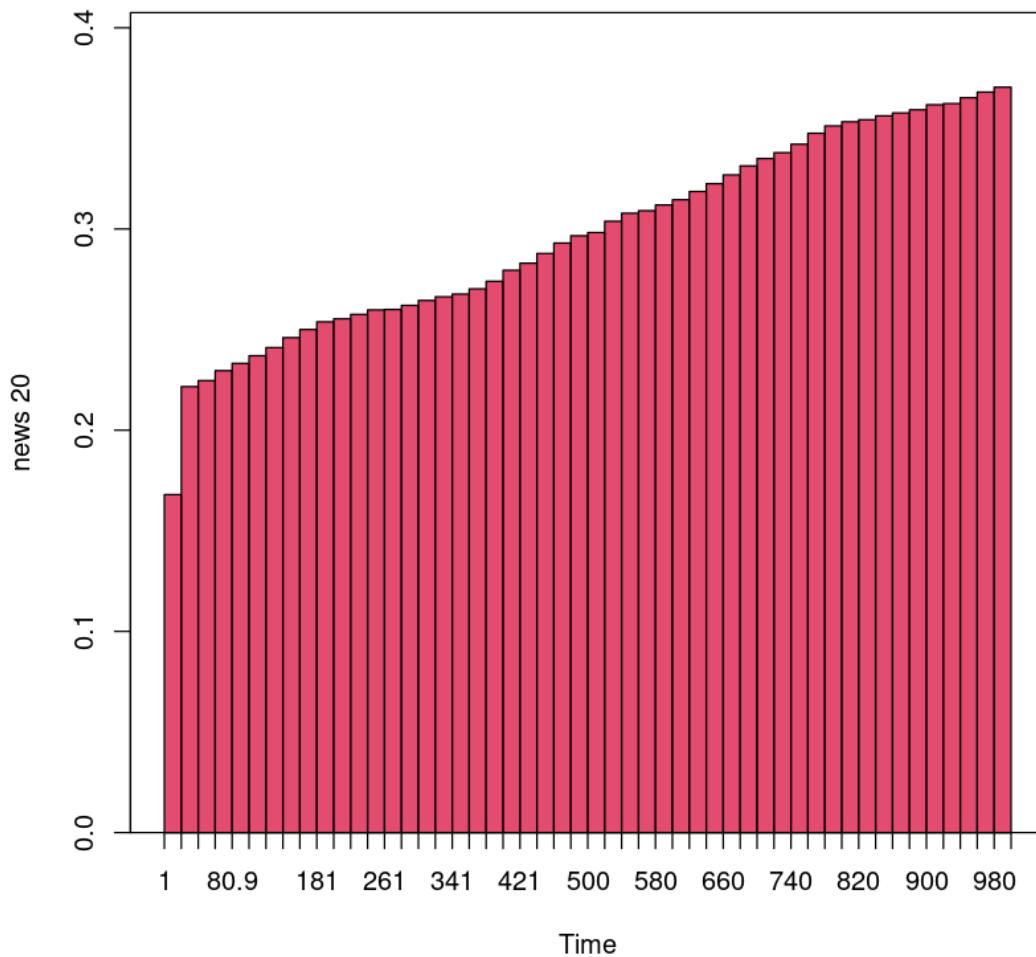


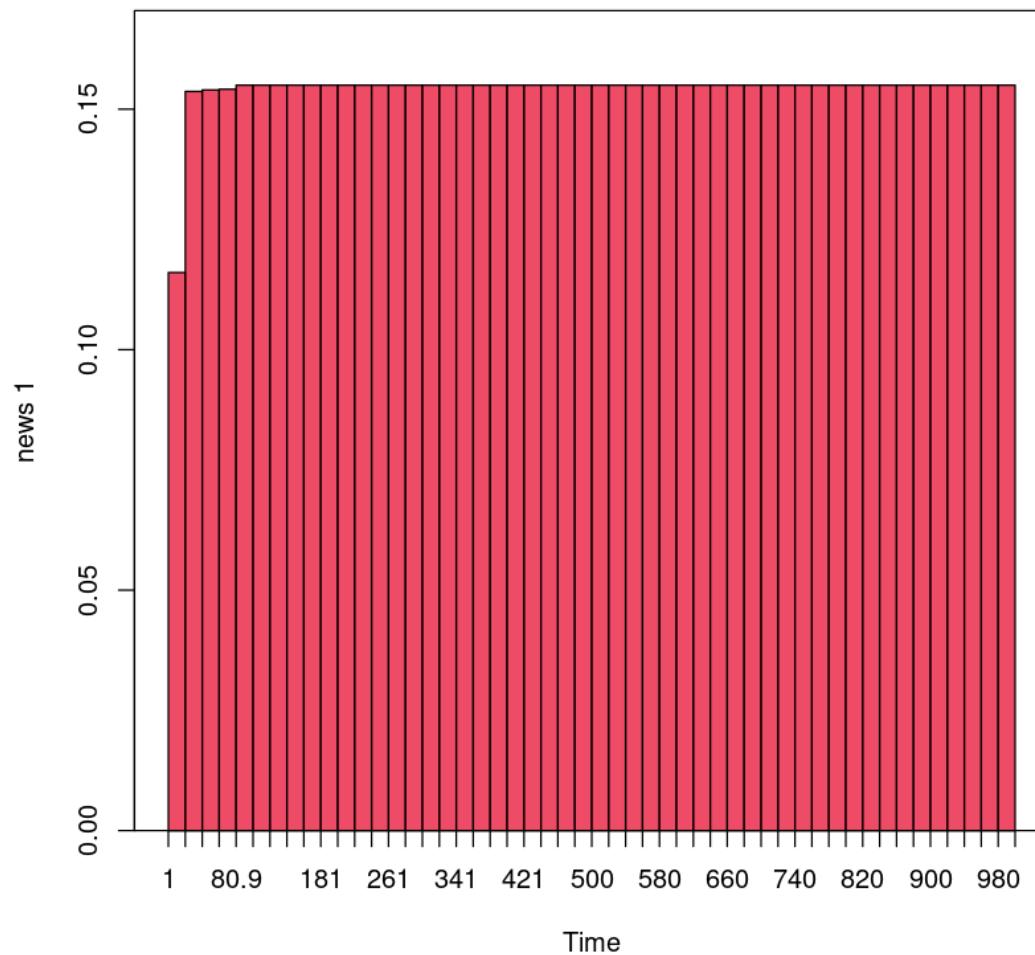
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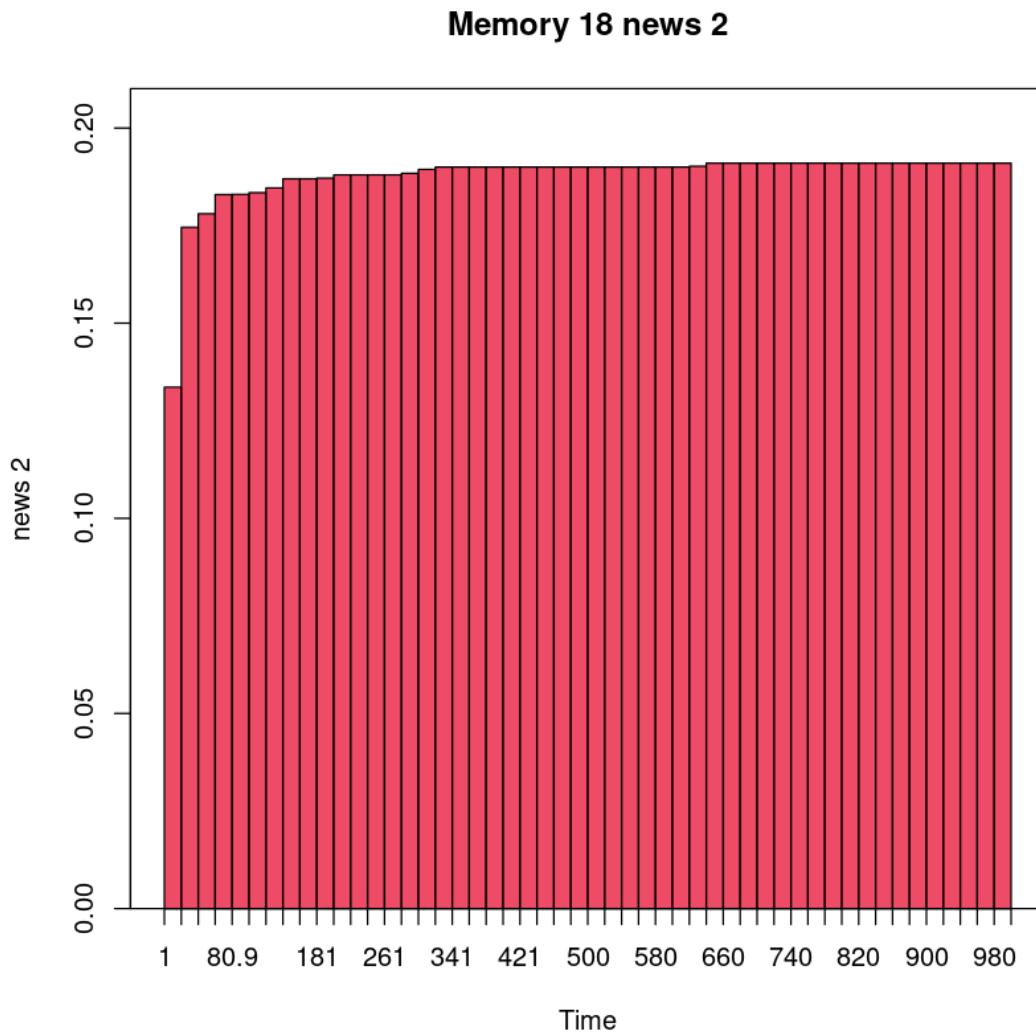
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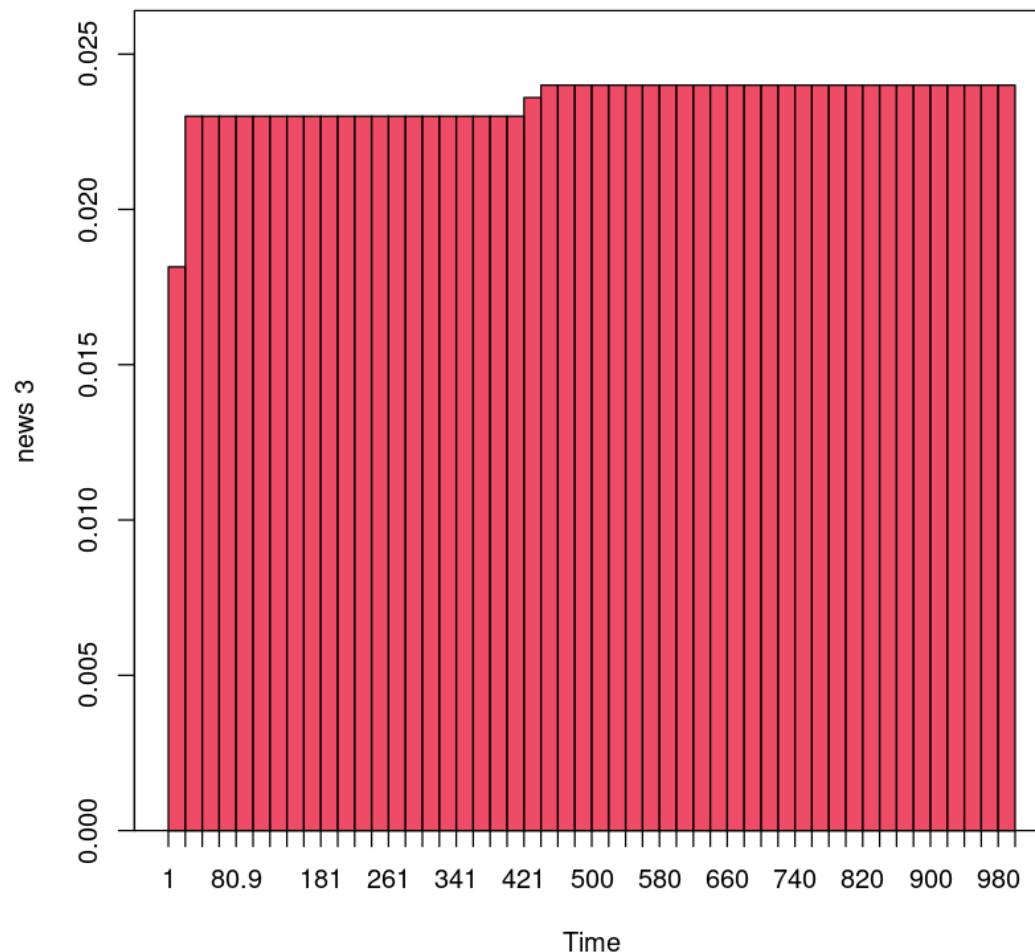
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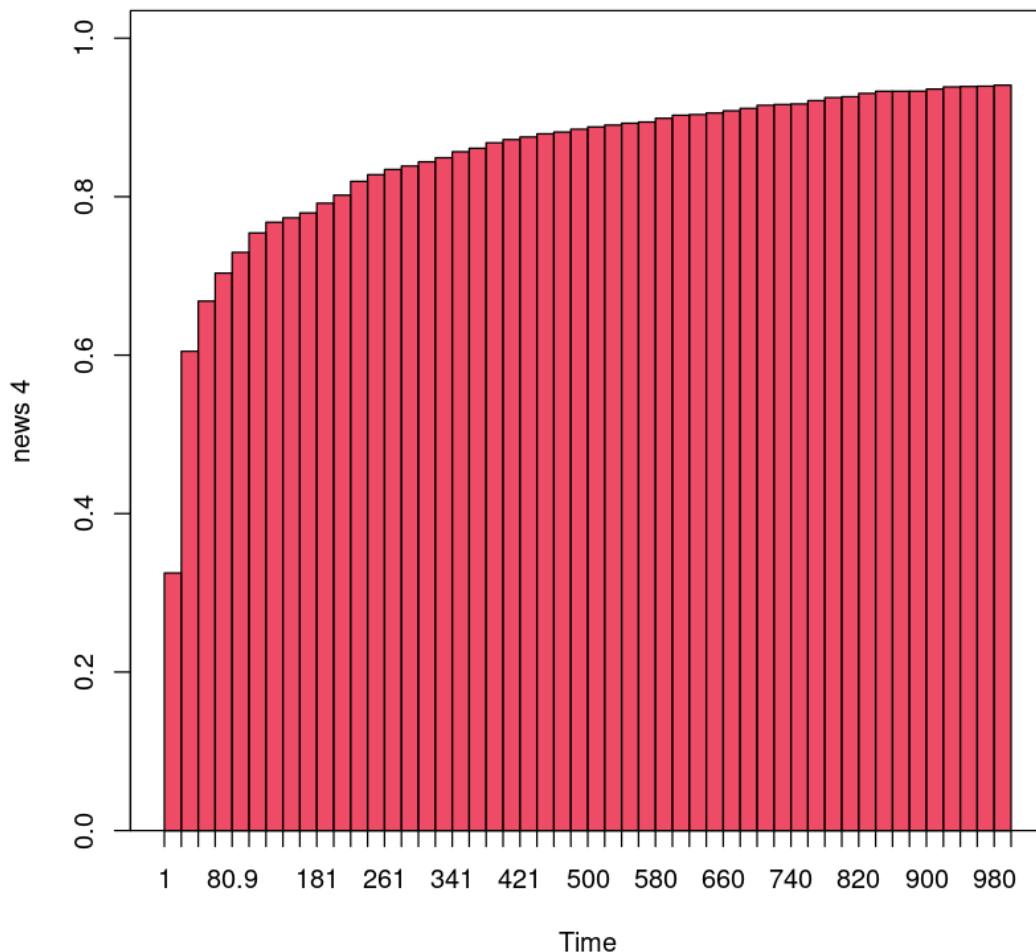
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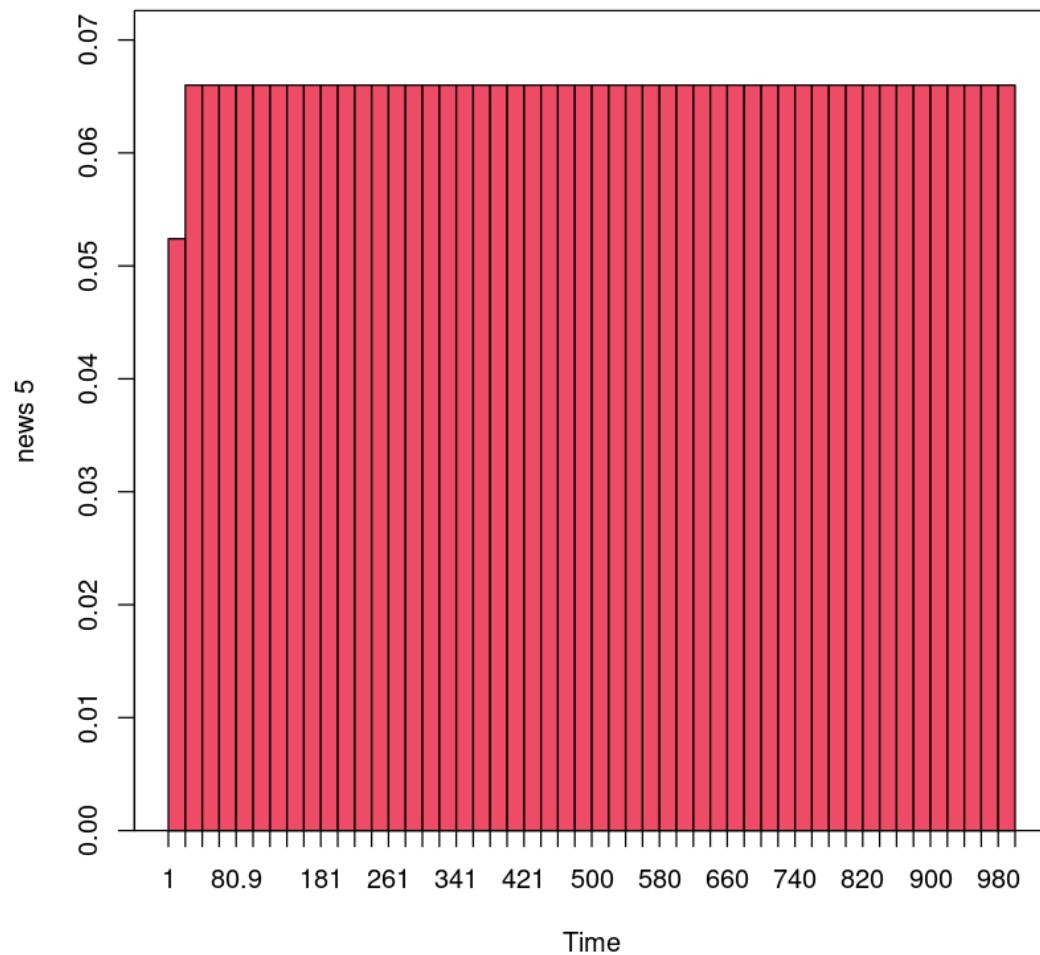
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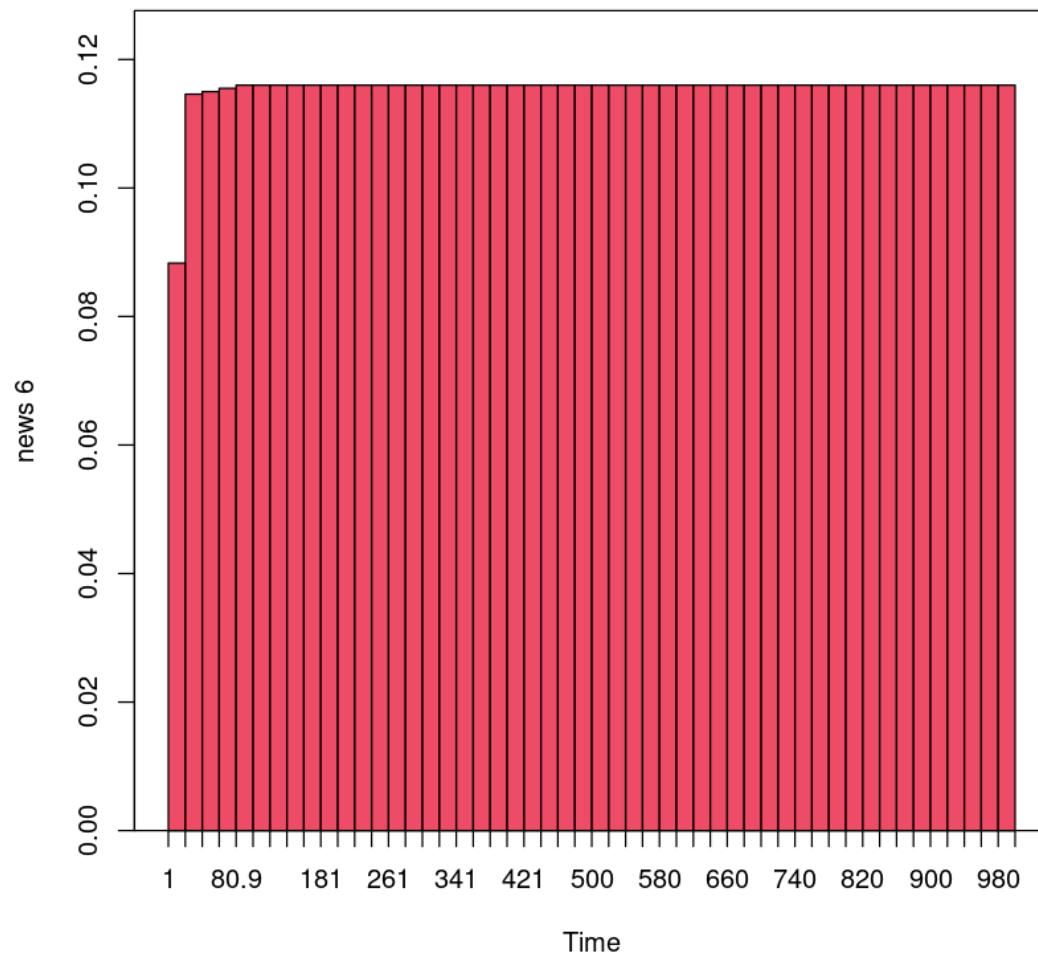
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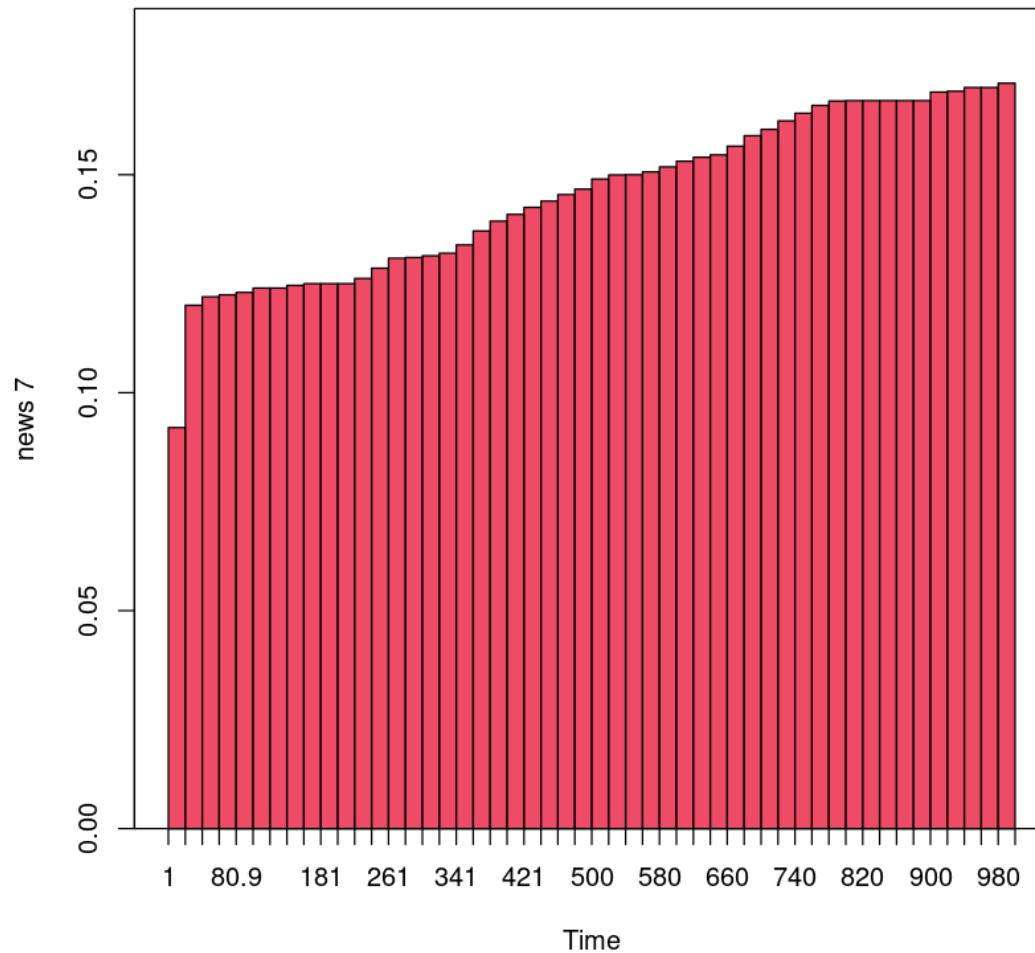


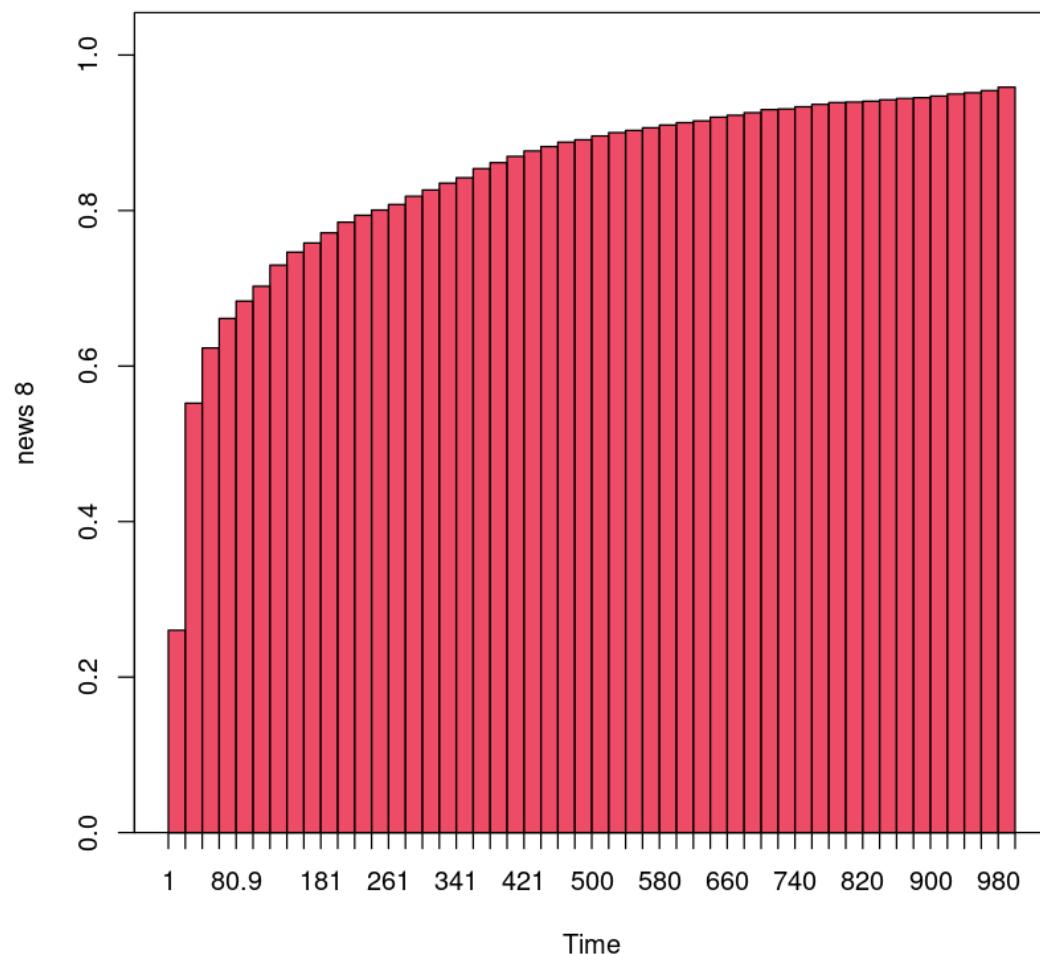
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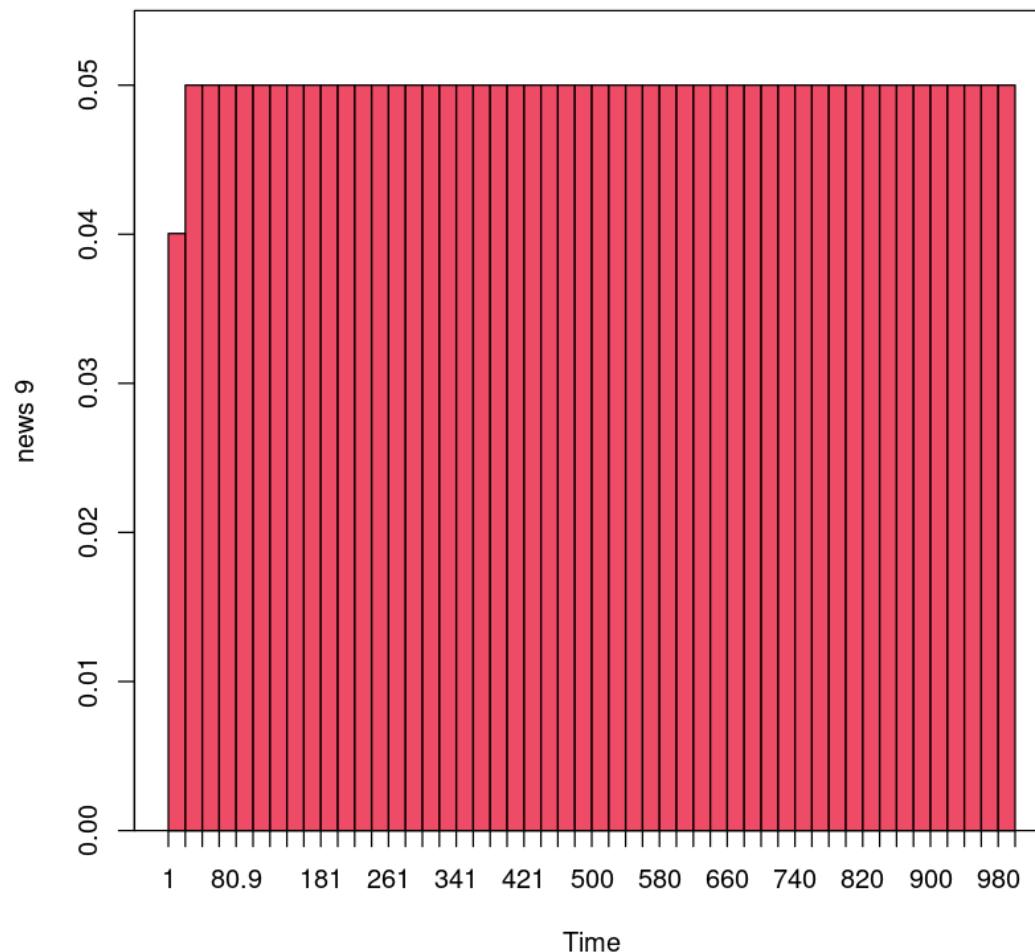
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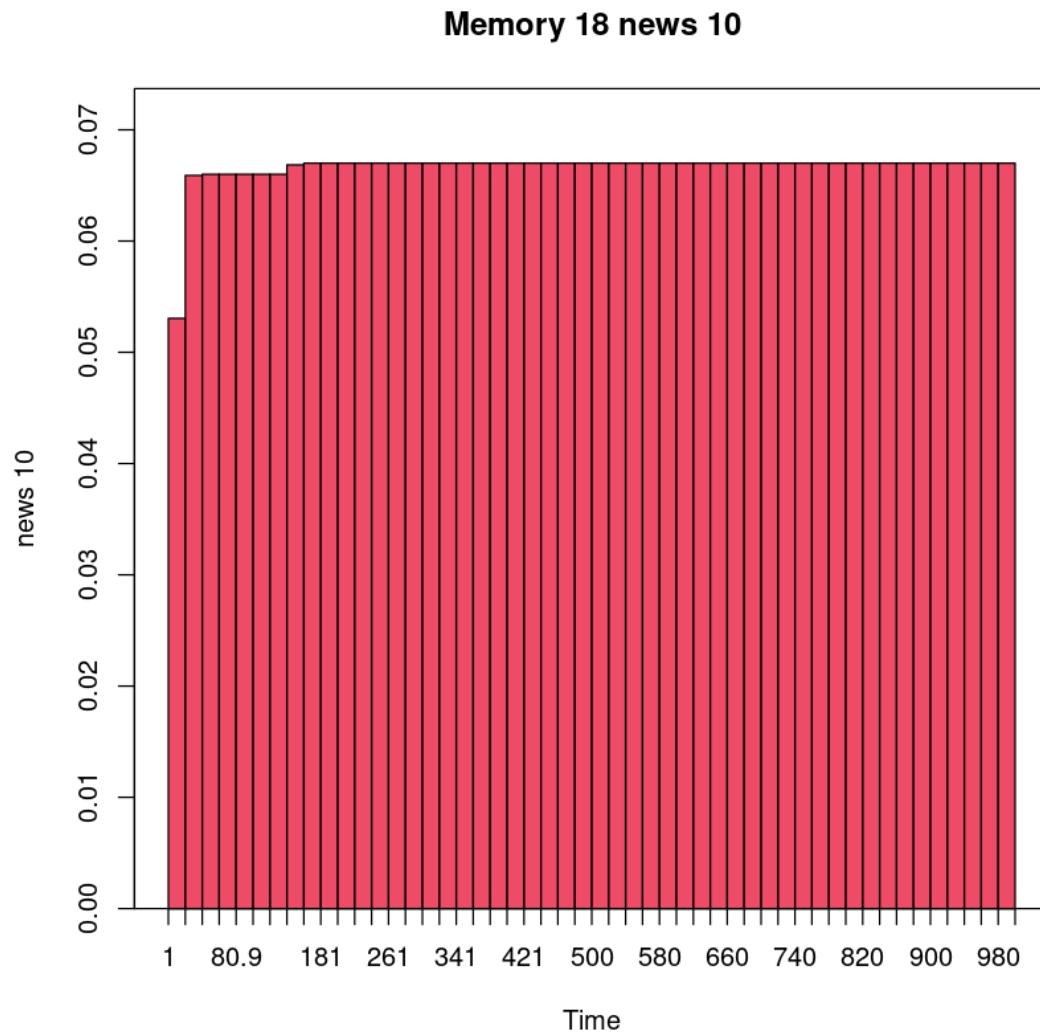
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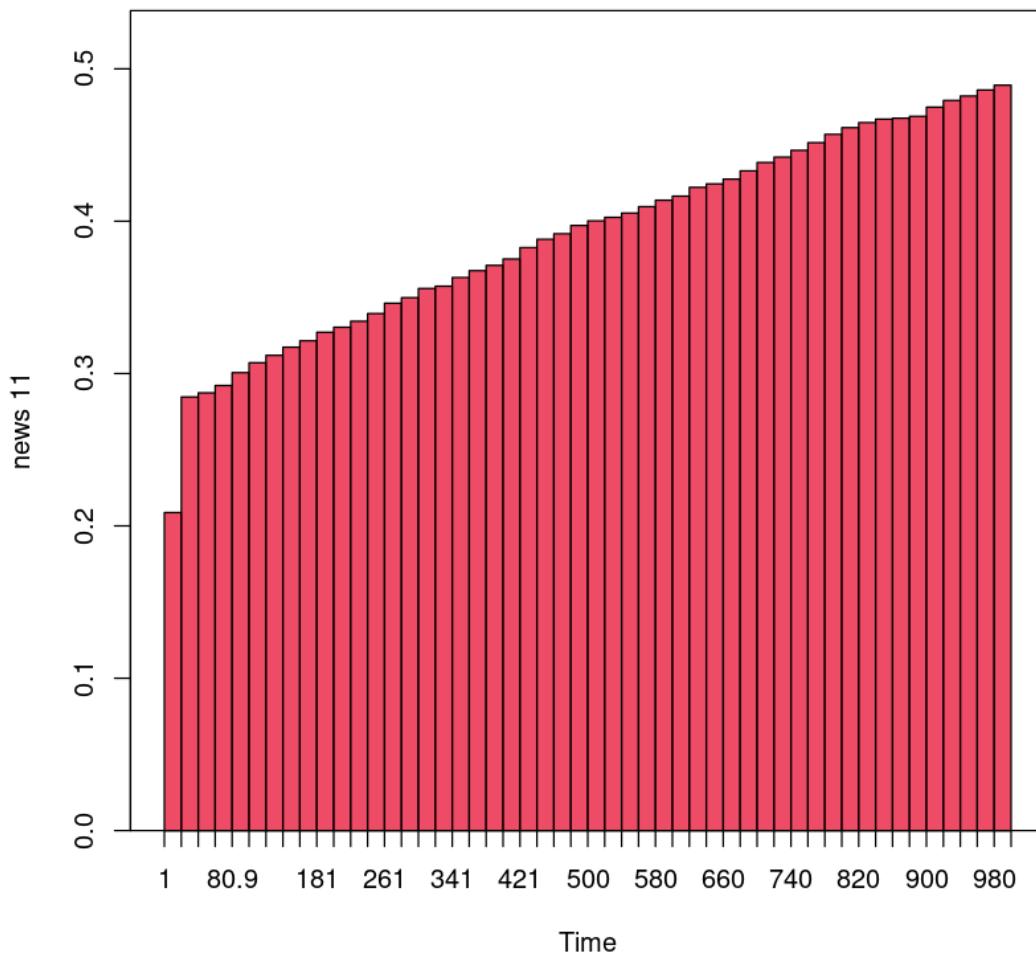
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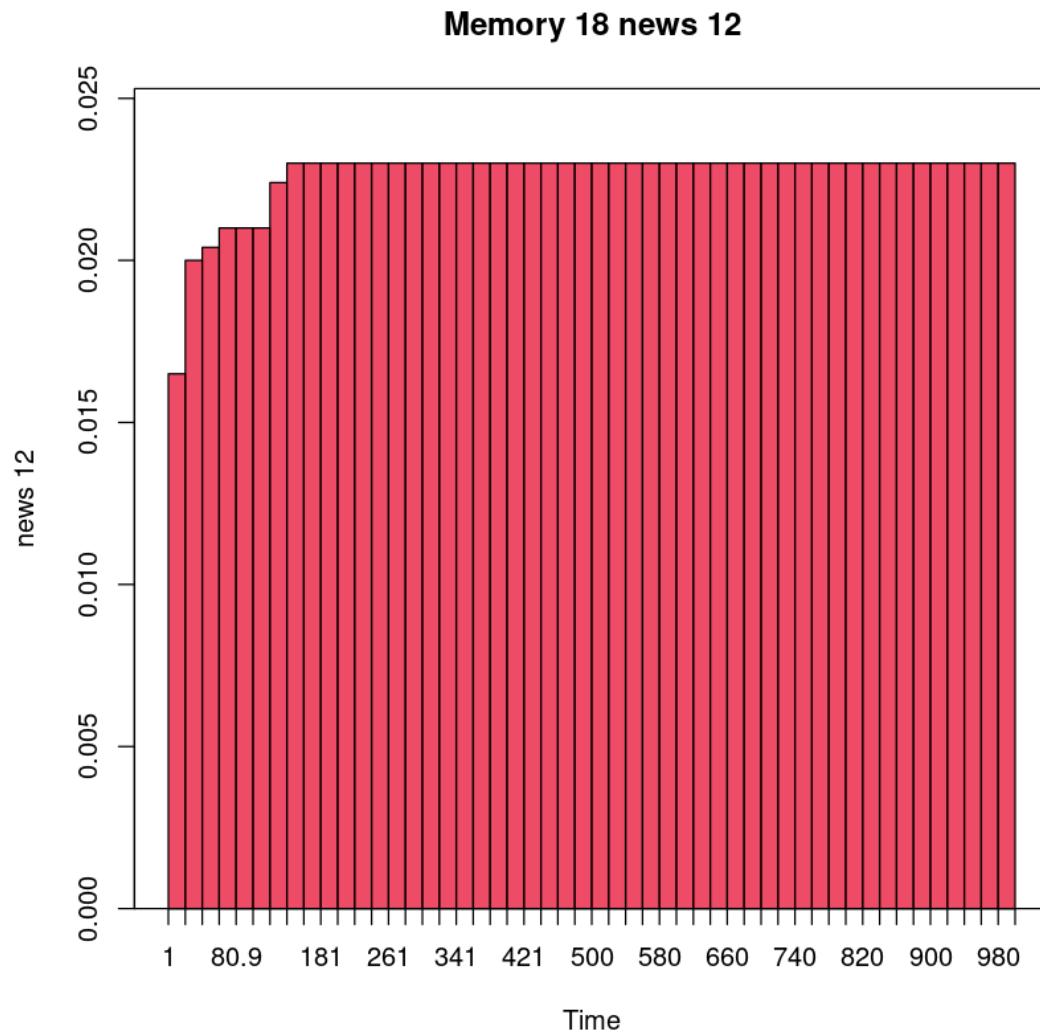
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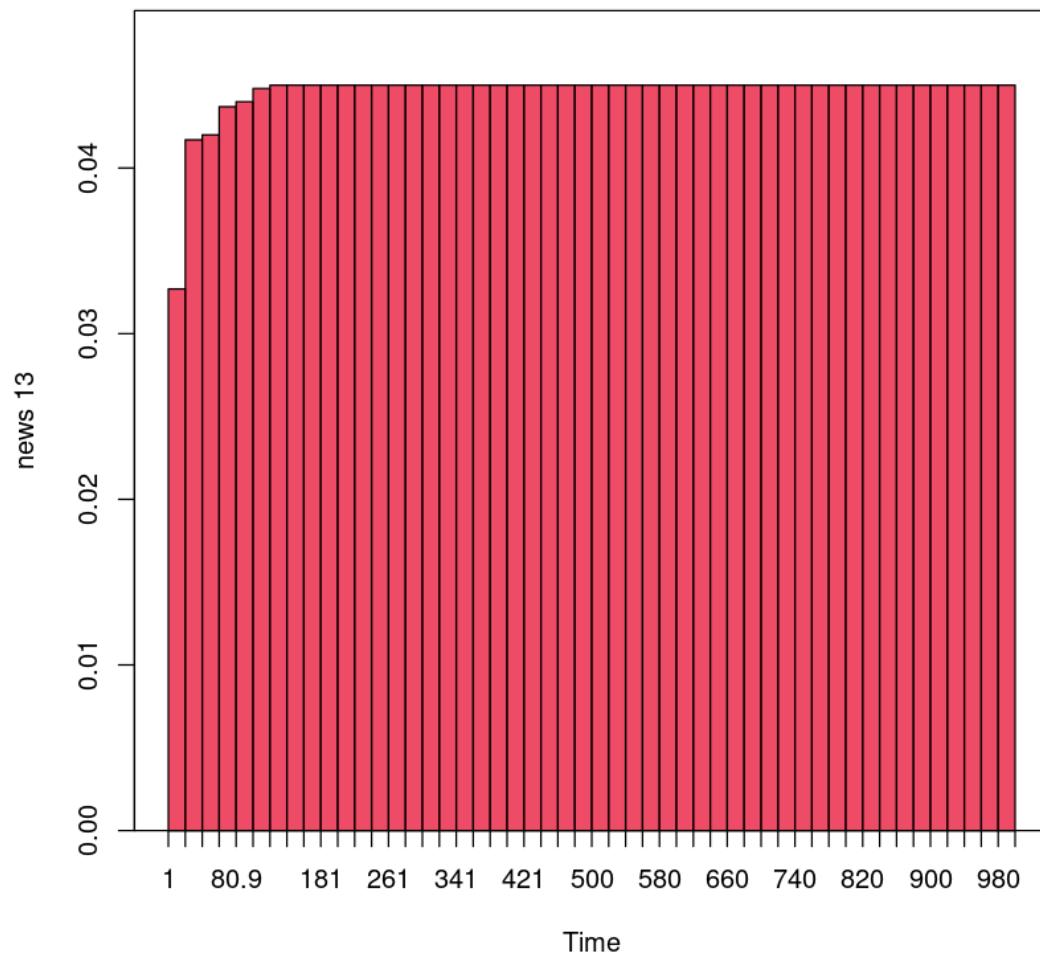
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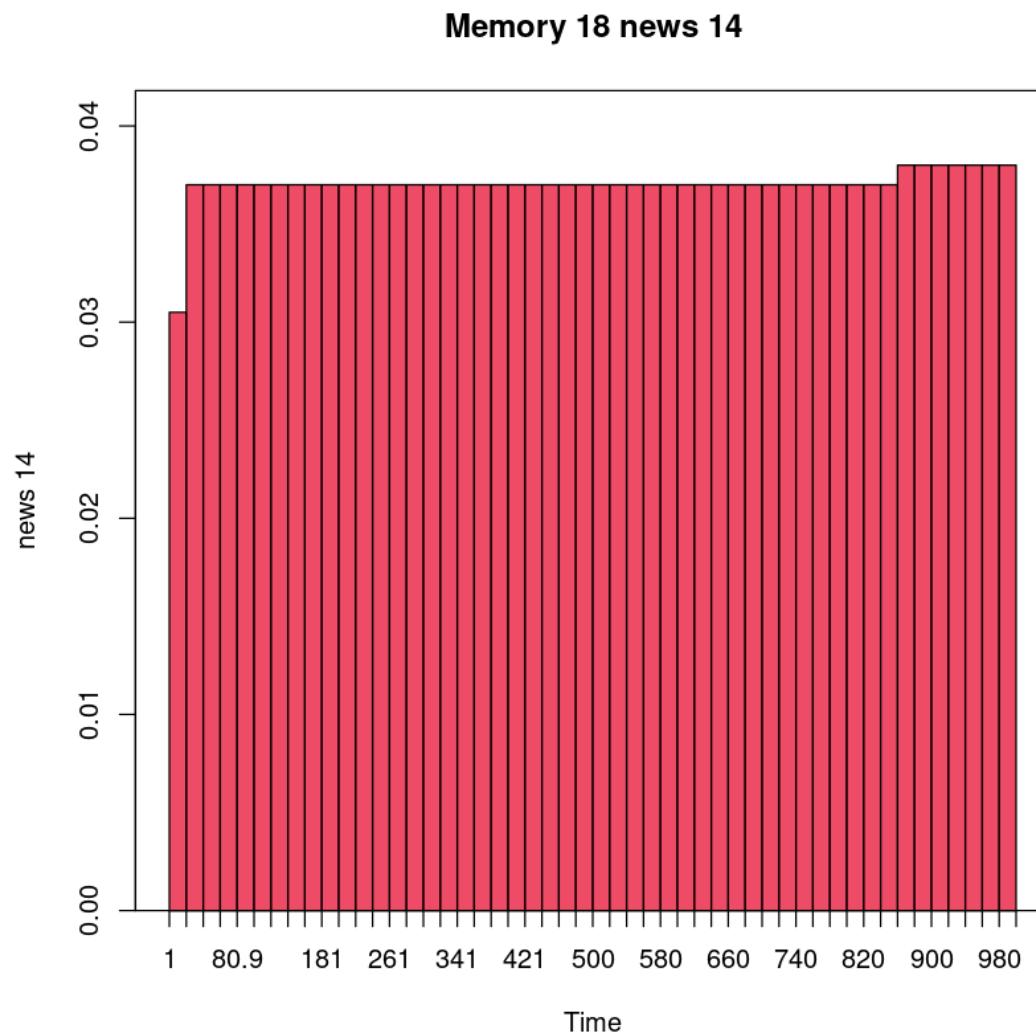
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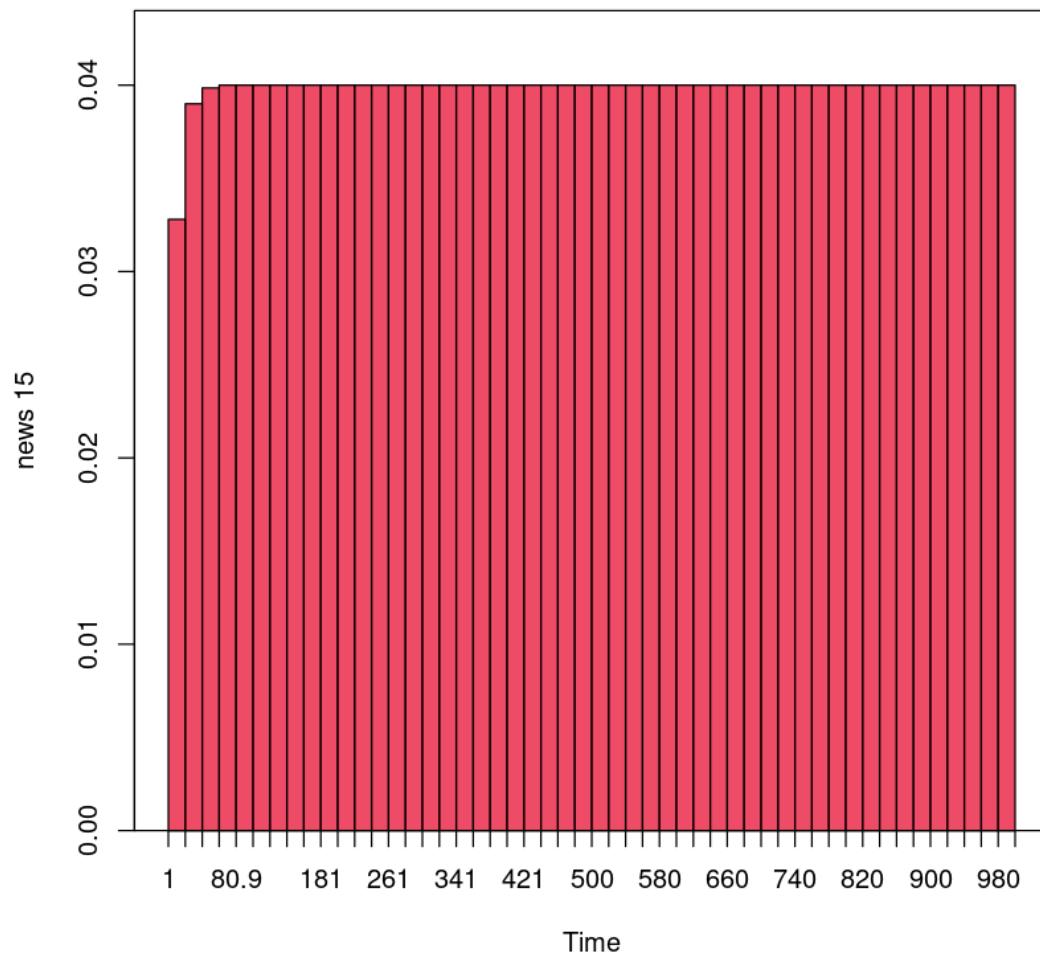


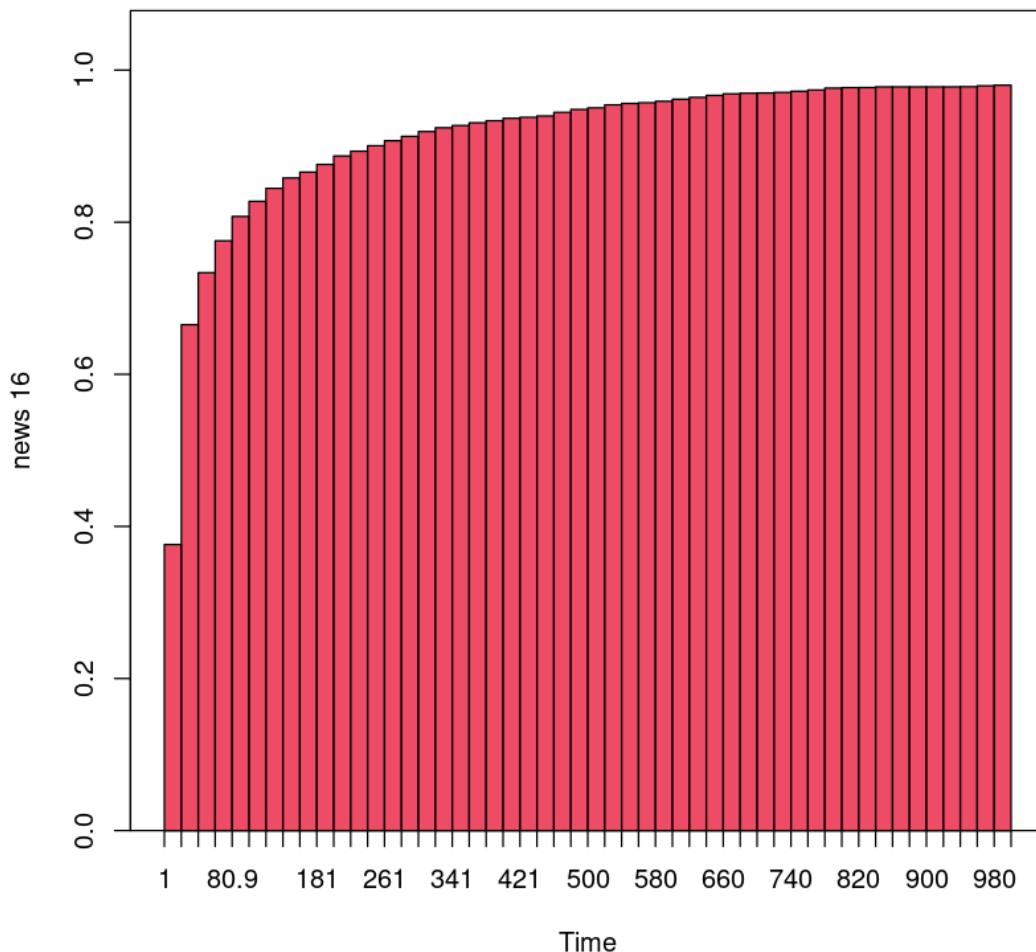
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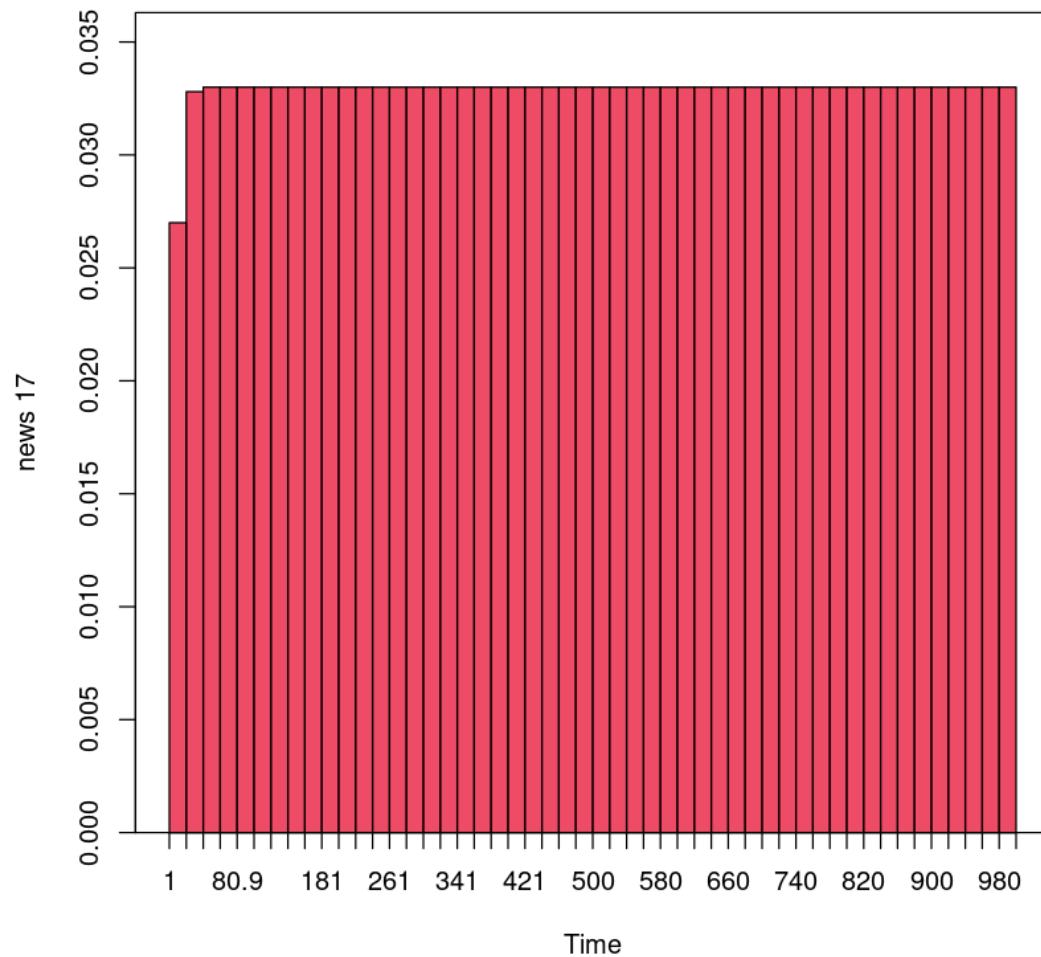


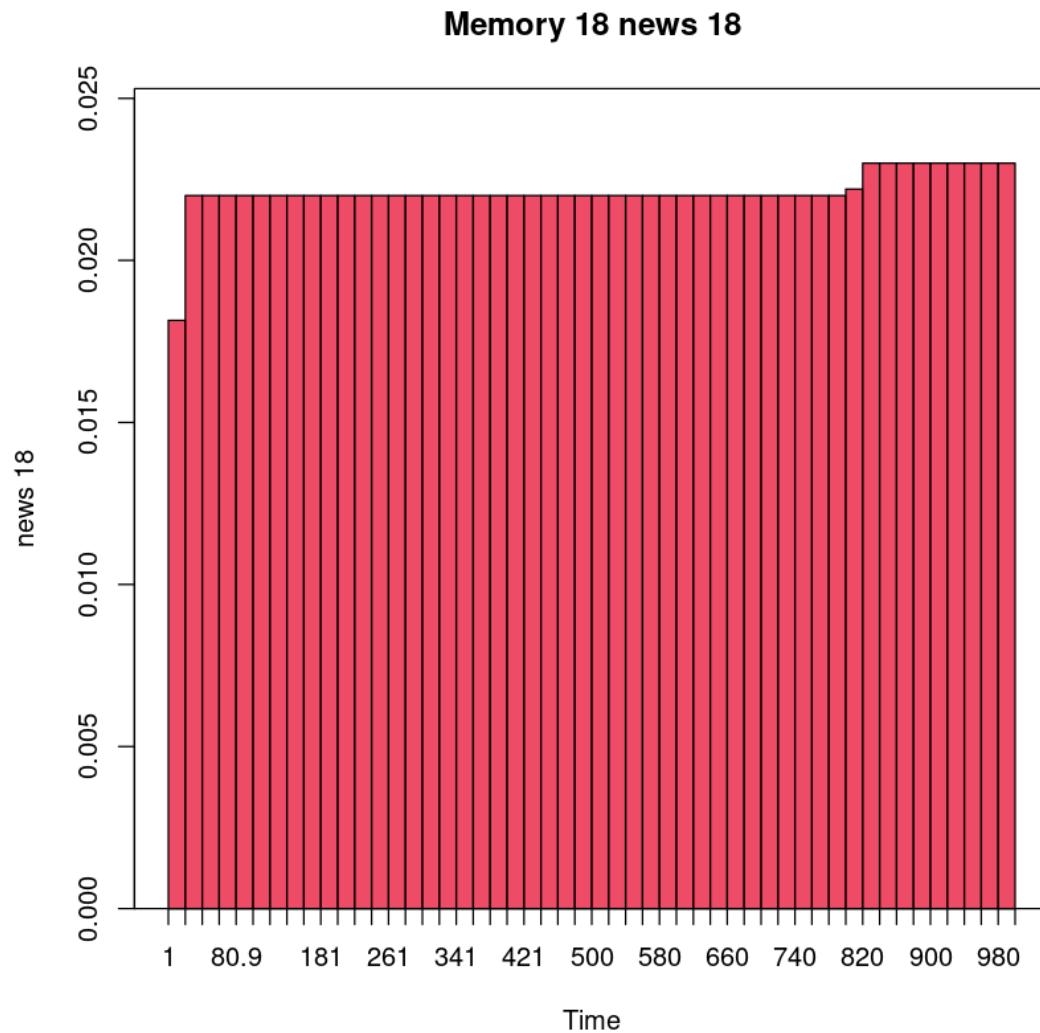
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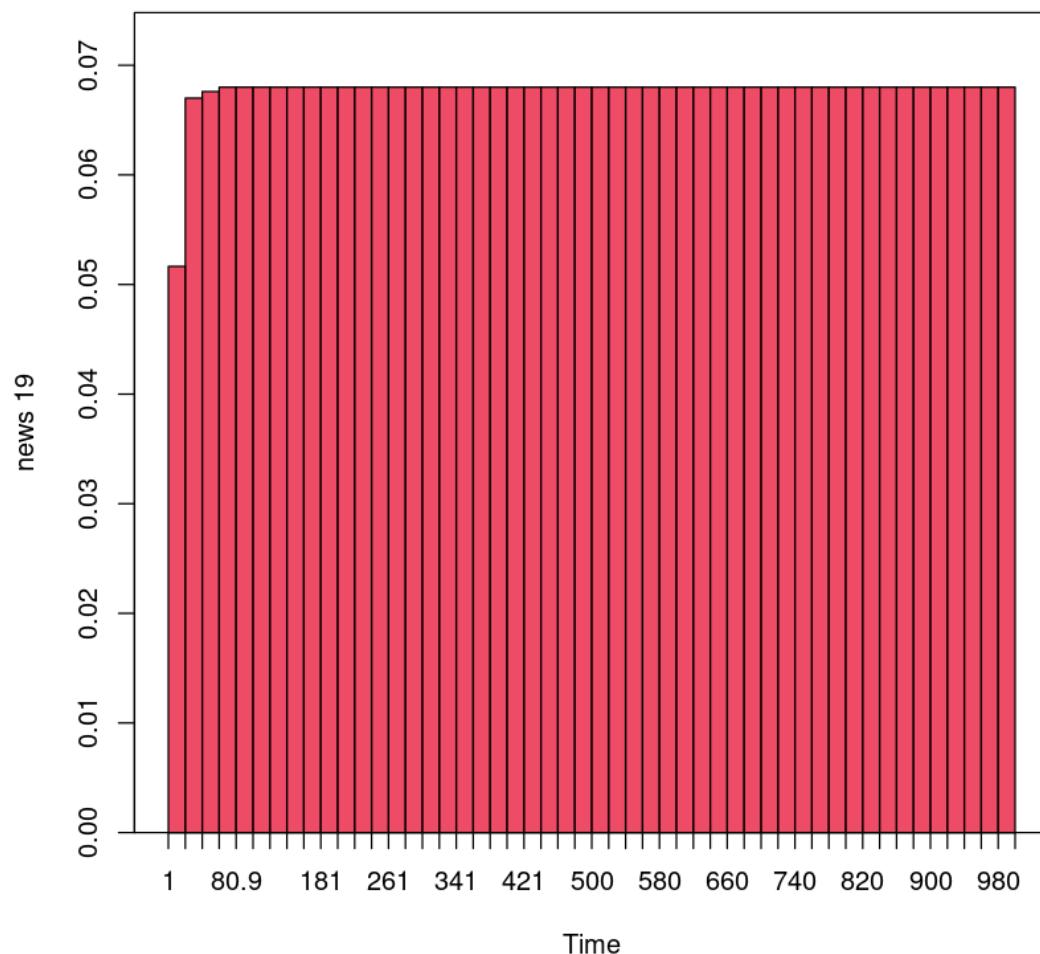


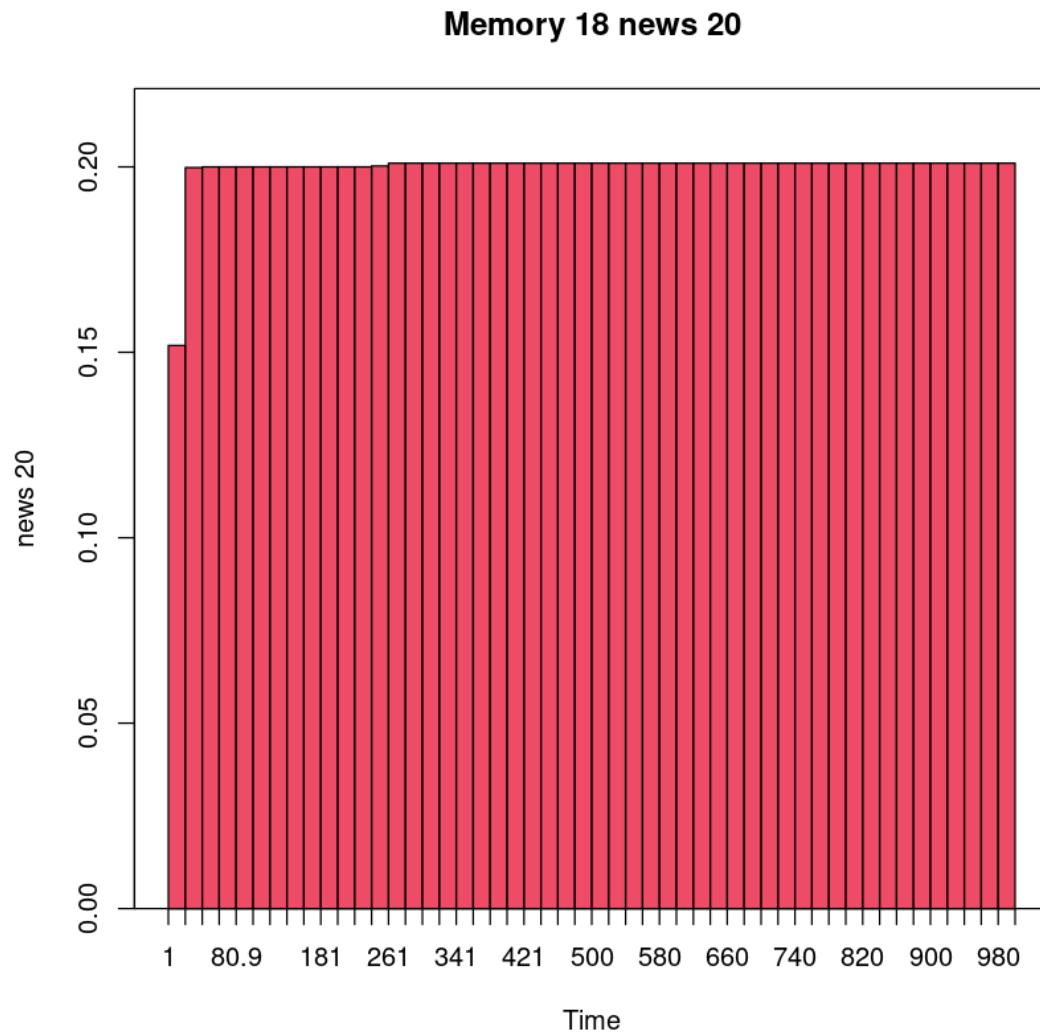
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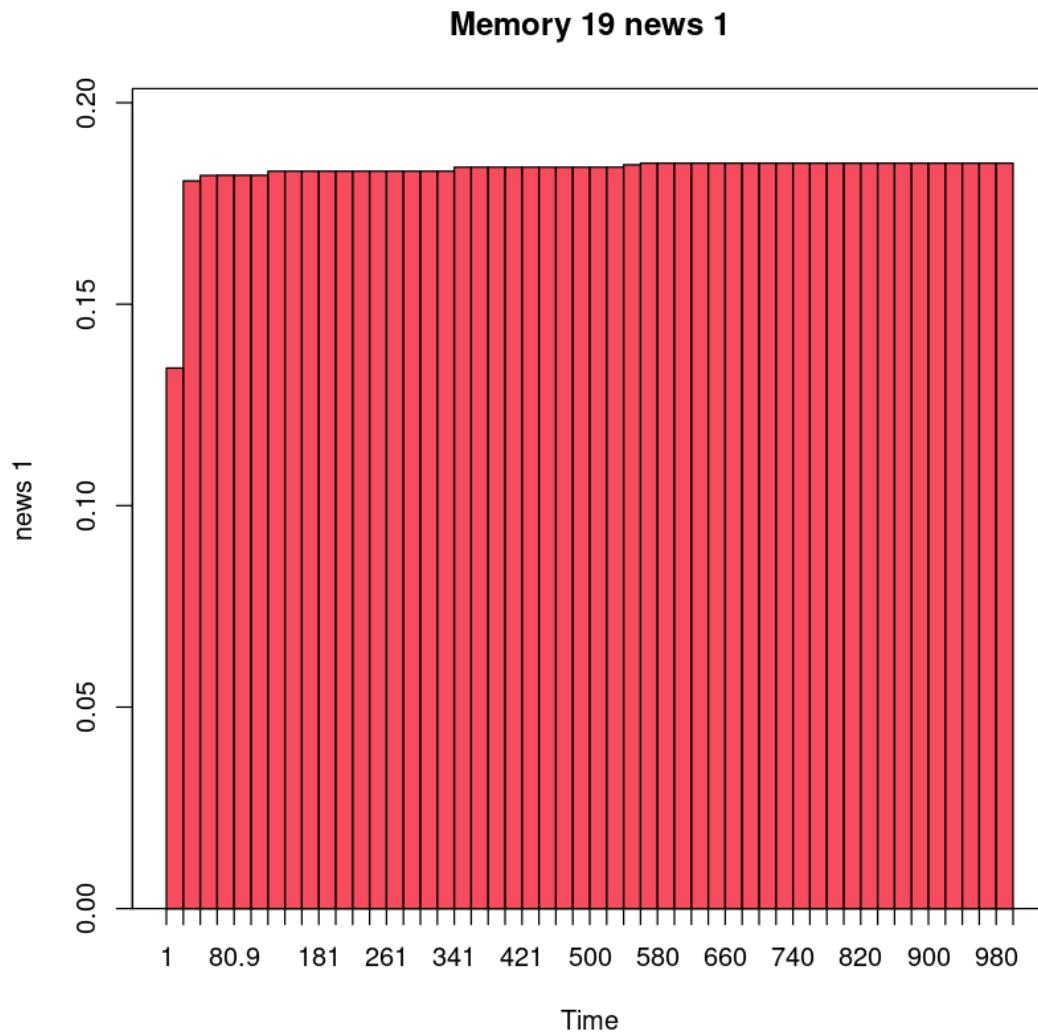
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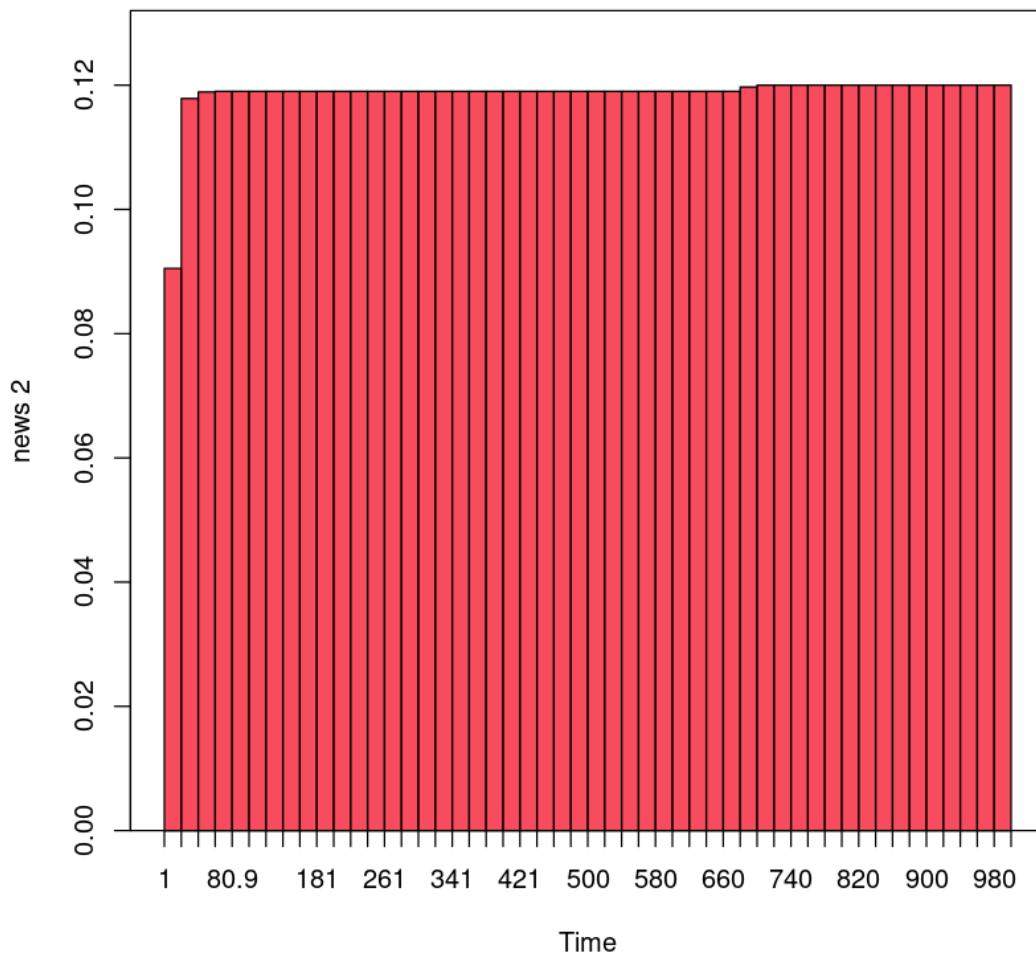
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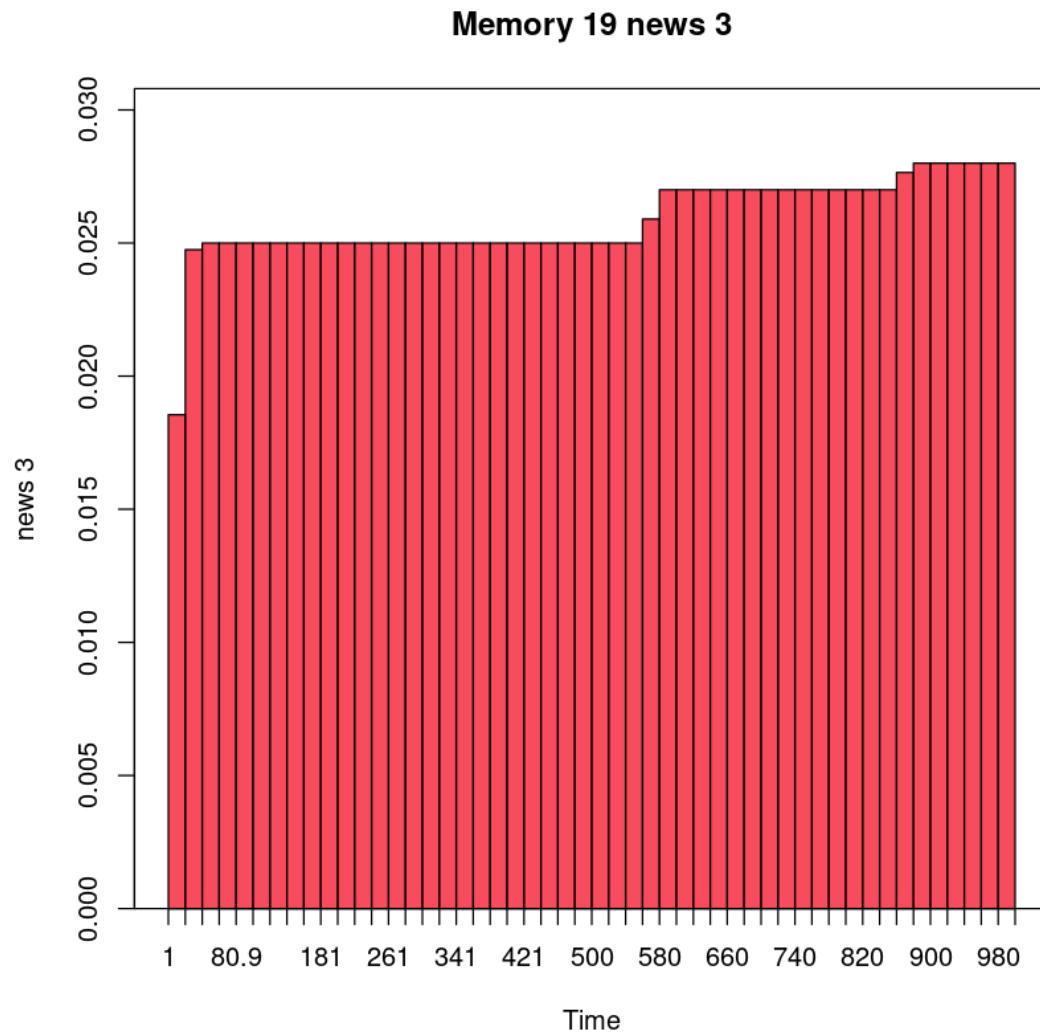


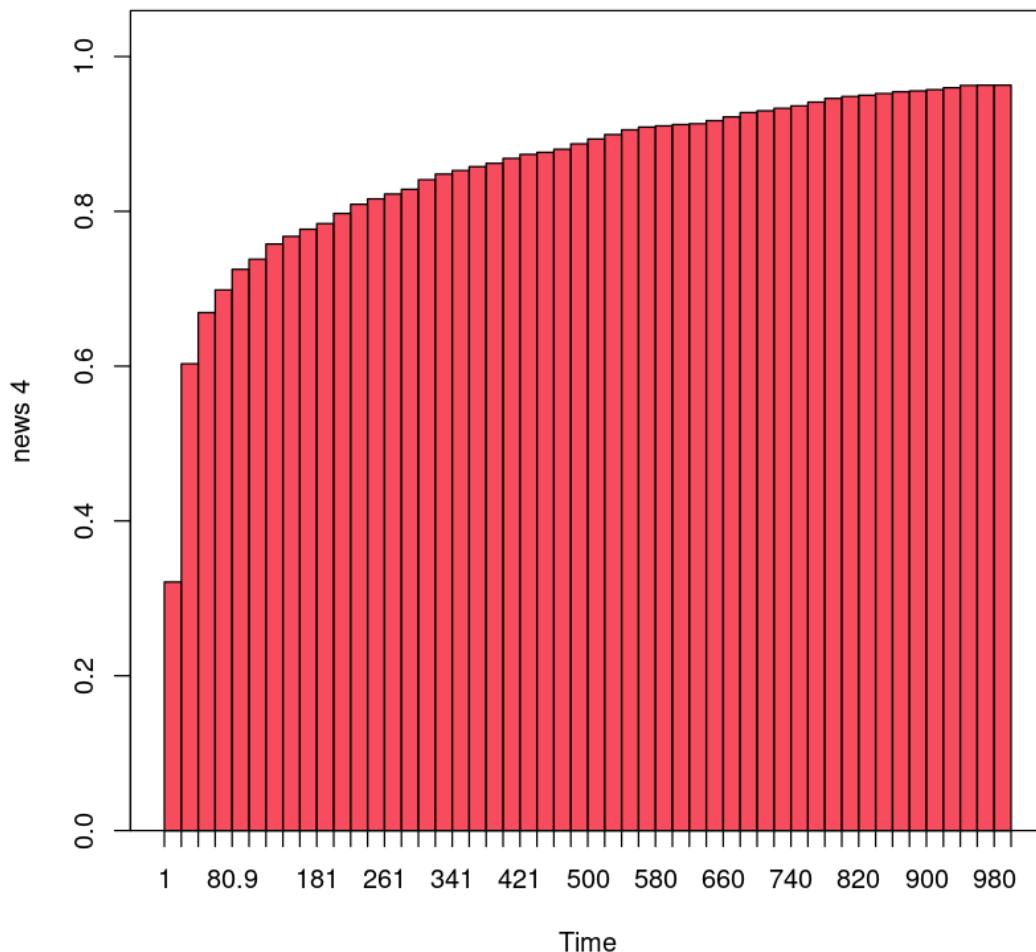
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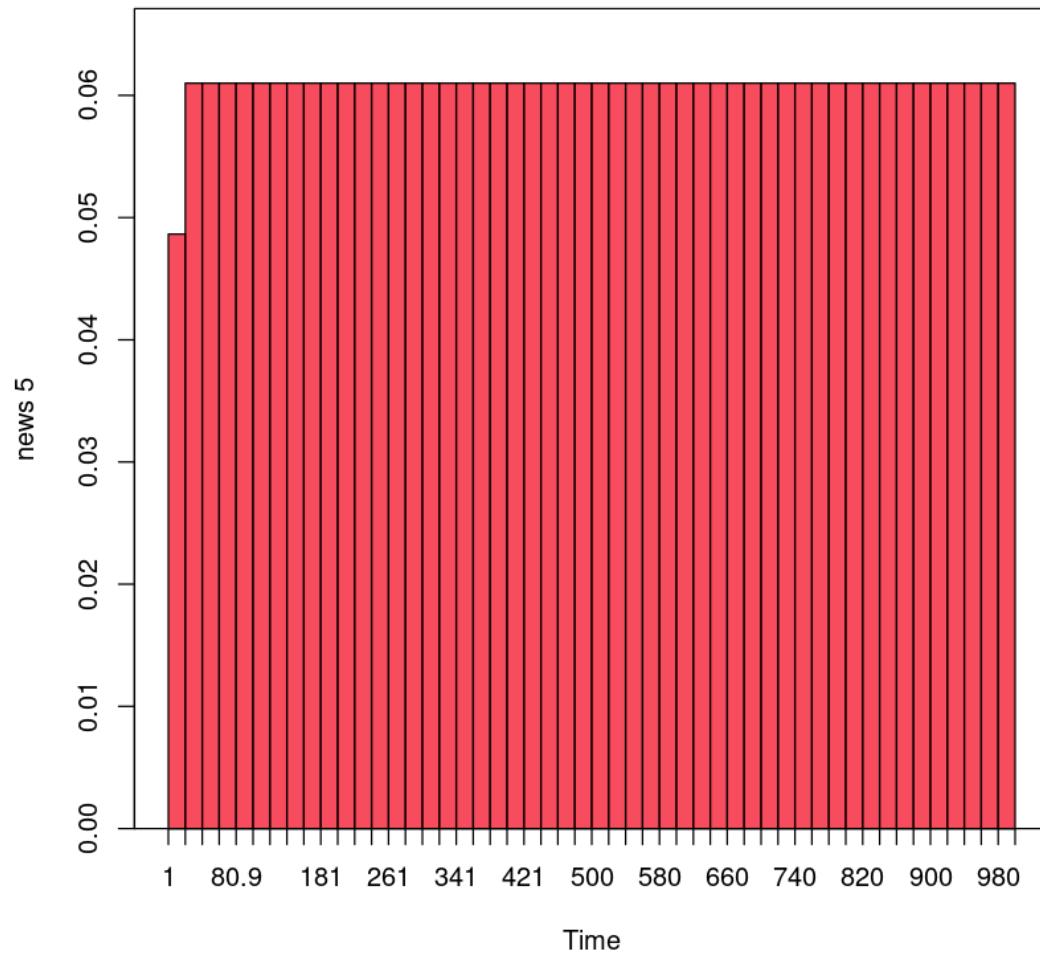


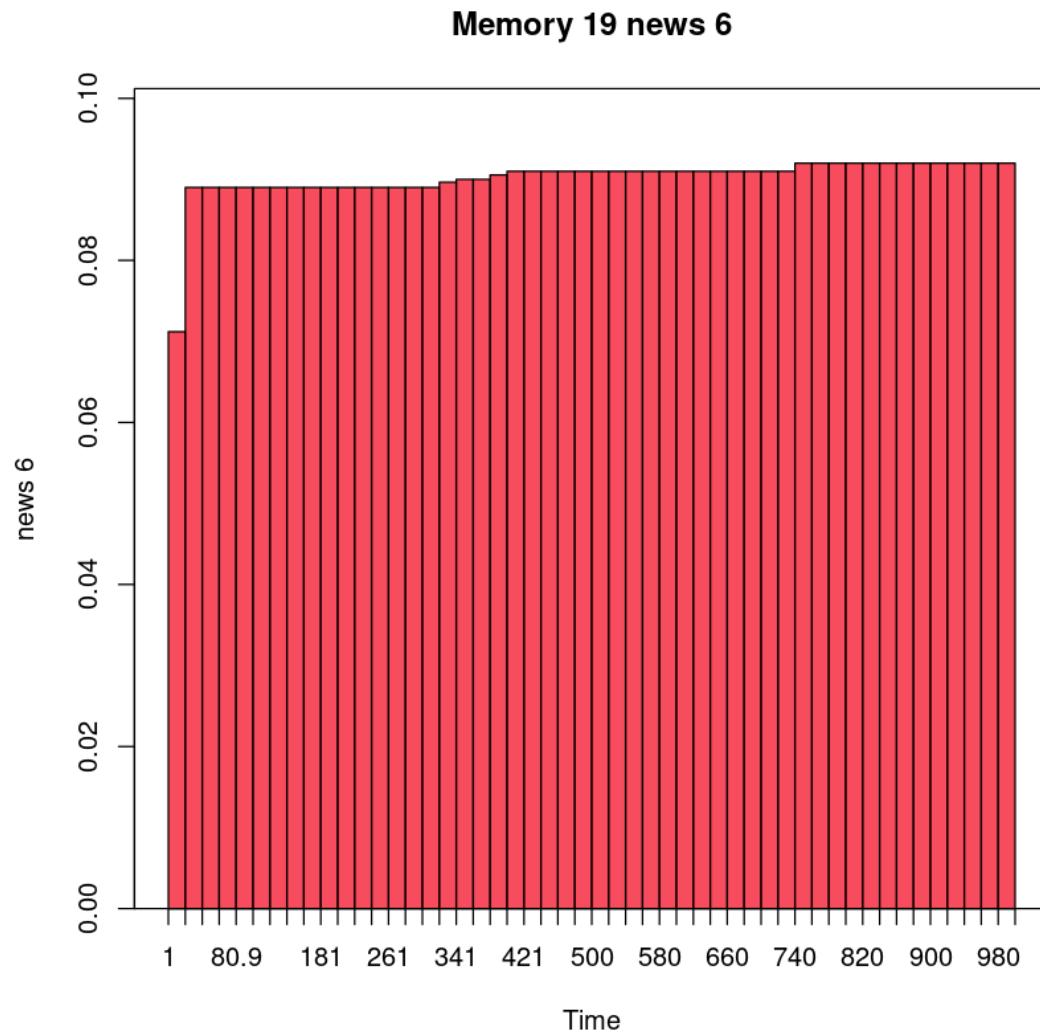


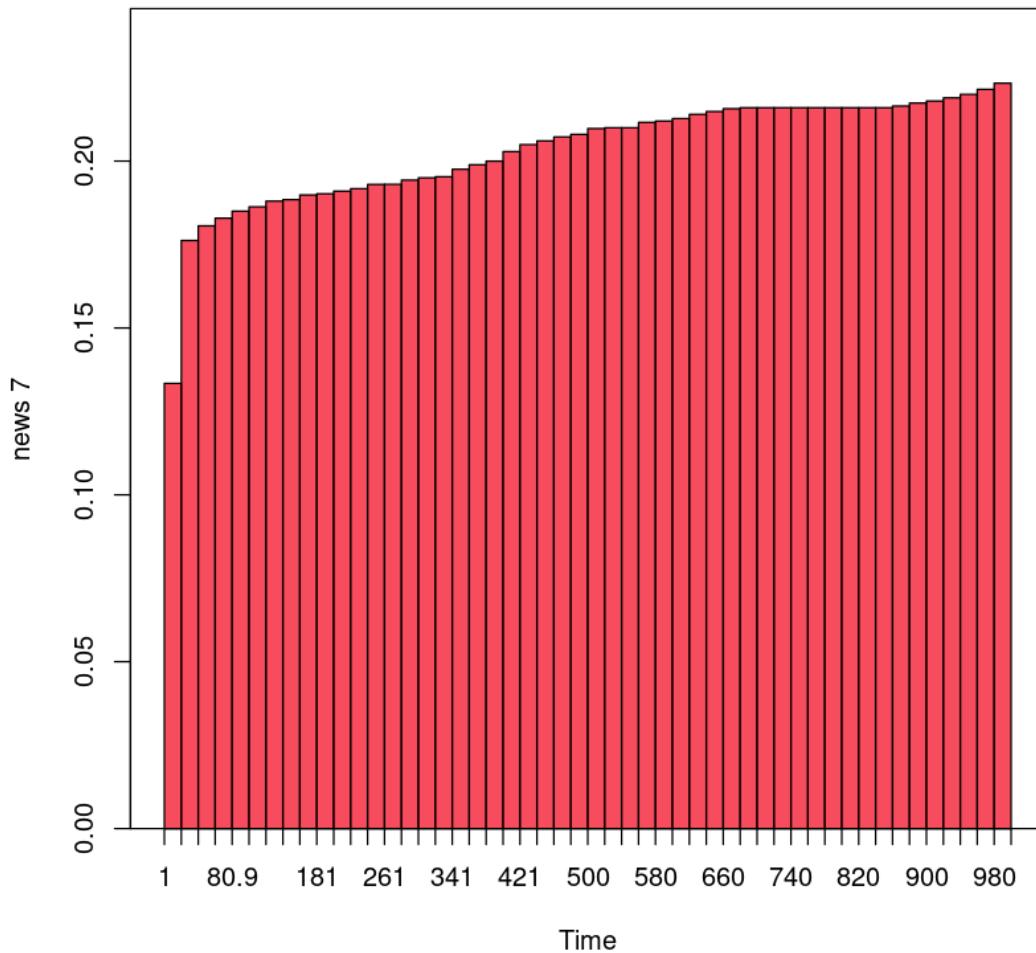
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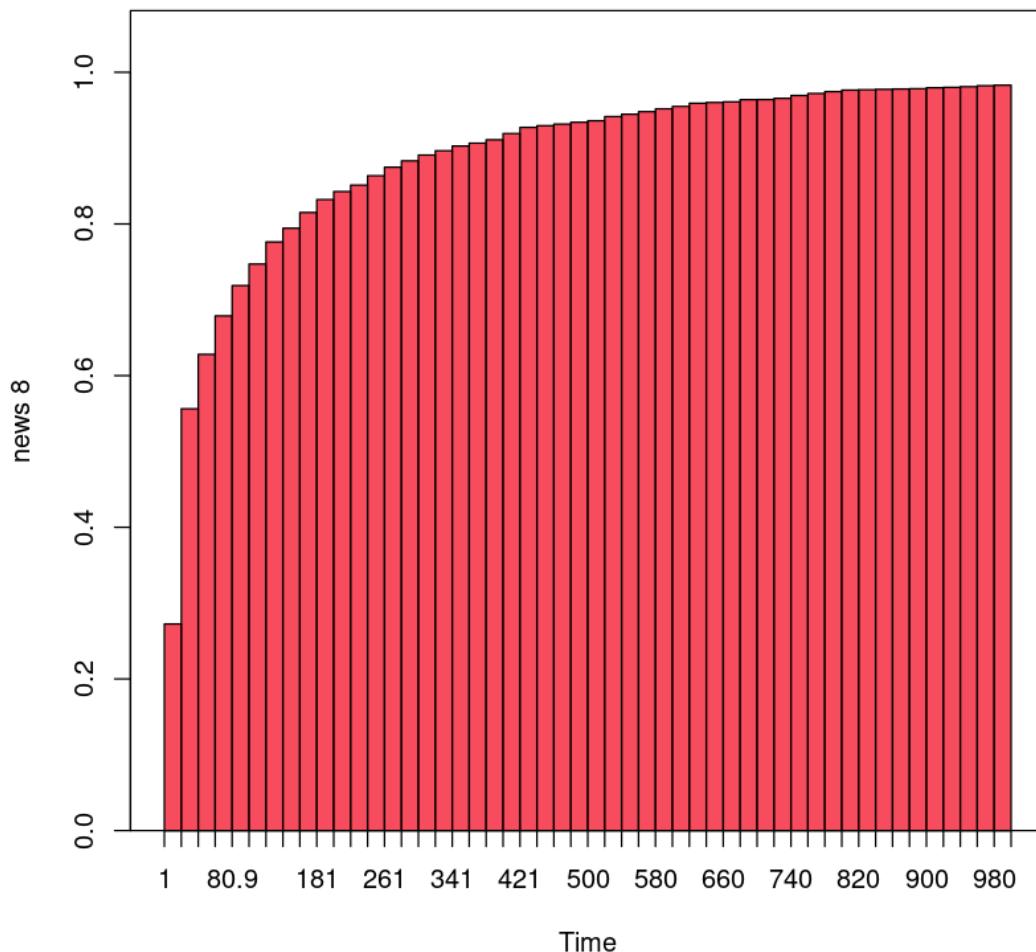


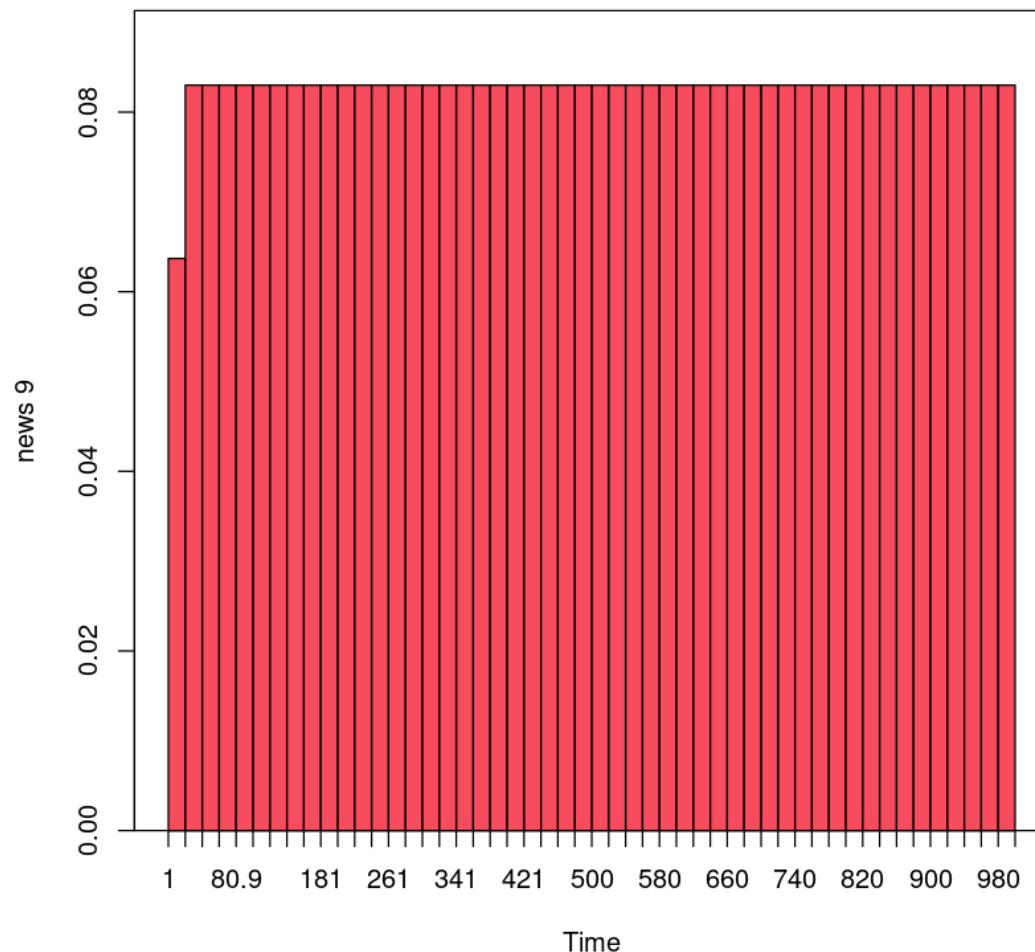
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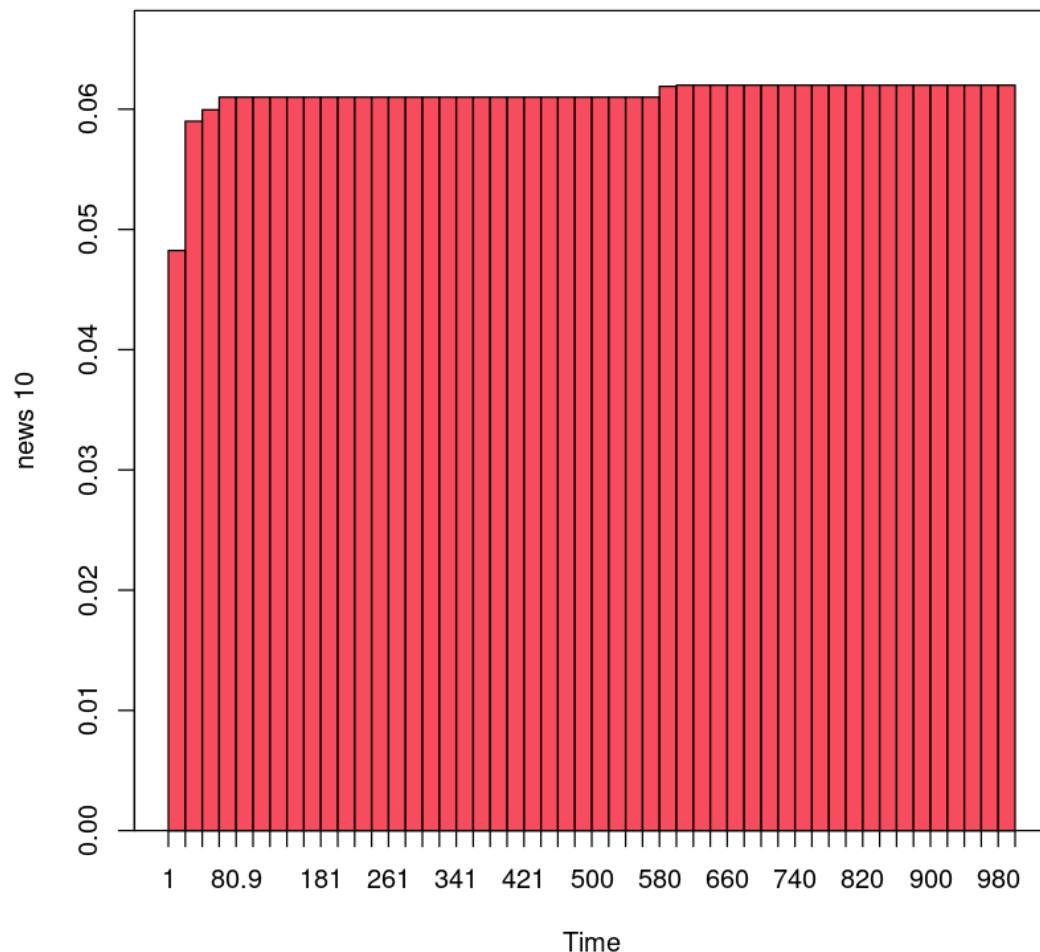
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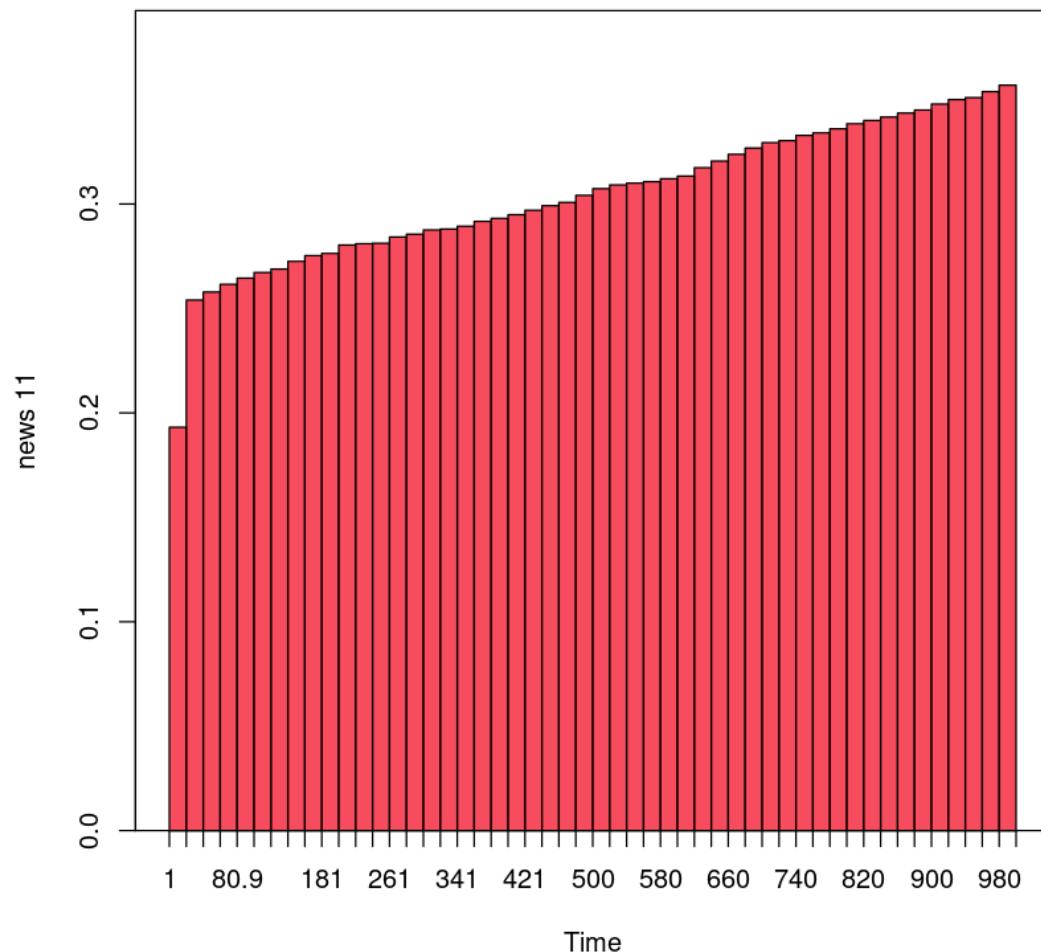


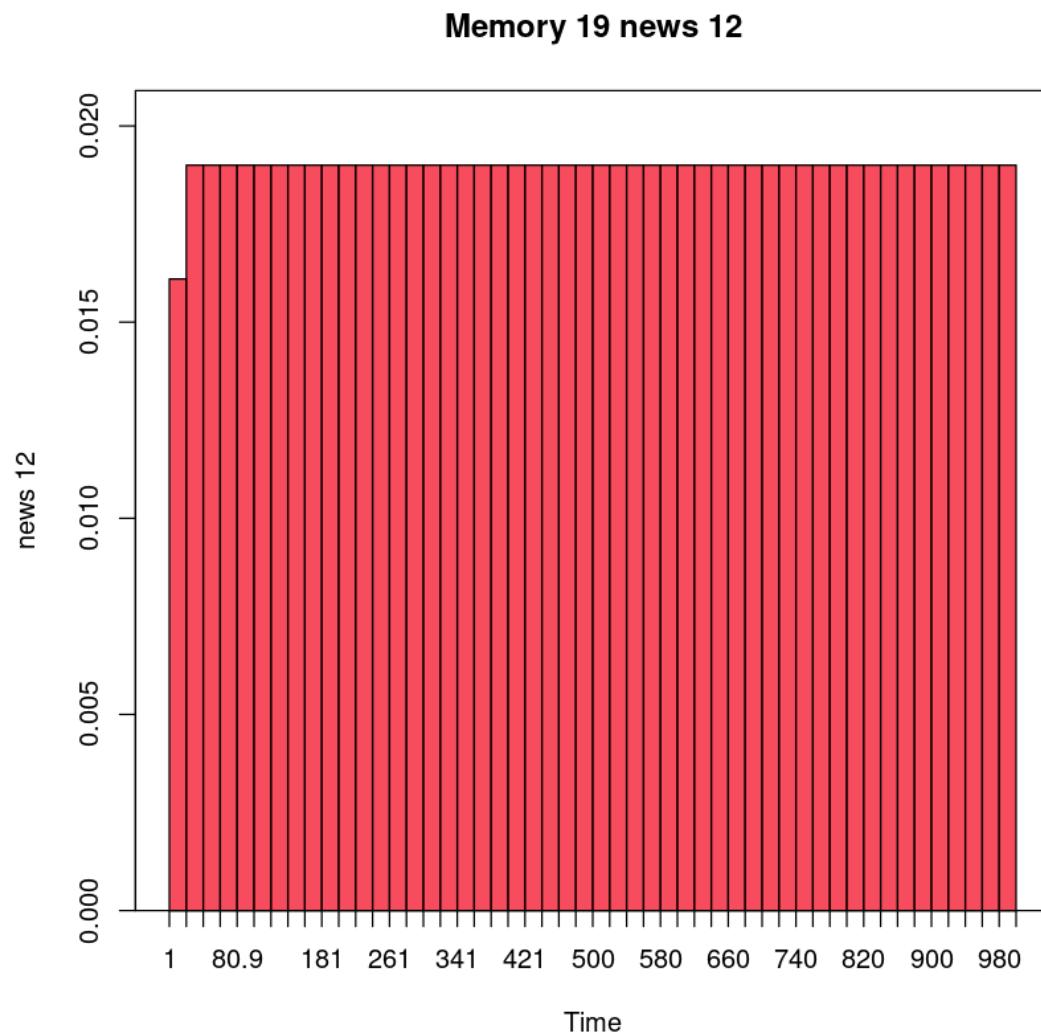
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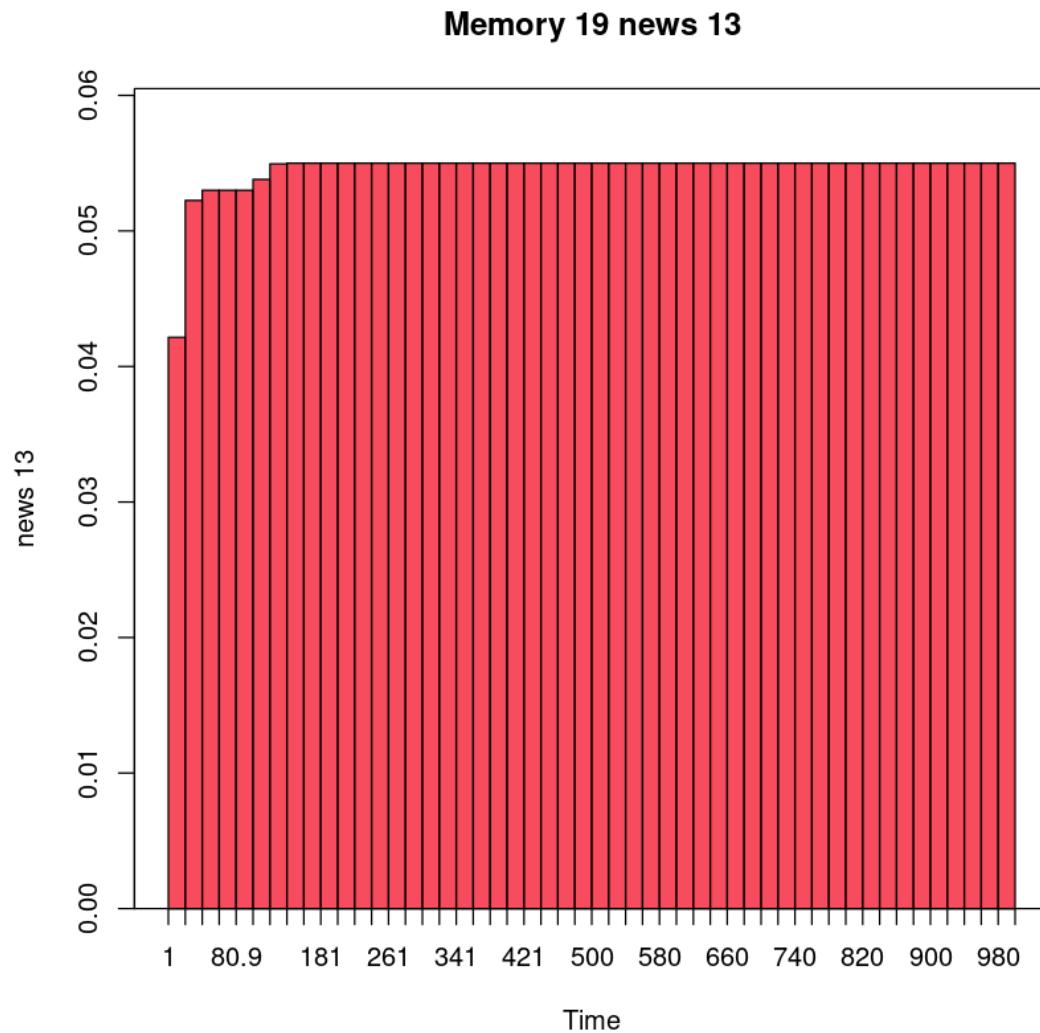
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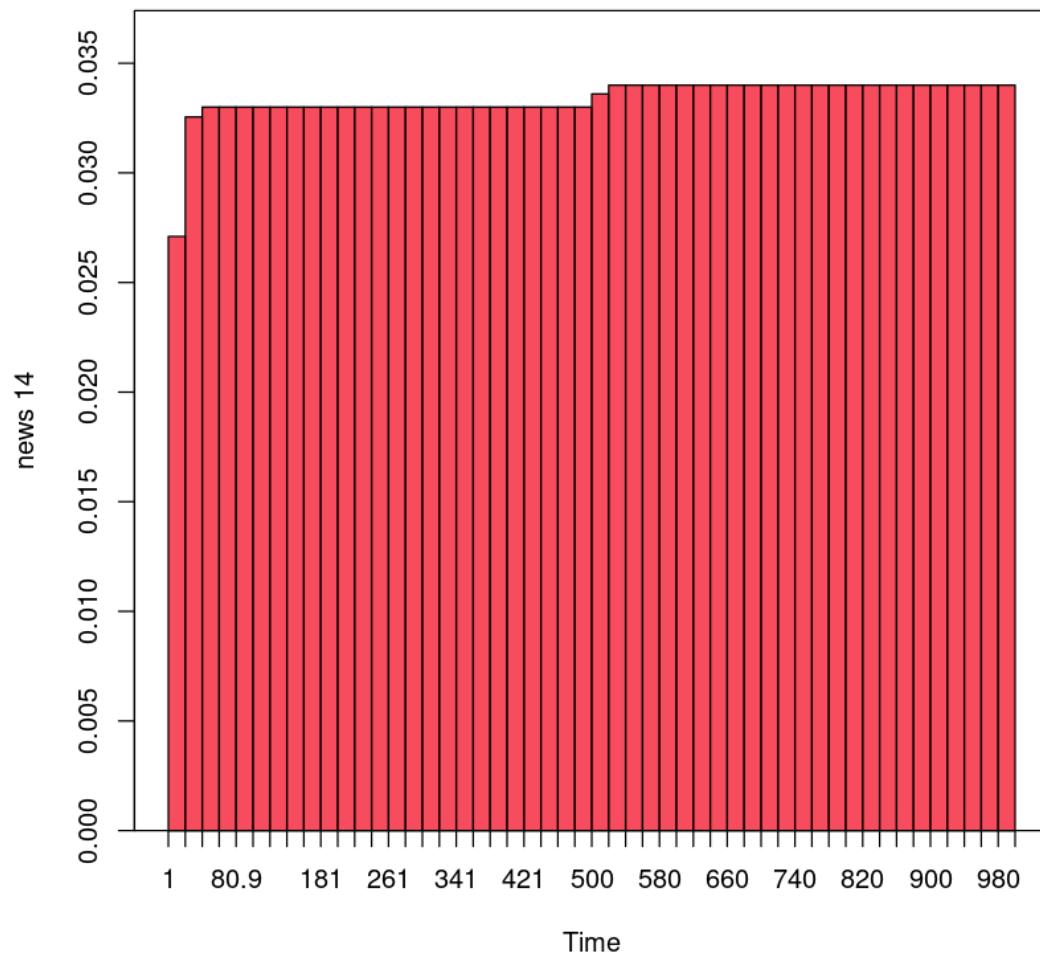
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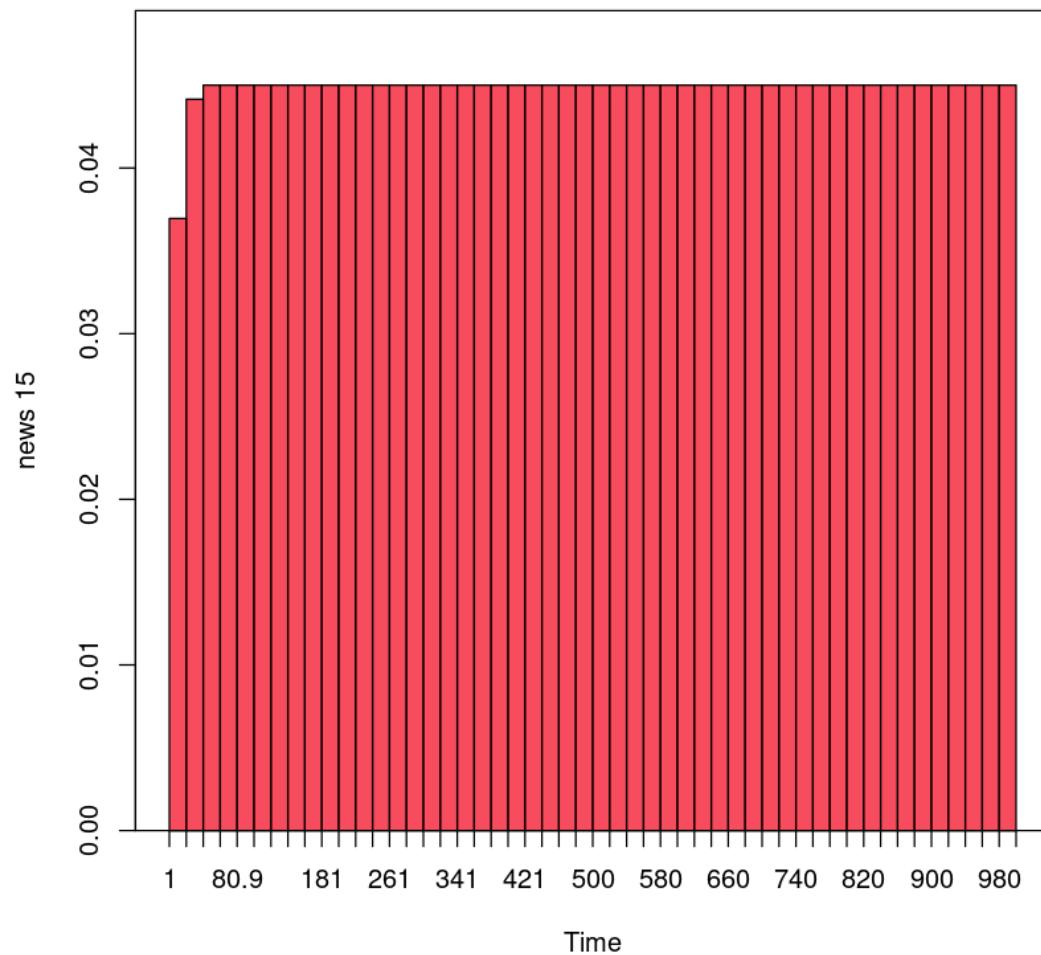
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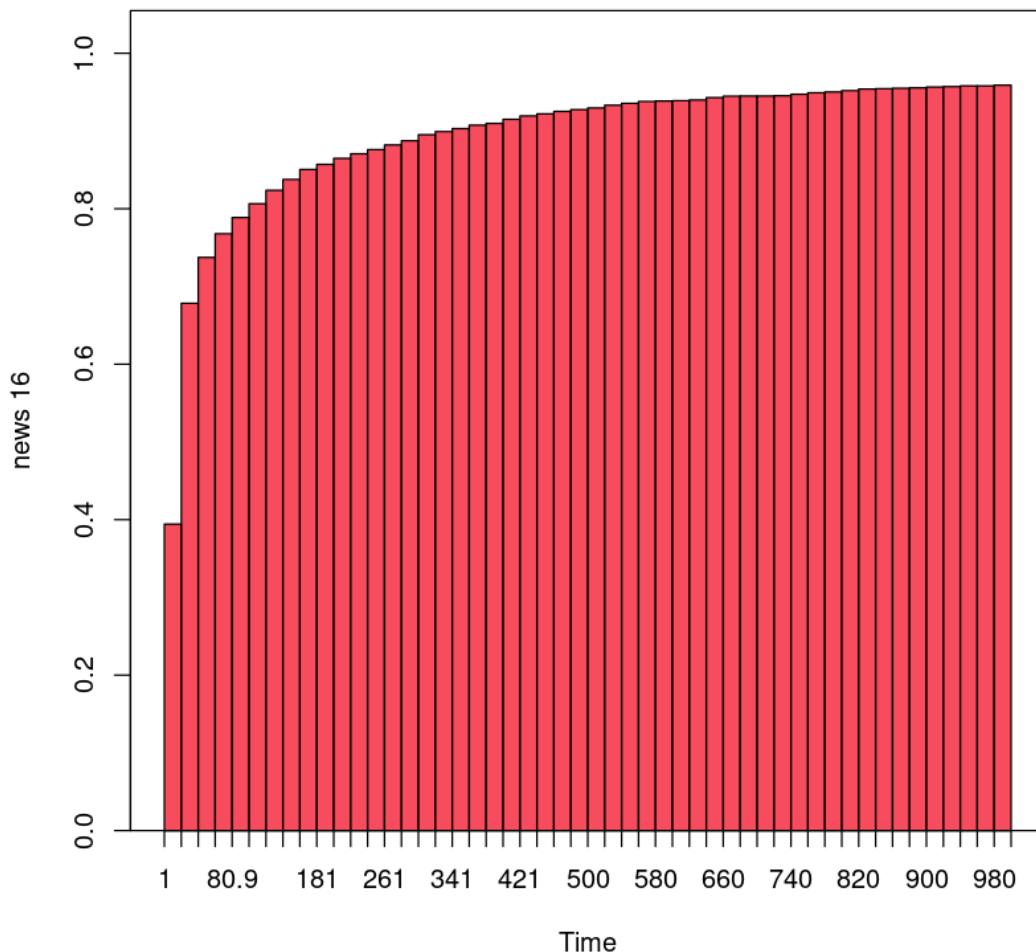
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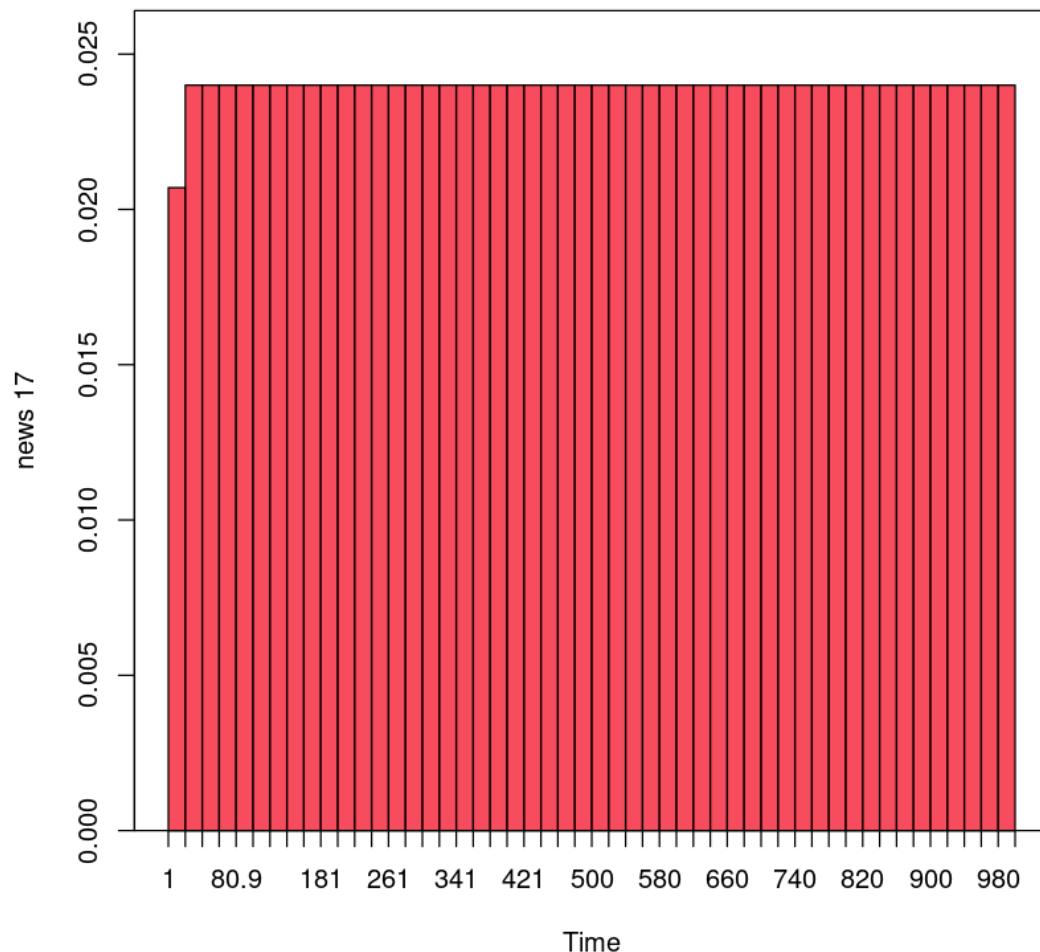


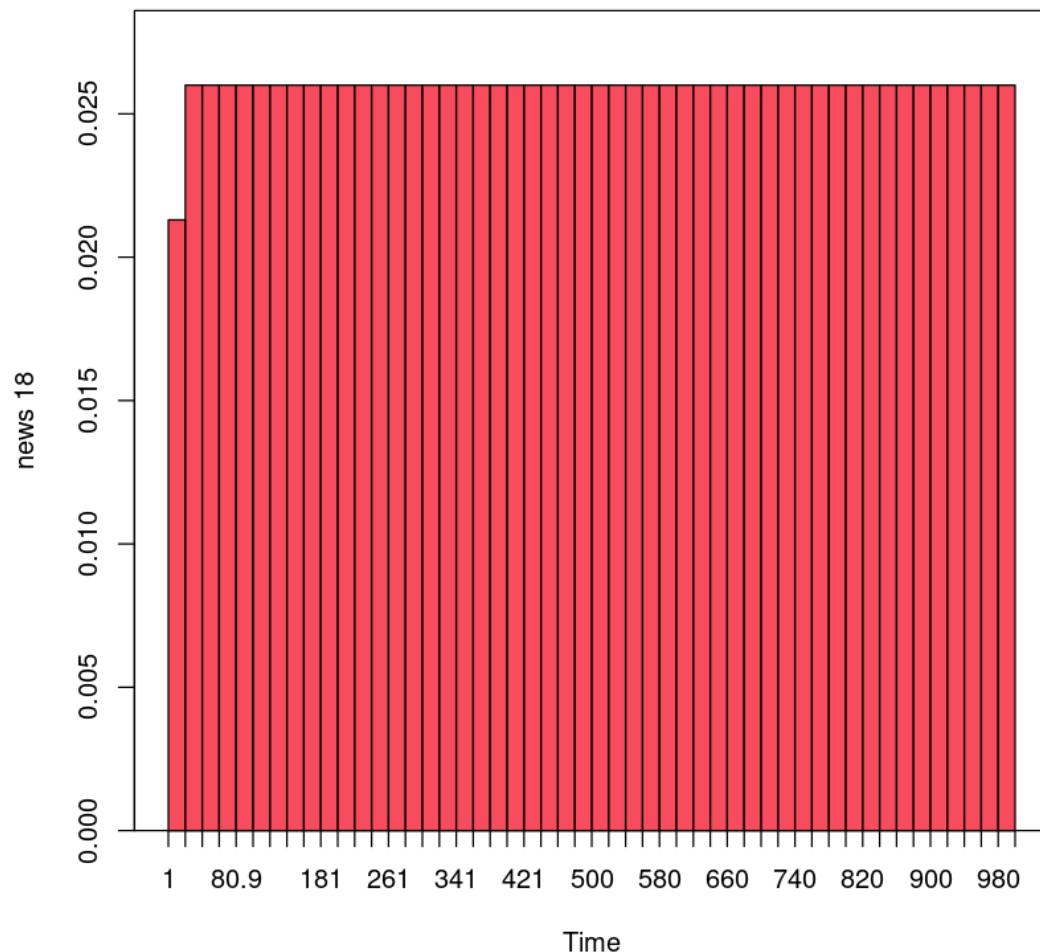


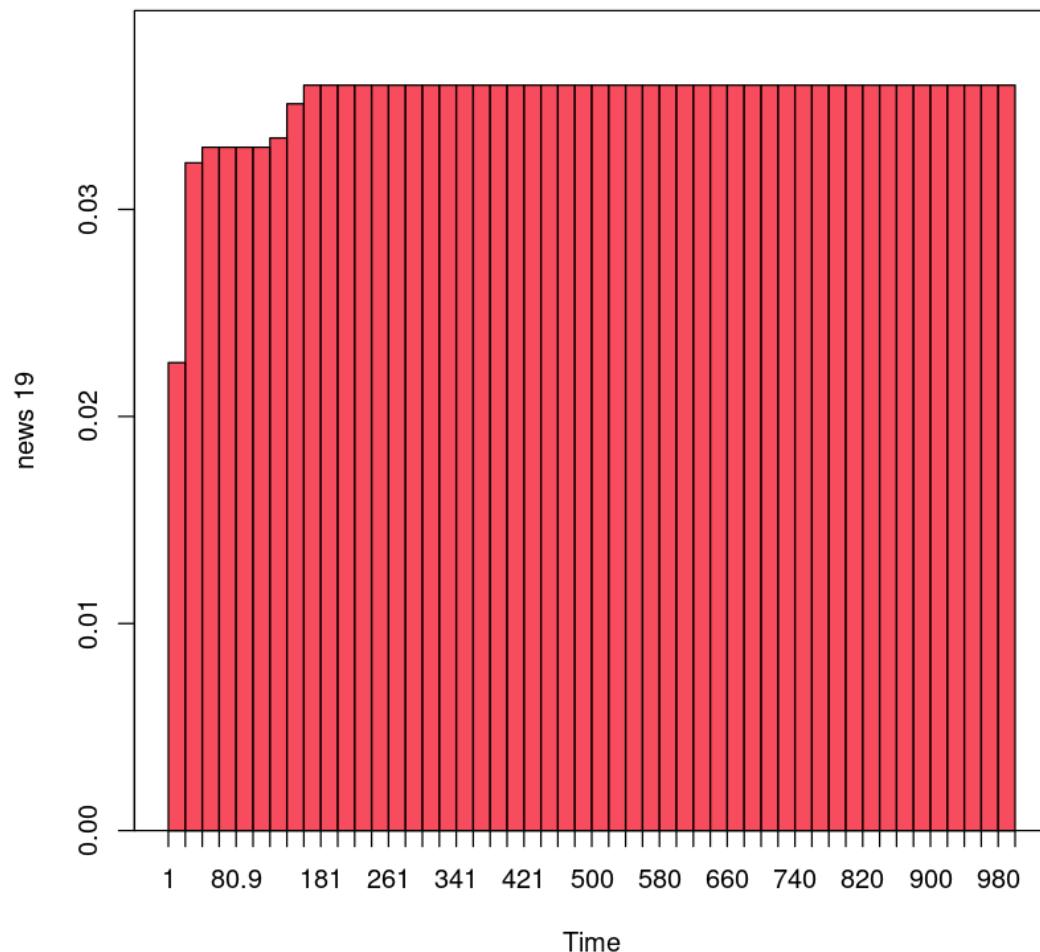
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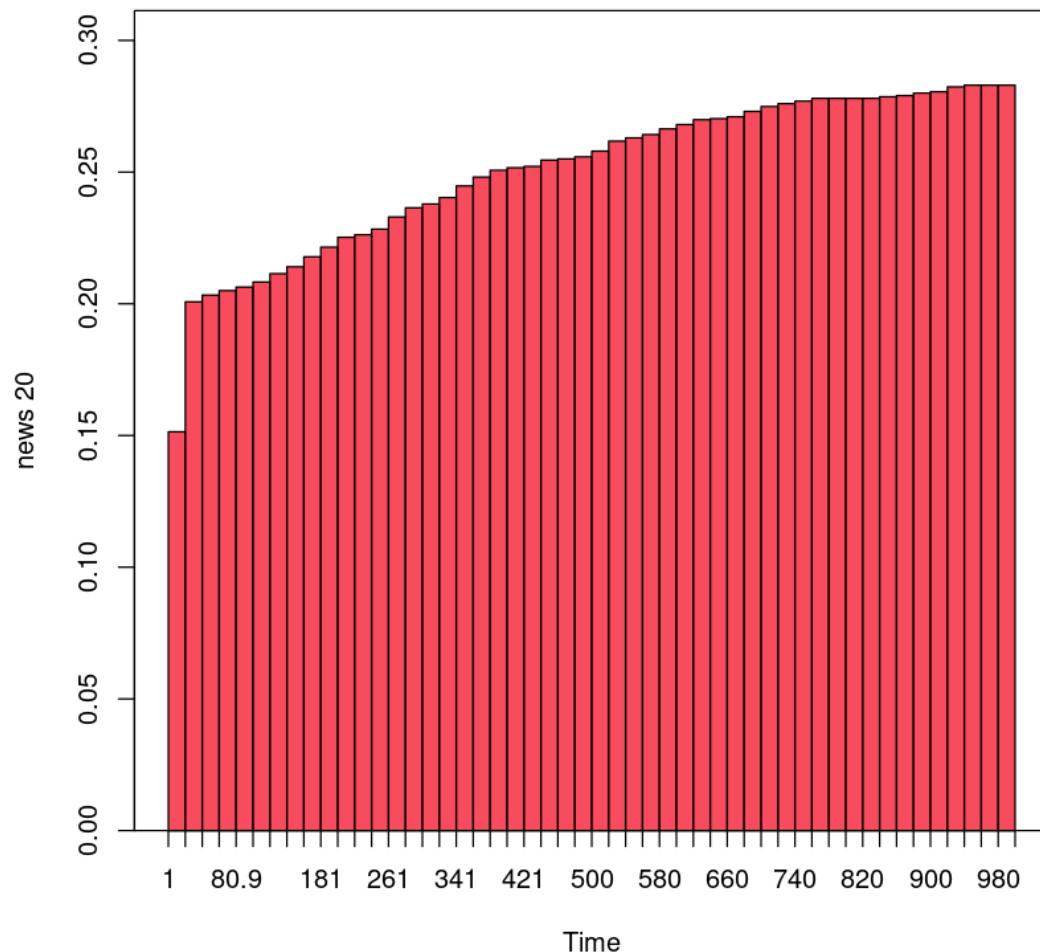
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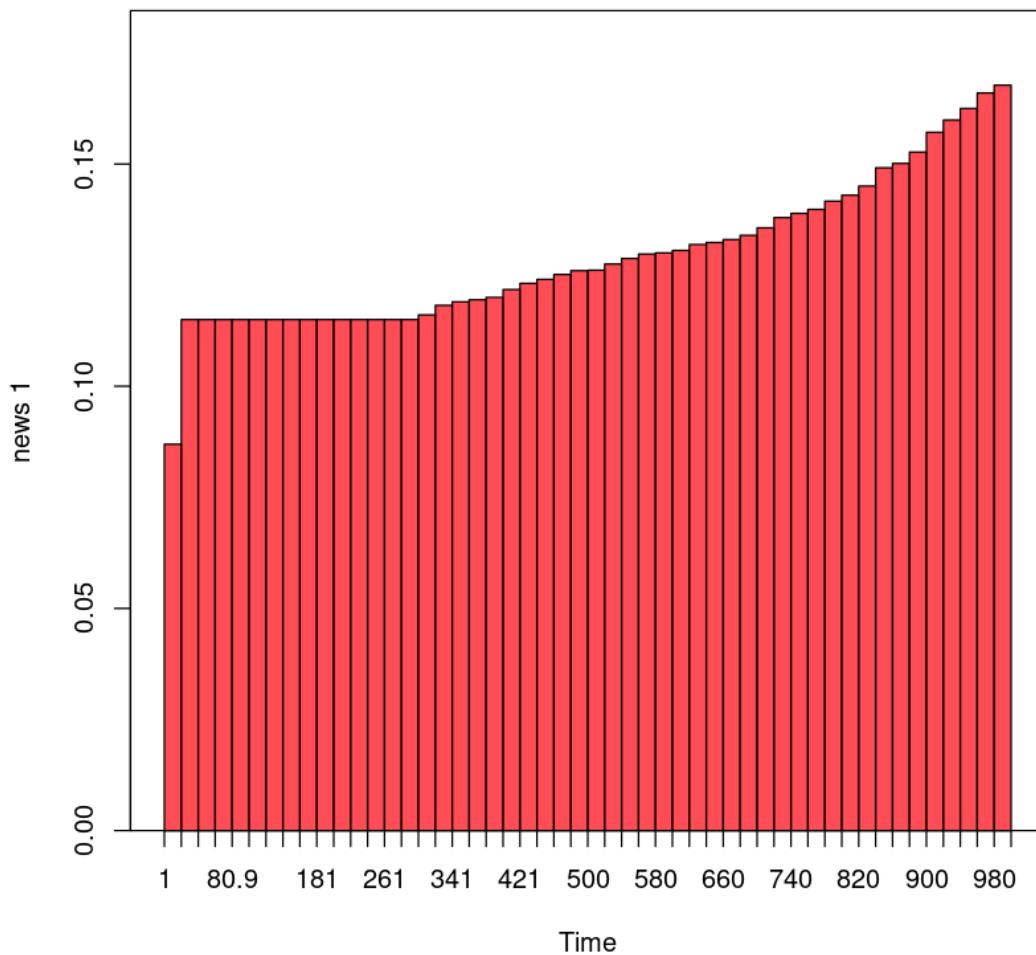
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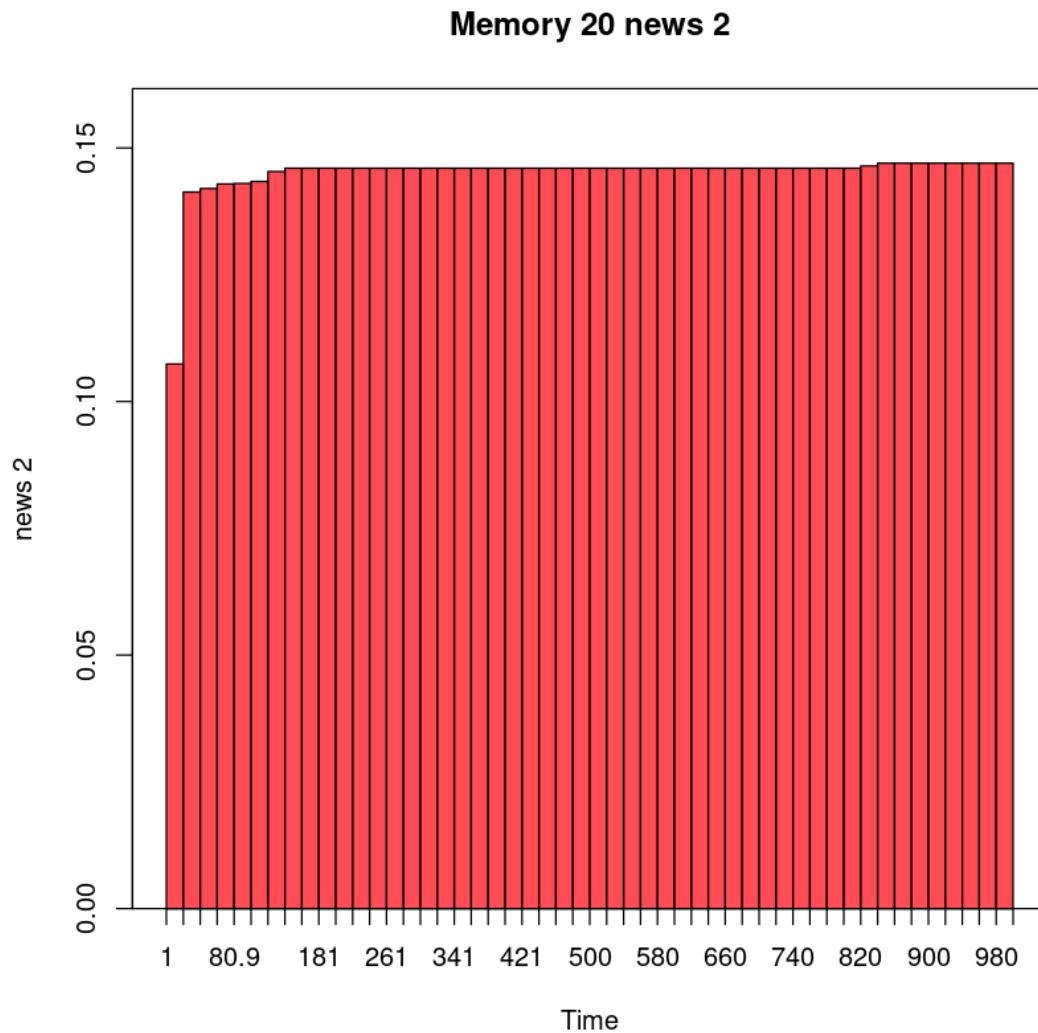
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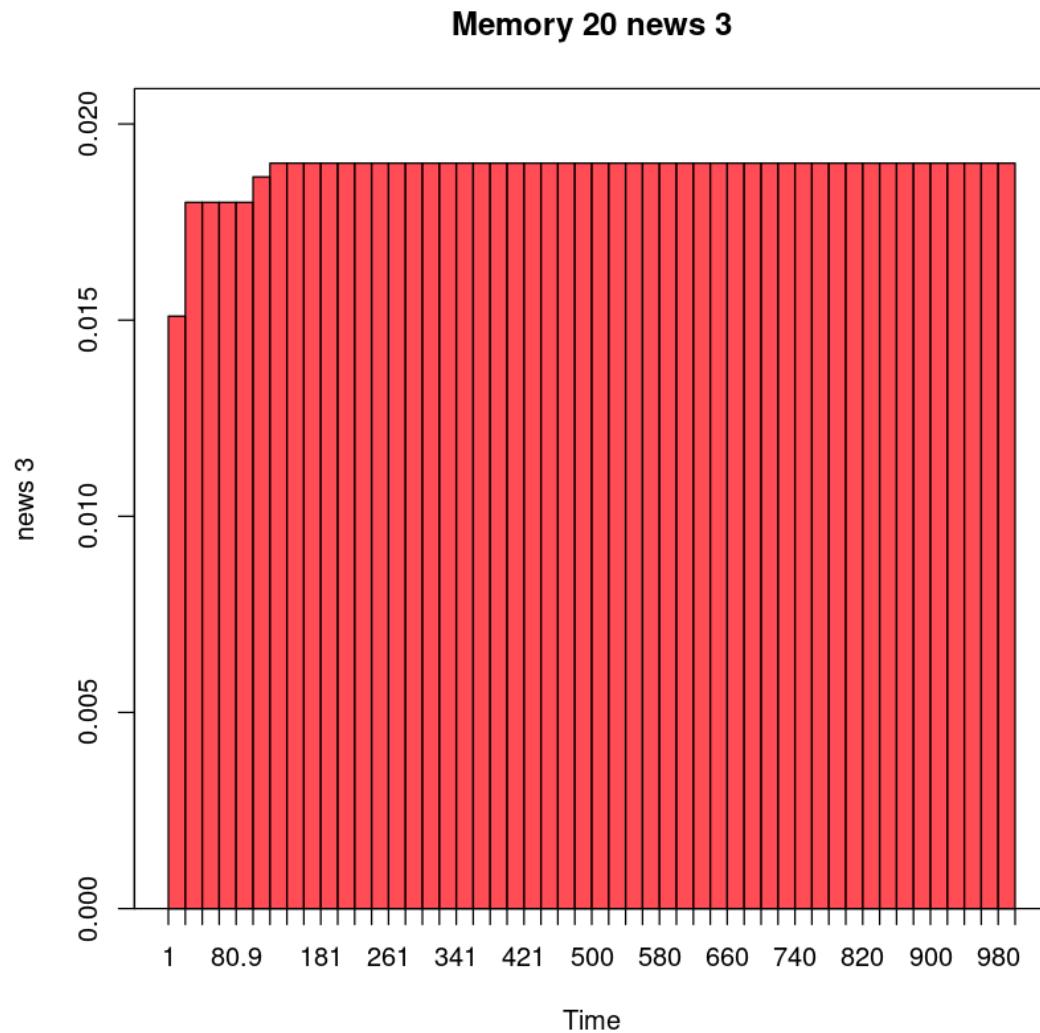
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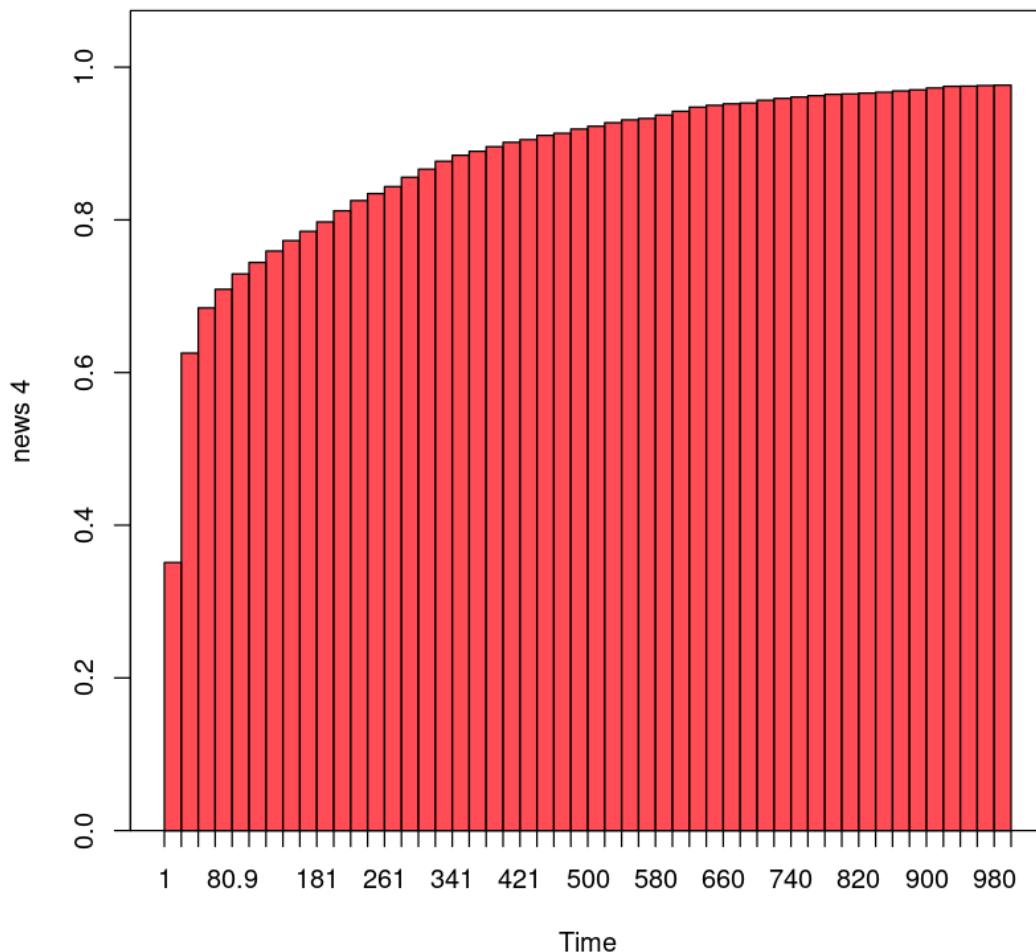
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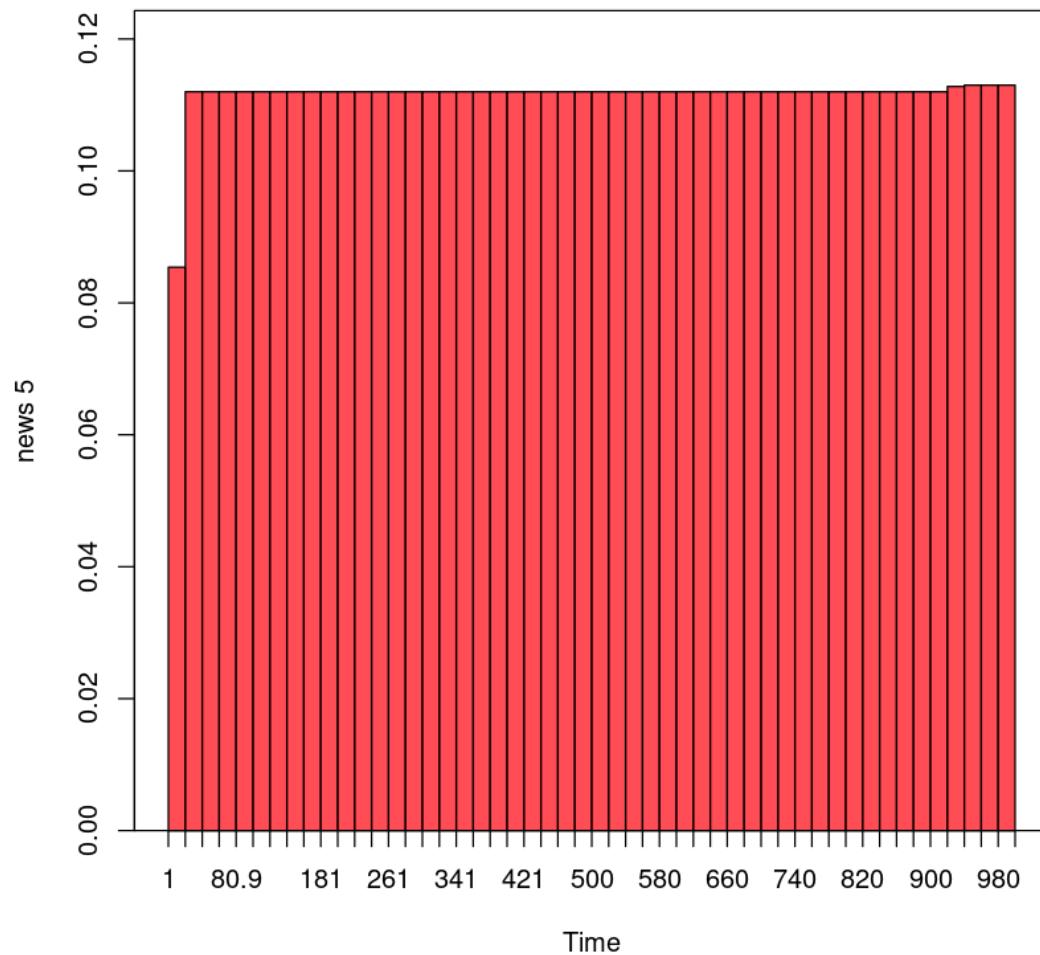
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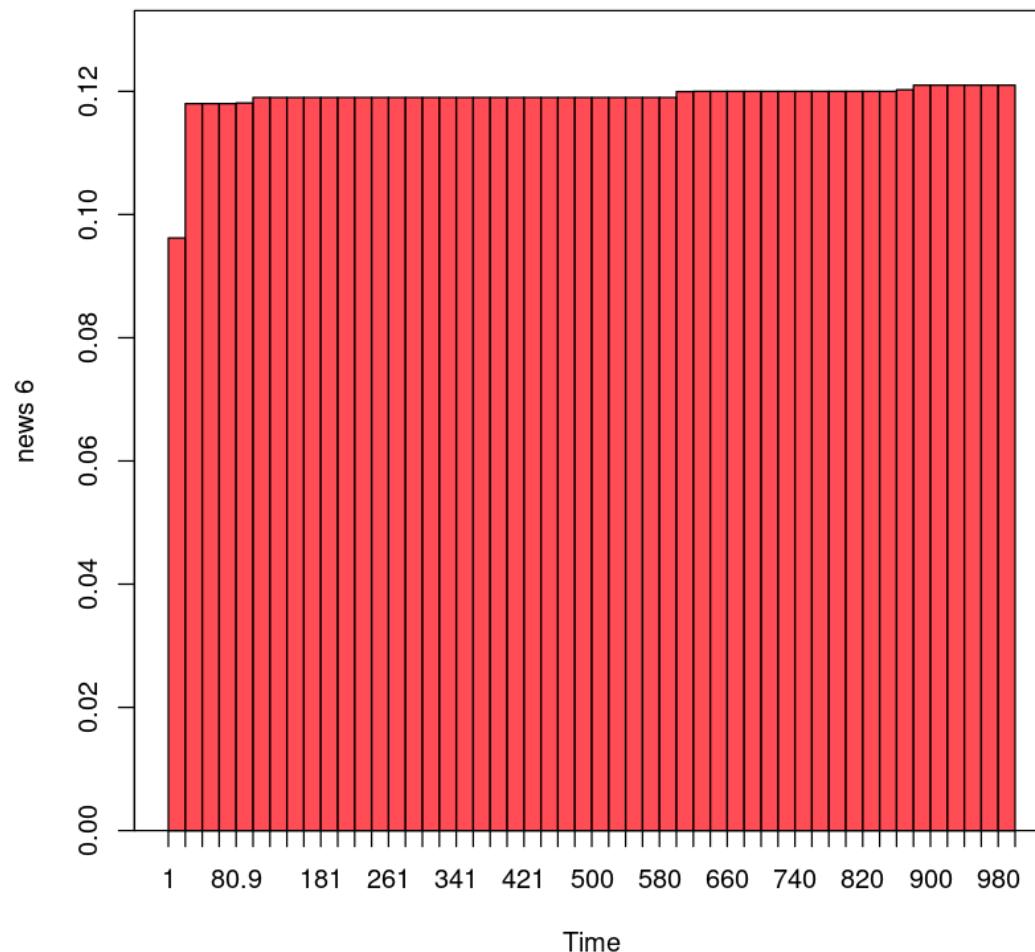
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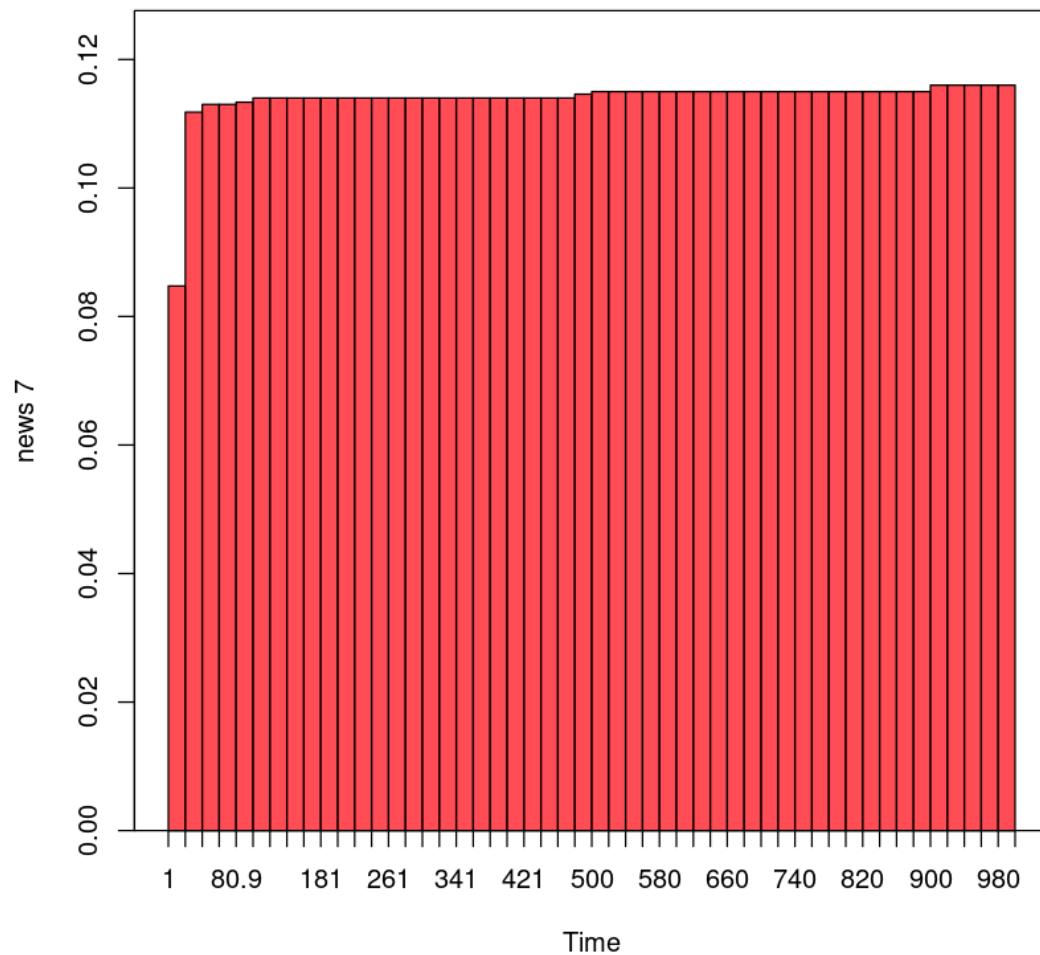


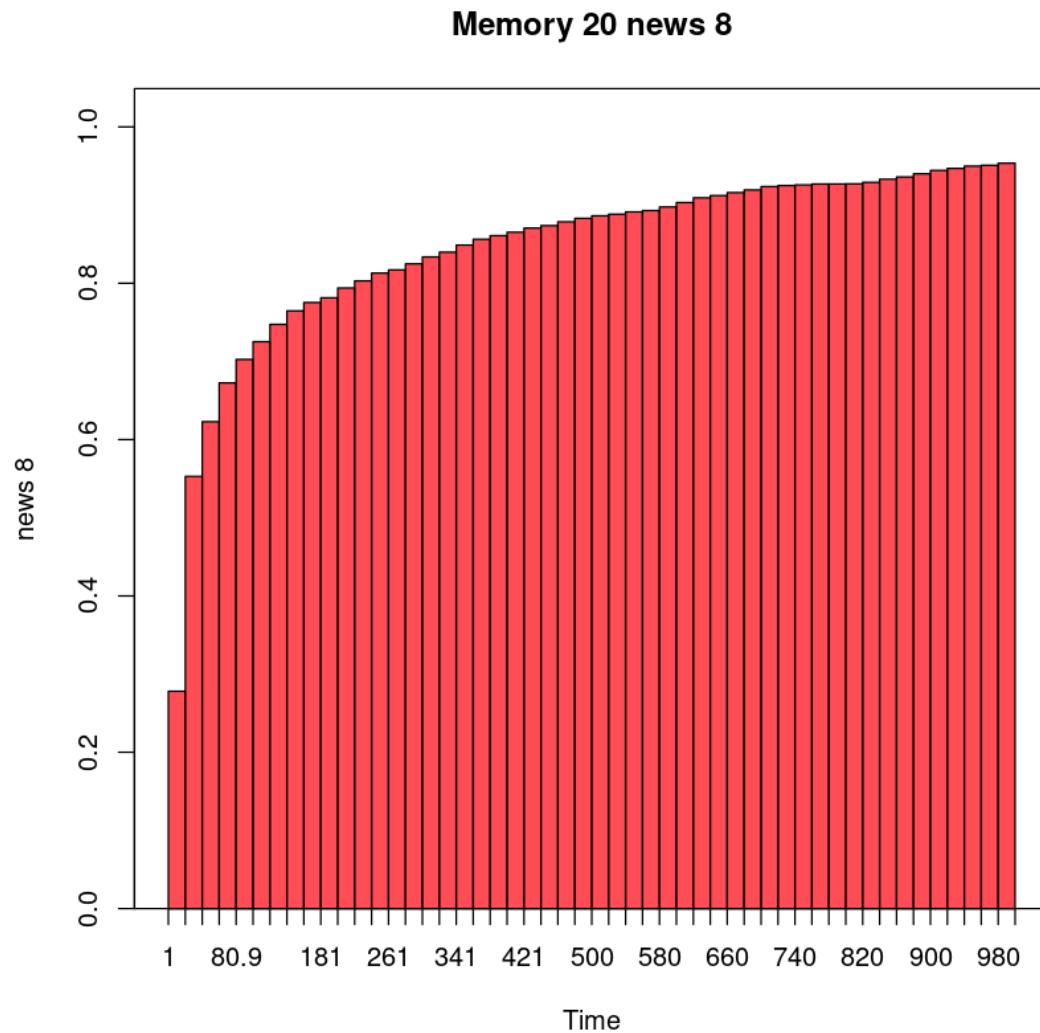


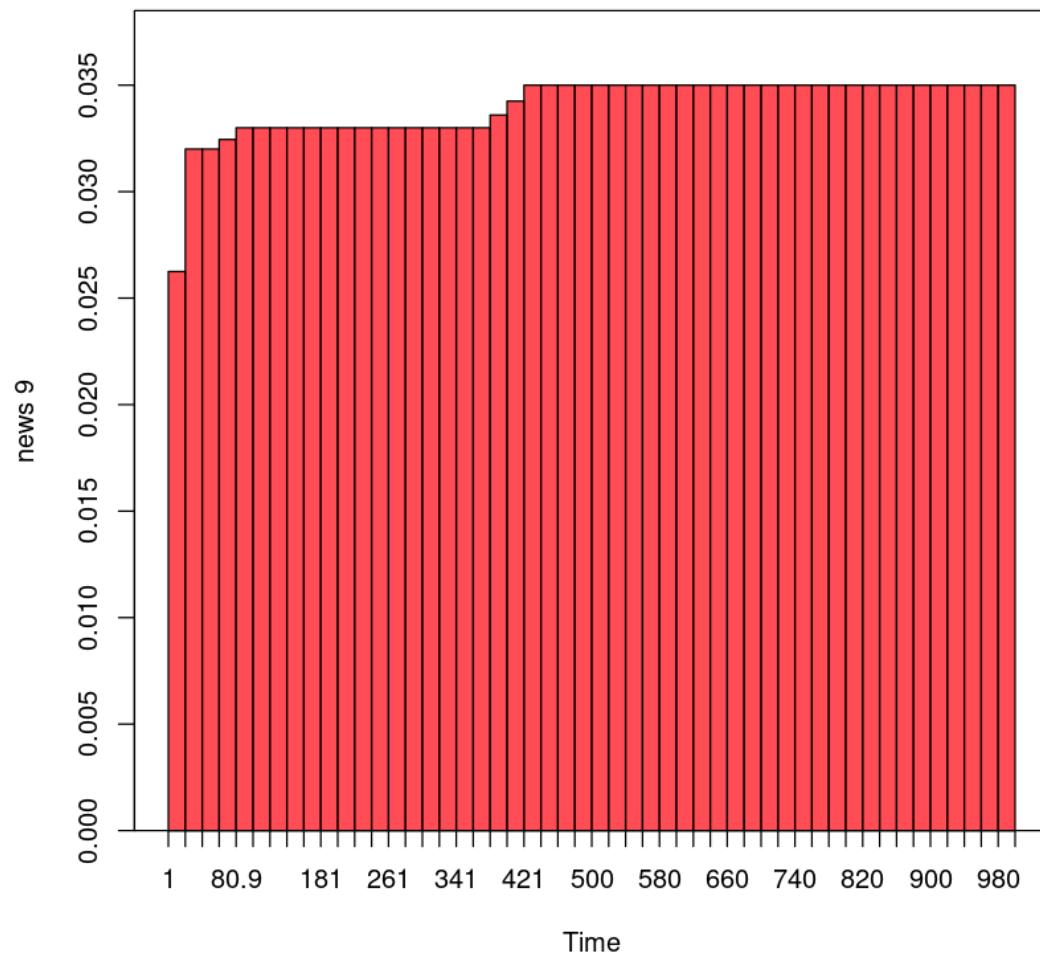
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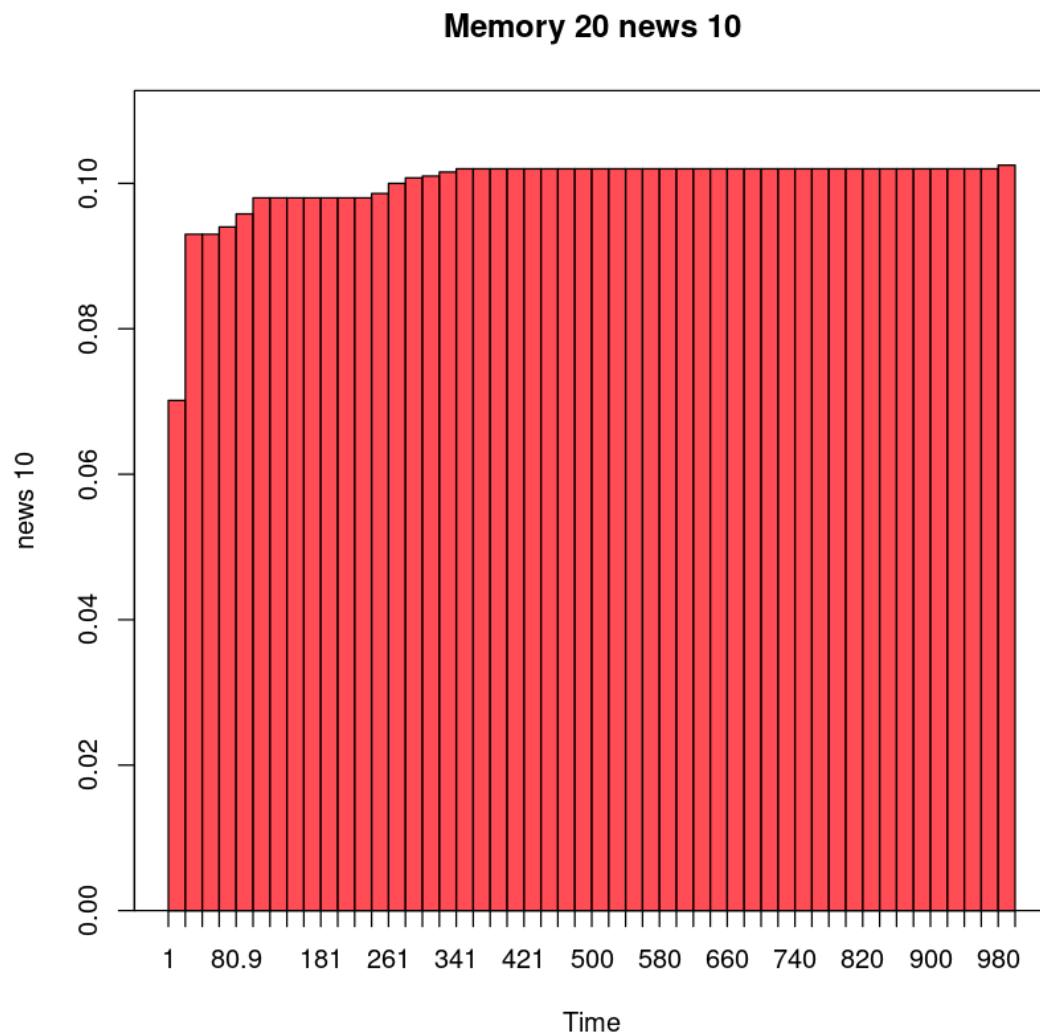
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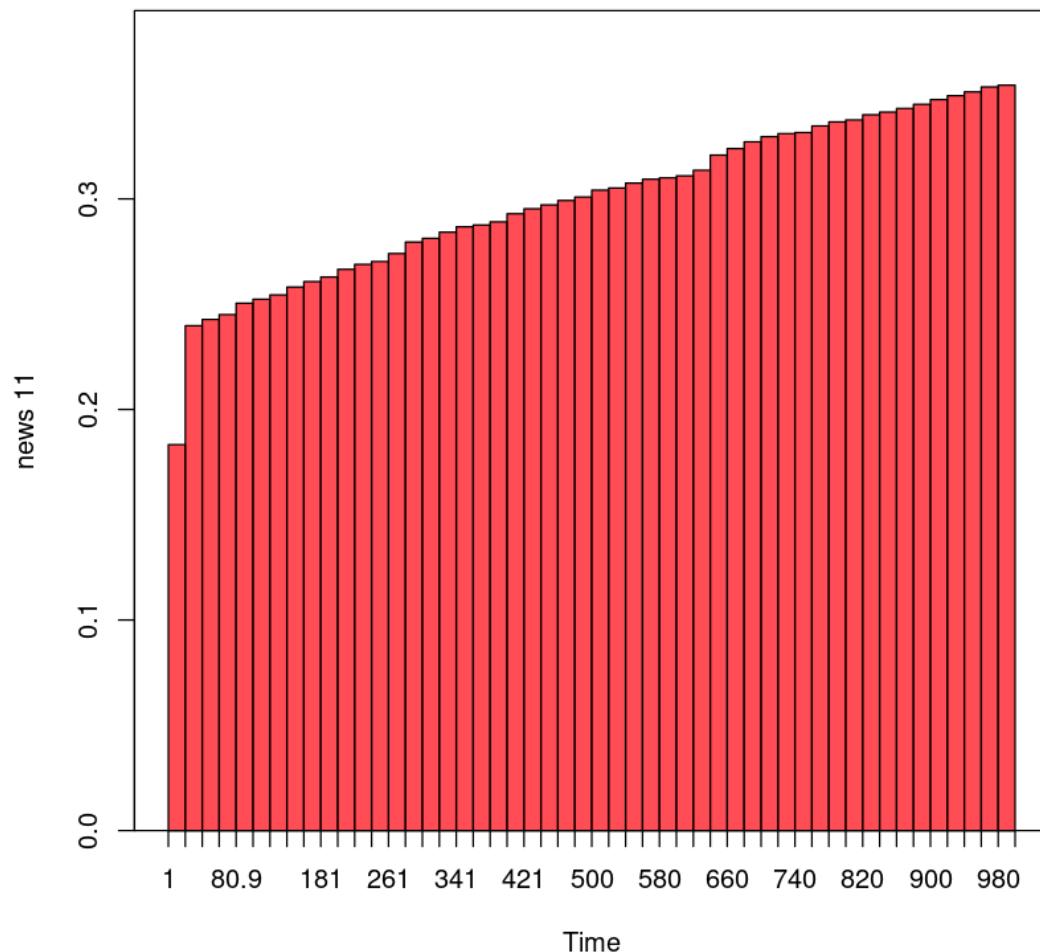
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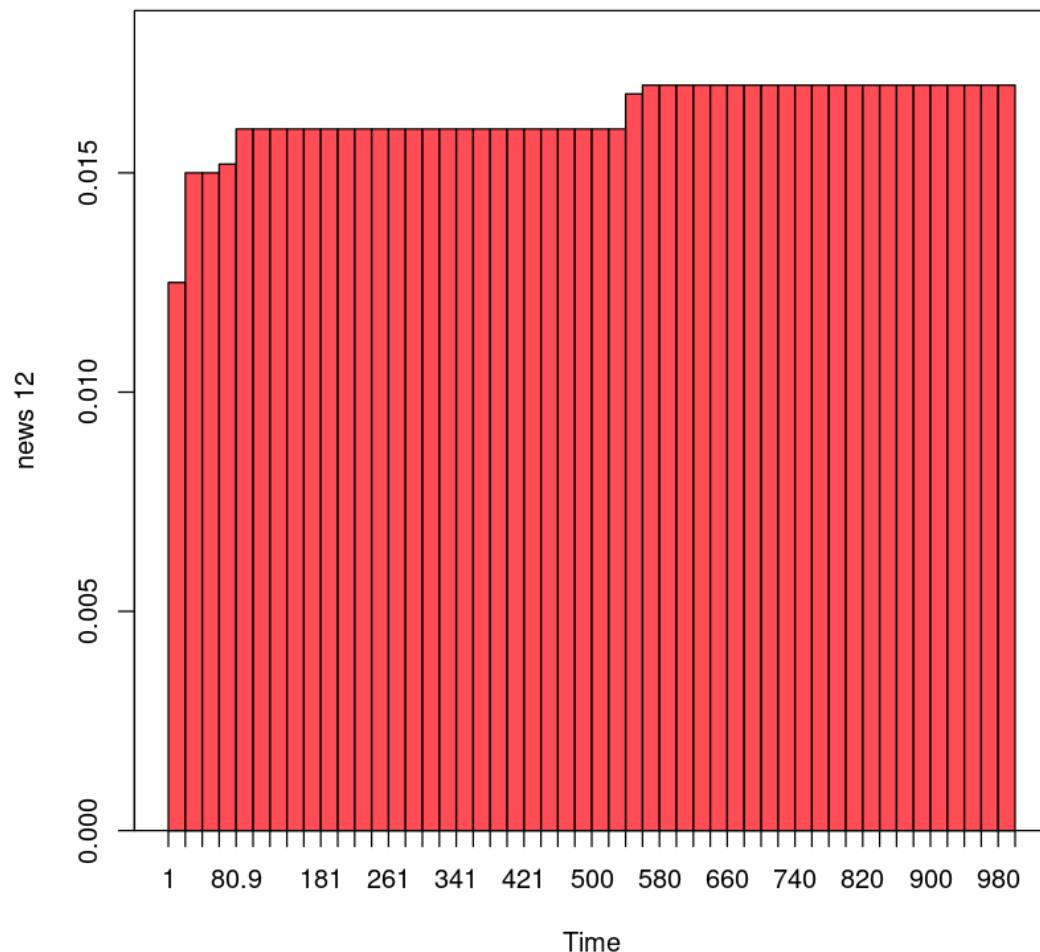
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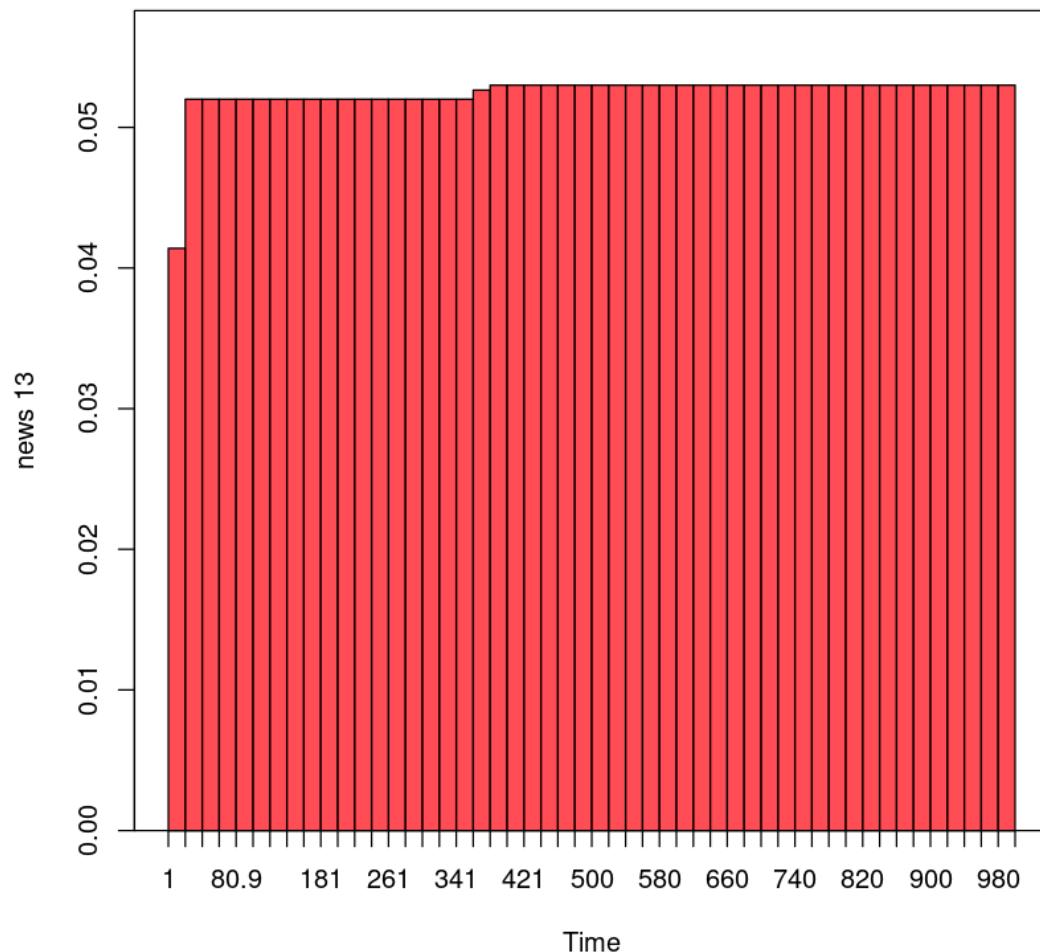


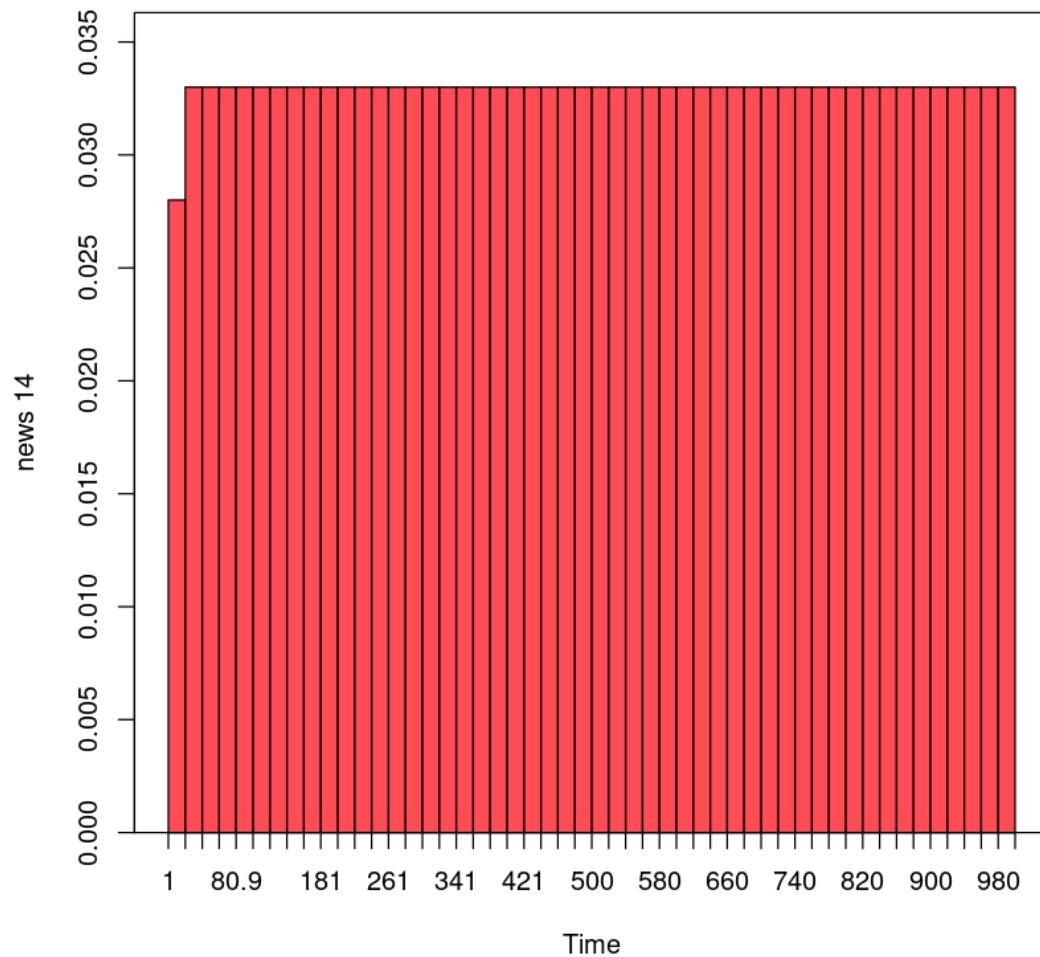
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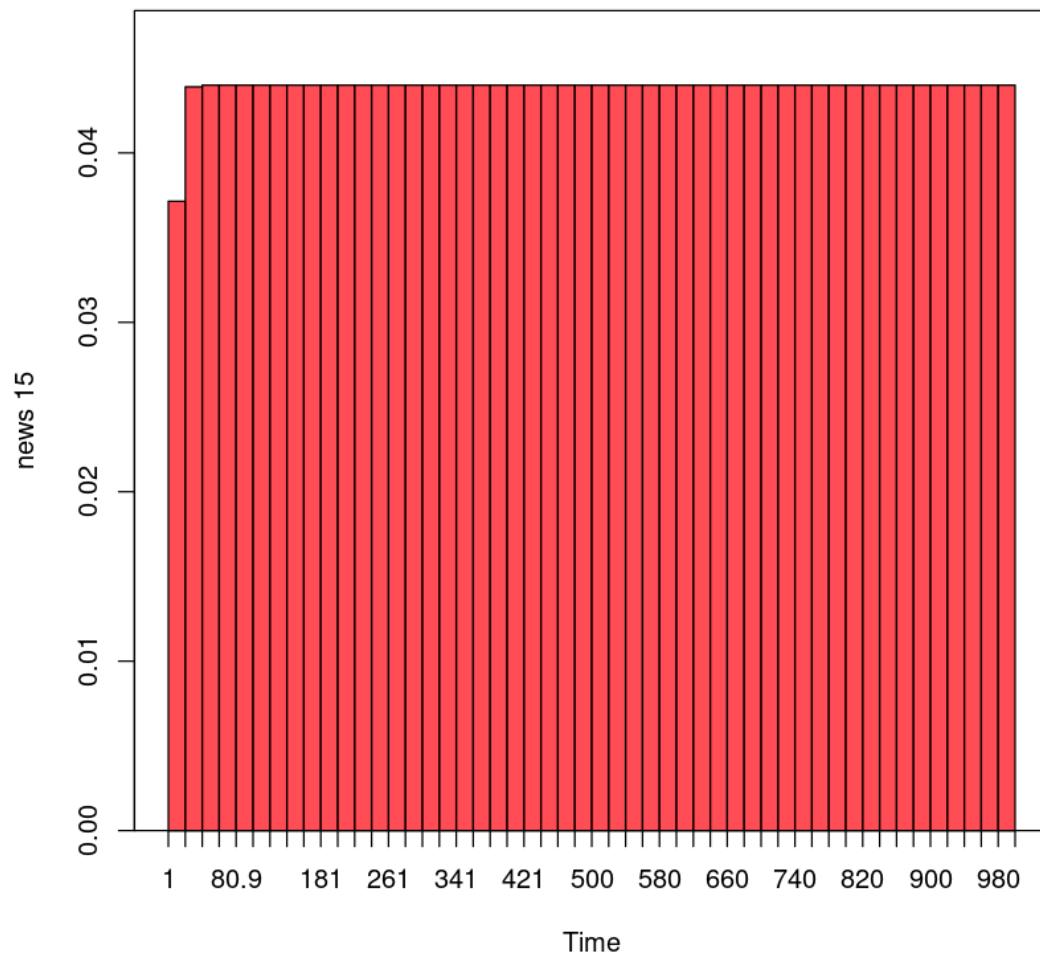


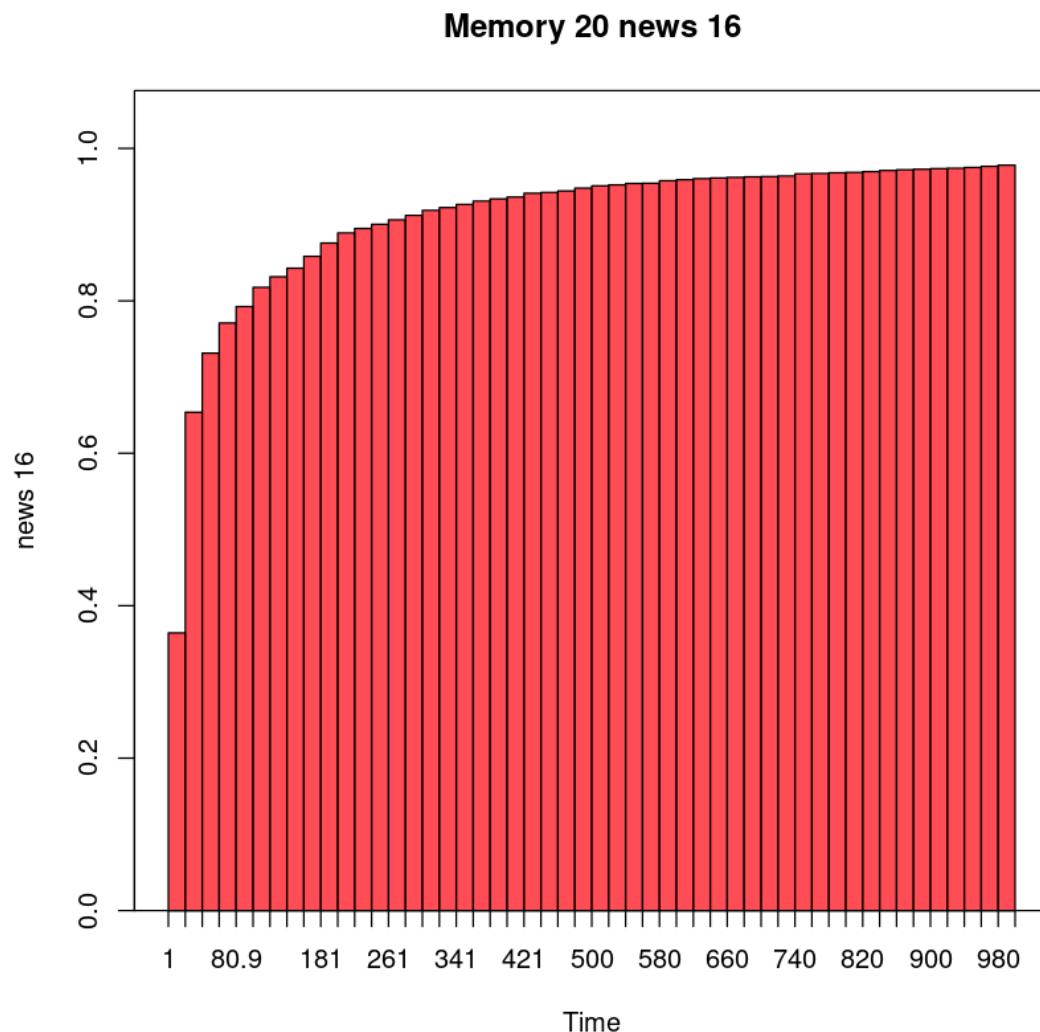
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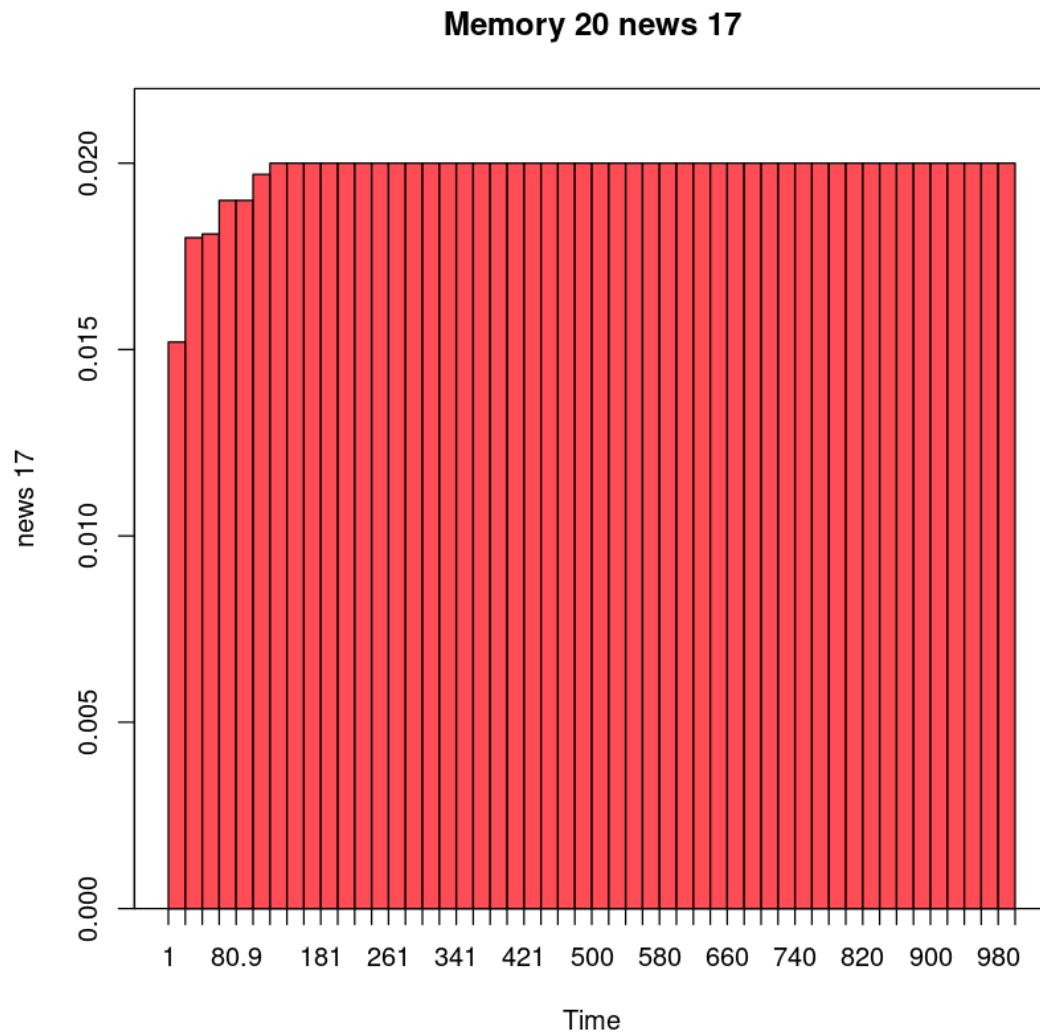
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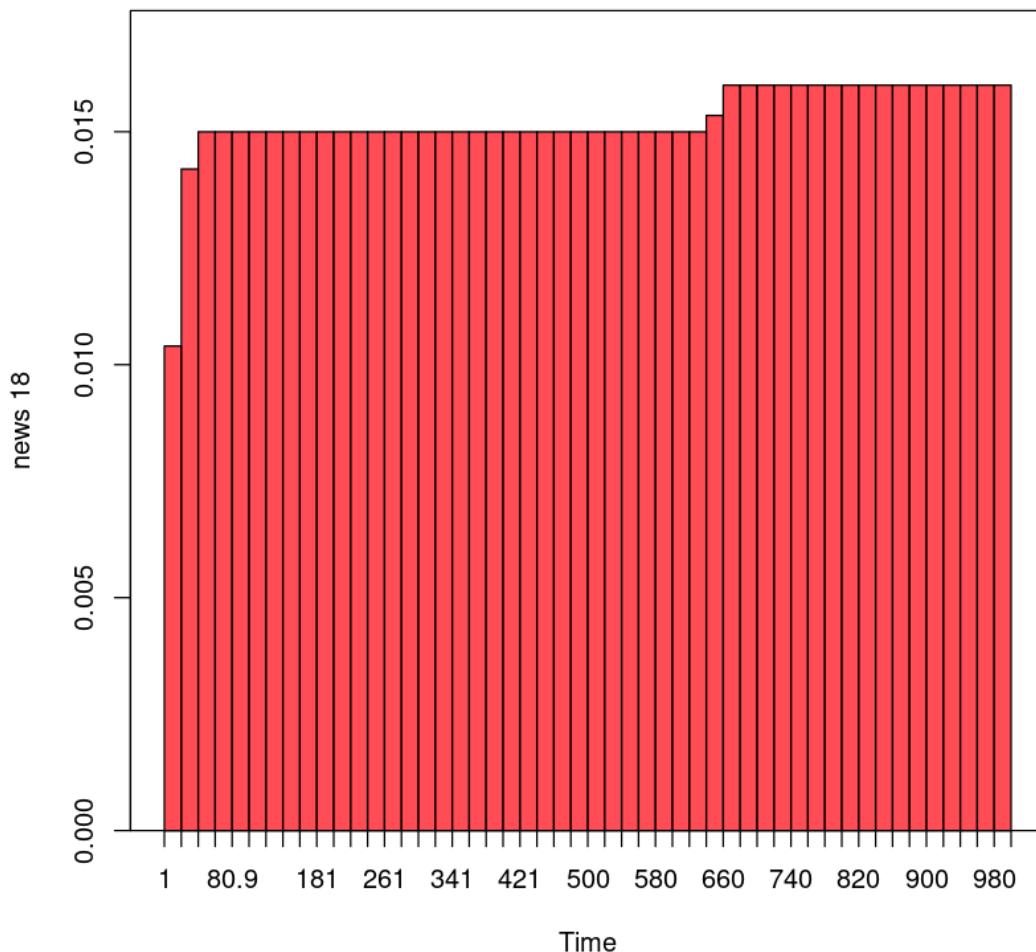
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**Memory 20 news 14**

**Memory 20 news 15**





**Memory 20 news 18**

**Memory 20 news 19**